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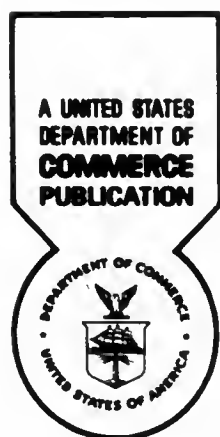
1970

MICRO PHOTO DIVISION



BELL & HOWELL

JUN



U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 2, 1970

Volume 875-

Number 1

PATENTS NOTICES

Board of Appeals Decisions Rendered in the Month of April 1970

Examiner affirmed	146
Examiner affirmed in part	16
Examiner reversed	39
Total	201

Dedication

3,080,922.—*Bernardus E. Moter*, Woodland Hills, Calif. MULTIPLE ZONE WELL PRODUCTION APPARATUS. Patent dated Mar. 12, 1963. Dedication filed Feb. 27, 1970, by the assignee, *Baker Oil Tools, Inc.*

Hereby dedicates the remainder of the term of the patent to the Public.

Certificates of Correction for the Week of June 2, 1970

Re. 26,758	3,462,432	3,475,400	3,481,774
3,317,492.	3,462,440	3,475,440	3,481,851
3,358,732	3,462,471	3,475,845	3,481,871
3,364,592	3,462,528	3,476,413	3,481,886
3,401,052	3,463,472	3,476,463	3,481,944
3,402,243	3,463,647	3,477,315	3,481,960
3,408,370	3,464,048	3,477,794	3,482,012
3,412,034	3,464,250	3,477,823	3,482,096
3,412,051	3,465,264	3,477,852	3,482,449
3,412,336	3,465,896	3,477,933	3,482,631
3,415,907	3,466,287	3,478,014	3,482,933
3,418,129	3,467,756	3,478,081	3,483,013
3,420,838	3,467,912	3,478,115	3,483,092
3,421,847	3,468,031	3,478,419	3,483,102
3,422,272	3,468,775	3,478,683	3,483,141
3,423,368	3,468,858	3,478,704	3,483,142
3,423,374	3,469,119	3,478,721	3,483,167
3,424,519	3,469,251	3,478,789	3,483,229
3,428,337	3,469,367	3,478,985	3,483,251
3,428,528	3,470,539	3,479,121	3,483,336
3,429,376	3,470,563	3,479,181	3,483,379
3,438,790	3,471,079	3,479,193	3,483,537
3,444,412	3,471,472	3,479,221	3,483,749
3,444,940	3,471,555	3,479,322	3,483,784
3,445,489	3,471,614	3,479,336	3,483,903
3,446,788	3,472,334	3,479,865	3,484,198
3,448,803	3,472,605	3,480,093	3,484,294
3,449,203	3,472,854	3,480,167	3,484,339
3,452,033	3,472,855	3,480,329	3,484,800
3,452,098	3,472,931	3,480,446	3,484,969
3,454,464	3,473,113	3,480,453	3,485,275
3,454,535	3,473,190	3,480,574	3,485,312
3,457,286	3,473,318	3,480,630	3,485,846
3,457,502	3,473,471	3,481,133	3,486,162
3,458,496	3,473,709	3,481,153	3,486,895
3,458,628	3,474,820	3,481,360	3,487,166
3,459,475	3,474,978	3,481,409	3,488,162
3,461,240	3,475,172	3,481,783	3,489,723
3,462,190	3,475,388	3,481,747	3,489,727
3,462,226			

Foreign Patents Received in the Search Center as of April 30, 1970

Source	Date received	Highest number
Australia:		
(Abstracts)	Apr. 27, 1970	64,293/70
(Patents)	Sept. 8, 1970	288,438
Austria	Apr. 7, 1970	276,700
Belgium	Apr. 17, 1970	686,600
Canada	Apr. 27, 1970	837,055
Czechoslovakia	Apr. 14, 1970	181,894
Denmark:		
(Applications)	Apr. 24, 1970	116,575
(Patents)	Apr. 24, 1970	115,170
East Germany	Apr. 23, 1970	71,732
Finland:		
(Applications)	Mar. 9, 1970	42,044
(Patents)	Mar. 9, 1970	37,420
France:		
(Patents)	Apr. 21, 1970	2,008,200
(Additions)	Mar. 23, 1970	94,750
(Medicaments)	Feb. 5, 1970	6,550 M
Germany:		
(Auslegeschriften)	Feb. 5, 1970	1,815,403
(Offenlegungsschriften)	Apr. 27, 1970	1,942,635
(Patentschriften)	Apr. 27, 1970	1,300,427
Great Britain	Mar. 2, 1970	1,176,002
India	June 18, 1969	102,055
Ireland	Mar. 16, 1970	28,781
Italy	Apr. 1, 1970	710,000
Japan	Apr. 29, 1970	8,720/70
Korea	Sept. 12, 1969	234/69
Netherlands:		
(Applications)	Apr. 13, 1970	11,604/69
(Patents)	Apr. 8, 1970	128,239
Norway:		
(Applications)	Apr. 8, 1970	118,963
(Patents)	Mar. 19, 1970	118,844
Poland	Apr. 21, 1970	59,324
Rumania	Mar. 11, 1970	52,087
Sweden:		
(Applications)	Apr. 7, 1970	319,738
(Patents)	Apr. 20, 1970	318,234
Switzerland	Apr. 27, 1970	485,386
U.S.S.R.	Mar. 19, 1970	247,877

Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Hungary: First received 5,792/1896
Latest 140,582/1951
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958

New Applications Received During March 1970

Patents	9082
Designs	477
Plant Patents	2
Reissues	69
Total	9630

Issue—June 2, 1970

Patents	1307—No. 3,514,784 to No. 3,516,090, incl.
Designs	50—No. 217,704 to No. 217,753, incl.
Def. Pub.	5—No. T875,001 to No. T875,005, incl.
Total	1362

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 3,112,262, W. D. Jones, R. H. Cahill and J. C. Lukman, PROCESS FOR POLYMERIZING VINYL ESTER IN AQUEOUS EMULSION CONTAINING WATER-SOLUBLE COLLOIDAL EMULSIFYING AGENT AND WATER-IMMISCIBLE NON-IONIC SURFACE ACTIVE AGENTS, decided Oct. 16, 1969, Interference No. 95,522, claim 4.

Patent No. 3,113,242, H. A. Leeder, Jr., FLASHING LAMP CIRCUIT USING A TRANSISTOR OSCILLATOR, decided Aug. 9, 1969, Interference No. 94,429, claims 1, 2, 3, 5 and 6.

Patent No. 3,185,364, R. A. Kleist, DRIVE SYSTEM FOR TAPE TRANSPORT SYSTEM, decided Mar. 12, 1970, Interference No. 95,903, claims 1, 4, 9 and 27.

Patent No. 3,206,999, R. M. Gold, PLASTIC FILM THERMOGRAPHY, decided Mar. 12, 1970, Interference No. 94,500, claims 2 and 13.

Patent No. 3,226,356, C. L. Kehr and J. L. Guthrie, CROSS-LINKING PROCESS, decided Oct. 21, 1969, Interference No. 94,051, claim 2.

Patent No. 3,232,522, M. A. Lewis, MOTOR DRIVE CIRCUITS, decided Mar. 12, 1970, Interference No. 95,904, claims 1 and 5.

Disclaimers and Dedications

3,473,371.—Alfred M. Leeb, Melrose Park, Pa. DYNAMIC LOADING SYSTEM. Patent dated Oct. 21, 1969. Disclaimer and dedication filed Feb. 4, 1970, by the assignee, Weston Instruments, Inc.

Hereby enters this disclaimer to the entire remaining term of said patent and dedicates the patent to the Public.

3,483,999.—Salvatore C. Cusano, Carawells Heights, Pa. CYCLIC HYDRAULIC ACTUATOR SYSTEM CONTROL. Patent dated Jan. 13, 1970. Disclaimer and dedication filed Feb. 4, 1970, by the assignee, Weston Instruments, Inc.

Hereby enters this disclaimer to the entire remaining term of said patent and dedicates the patent to the Public.

Disclaimers

Reissue No. 25,725.—Frank G. Lamb, Lake Oswego, Oreg. UPRIGHT REFRIGERATOR SHOWCASE. Reissue patent dated Mar. 2, 1965. Disclaimer filed Feb. 20, 1970, by the assignee, Pot Incorporated.

Hereby enters this disclaimer to claims 26, 27, 28, 29, 30, 31 and 32 of said patent.

3,094,163.—William D. Myers, Downey, Calif. RETRIEVABLE PARALLEL STRING WELL PACKER. Patent dated June 18, 1963. Disclaimer filed Feb. 27, 1970, by the assignee, Baker Oil Tools, Inc.

Hereby enters this disclaimer to claims 1, 10, 14 and 21 of said patent.

3,101,763.—Hiram H. Fisher, Jr., and Julian D. Kothahn, Houston, Tex. WELL PACKER. Patent dated Aug. 27, 1963. Disclaimer filed Feb. 27, 1970, by the assignee, Baker Oil Tools, Inc.

Hereby enters this disclaimer to claims 1, 4, 7, 8 and 11 of said patent.

3,199,978.—Jack T. Brown, Monroeville, Albert W. Hoppe, Canonsburg, and Donald W. Gauthier, Monroeville, Pa. HIGH-STRENGTH, PRECIPITATION HARDENING AUSTENITIC ALLOYS. Patent dated Aug. 10, 1965. Disclaimer filed Feb. 6, 1970, by the assignee, Westinghouse Electric Corporation.

Hereby enters this disclaimer to claim 11 of said patent.

3,426,010.—William Paul Dunsworth, Wilmington, Del. THIAZOLE-PYRAZOLONE AZO YELLOW DYES. Patent dated Feb. 4, 1969. Disclaimer filed Feb. 18, 1970, by the assignee, E. I. du Pont de Nemours and Company.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

3,484,763.—Richard M. Gouke, Colts Neck, N.J., and Philip A. Harding, Aurora, Ill. WIRING CONFIGURATION FOR 2-WIRE COINCIDENT CURRENT MAGNETIC MEMORY. Patent dated Dec. 16, 1969. Disclaimer filed Feb. 2, 1970, by the assignee, Bell Telephone Laboratories, Incorporated.

Hereby enters this disclaimer to claims 1 through 4, 7, and 10 of said patent.

United States Delegation to the Diplomatic Conference on Patent Cooperation Treaty

The Departments of State and Commerce announced on May 8 the membership of the United States Delegation to the Diplomatic Conference to be held in Washington May 25-June 19 on the proposed Patent Cooperation Treaty.

Co-Chairmen of the Delegation are Eugene M. Braderman, Deputy Assistant Secretary of State for Commercial Affairs and Business Activities, and William E. Schuyler, Jr., Commissioner of Patents, Patent Office, U.S. Department of Commerce.

Alternate Co-Chairmen are George R. Clark, General Patent Counsel, Sunbeam Corporation, Chicago, Illinois, and Harvey J. Winter, Acting Chief, Business Practices Division, Department of State.

Senior Advisors are James W. Brennan, International Patent Specialist, Patent Office, U.S. Department of Commerce, and Edward F. McKie, Jr., Patent Attorney, Birch, Swindler, McKie and Beckett, Washington, D.C.

Advisors are Donald W. Banner, General Patent Counsel, Berg-Warner Corporation, Chicago, Illinois; Robert B. Benson, General Patent Attorney, Allis-Chalmers Corporation, Milwaukee, Wisconsin; Pasquale J. Federico, Examiner-in-Chief (retired), U.S. Patent Office; H. Dieter Heinke, International Patent Specialist, Patent Office; W. Brown Morton, Jr., Patent Attorney, McLean, Morton and Boustead, Washington, D.C.; Sylvia E. Nilson, Deputy Assistant Legal Advisor, Department of State; and William A. Smith, III, International Patent Specialist, Patent Office.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner
F. H. BRONAUGH, Deputy Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 19, 1970

PATENT EXAMINING GROUPS	Actual Filing Date of Oldest New Case Awaiting Action
CHEMICAL EXAMINING GROUPS	
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director.....	5-24-66
Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director.....	1-12-66
Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director.....	8-08-66
Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pre-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—A. P. KENT, Director.....	4-30-66
Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director.....	3-04-66
Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	
ELECTRICAL EXAMINING GROUPS	
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—N. ANSHER, Director.....	3-07-60
Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	
SECURITY, GROUP 220—S. BOYD, Director.....	6-19-66
Ordnance, Firearms and Ammunition; Radar, Underwater Signaling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—J. F. COUCH, Director.....	6-03-66
Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 240—W. L. CARLSON, Director.....	8-28-66
Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	
PHYSICS, GROUP 250—R. L. EVANS, Director.....	6-03-66
Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	
DESIGNS, GROUP 260—S. BOYD, Director.....	8-14-60
Industrial Arts; Household, Personal and Fine Arts.	
MECHANICAL EXAMINING GROUPS	
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director.....	12-04-66
Conveyors; Hoists; Elevators; Article Handling Implements; Store Services; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Sorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—D. J. STOCKING, Director.....	8-06-66
Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director.....	10-21-66
Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Typewriters; Stationery; Information Dissemination.	
HEAT, POWER AND FLUID ENGINEERING, GROUP 340—C. F. GAREAU, Director.....	4-02-60
Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission; Fluid Handling; Lubrication; Joint Packing.	
CONSTRUCTIONS, SUPPORTS, TEXTILES, CLEANING, GROUP 350—T. J. HICKEY, Director.....	1-24-60
Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures; Centrifugal Separations; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes; Sewing Machines; Winding and Reeling.	
Total number of pending applications (excluding Designs).....	183,680
Total number of Design applications pending.....	3,428

Expiration of patents: The patents within the range of numbers indicated below expire during May 1970, except those which may have expired earlier due to shortened terms under the provisions of Public Law 860, 79th Congress, approved August 3, 1959 (35 Stat. 640) and Public Law 610, 83rd Congress, approved August 23, 1954 (35 Stat. 766), or which may have had their terms curtailed by disclaimer under the provisions of 35 U.S.C. 263. Other patents, issued after the dates of the range of numbers indicated below, may have expired before the full term of 17 years for the same reasons, or have lapsed under the provisions of 35 U.S.C. 151.

Patents..... Numbers 2,637,829 to 2,640,194, inclusive
Plant Patents..... Numbers 1,122 to 1,199, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE GEORGE V. ELTGROTH

No. 8237. Decided January 8, 1970

[57 CCPA —; 419 F.2d 918; 164 USPQ 221]

1. APPLICATION—DISCLOSURE—SUFFICIENCY OF DISCLOSURE—35 U.S.C. 112.

"We view appellant's argument concerning the adequacy of a disclosure under 35 U.S.C. 112 as essentially a restatement in his terms of the test applied in this court, namely, whether the specification is clearly sufficiently definite to guide those skilled in the art to its successful application. This court has often observed that minutiae of descriptions or procedures perfectly obvious to one of ordinary skill in the art yet unfamiliar to laymen need not be set forth. It has even been said that some experimentation, provided it is not an undue amount, is permissible. However, nothing must be left to speculation or doubt."

2. SAME—SAME—SAME—SPECULATIVE THEORY—35 U.S.C. 112.

"While we agree with the legal proposition inherent in appellant's position with regard to 35 U.S.C. 112, his argument leaves us unpersuaded of error in the Patent Office's position [regarding the insufficiency of the disclosure]. * * *. We agree with the Board that the specification 'lacks any tangible disclosure of specific isotopes and definite methods for altering their abundance.' Not one example is given. Not one isotope producing aging is identified, nor are 'agents, such as chelating agents or substances which will enter into preferred reversible reaction with the isotopes' specified. Moreover, appellant has not applied the law to the facts of his case in that he has failed to show how knowledge available to those skilled in the art would enable them to make and use his invention despite the lack of specific disclosure. It appears to us, after careful study of the specification, that appellant has provided no more than a speculative theory or hypothesis, highly significant though it may be, inviting others to undue experimentation to bring the invention to fruition."

3. PATENTABILITY—UTILITY—EVIDENCE—35 U.S.C. 101.

"Nor are we able to agree with appellant that the requirements of 35 U.S.C. 101 have been met. Undoubtedly, the *alleged utility* of control of the aging process in living organisms and the significant beneficial results flowing therefrom is adequate. Yet, there is a conspicuous absence of proof thereof."

APPEAL from Patent Office. Serial No. 290,908.

AFFIRMED.

George V. Eltgroth, pro se (Melvin M. Goldenberg, of counsel).
Joseph Schimmel (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN, LANE, Associate Judges, and RAO, Chief Judge, sitting by designation

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1-15, all the claims in appellant's application entitled "Method for Influencing Organisms."¹

The invention relates to the control of growth, aging and degeneration in living organisms, particularly to appellant's alleged discovery of what appears to be a key for the solution of the problems associated with these life processes. Appellant states in his specification that, while he is convinced that the factors crucial to the aging process are not amenable to chemical detection, he concludes that these factors are isotopes of the elements upon which we rely for our sus-

¹ Serial No. 290,908, filed June 27, 1963, alleged to be a continuation of Serial No. 823,354, filed June 29, 1959.

JUNE 2, 1970

U. S. PATENT OFFICE

5

tenance and the life processes themselves. It is proposed that the different diffusion rates of these elements and their compounds are a factor leading to a progressive change in the isotope abundance spectrum within the body. The specification then states:

By using the mass spectrometer to run abundance profiles of the various isotopes for the blood components, specialized tissues and vital organs on subjects of different ages and with different pathological conditions, the correlation between these factors, pathology and age is established. Those isotopes which are critical to the aging process or give rise to pathological conditions are thus isolated.

With this information in hand, agents, such as chelating agents or substances which will enter into preferred reversible reactions with the isotopes whose concentration is to be reduced (or enhanced) are experimentally determined upon, and administered until the desired reduction, or change in balance, is achieved, as needed to reduce the effective age of the organism, or abate the pathological condition.

No more specific teaching than the above appears. No examples are presented. We are told, however, of the many possibilities laid open for exploration, not the least exciting of which is the permanent maintenance of a level approximating that of age twenty-five to thirty.

The following claims are sufficiently representative of those on appeal:

1. The method of influencing the effective age of a living organism which comprises modification of the abundance of a specific isotope present in such organism.

7. The method of influencing age correlated phenomena in a living organism which comprises modification of the isotope abundance profile in such organism.

12. The method of influencing a living organism which comprises modifying in such organism the abundance profile of specific isotopes of specific elements in a manner different than any attendant modification of the abundance profile of said elements, the latter profile taking into account all of the quantities of isotopes of said elements which are present in such organism.

The Examiner rejected all of the claims on each of the following grounds: (1) as lacking statutory utility under 35 U.S.C. 101; (2) as being based on a disclosure failing to satisfy either the "enabling" or "best mode" portions of 35 U.S.C. 112; (3) as vague and indefinite under 35 U.S.C. 112, in not pointing out the invention with particularity to distinguish from the prior art; and (4) as reading on the prior art, i.e., anticipation under 35 U.S.C. 102.

The references relied upon are:

Bersworth et al., 2,875,129, Feb. 24, 1959.

Geneva, 1955 International Conference on the Peaceful Uses of Atomic Energy, Report of the U.S. Delegation, vol. 1, pp. 150 and 250-251, "Modification of Radiation Response."

Foreman, "The Use of Chelating Agents for Accelerating Excretion of Radio Elements," J. A. Ph. A. Sci. Ed., vol. XLII, No. 10, October 1953, pp. 629-632.

Bessman et al., "Chelation," Ann. Int. Med., vol. 47, No. 5, November 1957, pp. 1036-1040.

Vaughan et al., "EDTA (Versene) for Removing Fission Products from the Skeleton," J. Pharm. and Pharmacology, vol. 6, No. 4, April 1954, page 266.

Spencer et al., "Effect of EDTA on Radio Strontium Excretion in Man," PS.E.B.M., March 1958, pp. 565-7.

Bair et al., "Synergistic Action of EDTA and Radiation on Yeast," Science, vol. 127, No. 3302 (11 Apr. 1958).

Cohn et al., "Experimental Treatment of Poisoning from Fission Products," A.M.A. Arch. Indust. Health, vol. 14, December 1956, pp. 533-538.

Bessman discloses that a chelate is a compound formed between a metallic ion and an organic molecule having two neighboring groups capable of simultaneously combining with the metal to form a ring structure. The reference further states that there are many naturally occurring chelating agents, including amino acids, carbohydrates and proteins, and that those normally present probably serve a physiological function since it can be demonstrated that at normal concentrations they can affect metabolic activity. Most of the complex reactions upon which the vital processes of living organisms depend, the author believes are influenced at some stage by natural chelates. The use of the chelating agent, ethylenediaminetetraacetic acid (EDTA), for the lowering of excessively elevated serum calcium levels and as a deleading agent for the treatment of lead poisoning is described. Many antimicrobial and antituberculous drugs are said to be chelating agents.

Foreman discloses that administration of EDTA assists elimination, through urinary excretion, of radioactive isotopes such as yttrium-91 and plutonium 239.

Bersworth teaches the elimination of nickel or lead by administering a calcium chelate.

The remaining references may be summarized as disclosing the use of chelating agents as detoxification agents in cases of metal and fission product poisoning.

The Examiner's position with respect to the rejection based on the prior art was, in essence, that the breadth of the claims caused them to be "readable" on the reference disclosures. It was his opinion that the claims were met also by the "historical living-organism isotope-profile-modifications, or 'fall-out' in events known as 'Hiroshima,' 'Nagasaki,' 'Eniwetok,' and 'Bikini' * * *."

In affirming the Examiner's rejections, the Board failed to make specific mention of ground (3) *supra*. With respect to the sufficiency of appellant's disclosure under 35 U.S.C. 112, it remarked:

We have studied the specification and have come to the conclusion that no one, no matter how skilled, could carry out appellant's alleged invention with the information contained therein. * * *

The entire specification is in the nature of a prophecy or speculation on the part of appellant. It lacks any tangible disclosure of specific isotopes and definite methods for altering their abundance.

Related was the Board's observation that:

Page 4 vaguely refers to the possibility of using chelating agents but this much is disclosed by the many references cited by the Examiner. These show the elimination of various isotopes and heavy metals from a living organism by administration of chelating agents and this leads to the next rejection of the claims as fully met by this prior art under 35 U.S.C. 102. * * *

In our opinion the claims present no distinction over the procedures of the references.

The rejection for lack of statutory utility was commented upon also:

As we have already noted, appellant's disclosure is prophetic. At most it suggests a theory which has not been accepted or even recognized by the prior art. Under such circumstances proof of utility is prerequisite to the grant of a patent

but no evidence of any kind has here been presented. *In re Otiron*, 51 CCPA 852; * * * 325 F.2d 248; 139 USPQ 516; *In re Novak et al.*, 49 CCPA 1283; * * * 306 F.2d 924; 134 USPQ 335. Particularly apropos to the present application is the following statement by the Supreme Court in *Brenner v. Manson*, 333 OG 1349; 148 USPQ 689:

"... But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion. '[A] patent system must be related to the world of commerce rather than to the realm of philosophy.'"

Appellant's position is that once his disclosure in association with other prior art has advanced the reader to the point where the balance of the acts to be performed are of a "purely ministerial nature, time consuming and expensive though they may be," he has met the requirements of 35 U.S.C. 112. Conceding that considerable work remains to be done, appellant contends that the question is whether the remaining work is necessarily inventive in character.

Appellant further argues that there is no basis under 35 U.S.C. 101 for imposing different or higher standards of utility for inventions involving compositions of matter or methods of treatment of organisms than for the purely mechanical inventions. He states in his brief that the

* * * disclosure is teleologic in nature, which means that since the steps are formulated in terms of the end result, the readjustment of the steps in the light of results obtained by the worker in the field, must inevitably lead to success, and this without any tincture of invention, for the applicants' disclosure leaves nothing but ministerial, non-inventive, though time-consuming activities to be performed on the part of the laboratory worker. With this teleologic or closed logic loop type of disclosure there is no margin for a miscarriage which could result in lack of utility. Hence, the requirement of utility is intrinsically met with a disclosure of this nature.

With respect to the rejection based on 35 U.S.C. 102, appellant contends that the references relied upon fail to disclose his invention in that they are concerned with modification of the *element* abundance profile, whereas he is concerned with modifying the abundance of a given *isotope* contributing to the total presence of a selected element while retaining the presence of other isotopes of the same element. Moreover, it is argued, the references deal with elimination of poisons which reduce life span, and none mentions concern with prolongation of the normal life span of a healthy organism.

[1] We view appellant's argument concerning the adequacy of a disclosure under 35 U.S.C. 112 as essentially a restatement in his terms of the test applied in this court, namely, whether the specification is clearly sufficiently definite to guide those skilled in the art to its successful application. This court has often observed that minutiae of descriptions or procedures perfectly obvious to one of ordinary skill in the art yet unfamiliar to laymen need not be set forth. It has even been said that some experimentation, provided it is not an undue amount, is permissible. However, nothing must be left to speculation or doubt.

[2] While we agree with the legal proposition inherent in appellant's position with regard to 35 U.S.C. 112, his argument leaves us unpersuaded of error in the Patent Office's position. Appellant has been no more specific in his disclosure than in that portion quoted, *supra*. We agree with the Board that the specification "lacks any tangible disclosure of specific isotopes and definite methods for altering their abundance." Not one example is given. Not one isotope producing aging is identified, nor are "agents, such as chelating agents or

substances which will enter into preferred reversible reaction with the isotopes" specified. Moreover, appellant has not applied the law to the facts of his case in that he has failed to show how knowledge available to those skilled in the art would enable them to make and use his invention despite the lack of specific disclosure. It appears to us, after careful study of the specification, that appellant has provided no more than a speculative theory or hypothesis, highly significant though it may be, inviting others to undue experimentation to bring the invention to fruition.

[3] Nor are we able to agree with appellant that the requirements of 35 U.S.C. 101 have been met. Undoubtedly, the *alleged utility* of control of the aging process in living organisms and the significant beneficial results flowing therefrom is adequate. Yet, there is a conspicuous absence of proof thereof. This court's recent decisions in *In re Fereus*, 57 CCPA —, — F.2d —, 163 USPQ 609, and *In re Buting*, 57 CCPA —, — F.2d —, 163 USPQ 689, explore in depth the requirements of proof of utility. Suffice it to say, we find the instant record too speculative to satisfy the requirement of 35 U.S.C. 101.

Having carefully considered appellant's arguments and the authorities cited in support thereof, we are unconvinced of error in the Board's decision with respect to the rejection based on 35 U.S.C. 112, paragraph 1, and 35 U.S.C. 101. The view we take with regard to the preceding renders it unnecessary to consider the other issues raised by the appeal. Accordingly, the decision is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,704,663, D. R. Blake, LEVELING DEVICE filed Mar. 26, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c694, David R. Blake et al., Ever-Level Glides, Inc. v. Bassick Co. Pursuant to agreement judgment order entered in this matter of Feb. 23, 1967 made final. Injunction shall remain in full force and effect for the life of the patent, Mar. 19, 1970.

2,742,327, T. Marks, FULLY AUTOMATIC MACHINE FOR MAKING BRUSHES, filed May 27, 1966, D.C.N.J. (Newark), Doc. C-542-66, American Technical Machinery Corp. v. Puleo's Novelty Company. Dismissal on settlement, Mar. 6, 1970.

2,827,637, G. B. Wagenfeld, DISPOSABLE HEADRESS UNIT, filed Mar. 5, 1970, D.C., S.D. Ohio (Columbus), Doc. 70-58, Cellucap Manufacturing Company v. Paperlynen Company.

2,841,056, L. D. Hincer, PAPER EDGE FLARING MACHINE, filed Dec. 12, 1969, D.C., E.D. Mo. (St. Louis), Doc. 69C438(3), Howard F. Hincer and Custom Paper Products v. Robert A. Smiley and Ward Paper Box Co.

2,877,910, F. E. Nelson, CONTAINERS AND ELEVATING AND DUMPING APPARATUS THEREFOR FOR LOAD-CARRYING VEHICLES, filed Dec. 11, 1969, D.C., N.D. Tex. (Dallas), Doc. CA-3-3545-B, Pak-Mor Mfg. Co. v. The City of Farmers Branch.

2,896,857, G. R. Tompkins, WASHING APPARATUS, filed Sept. 30, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c1804, Malsbury Mfg. Co., G. R. Tompkins and Rezarc, Inc. v. Ald, Inc. Judgment, Tompkins owner of patent. Judgment on the counterclaim is entered for the plaintiffs with prejudice. Defendant has infringed claim 5 of plaintiffs' patent. Fifteen days after entry of this judgment, a writ of perpetual injunction shall issue to defendant, Mar. 18, 1970.

2,933,344, H. W. Shumaker, WIND DEFLECTORS, filed Mar. 19, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-578-HP, Hugh W. Shumaker v. Superior Industries, Inc. et al.

2,936,890, P. Tashman, TRAY OR PAN CABINETS, filed Mar. 17, 1970, D.C., S.D. Fla. (Miami), Doc. 70-344-C-WM, Precision Metal Products, Inc. v. Brunor, Inc.

2,953,354, E. B. Williams, Jr., DRILL BIT, filed Jan. 17, 1969, D.C., N.D. Tex. (Dallas), Doc. 3-2957-A, Williams Bit & Tool Company v. American Coldset Corporation. Defendant has infringed patent and is finally enjoined. Defendant's counterclaim dismissed with prejudice, Mar. 18, 1970.

3,004,346, M. C. A. Quenot, STEEL TAPE FOR MEASURING INTERNAL DIMENSIONS, filed July 7, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c1416, Etablissements Quenot & Cie v. Sears, Roebuck & Co. Defendants motion to transfer this cause to the Federal District Court for the District of Columbia pursuant to 28 U.S.C. Section 1404, granted, Nov. 28, 1969.

3,013,189, G. W. Traver, METHOD OF CONDITIONING POLYETHYLENE SURFACES FOR THE ADHESION OF MATERIALS COATED THEREON AND RESULTING PRODUCT, filed May 29, 1968, D.C. Del. (Wilmington), Doc. 3555, E. I. du Pont de Nemours and Company v. Extrudo Film Corporation. Complaint and counterclaim dismissed with prejudice, Jan. 14, 1970.

3,046,905, F. Van Gorp, WING PULLEY BELT GRIPPING DEVICE, filed Mar. 18, 1970, D.C., M.D. Fla. (Ocala), Doc. 70-4-C, Van Gorp Manufacturing, Inc. v. Townley Industrial Plastics, Inc.

3,047,198, Levine and Phillips, GARMENT HANGER, filed Sept. 20, 1967, D.C., E.D.N.Y. (Brooklyn), Doc. 67-C-900, Bernard Plastics Molding Corp. v. Mr. Hanger, Inc. Consent judgment for injunction filed, Feb. 4, 1970.

3,093,487, Jones, Tracy and Deffenbaugh, EGG PRODUCTS AND PROCESSES FOR PREPARING SAME; 3,113,872, Jones and Johnson, METHOD OF TREATING SHELLS EGGS, filed Mar. 5, 1970, D.C. Nebr. (Omaha), Doc. 03479, Milton G. Waldbaum Company v. Roberts Dairy Company.

3,105,748, W. Stahl, METHOD AND SYSTEM FOR DRYING GAS AND RECONCENTRATING THE DRYING ABSORBENT, filed Mar. 4, 1970, D.C., W.D. Mo. (Kansas City), Doc. 18161-3, Combustion Engineering, Inc. v. Black, Sivalls & Bryson, Inc.

3,113,872. (See 3,093,487.)

3,136,248, J. R. Anderson, PROCESS AND APPARATUS FOR TEMPORARILY INDICATING CORRECTIONS IN TEXT OF PRINTED MATTER, filed Mar. 11, 1970, D.C., N.D. Ill. (Chicago), Doc. 70c584, La Salle Street Press, Inc. v. Twentieth Century Press, Inc.

3,164,933, A. Labowsky, GRINDING WHEEL, filed Mar. 19, 1970, D.C.N.J. (Newark), Doc. 321-70, Diamond Productions, Inc. and Dorothy Labowsky v. Associated Diamond Products, Inc. et al.

3,170,275, Rohdin and Rohdin, MEANS FOR HEAT SEALING LIDS ON BLISTERS, filed May 26, 1965, D.C., S.D.N.Y., Doc. 65-C-1617, Packaging Industries Ltd., Inc. v. Accurate Steel Rule Die Mfgs., Inc. Stipulation and order, action discontinued, Mar. 11, 1970.

3,191,767, R. P. Glowiak, INDEX TAB CARD CONVERTERS, filed Sept. 26, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c1778, Business Forms Finishing Service, Inc. v. Palmer A. Carson and Henry Kovach, doing business as Pull-A-Part Business Forms. Judgment order, defendants Palmer A. Carson and Henry Kovach and all those in privity with them are hereby held jointly and severally liable for infringement of claims 1 and 8 of the patent and enjoined. Defendants' first and second counterclaims are dismissed with prejudice, Mar. 5, 1970.

3,415,066, P. M. Trainor, LOCKING BAYONET CONNECTOR SECUREMENT, filed Aug. 18, 1969, D.C., N.D. Ill. (Chicago), Doc. 68c1719, Patrick M. Trainor, Shapiro, Levine & Crane (John E. Rosenquist, trustee for benefit of Patrick M. Trainor and Shapiro, Levine and Crane) v. Fort Lock Corporation. By stipulation, dismissed with prejudice, Mar. 4, 1970.

3,423,149, H. N. Braunhut, ADJUSTABLE POLARIZING EYEGLASSES, filed Oct. 20, 1969, D.C. Mass. (Boston), Doc. 69-1111-C, Honey Toy Industries, Inc. v. Bandwagon, Inc. and John B. Crawford. Dismissed by stipulation with prejudice concerning the issue of infringement, without prejudice as to the issue of validity of patent, Mar. 20, 1970.

3,450,060, Adams and Davis, TROLLY SPACING DEVICE, filed Mar. 18, 1970, D.C. Kans. (Wichita), Doc. W-4336, Lowell K. Adams, Albert D. Davis and Kenneth Monfort v. National Beef Packing Company.

3,474,553, G. E. Moore, Sr., FABRIC SPREADING AND FEEDING MACHINE, filed Nov. 6, 1969, D.C., S.D. Fla. (Miami), Doc. 69-1294-WM, R. L. Sjostrom Company v. Jensen Machinery, Inc. Complaint is dismissed without prejudice, Feb. 12, 1970.

3,481,268, Price, Szilagyi and Quinto, GARBAGE COMPACTOR, filed Mar. 2, 1970, D.C.N.J. (Newark), Doc. C-248-70, International Patents & Development Corp. v. Resources Control Corp. et al.

3,489,154, Kaspar and Ambrose, COMPOSITE SHEET MATERIAL AND GARMENTS MADE THEREFROM, filed Jan. 13, 1970, D.C. Conn. (New Haven), Doc. 13642, International Playtex Corporation v. Bontec Corp., The Howland-Hughes Company.

DEFENSIVE PUBLICATIONS

PUBLISHED JUNE 2, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O.G. 687. The abstracts of Defensive Publication applications are identified by distinctly numbered series and are arranged chronologically. The heading of each abstract indicates the number of pages of specification, including claims and sheets of drawings contained in the application as originally filed. The files of these applications are available to the public for inspection and reproduction may be purchased for 30 cents a sheet.

Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

T875,001 TEXTILE FIBER FINISH CONTAINING BIOCIDE AND FUNGICIDE

Robert Tilden Burrus and Neil Lamar Finch, Sr., Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 27, 1968, Ser. No. 763,395

Int. Cl. D06m 13/34, 13/28

U.S. Cl. 252-8.8

No Drawing. 17 Pages Specification

Fibers having on their surfaces a lubricating composition comprising a finish base and an effective amount of 2,2'-thiobis-(4,6-dichlorophenol) bactericide, and 3,5-dimethyltetrahydro-1,3,5,2H-thiadiazine-2-thione fungicide resist fungus and bacteria, discoloration, oxidation and abrasion in processing. The finish base is a wax with an oil carrier; the following is a preferred finish base formation:

	Parts
Refined coconut oil	68.2
Polyoxyethylene/sorbitol tetraoleate/aurate	20.0
Polyoxyethylene/sorbitol septaoleate	10.0
Orthophenylphenol	1.8
No. 50 white oil	350.0
Aluminum monopalmitate	8.0
Oxidized polyethylene (2500 M.W.)	40.0
2,2'-thiobis(4-methyl-6-tertiary butyl phenol)	2.0

The bactericide and fungicide are effective in amounts of about 0.25% each by weight of the finish base. The invention is particularly useful for fibers used in making ropes.

T875,002 SYNERGISTIC INSECTICIDAL COMPOSITIONS AND METHOD OF USE

Ronald Eugene Montgomery, Middleport, and Harry Hobart Incho, Medina, N.Y., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

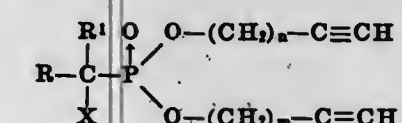
Filed Nov. 15, 1968, Ser. No. 776,247

Int. Cl. A01n 9/02, 9/24, 9/36

U.S. Cl. 424-219

No Drawing. 12 Pages Specification

Synergistic insecticidal combinations of esters of chrysanthemic acid, for example pyrethrins, allethrin, and (1-cyclohexene-1,2-dicarboximido)methyl chrysanthemumate, with certain di-alkynyl haloalkylphosphonate synergists, are described. These synergists have the general formula:



wherein X is halogen; R and R¹ are each hydrogen, halogen, lower alkyl or halogenated lower alkyl; and n and m

are each integers from one to four inclusive. The preparation of representative compounds of this class of di-alkynyl haloalkylphosphonates, for example di-3-butynyl chloromethylphosphonate, and the synergistic activity of said phosphonate with representative chrysanthemumate insecticides, are described in detail.

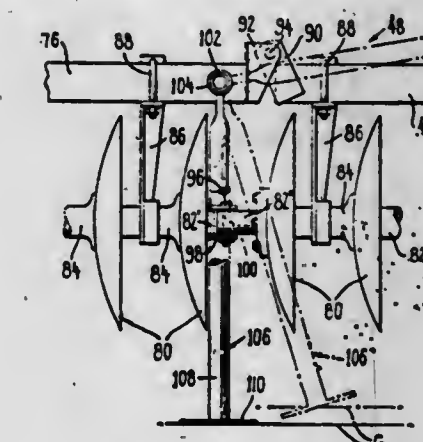
T875,003 FOLDING FRAME IMPLEMENT Clarence B. Richey, Royal Oak, Mich., assignor to Massey-Ferguson Inc., Detroit, Mich., a corporation of Maryland

Filed June 18, 1969, Ser. No. 834,259

Int. Cl. A01b 63/00

U.S. Cl. 172-456

3 Sheets Drawing. 8 Pages Specification



A disc harrow comprises a rectangular frame and pairs of front and rear gangs having discs 80. A foldable wing such as 76 is provided at the end of each gang such as 48 to enable folding to a narrower dimension for transport. Each wing is pivotally connected at 94 to the gang frame member 40 and its axle 82' has a removable pin connection 96 to the frame axle 82". Each wing is provided with a leg 106 which is pivoted at 102 to its frame member 76 at a distance spaced from the wing pivot point 94. The legs are moved from an elevated substantially horizontal phantom line stored position to a depending solid line ground engaging position so that, upon subsequent removal of pin 96 and lowering of the disc harrow, the legs will force the wings to pivot up to a near-vertical position. From this position each wing may be carried over-center manually or by inertia if lowering is quick enough. However, the preferred mode of moving each wing over center is by further lowering the disc harrow. To accomplish this, the legs 106 must depend below the

bottoms of discs 80 a distance greater than the sum of the distance between pivots 94 and 102 and the vertical distance each pivot 102 lies below pivot 94 in the unfolded position shown. Upon going over center each wing is held in an intermediate position by the leg. Raising of the disc harrow will cause the leg to gently lower the wing into its folded position for travel. Unfolding of the wing is accomplished in a like manner and the phantom line position 106" of the leg illustrates how the leg controls the descent of the wing to the illustrated unfolded position.

T875,004
REGENERATION OF CHROMATOGRAPHY SUPPORT

Donald E. Linder, 1708 NE. Woodlands,
Ponca City, Okla. 74601

Filed Sept. 22, 1969, Ser. No. 860,075

Int. Cl. F26b 3/06

U.S. Cl. 34—30

No Drawing. 4 Pages Specification

Solid particulate support material, which is coated with a waxy or liquid substrate for use in separating mixtures by gas-liquid chromatography, is regenerated for re-use by thermal treatment.

T875,005
TONER COMPOSITION FOR DEVELOPING ELECTROSTATIC IMAGES
George L. Beyer, Webster, and Raymond J. Rauscher,
Rochester, N.Y. (both of Kodak Park Works, Rochester, N.Y. 14650)

Filed Dec. 4, 1969, Ser. No. 882,325

Int. Cl. G03g 9/02

U.S. Cl. 96—1

No Drawing. 11 Pages Specification

Toner particles for use in developing electrostatic charge patterns are comprised of about 1 to 20% by weight of a colorant and from about 99 to 80% by weight of a thermoplastic binder component containing a polyamide resin having a sharp melting point and a modifying resin which can be a rosin, a rosin ester, a halogenated polyphenyl resin, a coumarone-indene resin and mixtures. The polyamide comprises about 30 to about 50% by weight of the binder component and the remainder is comprised of one or more modifying resins. The toner particles have a sharp softening point within the range of about 70 to 125° C. a melt viscosity between about 60 and 600 poise and an average particle size of about 1/2 to 30 microns. Developer compositions are formed by admixing about 1 to 10% by weight of toner particles with about 99 to 90% by weight of carrier particles. Suitable carriers include magnetic materials such as iron particles as well as non-magnetic materials such as glass beads.

PATENTS

GRANTED JUNE 2, 1970

GENERAL AND MECHANICAL

3,514,784
PROTECTIVE FOOTBALL APPARATUS

Robert F. McDavid, 1438 S. 6th St.,

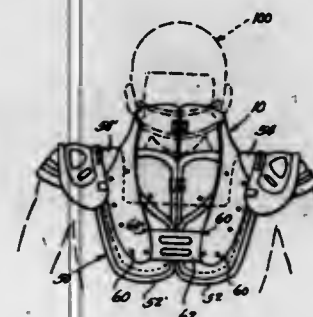
Terre Haute, Ind. 47809

Filed Feb. 7, 1969, Ser. No. 797,599

Int. Cl. A41d 13/00

U.S. Cl. 2—2

9 Claims



Apparatus for connection on the shoulder harness of a football player for extension and confrontation of the cervical spine to brace and prevent injuries to the cervical spine and head from whiplash.

3,514,786
PROTECTIVE GARMENT

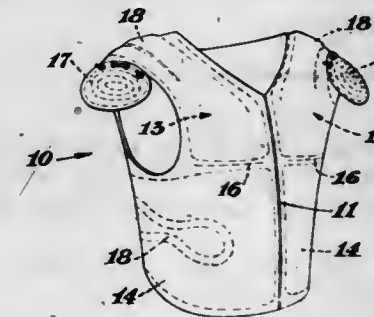
Al G. Terwilliger, 44 W. Palmer, Detroit, Mich. 48202

Filed Feb. 6, 1968, Ser. No. 703,288

Int. Cl. F41h 41/02

U.S. Cl. 2—2.5

5 Claims



A vest-like garment for the protection of the upper torso is disclosed. In the preferred embodiment protection is achieved by sewing selectively contoured plastic parts backed by elastomeric padding between the fabric layers of a vest-like garment.

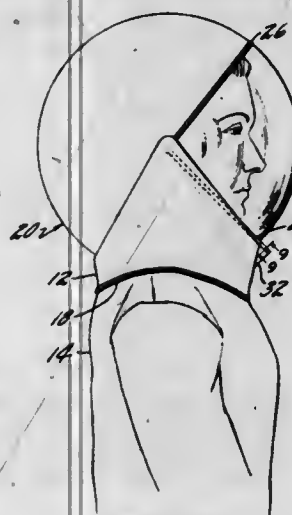
3,514,785
EMERGENCY SPACE-SUIT HELMET
Harvey A. Smith, Hampden, Mass., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 24, 1966, Ser. No. 529,884

Int. Cl. B63c

U.S. Cl. 2—2.1

8 Claims U.S. Cl. 2—3



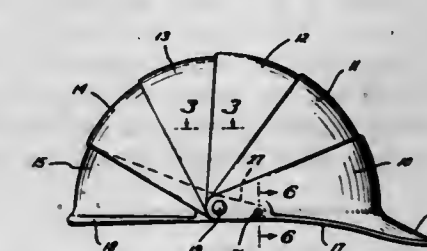
A frusto-conically shaped distensible member when inflated encircles a portion of the wearer's head and carries a collapsible member automatically extending over the remaining portion of the head and engages a seat formed by a surface of the distensible member. A pulley arrangement secured between the walls of the distensible member automatically extends and retracts the collapsible member. The unit when deflated is carried on the back of the wearer so as to provide an automatic emergency space-suit helmet.

3,514,787
COLLAPSIBLE PROTECTIVE HAT
Alvin B. Kennedy, Jr., 1802 Meadowview,
Alvin, Tex. 77511

Filed June 24, 1968, Ser. No. 739,385

Int. Cl. A42b 1/02

2 Claims



A protective or so-called hard hat is made up of a plurality of arcuate segments pivoted together at their ends and provided with complementary stop and latching elements so that the segments can be expanded into relatively stable hat shape and collapsed into a compact interesting configuration so as to be readily carried or stored in a briefcase or valise or even in a coat pocket.

3,514,788
BEAUTY CARE PROTECTIVE GARMENT
Betty Miller, 177 Du Bois, West Deptford,
Woodbury, N.J. 08097

Filed Dec. 31, 1968, Ser. No. 788,207

Int. Cl. A41d 3/04

U.S. Cl. 2—87

4 Claims

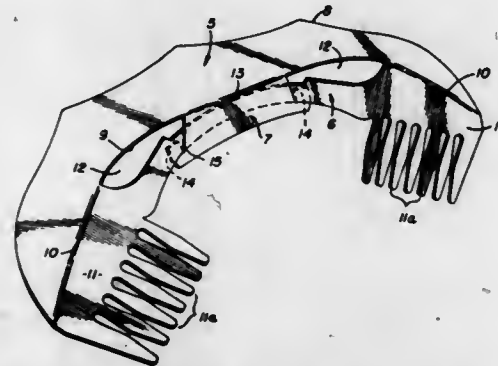
A garment of liquid impervious flexible sheet material having a body covering part and arm covering sleeves, the body covering part having a resiliently contractile collar

for snug engagement about a wearer's neck, the sleeves having resiliently contractile cuffs for snug engagement



3,514,789
SELF-ERECTING, DISPOSABLE HEADRESS
Edmund J. De Villers, Upper Arlington, Ohio, assignor to Papertynen Company, Columbus, Ohio, a corporation of Ohio
Filed Sept. 20, 1968, Ser. No. 761,215
Int. Cl. A42b 1/02
U.S. Cl. 2—198

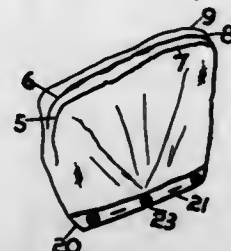
2 Claims



A self-erecting headress for waitresses, nurses and feminine service personnel formed from an integral blank of paper, or other readily disposable, flexible sheet material, and constructed to provide a generally upstanding, crown-forming panel, a headband strip having comb-like anchoring tabs, and a locking flap connected between the crown-forming panel and the headband strip and arranged to hold the crown-forming panel and headband strip in longitudinally bowed, relative angular relationship.

3,514,790
SIMULATED POCKET HANDKERCHIEF
William Paul Harvey, Arab, Ala., assignor to Paul Harvey Ltd., Inc., Arab, Ala., a corporation of Alabama
Filed Sept. 25, 1968, Ser. No. 762,507
Int. Cl. A41b 15/00
U.S. Cl. 2—279

8 Claims

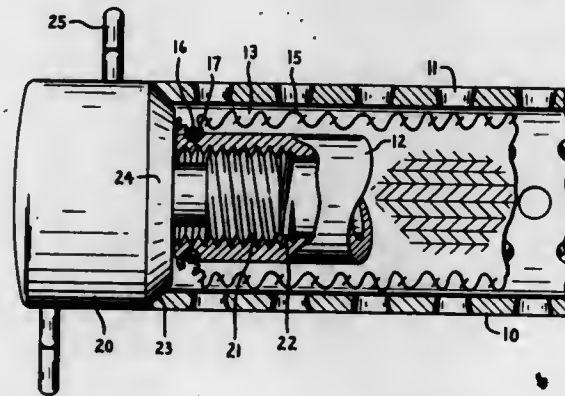


Discloses a simulated pocket handkerchief designed for use in the breast pocket of men's jackets, consisting of a decorative fabric puff containing a plurality of accordion pleats at the top and a stiffened foundation portion at the bottom, said decorative fabric puff being secured

to a rigid pocket support member which in a preferred embodiment is vertically adjustable to compensate for differences in the depth of jacket pockets.

3,514,791
TISSUE GRAFTS
Charles H. Sparks, 3725 SE. Martins St.,
Portland, Oreg. 97202
Filed July 25, 1967, Ser. No. 655,838
Int. Cl. A61f 1/22, 1/24
U.S. Cl. 3—1

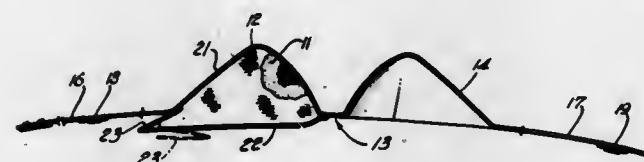
19 Claims



Method and apparatus for growing a graft structure, particularly in a patient's own body. A perforated die of suitable shape to mold the desired structure is implanted in the patient's body. Cloth reinforcing material is placed in the die. Connective tissue grows into the die through the perforations and encapsulates the cloth, filling the die cavity. The die may be seeded with cells to make special parts, periosteal cells being used to make bones and epithelial cells being used to make epithelial tissue. The dies may be shaped to form relatively simple parts such as tendons and tubes and also more complex parts such as complete tricuspid heart valves.

3,514,792
BUST FORM
Ruth Freedman, 233 W. 77th St.,
New York, N.Y. 10024
Filed Sept. 5, 1968, Ser. No. 757,731
Int. Cl. A41c 3/10
U.S. Cl. 3—36

8 Claims



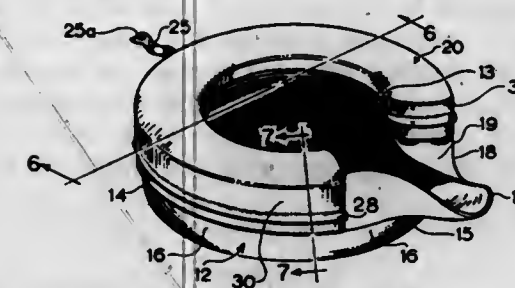
Artificial female bust form and structure thereof removably positioned in a brassiere or the like for simulating natural bust contour after breast surgery.

3,514,793
MULTI-PURPOSE CUSHIONED SEAT
Gail West, Ferguson, Mo. (9953 Halls Ferry Road,
St. Louis, Mo. 63136)
Filed Apr. 12, 1967, Ser. No. 630,231
Int. Cl. A61g 9/00
U.S. Cl. 4—113

3 Claims

My invention resides in a releasing means for a plurality of spaced suction cups provided integrally with the bottom planar face of a cushioned seat adapted for use with a bedpan seat, whereby said releasing means serves both to obviate contamination with said seat following the use thereof, and to support said seat in space for drip drying

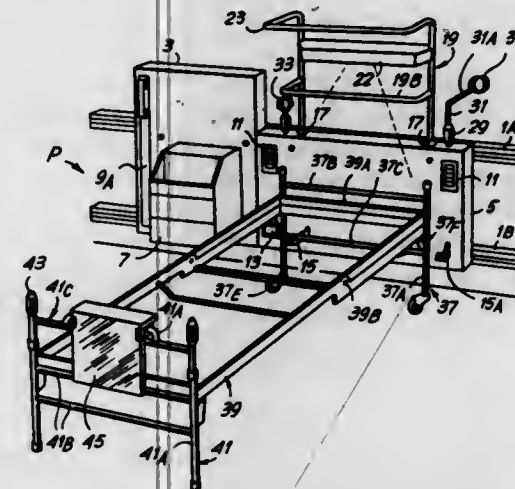
following a sanitation bath, whereby said seat in itself will not be subjected to contamination, during the process-



ing of a plurality thereof, as generally is practiced in hospitals and nursing homes.

3,514,794
BED UNITS
Giancarlo Pofferi, Pistola, Italy, assignor to Ital-Bed
Costruzione Lettie e Affini S.r.l., S. Pierino, Pistola,
Italy, an Italian corporate body
Filed Aug. 12, 1968, Ser. No. 752,013
Int. Cl. A47c 17/40; A47b 83/00
U.S. Cl. 5—2

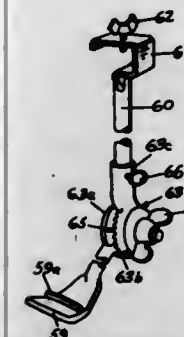
7 Claims



A hospital bed unit includes a panel mounted on two horizontal channels containing electrical conductors and fluid conduits. Sockets and control apparatus mounted on the panel are connected to the electrical conductors and fluid conduits. A foot operated hook mounted on the panel can engage one of the lower cross-beams of a bed and so lock the bed to the panel. Both bed and panel are provided with a variety of clamps to secure various accessories to the bed and panel.

3,514,795
HOSPITAL BED
Harriet B. Howes Beeman, Norwood, Ohio
(4034 Montgomery Road, Cincinnati, Ohio 45212)
Filed May 26, 1967, Ser. No. 641,511
Int. Cl. A47c 21/00
U.S. Cl. 5—327

21 Claims

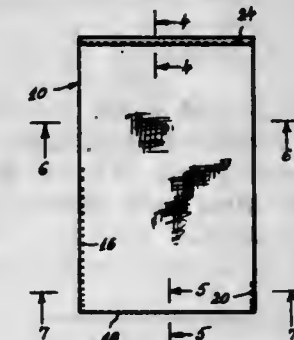


A hospital bed for a patient suffering from a disease or accident affecting large areas of the body comprising a

head member, a foot member, and side and top members extending therebetween. Adjustable means on said head, foot, side and top members to which individually adjustable means may be affixed for supporting a patient at unaffected areas of the body.

3,514,796
BEDCLOTHES
Elizabeth Dillroll, 939 Graydon Ave.,
Norfolk, Va. 23705
Filed Oct. 12, 1967, Ser. No. 674,843
Int. Cl. A47g 9/00
U.S. Cl. 5—334

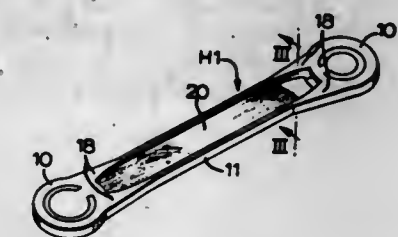
7 Claims



Bedclothes capable of being conveniently carried by a traveler and inserted between the sheets of a bed found in a motel, hotel or the like in order to protect the traveler. The bedclothes consist of a pair of superposed sheets attached to each other along part of one long edge and open at one side and at one end. The attached sheets serve as a sleeping bag.

3,514,797
MATTRESS HANDLE
Milton Zyman, Toronto, Ontario, Canada, assignor, by
mesne assignments, to Convex Limited, Nassau Baha-
mas, a Bahamian company
Filed Mar. 21, 1968, Ser. No. 714,965
Int. Cl. A47c 23/00; A47b 95/02
U.S. Cl. 5—345

7 Claims



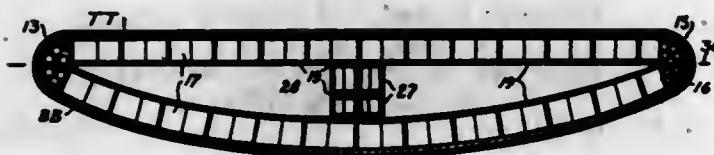
A decorative mattress handle comprising an ornamental strip mounted between the terminals of an elongated plastic handle to enhance the appearance thereof.

3,514,798
SURF-BOARD CONSTRUCTION AND METHOD OF MAKING SAME
Robert Ellis, 350 Lomas Santa Fe Drive,
Solana Beach, Calif. 92075
Filed Feb. 1, 1968, Ser. No. 702,280
Int. Cl. A63c 15/02
U.S. Cl. 9—310

4 Claims

A surf-board in which the outer shell or skin is composed of solidified laminating polyester resin onto which, while the resin is still moist, is pressed a sheet of glass cloth which is then impregnated with the same resin. This occurs on the interior surface of each half of a mold having the configuration of the surf-board when mold is closed and onto this moist shell is pressed and secured thereto by adhesion a sheet of honey-comb material such as kraft liner board impregnated with a thermosetting

phenolic resin. This honey-comb sheet can be bent quite sharply in one direction and is thus made to fit in place within the curvatures of the mold, the inner edges of the honey-comb adhering to the moist impregnated glass cloth while a skin or sheet of suitable paper or other suitable material is glued to the outer surfaces of the

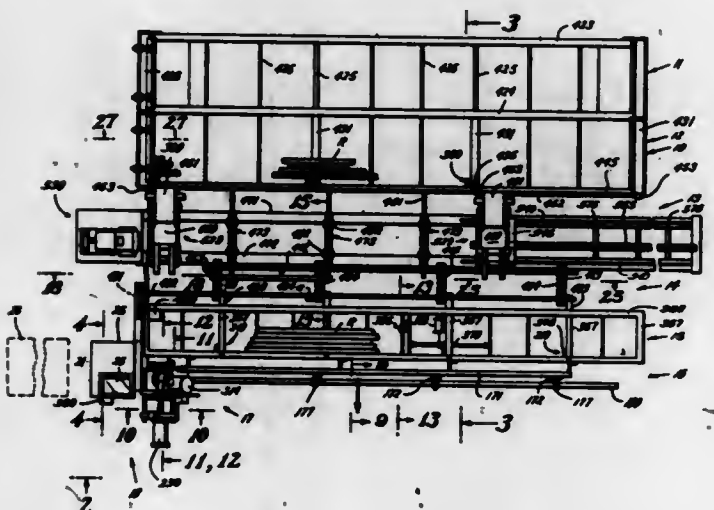


honey-comb material, and when hardened, a very rigid light-weight panel results permitting a considerable air space within the surf-board. Narrow parts of the surf-board may first be filled with hollow plastic balls, etc. first sprayed with polyester resin as a binder, to secure them together and to the sides of the surf-board.

3,514,799

METHOD AND APPARATUS FOR HANDLING, PREPARING AND FEEDING RODS FOR A THREAD FORMING MACHINE

James A. Houser, Houston, Tex., assignor to Standco Industries, Inc., a corporation of Texas
Filed Mar. 8, 1968, Ser. No. 711,623
Int. Cl. B21k 27/04; B23g 1/52, 11/00
U.S. Cl. 10-162 28 Claims



A rod feed trough is aligned with a washing or cleaning apparatus for conducting rods thereto to clean them prior to passing them through a thread forming machine. Adjacent the rod feed trough is a secondary magazine for supplying rods, one at a time, to the trough. Switch means are provided for actuating ejector means to eject the rods, one at a time, from the secondary magazine to the trough; for positioning dampening movement means adjacent the trough to inhibit undesired movement of the rod when it is in the trough and for moving the dampening means to accommodate reception of each rod into the trough.

As each rod is ejected into the trough from the secondary magazine, additional switch means actuates a spinning mechanism which engages the rod in the trough and imparts rotation thereto as well as longitudinal movement to move it into the washing apparatus.

Also, as each rod is ejected from the secondary magazine into the rod trough, switch means is actuated to eject a rod from a primary magazine into vice means which hold it while at least one end of the rod is chamfered.

After the rod is chamfered, the chamfering mechanism is first withdrawn from contact with the rod, the vice means opened, and the chamfered rod moved to the secondary magazine to replace a rod as one is ejected from the secondary magazine into the rod trough. When this occurs, switch means is actuated to place the ejector means on the primary magazine in position to thereafter eject a rod to the chamfer mechanism when another rod is ejected from the secondary magazine into the rod feed trough.

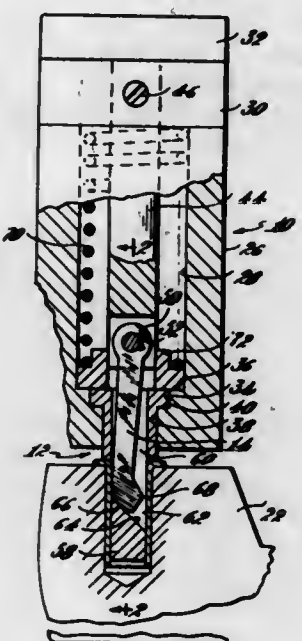
3,514,800

THIMBLE SETTER

John M. Famigliette, 630 Plain St.,
Stoughton, Mass. 02072
Filed Apr. 2, 1969, Ser. No. 812,788
Int. Cl. A43d 00/00

U.S. Cl. 12-1

8 Claims



A holder containing an axial hole within which is pivotally supported a punch bar and a spindle telescopically mounted in the hole in the holder for movement relative to the punch bar, said spindle being adapted to fit snugly into a thimble and containing an axial slot through which the punch bar extends and a lateral opening through which the punch bar is adapted to be displaced by relative movement of the support and spindle to cause the punch bar to make a depression in the wall of the thimble.

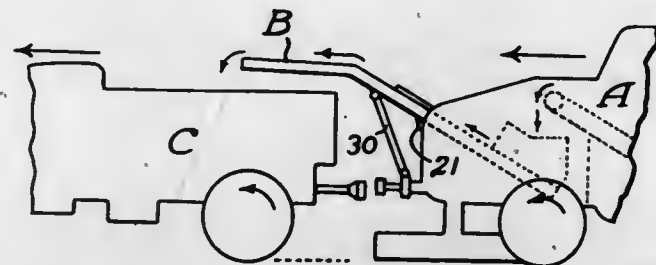
3,514,801

PICK-UP HIGHWAY SWEEPER AND CONVEYOR ASSEMBLY

Charles H. Ralmer, Central Point, Oreg., assignor to Guthrie Machinery Company, Portland, Oreg., a corporation of Oregon
Filed Sept. 16, 1968, Ser. No. 762,285
Int. Cl. E01g 1/02

U.S. Cl. 15-84

4 Claims



A sweeper having a chassis, a debris receiving hopper, a rotatable broom and a debris conveyor leading into the hopper, and a conveyor assembly associated with

the sweeper and interposed between the hopper of the sweeper and its conveyor in order to permit the bypassing of the hopper and allow the debris being swept up by the broom to be conveyed directly into a debris hauling vehicle.

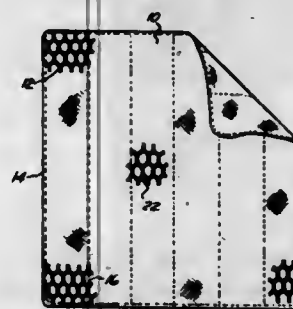
3,514,802

WASH ARTICLE

Delta Lee Keech, 21286 Pickford, Detroit, Mich. 48219
Filed May 31, 1968, Ser. No. 733,555
Int. Cl. A47l 17/00

U.S. Cl. 15-118

1 Claim



This invention relates to a washcloth having nylon mesh stitched thereto. The nylon mesh comprises multiple strands of nylon, braided together into a pattern of small hexagons. The mesh is secured to the washcloth by means of parallel lines of stitching and stitches around the border of the cloth. The mesh provides an excellent scrubbing surface. The article is grasped by the cloth section during the scrubbing operation.

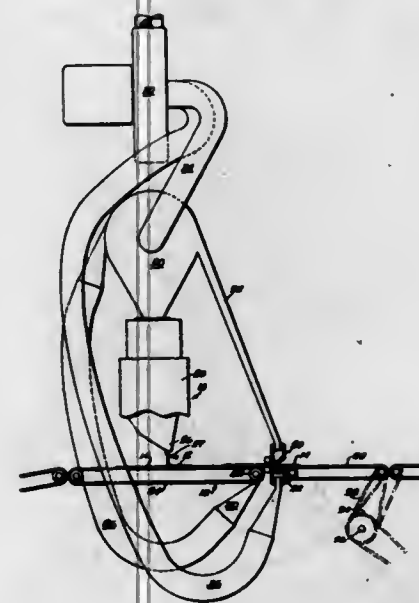
3,514,803

APPARATUS TO SELECTIVELY REMOVE POWDER FROM COATED SHEET MATERIAL

Eugene T. Turney, Jr., 1112 S. North Lake Drive,
Hollywood, Fla. 33021
Filed June 5, 1967, Ser. No. 643,615
Int. Cl. A47l 5/00

U.S. Cl. 15-306

7 Claims



Apparatus for and process of removing excess powder from the face surfaces of sheets which have been treated by selectively coating certain face areas with a material to hold a film of powder thereon; the sheets having a

layer of powder thereover are moved in a plane of travel between opposed elongate vacuum nozzles, one of the nozzles providing a vacuum force to lift free powder from the powdered face surfaces of the sheets to remove the excess, and the other and opposed nozzle providing a vacuum force of balance on the underside or unpowdered surface of the sheet to resist lifting of the sheet and maintain the sheets in their plane of travel.

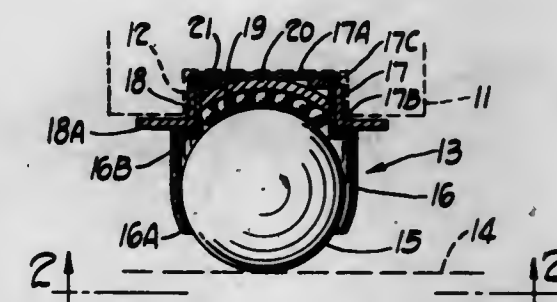
3,514,804

BALL CASTER AND METHOD OF MAKING THE SAME

George J. Hoffman, Northfield, William O. Settle, Independence, and Lester E. Law, North Royalton, Ohio, assignors to Kendale Industries, Inc., Independence, Ohio, a corporation of Ohio
Filed Nov. 7, 1968, Ser. No. 774,031
Int. Cl. B60b 33/00

U.S. Cl. 16-26

7 Claims



A ball-type caster having a load-carrying ball, a plurality of smaller back-up balls in rolling engagement therewith, and an assembly of sleeve member, cup member, annulus, and disc member carrying said balls in position.

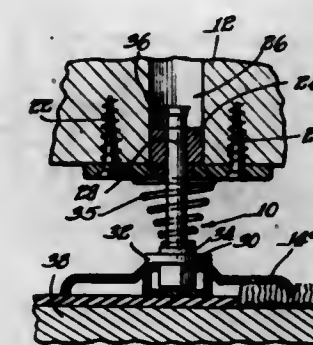
3,514,805

GUIDE CHANNEL FOLLOWER DEVICE

Robert E. Foltz, Sterling, Ill., assignor to Lawrence Brothers, Inc., Sterling, Ill., a corporation of Illinois
Filed Feb. 5, 1968, Ser. No. 702,916
Int. Cl. E05d 13/02

U.S. Cl. 16-90

6 Claims



The present invention relates to improvements in guide channel follower devices for use in association with the margin of a slidable panel, as for example the lower edge of a door panel adapted to be shifted along a guide channel. An embodiment of the invention disclosed in this application consists of a plate-like fitting adapted to be fastened as by screw fasteners to the lower edge of a door panel, the central portion of said plate-like fitting having a bearing or bushing extending upwardly therefrom and insertable within a complementary aperture of the lower

margin of the panel. A shank member is longitudinally slidable within the bearing, the outer or projecting portion of the shank supporting a follower member such as a roller. Encircling the shank and positioned between the roller and the plate member is a spring biased in compression so as to continually urge the roller downwardly, whereby to maintain continuous proper registration of the roller with the channel of a guideway or track.

3,514,806

GUIDE FOR TRAVELLING CURTAINS

Gerardo Klein, Calle Escorial 133, Barcelona, Spain

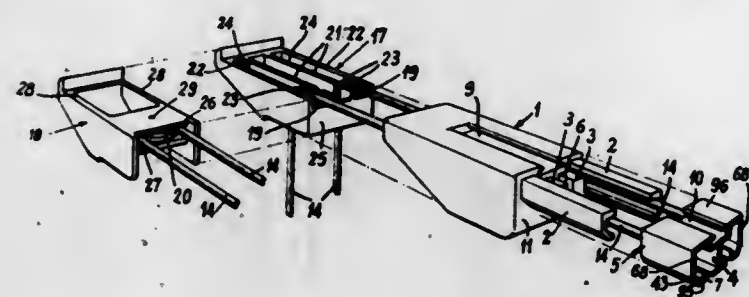
Filed Dec. 20, 1968, Ser. No. 785,695

Claims priority, application Spain, Jan. 5, 1968, 135,482; Jan. 8, 1968, 135,495; Jan. 26, 1968, 136,112; Feb. 23, 1968, 136,963

Int. Cl. A47h 5/032, 13/10

U.S. Cl. 16—94

19 Claims



The present invention relates to a guide for sliding curtains which comprises at least a hollow shaped track, on which slide the devices for hanging the curtains and the devices for their crossing, supported by holding parts mounted on supports that can be attached to walls or ceilings, and each provided at its ends with terminals carrying guiding pulleys and a pulley for the return of the driving cord.

3,514,807

HINGE CONSTRUCTION

Lee Triplett, 2878 South 8600 West,

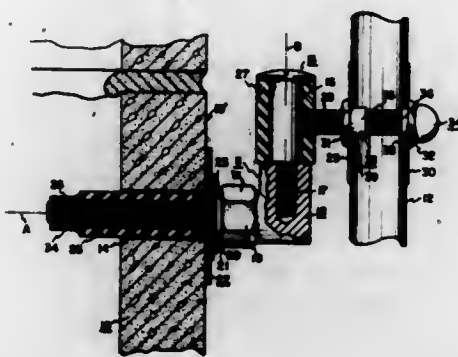
Salt Lake City, Utah 84121

Filed Aug. 5, 1968, Ser. No. 750,363

Int. Cl. E05d 5/02

U.S. Cl. 16—158

8 Claims



The present invention comprises a new and improved hinge construction which may be adapted for securing gates having either metal tubular frames or rectangular wood frames, by way of example. The hinges of the present invention are provided with expandable compression-lock means by which the hinges can be mounted to external walls, posts, and so forth. The hinge is specially constructed as regards bearing surfaces provided so that the hinge may be easily secured in place in blind apertures, bores, and so forth.

3,514,808
APPARATUS FOR DISCONNECTING THE COMPONENTS OF COMPOSITE FOOD PIECES

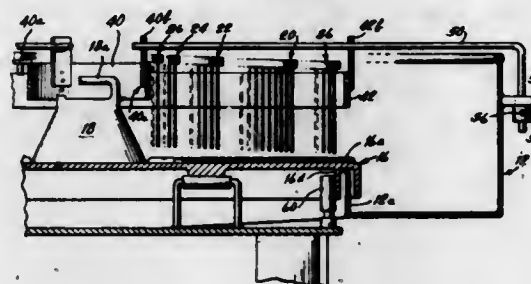
Cyrus A. Alldred, Jr., and Lucas J. Conrad, Winston-Salem, N.C., assignors to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

Continuation-in-part of application Ser. No. 603,484, Dec. 21, 1966. This application Oct. 31, 1967, Ser. No. 679,326

Int. Cl. A22c 17/00

U.S. Cl. 17—1

8 Claims



Composite food pieces, for example, meat clinging to bone and the like, are fed into the center of a rotating disk. The disk is provided with a plurality of radial ribs and a tine array, in the form of a series of spirals, is mounted above the disk so that the downwardly depending tines have their tips spaced slightly above the ribs. The composite pieces, such as bony pieces of poultry carcasses, are driven centrifugally to the periphery of the disk and are there discharged. During their passage between the tines and ribs of the disk, the composite pieces are pulled apart so that the material discharged is a conglomerate or mixture of disunited fleshy portions and hard portions. The tine array, because of the spiral arrangement, acts to cause the pieces to work back in opposition to centrifugal force produced by the rotation of the disk. The tines themselves are made of stainless steel and typically are epoxy-mounted.

3,514,809

APPARATUS FOR REMOVING HEADS FROM BIRDS

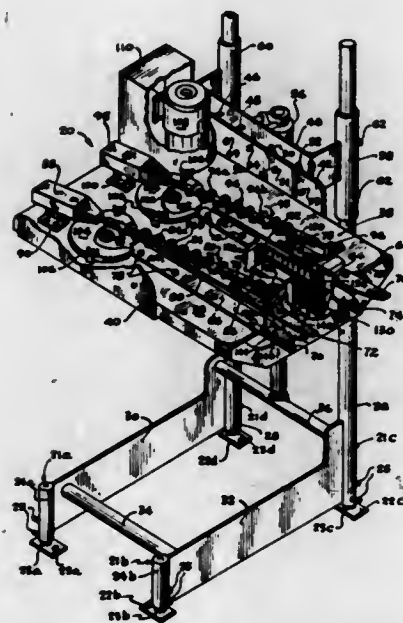
James W. Barbour, and Lawrence B. Porter, Chicago, Ill., assignors to John Mohr & Sons, Chicago, Ill., a corporation of Illinois

Filed Nov. 8, 1967, Ser. No. 681,536

Int. Cl. A22c 21/00

U.S. Cl. 17—12

8 Claims



A method and apparatus for processing poultry to remove the heads from birds wherein the pendulously supported bird is delivered to a guide means which orients

and captures the head of the bird at the base of the skull and wherein means are provided to lift the neck skin away from the skull while transporting the head toward the severing means to cut the head from the neck of the bird substantially at the base of the skull.

3,514,810

DEVICE FOR SUSPENDING OR CARRYING PIECES OF SOFT MATERIAL, ESPECIALLY CUT UP MEAT OR PORK OR SIMILAR FOOD-STUFFS

Rolf Albert Fredrik Westergren, Saltsjö-Duvnas, Sweden, assignor to Bengt Gunnar Torngvist, Nasby, Sweden

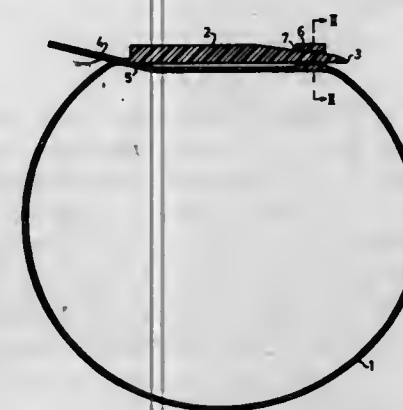
Filed Apr. 3, 1967, Ser. No. 627,736

Claims priority, application Sweden, Apr. 4, 1966, 4,514/66

Int. Cl. A22c 15/00

U.S. Cl. 17—44.2

6 Claims



The invention concerns a device for one time use by means of which cuts of meat or the like can be suspended or carried in a hygienic manner. Said device consists of a strip or string of flexible material one end of which comprises a stiff and pointed portion. Said stiff and pointed portion is meant to be forced through a part of a cut of meat, whereafter the ends of said string or strip are brought together and joined so that the strip or string forms a loop in which the cut of meat can be suspended or carried.

3,514,811

FISH ORIENTER

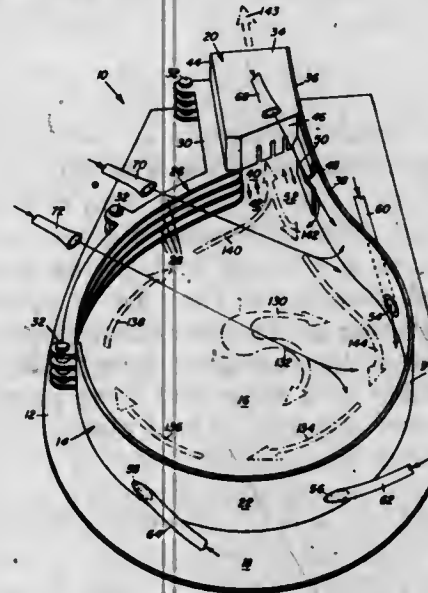
Jeffery L. West, Winchester, Mass., assignor to the United States of America as represented by the Secretary of the Interior

Filed Oct. 30, 1968, Ser. No. 771,792

Int. Cl. A22c 25/08, 25/12

U.S. Cl. 17—55

7 Claims



Apparatus singulating, uniformly heading and orienting the dorsal side of fish in which fluid jetting devices are arranged for cooperation with structure contoured to

guide and divert the fish. Jetted fluid produces a circulation stream in which randomly placed fish are urged into a single file and then carried forward to strike a surface deflecting the fish into a jet mechanism wherefrom head-first fish are ejected, and tail-first fish are rejected to the circulation stream. Ejected fish are further propelled into a partially semi-circular channel which is contoured to guide singulated, uniformly headed fish it receives into turning to a uniform dorsal side disposition for feeding to further fish processing machinery.

3,514,812

APPARATUS FOR MOLDING HOLLOW ARTICLES

Heinz Evers, Hamburg, Germany, assignor to Interstabella AG, Chur, Switzerland

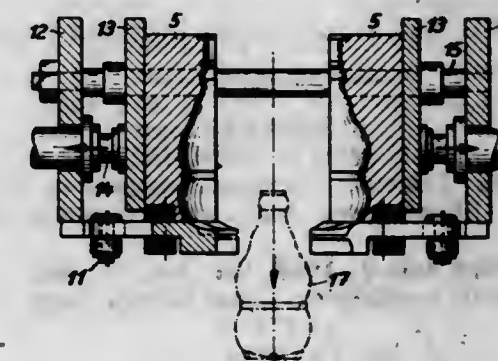
Filed July 11, 1967, Ser. No. 652,521

Claims priority, application Germany, July 12, 1966, E 23,705; Nov. 29, 1966, J 32,360

Int. Cl. B29c 17/07; B29d 23/03

U.S. Cl. 18—5

8 Claims



The apparatus for making bottles for pressurized liquids, especially for beer, from an extruded hose of plastic comprising a multipart, preferably a two-part blow mold and a bottom mold. The bottom mold consists of at least three, preferably six, bottom mold sector portions, which can be moved radially to and from a point on the longitudinal center axis of the hose. With the movement of the sector portions to the center axis the hose is squeezed together and a bottom with star-shaped welding seams and outwardly projecting ribs is formed. The ribs result from the squeezing operation and may serve as a base for the bottle which is outwardly vaulted at its underside.

3,514,813

MACHINE FOR MAKING PHONOGRAPH RECORDS

William S. Westermann, Nashville, Tenn., assignor to D.D.W., Inc., Nashville, Tenn.

Filed July 8, 1966, Ser. No. 563,877

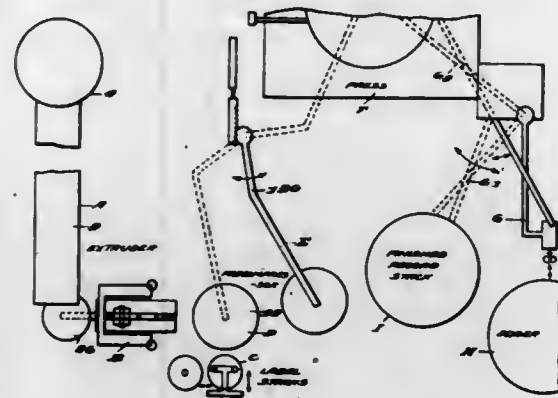
Int. Cl. B29d 17/00

U.S. Cl. 18—5.3

20 Claims

A machine for making phonograph records has a rotatable cup which is movable to a position beneath an extruder which extrudes plastic material eccentrically into the cup while the cup rotates to form an annular body. This cup is mounted on a carriage which is moved away from the extruder and which, at the furthest point from the extruder, is inverted and deposits the annular body around a pin on a receiving plate. Prior to the deposit of the annular body, a label is placed face down over the pin. After the receiving plate receives the annular body, another label is placed face up on top of the annular body. A single label feeding mechanism is used, two label holding mechanisms being moved successively beneath the label feeding mechanism. After the sandwich

is completed, the receiving plate is raised and places the sandwich against a downwardly directed surface having a central pin thereon to compress the sandwich partly. The receiving plate is then lowered, and the downwardly facing plate is swung between the two dies of a press, where



the sandwich is discharged from the plate. The record is then pressed between two dies. It is then picked up from the press and carried to an edger which removes the flashing and rounds off the edge of the record. The finished record is then transferred to a finished record stack.

3,514,814

SOLE MOLD ASSEMBLIES

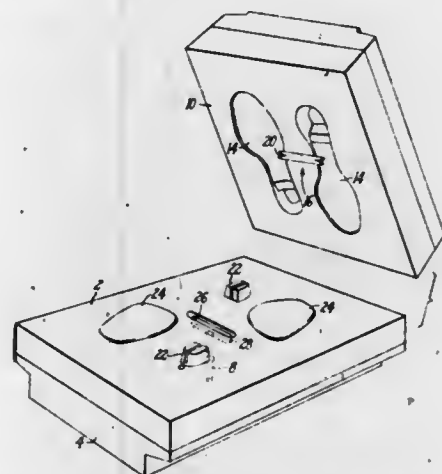
John E. Mills, Leicester, England, assignor to USM Corporation, Flemington, N.J., a corporation of New Jersey

Filed July 1, 1968, Ser. No. 741,500

Claims priority, application Great Britain, Sept. 23, 1967, 43,371/67

Int. Cl. B29c 1/00

U.S. Cl. 18—42



A sole mold assembly including first and second mold members movable relative to each other between a first position in which the mold members are separated and a second position in which the mold members are in engagement with each other. The second mold member has two recesses located side by side, each recess having the configuration of a shoe bottom unit. The second mold member is provided with a bridge portion which extends outwardly from the second mold member and which interconnects the two recesses. The first mold member has recesses or raised portions as required to complete the mold cavities to be formed when the two mold members are brought into engagement. In addition, the first mold member is provided with a sprue passage comprising a channel disposed to receive the bridging portion of the second mold member when the two mold members are in engagement. The dimensions of the bridging portion and the channel are such as to leave clearance therebetween whereby to form a passageway connecting the mold cavities with a delivery bore located in the first mold member.

3,514,815
BUNDLE TIE

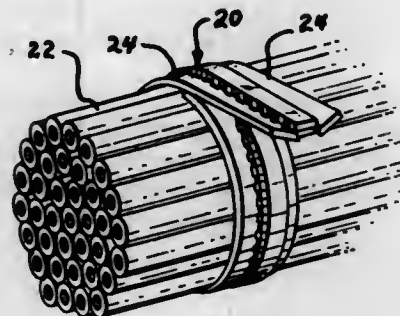
William Robert Evans, Hershey, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Filed Apr. 10, 1968, Ser. No. 720,101

Int. Cl. B65d 63/00

U.S. Cl. 24—16

5 Claims



A bundle tie is disclosed and comprises an elongated flexible strap for tying a bundle of cables or the like, the strap having a pair of laterally extending wing members having bearing surfaces for engaging the strap, and cooperable interlocking means disposed between the wing members, the interlocking means being capable of self-engagement when the strap is disposed around a bundle and caused to overlap itself. Alternative forms of interlocking means are disclosed together with alternative forms of wing members.

3,514,816

PUSHBUTTON SEPARABLE FASTENER

Masahiko Inoue, Toyota-shi, Japan, assignor to Toyota Jidosha Kogyo Kabushiki Kaisha, Toyota-shi, Japan, a corporation of Japan

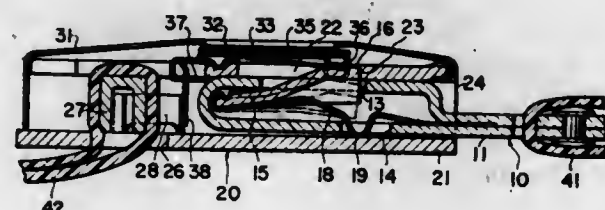
Filed Mar. 25, 1969, Ser. No. 810,235

Claims priority, application Japan, May 13, 1968, 43/31,662

Int. Cl. A44b 11/26

U.S. Cl. 24—77

5 Claims



A pushbutton buckle device for an automobile safety belt wherein a latch enters a buckle. The buckle has a case defining an enclosure with an open front end and upper and lower openings. Within the case is a case plate spring secured to the case at one end and having a projection which is directed downward. The case is covered by a cover with an opening at the place corresponding to the mounting position of the case plate spring. The latch has an inserting member with upper and lower parallel plates and top and bottom openings in said plates. The parallel plates define a latch space within which is a hook piece. The hook piece has an engaging projection on the upper side thereof which projects outside the latch space from the top opening and passes through the upper opening of the case to be engaged therein. To bias the hook piece there is a support plate spring arranged on the lower side of the hook piece in the latch space secured to the hook piece at one end and partially projecting to the outside from the bottom opening.

3,514,817

TUBULAR ROPE CLIP BLANK

Otto Salm, Behringstrasse 8, Bremerhaven, Germany

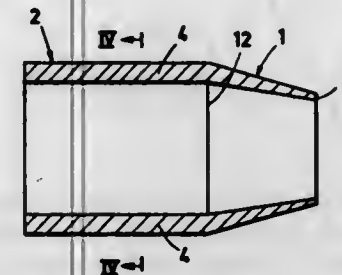
Filed Nov. 22, 1968, Ser. No. 778,081

Claims priority, application Germany, Nov. 24, 1967, S 63,155

Int. Cl. F16g 10/02

U.S. Cl. 24—123

2 Claims



A rope clip blank of ductile material for making a mechanical rope splice having a conical end portion, by swaging said blank onto the rope strands. The tubular blank has a flat-cylindrical or oval portion the semi-circular walls of which are margined by excentric semi-circles such that the wall thickness of said walls decreases from the straight side walls towards a minimum wall thickness at the apices of said semi-circular walls. The blank further has a tapered end portion of steadily decreasing wall thickness towards the outer end of said end portion.

3,514,818

COBALT BONDED TUNGSTEN CARBIDE CUTTING TOOLS

Geoffrey W. Meadows, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Continuation-in-part of application Ser. No. 660,986, Aug. 16, 1967. This application June 4, 1969, Ser. No. 830,247

Int. Cl. C22c 29/00

U.S. Cl. 29—182.8

10 Claims

Tools having a working surface, such as a cutting edge, of tungsten carbide bonded with from 1 to 30 percent by weight of tungsten-cobalt alloy are useful as tips, inserts and bits for cutting, punching and otherwise shaping metal.

3,514,819

RELEASEABLE PINS

William Charles Hill, William Hickman Green, and Herbert James Hunt, Aldershot, England, assignors to Air-Log Limited, Aldershot, England, a British company

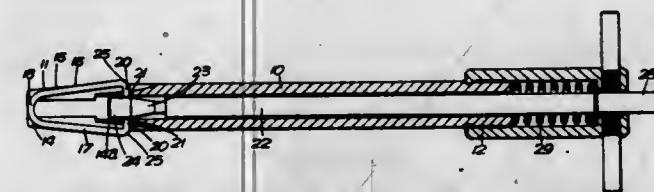
Filed July 2, 1968, Ser. No. 742,018

Claims priority, application Great Britain, Dec. 28, 1967, 58,908/67

Int. Cl. A44b 17/00; F16b 19/00

U.S. 24—211

1 Claim



A releasable shackle or pivot pin has latching means in the form of an arm extending lengthwise of the pin with one end of the arm within the compass of the pin and the other end movable between a latching position in which it projects from the pin and an unlatching position in which it lies within the pin. A rod slidable lengthwise within the pin has a cam surface for moving the arm to the latching position.

3,514,820

TWIST LATCH

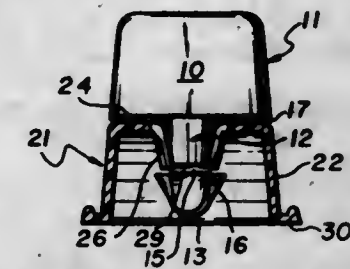
Herman O. Rogg, 94 Brook Drive, Watchung, N.J. 07060

Filed Oct. 4, 1968, Ser. No. 765,102

Int. Cl. A44b 17/00

U.S. Cl. 24—221

8 Claims



A twist latch having a twistable latch mounted on a base in which the latch is urged into seating engagement on the base in either locked or unlocked position by the engagement of cam fingers in the base with a flared or tapered cam surface of a shaft on the latch.

3,514,821

BUCKLES FOR SAFETY BELTS

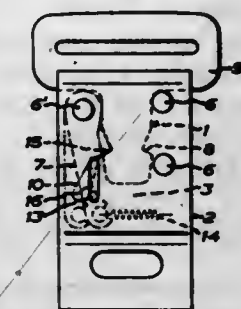
Olov Pontus Saxmark, Skarhamm, Sweden, assignor to AB Industrifadras, Monstera, Sweden

Filed Feb. 4, 1969, Ser. No. 796,331

Int. Cl. A44b 11/25

U.S. Cl. 24—230

6 Claims



A buckle for safety seat belts comprises a locking tongue and a buckle body having a space for insertion of the locking tongue thereto. The buckle body has a latch member pivoted thereto, and for retaining the locking tongue in the buckle body the latch member is adapted to engage in a recess in the locking tongue at one longitudinal edge thereof. The latch member has cam means with which a projection provided in a sleeve which is slidably mounted on the buckle body, is adapted to coact for moving the latch member out of latching position when the sleeve is slid along the buckle body.

3,514,822

TRANSPORTER FOR MANUAL SLIPS

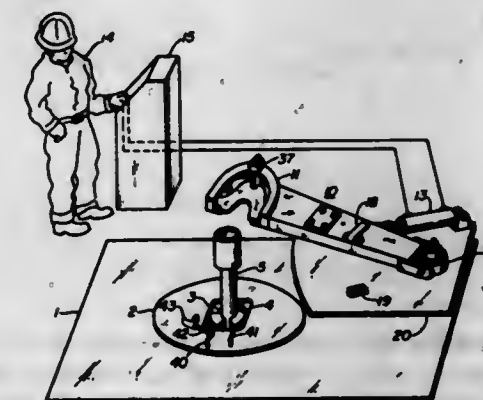
William Guier, 3100 E. 71st St., Tulsa, Okla. 74105

Filed Oct. 16, 1968, Ser. No. 768,132

Int. Cl. A44b 21/00

U.S. Cl. 24—263

10 Claims



A framework for supporting manual slips while the slips are disengaged from well pipe. The framework is

disclosed as either pivoted or reciprocated to bring its slip-receiving basket either to the well bore or away from the bore.

3,514,823

TENTERING CLIP FOR GRIPPING MATERIAL OF VARYING THICKNESSES

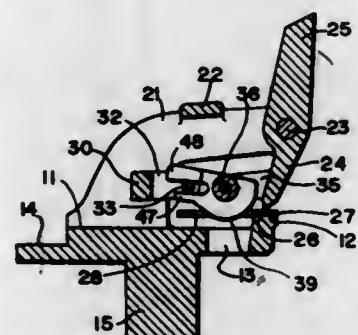
Kenneth Elton Fish, Warwick, R.I., assignor to Bevis Industries, Inc., Providence, R.I., a corporation of Florida

Filed May 14, 1968, Ser. No. 729,092

Int. Cl. D06c 3/10

U.S. Cl. 26—62

4 Claims



This invention relates to tentering clips employing a controller, and particularly to an improved controller which is pivoted directly to the swinging gripping jaw; the controller being guided and provided with a face contour, counterweighted, so as to be drawn lightly into contact with the material by the movement of the swinging jaw, will pivot into position upon the material in a manner to insure gripping of the selvage edge by the jaw regardless of the thickness of the material, to thereby accommodate materials of varying thicknesses.

3,514,824

A METHOD OF PRODUCING A COHERENT MULTIFILAMENT YARN

Joseph Alfred Briscoe, Harrogate, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

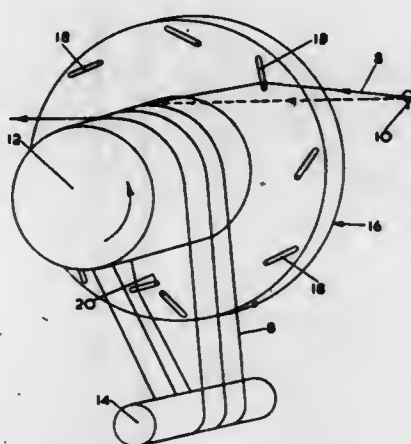
Filed Apr. 4, 1968, Ser. No. 718,693

Claims priority, application Great Britain, Apr. 17, 1967, 1,753/67

Int. Cl. D02g 1/00

U.S. Cl. 28—72.1

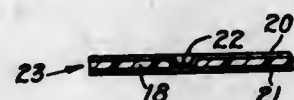
3 Claims



A bundle of substantially parallel, continuous filaments is subjected to the "plucking" action of a deflecting member which sets the filaments in vibration in such a manner that they become individually and collectively intertwined and entangled to produce an interlaced yarn.

3,514,825
METHOD OF MANUFACTURING ELECTROLUMINESCENT DISPLAY DEVICES
Vincent Vodicka, South Euclid, Ohio, assignor to General Company, a corporation of New York
Original application Apr. 4, 1966, Ser. No. 546,114, now Patent No. 3,435,270. Divided and this application Jan. 15, 1968, Ser. No. 697,698
Int. Cl. H01j 9/44
U.S. Cl. 29—25.18

7 Claims



A method of making an electroluminescent display device comprises the steps of laminating an apertured organic plastic insulator sheet between metal foil sheets to effect surface interengagement thereof through the apertures in the insulator sheet, applying protective acid-resist coatings in selective electrode and circuit lead area patterns respectively on opposite sides of the laminate with the individual electrode sections and circuit leads in registry with respective ones of the apertures in the insulator sheet, etching away the unprotected areas of the metal foil sheets, dissolving the protective acid-resist coatings off the metal foil sheets to expose the metal foil electrode and circuit lead area patterns therebeneath, and then applying an electroluminescent phosphor layer and a light-transmitting front electrode overlayer onto the electrode area pattern side of the insulator sheet.

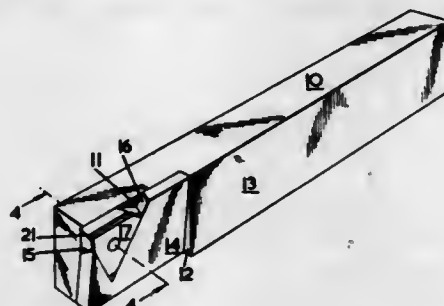
3,514,826

HOLDER FOR A CUTTING TOOL BIT

John Campbell Francis Dawkins, Roy Alfred Gaved, and Alan Greig, Tonbridge, England, assignors to Diagrit Grinding Company Limited, Tonbridge, Kent, England
Filed Apr. 18, 1968, Ser. No. 722,403
Claims priority, application Great Britain, Apr. 18, 1967, 17,628/67; Aug. 15, 1967, 36,040/67
Int. Cl. B26d 1/00

U.S. Cl. 29—96

6 Claims



A cutting tool bit is held firmly against a locating face on a tool holder by a pin extending through parallel bores in the bit and the holder. The bore in the bit is further than the bore in the holder from the locating face so that when the stem of the pin is in the holder bore and the head of the pin is in the bit bore, the pin will be resiliently distorted and will force the bit against the locating face.

3,514,827

APPARATUS FOR FORMING HINGES IN ALL-PLASTIC BOOK COVERS

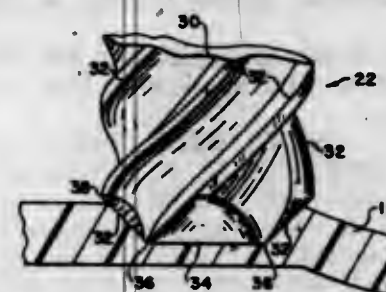
Robert G. Peace and Gerard V. Delaire, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 10, 1968, Ser. No. 766,409
Int. Cl. B26d 1/12; B27g 13/00

U.S. Cl. 29—103

3 Claims

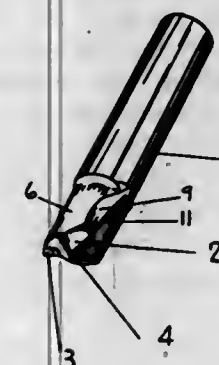
Apparatus for forming hinges in a sheet of thermoplastic material including a rotary cutting tool and having flutes with cutting edges formed along their outer extent.

The end of the cutting tool also has edges extending radially outward from the center of the tool to intersect the cutting edges on the flutes. The outer end of the cutting tool is beveled and rounded such that surfaces joining the cutting edges form the frustum of a right-circular cone in which the edge joining the surfaces is rounded.



3,514,828
END-MILLING CUTTERS
Dennis H. Wale, Woodhouse Eaves, England, assignor to Marwin Cutting Tools Ltd., Rothery, England
Filed Apr. 8, 1968, Ser. No. 719,533
Int. Cl. B26d 1/12
U.S. Cl. 29—105

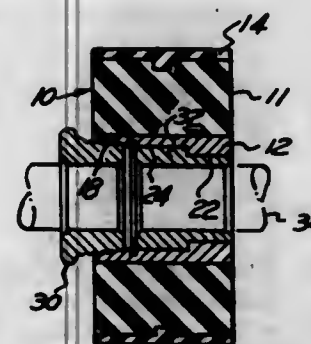
7 Claims



An end-milling cutter for a machine tool having an end center portion high-speed steel cutting area with a plurality of flutes formed therein, and wear-resistant cutter members as formed of tungsten carbide or sintered ceramic mounted on said flutes.

3,514,829
ROLLERS
Leland F. Blatt, 24121 Mound Road, Grosse Pointe, Mich. 48091
Filed June 27, 1968, Ser. No. 740,698
Int. Cl. B21b 31/08
U.S. Cl. 29—130

1 Claim

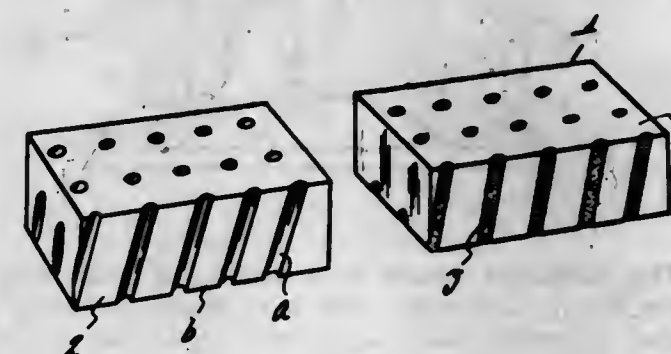


A variety of rollers particularly useful in automation, characterized by the use of a basic part or basic roller made up of an annulus or roller part of rubber-like material molded onto a tubular liner of metal; with a variety of mounting parts to enable the basic roller to

be mounted interchangeably on a variety of shaft sizes and other locations; and with the roller part being of a variety of forms; thus providing a variety of completed rollers and mountings.

3,514,830
METHOD FOR MANUFACTURING A COATING LAYER TO PROTECT THE WORKING SURFACES OF MACHINERY
Shigiro Takakita, 1, 323 Kamibata-cho, and Ko Takakita, 3683-40 Sakuragaoka, both of Naburi-shi, Mito-ken, Japan
Filed Oct. 27, 1967, Ser. No. 678,561
Claims priority, application Japan, Oct. 29, 1966, 41/71,574
Int. Cl. B21h 7/00; B21k 19/00
U.S. Cl. 29—148.3

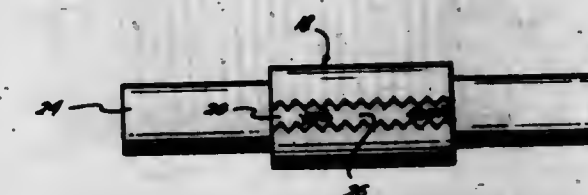
6 Claims



A surface coating material for protecting the working surface, such as scrapers, ploughs of agricultural, or civil engineering machinery or the like from wear, is manufactured by first forming a shaped skeleton having a number of pores communicating with the exterior with a wear-resistant material into a desired shape in accordance with the intended use of said surface coating material, and then impregnating into the pores of the shaped skeleton a plastic material such as synthetic resins to avoid adherence of an object to be worked to the working surface of the machinery.

3,514,831
BONDING METHOD AND ARTICLE
Forrest B. Bruch and William C. Hood, Houston, Tex., assignors to Ethylene Gulf Coast Corporation, Houston, Tex., a corporation of Texas
Filed Dec. 6, 1967, Ser. No. 688,520
Int. Cl. B21d 53/10
U.S. Cl. 29—149.5

9 Claims



Method is provided for bonding to a tubular sleeve of thin metal sheet, a fabric comprised of fibers of tetrafluoroethylene in one layer and fibers of glass and tetrafluoroethylene in another layer. Method includes rolling a flat sheet of metal to form tubular sleeve, placing adhesively coated fabric strip on cylindrical mandrel and positioning mandrel inside sleeve. Sleeve is compressed into contact with fabric strip whereupon the fabric is

bonded to the inner surface of the sleeve. Assembly is then heated to set the bond.

Article is provided by the method summarized above.

3,514,832 METHOD OF ASSEMBLING AN AUTOMATICALLY ADJUSTABLE PIVOT JOINT

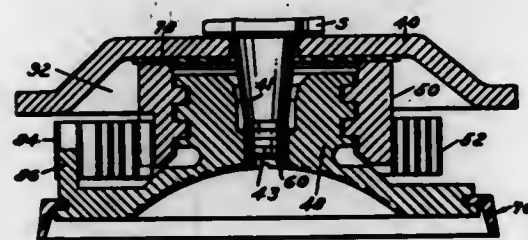
William C. Wehner, 14891 Grandville, Detroit, Mich. 48223

Original application Mar. 3, 1964, Ser. No. 349,114, now Patent No. 3,389,928, dated June 25, 1968. Divided and this application Mar. 14, 1968, Ser. No. 763,433

Int. Cl. B23p 11/00

U.S. Cl. 29—149.5

6 Claims



This disclosure relates to a method of assembling an automatically adjustable ball joint having a spring tensioned jack-screw unit continuously urging the stud head into bearing engagement with the primary bearing. The jack-screw is retained against relative threaded movement by a locking means which tensions the movable jack-screw member against the cover of the housing. The jack-screw assembly, spring and cover are then received in the housing, and the locking means is released. The spring of the jack-screw unit may also be initially retained, prior to assembly with the jack-screw members, by clamping means, which is removed after assembly of the spring with the jack-screw unit.

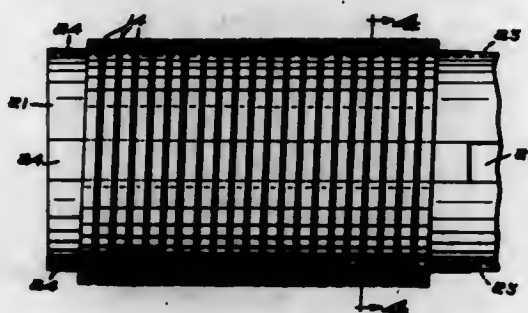
3,514,833 METHOD OF MAKING A SLOTTED GAS BURNER HEAD

James M. Dunston, Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed Apr. 15, 1968, Ser. No. 721,228
Int. Cl. B21d 53/00

U.S. Cl. 29—157

6 Claims



A method of making a slotted gas burner head comprising forming a helical coil of steel strip while holding the loops of the coil equidistantly separated, mounting a plurality of straight metal bars longitudinally of the coil in spaced parallel relation, brazing the loops to the bars, cutting the brazed coil along a median longitudinal line through the bars to form a plurality of slotted gas burner head tops and detachably mounting these gas burner head tops on a base to form the gas burner head.

3,514,834 METHOD FOR SECURING AN ELONGATED METAL MEMBER TO A FLAT METAL SHEET

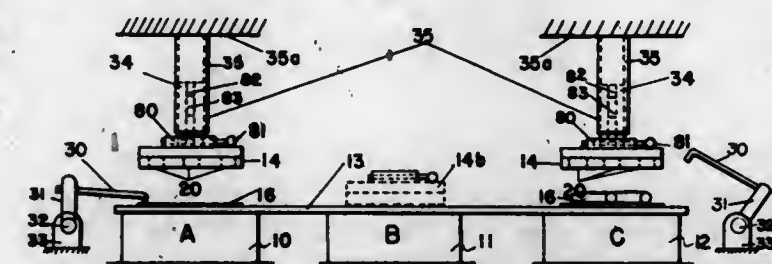
Edward G. Beck, Jr., Fort Thomas, Ky., assignor to The Stolle Corporation, Sidney, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 523,619, Jan. 28, 1966. This application Oct. 5, 1967, Ser. No. 673,138

Int. Cl. B21d 53/02

U.S. Cl. 29—157.3

11 Claims



A method of securing metallic tubing and the like to a flat metal sheet while maintaining the flatness of the sheet so that the composite tube and sheet may be used as radiant heating or cooling panels in building interiors where distortion or wrinkling of the flat sheet would be undesirable. The apparatus comprises a heating station where a composite of sheet, of suitably disposed bonding material, and a piece of tubing in properly assembled relationship and under pressure are heated to induce a bond between the tubing and the sheet while maintaining the sheet in flat condition. An assembly station is provided including a jig in which the piece of tubing may be accurately located, means for accurately locating the jig with respect to the sheet, and means for raising and lowering the jig and for releasing the jig from the raising and lowering means so that it may move with the assembly from the assembly station to the heating station. After the heating cycle, the assembly moves to a cooling station (which may be the same as the assembly station) for a cooling cycle. A combined assembly and cooling station may be provided on each side of the heating station, each assembly station having a jig whereby production may be speeded up.

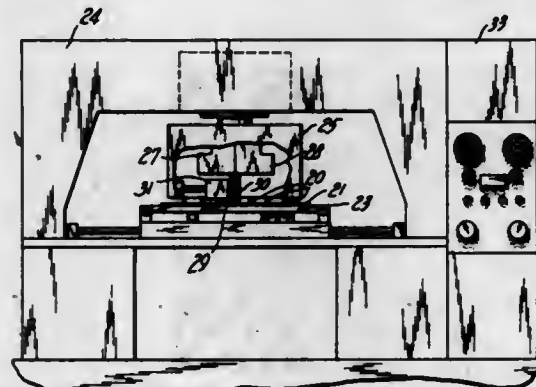
3,514,835 APPARATUS FOR WRAPPING WIRE ON TERMINALS

John O. Etchison, Jr., Clemmons, and John G. Tucker, Winston-Salem, N.C., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 1, 1967, Ser. No. 687,186
Int. Cl. B21f 15/00, 45/00; H01r 9/14

U.S. Cl. 29—203

3 Claims



An apparatus for wrapping the ends of a wire on terminals utilizes sleeve loading wrapping tools for capturing the ends of the wire and for stripping the insulation from the ends of the wire. After an end of the wire is captured by a sleeve loading tool, the tool is rotated through an angle to uncover a terminal receiving recess in the end

of the tool. The wrapping apparatus also includes a flexible tube for guiding the wire as it is inserted into a pair of wire wrapping tools. After one of the tools has wrapped one end of the wire on a terminal, the tube is used to guide the wire as it is laid on a terminal board or chassis.

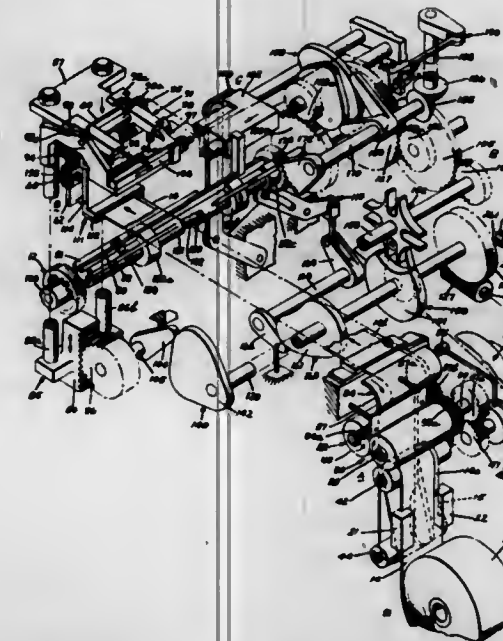
3,514,836 APPARATUS FOR PRODUCING INSULATION IN THE SLOTS OF MAGNETIC CORES

Lowell M. Mason, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Filed July 17, 1967, Ser. No. 653,983

U.S. Cl. 29—205

11 Claims



In the production of slot liners having differing configurations in slots of a magnetic core, dielectric strip material is fed to a sizing and forming station by a strip accumulating and urging device, and strip pieces of preselected sizes are formed. The accumulating and feeding device urges the strip material toward a stop plate at the station, and an adjustable cutting blade severs the strip material to form the strip pieces with the desired size. The strip pieces are placed on a given one of several forming tools disposed adjacent the station to produce individual strip pieces having desired configurations, and the tools inserted into preselected slots of a magnetic core to carry the strip pieces into the core slots as slot liners. A strip piece holding arrangement is provided in the vicinity of the sizing and forming station to maintain the strip piece on the forming tool during insertion for assisting in the proper and accurate placement of the strip piece in the magnetic core slot.

The slot liners so produced may have laterally extending portions and an intermediate axially extending bight portion at one end thereby permitting shorter coils to be used in the magnetic core while also allowing the coils to take a gradual bend adjacent the core, next to the bight portion, which tends to prevent damage to the coils.

3,514,837 COIL-DEVELOPING APPARATUS

Dallas F. Smith, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Continuation-in-part of application Ser. No. 594,462, Nov. 15, 1966. This application Apr. 2, 1969, Ser. No. 826,744

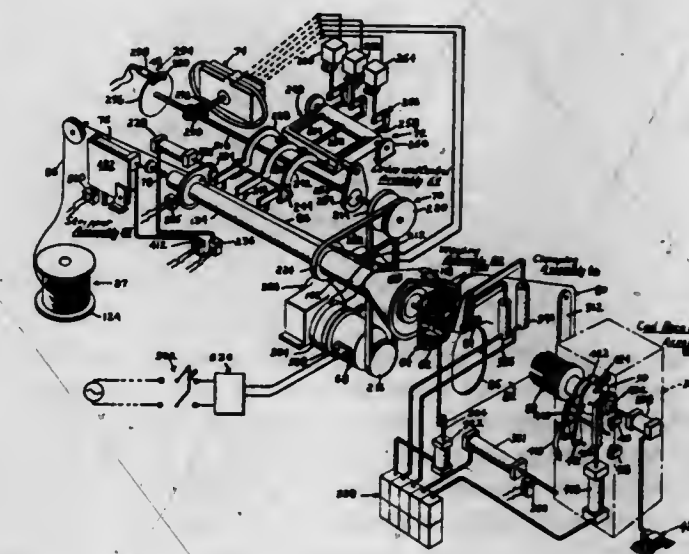
U.S. Cl. 29—205

Int. Cl. H02k 15/00

16 Claims

Apparatus for developing wound coil groups for ultimate placement into electromagnetic cores. A noncollapsing multistage coil form has a number of different

size coil-forming stages on which turns of electrically conductive wire are developed by a reversibly rotatable flyer assembly into serially connected coils of different sizes as at least some of the turns are being transferred into a coil-receiving assembly. During the winding of the turns, the wire is held by a clamping unit which also acts to reduce and control oscillation of the wire. The apparatus also has components which assist in the transfer of the turns from the multistage coil form without need for col-



lapsing the form, and the coil-receiving assembly and coil form are indexed at the proper time to accommodate all coil groups in a given winding. Thus, the same noncollapsing form and coil-receiving assembly are used in the automatic development of a number of coil groups in the same winding, with reduced tendency for turns to cross over and with rather short interpole wires between coil groups. The apparatus operates efficiently and rapidly, is versatile, and is capable of handling a wide range of core and wire sizes.

3,514,838 METHOD OF SEVERING A NUCLEAR FUEL BUNDLE

Robert M. Freeborg, Lafayette, Calif., assignor, by mesne assignments, to Bechtel International Corporation, San Francisco, Calif., a corporation of Delaware

Filed July 15, 1966, Ser. No. 565,465

U.S. Cl. 29—426

2 Claims



1. The method of severing a bundle of long, parallel articles wherein said bundle is retained by a plurality of spaced support frames surrounding the articles comprising providing a saw blade having a thick back thereon, said back being substantially thicker than the said blade, severing said frame by passing said blade between said articles whereby said back tends to separate the articles and prevent the cutting edge of the blade from contacting said articles whereby the cutting edge of said blade severs the support frame and separates the articles without the articles themselves being damaged.

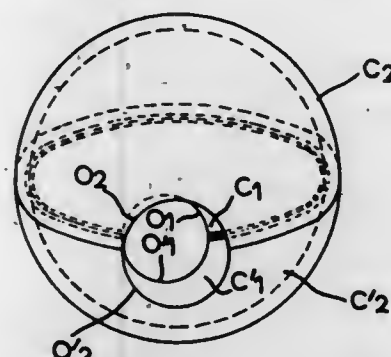
3,514,839

METHOD FOR MAKING MULTIWALL VESSELS
 Edouard Georges Daniel Rodriguez, La Clotat, France, assignor to Chantiers Navals de la Clotat, La Clotat, Bouches-du-Rhone, France, a company of France
 Filed Aug. 2, 1967, Ser. No. 657,761
 Claims priority, application France, Aug. 26, 1966, 74,375

Int. Cl. B21d 39/02

U.S. Cl. 29-463

2 Claims



The method for making vessels, designed to contain any product exerting upon its walls a high pressure, and having a wall thickness which is function of said pressure value and of the material the vessel is made of, consists in imbricating into each other n homothetic and coaxial sheaths of revolution, each having a thickness value e/n sufficiently low to allow a complete penetration welding, each of these sheaths being itself composed by at least two identical shells assembled by welding, and in providing, between said sheaths, connecting means.

3,514,840

METHOD OF FABRICATING NARROW-WIDTH COMPOSITES

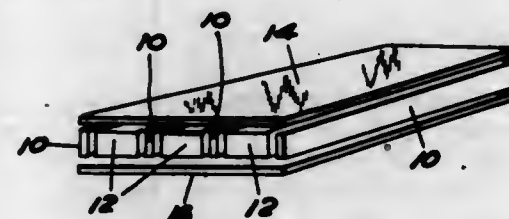
Richard K. Pitter, Gibsonia, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

Filed Apr. 18, 1968, Ser. No. 722,283

Int. Cl. B23k 31/02

U.S. Cl. 29-470.1

5 Claims



Fabrication of narrow-width composites by alternately disposing elongated strips of core material and cladding material side by side to a desired width, encasing the disposed strips with cladding material and pressure bonding the thusly arranged components into a wide composite assembly. The wide composite assembly is then longitudinally cut or slit at the cladding material strips to produce a plurality of narrow-width composites along their longitudinal surfaces.

3,514,841

FORMING A TIP SECTION THAT FEEDS STREAMS OF HEAT-SOFTENED MATERIAL

Robert M. Woodward and Hellmut I. Glaser, Newark, Ohio, assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Continuation-in-part of application Ser. No. 363,705,

Apr. 30, 1964. This application May 17, 1967, Ser. No. 639,068

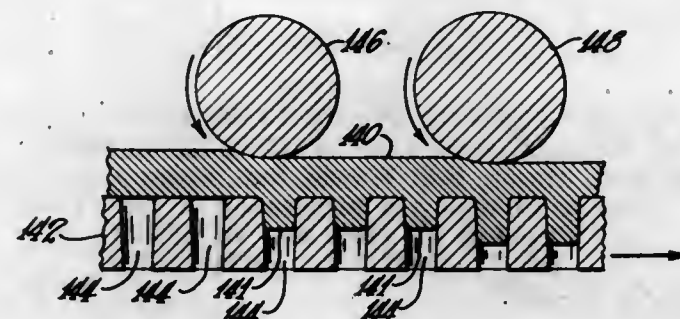
Int. Cl. C03b 37/02

U.S. Cl. 29-480

8 Claims

A method for making a tip section for a stream feeder of flowable material by first forming a plate with raised

portions on a major surface thereof, subsequently joining additional material on the end regions of the raised por-



tions and drawing the material of the raised portions and added joined material into elongated tubular projections.

3,514,842

BRAZING PROCESS

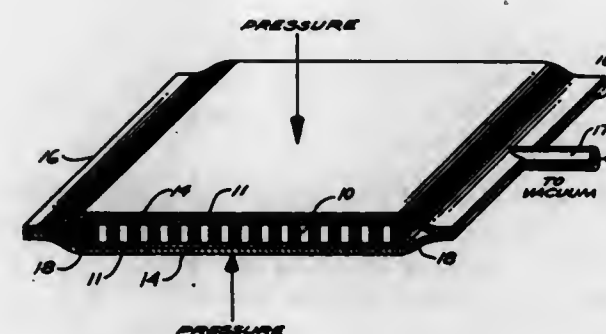
Charles S. Benyukian, Gardena, and Mike J. Mitchell, Downey, Calif., assignors to North American Rockwell Corporation

Filed Jan. 16, 1968, Ser. No. 698,228

Int. Cl. B23k 31/02

U.S. Cl. 29-494

11 Claims



A process is described for forming a brazed honeycomb sandwich commencing with conventional adhesive bonded honeycomb core. In a typical embodiment conventional phenolic bonded, perforated aluminum honeycomb core is sandwiched between two aluminum face sheets with brazing alloy between the face sheets and the core. This assembly is enclosed in a sheet steel envelope which is sealed and continuously evacuated. The enclosed assembly is heated to a temperature in excess of 850° F. to decompose the phenolic resin into a carbonaceous char and gaseous decomposition products. During heating the dynamic vacuum extracts the gaseous products from the honeycomb core to prevent braze contamination. After complete outgassing, the assembly is heated to a temperature sufficient to melt the brazing alloy to effect brazing of the honeycomb sandwich.

3,514,843

METHOD FOR MAKING CLAMPED HELIX ASSEMBLIES

George Cernik, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Dec. 30, 1966, Ser. No. 606,203

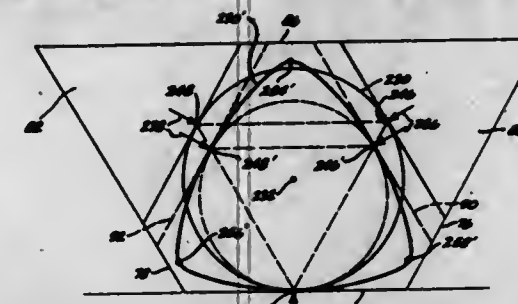
Int. Cl. B23q 7/00

U.S. Cl. 29-559

4 Claims

In the disclosed method for achieving "ideal triangulation" of a ring-like clamping member, preferably for clamping longitudinal support rods about a helical slow-wave structure, inwardly directed force is applied to the

clamping member at three points equally circumferentially spaced along its outer surface and in a manner to



move two of these points equal distances directly toward the third point while maintaining the third point stationary.

3,514,844

METHOD OF MAKING FIELD-EFFECT DEVICE WITH INSULATED GATE

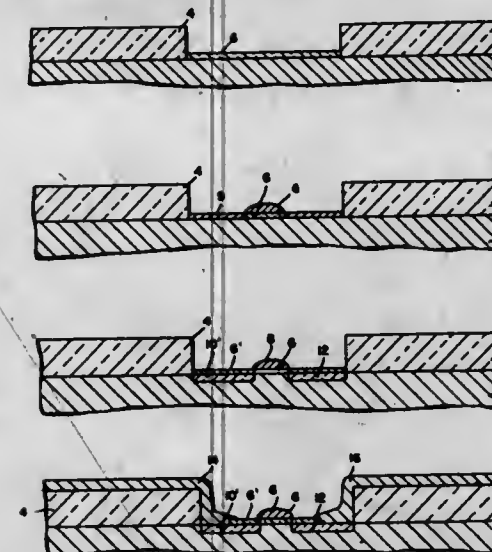
Robert W. Bower, Palos Verdes, and Gordon A. Shifrin, Malibu, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Dec. 26, 1967, Ser. No. 693,414

Int. Cl. H01l 11/14

U.S. Cl. 29-571

6 Claims



Method of making field-effect devices wherein the source and drain regions or extensions of such regions already formed are provided by coating the surface of a semiconductor body adjacent a metal gate thereon with a dopant material and then bombarding this dopant layer with inert ions to drive the dopant atoms into the semiconductor except where the gate masks the body from the inert ion bombardment.

3,514,845

METHOD OF MAKING INTEGRATED CIRCUITS WITH COMPLEMENTARY ELEMENTS

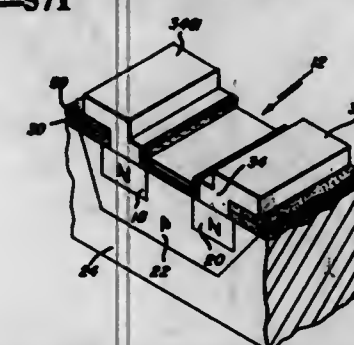
Wilhelm H. Legat, Woodside, Calif., and Alan F. Dixon, Andover, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Aug. 16, 1968, Ser. No. 753,119

Int. Cl. H01l 11/14

U.S. Cl. 29-571

2 Claims



A semiconductor device which comprises a number of complementary metal-oxide-silicon transistors, such as the

field-effect type, in a single integrated circuit, and method of making such a device wherein a semiconductor substrate is oriented in a preferred direction and etched to provide cavities having sides substantially identical profiles. The cavities are then filled in with single crystal material of opposite conductivity.

3,514,846

METHOD OF FABRICATING A PLANAR AVALANCHE PHOTODIODE

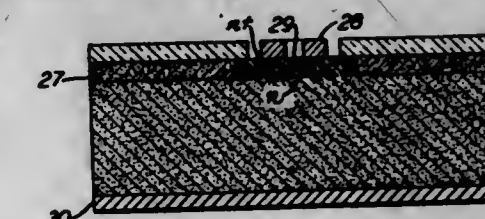
William T. Lynch, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Nov. 15, 1967, Ser. No. 683,271

Int. Cl. H01l 15/02

U.S. Cl. 29-572

1 Claim



An avalanche junction with uniform breakdown characteristics is fabricated by growing on a p+ substrate an n-type epitaxial layer and thereafter converting all but a central portion of the epitaxial layer to p-type. Connections are provided to the central n-type portion and the p+ type substrate. Such a fabrication process results in a device including a p-n junction which has a planar central portion having a low characteristic breakdown voltage and a curved edge portion having a higher characteristic breakdown voltage. Accordingly, the breakdown can be limited to the planar central portion where it can be expected to be more uniform. The process is especially useful in the fabrication of an avalanche photodiode.

3,514,847

PROCESS FOR MAKING PHOTOCONDUCTIVE MATRICES

William Hotine, Alhambra, Calif., assignor to General Dynamics Corporation, a corporation of Delaware

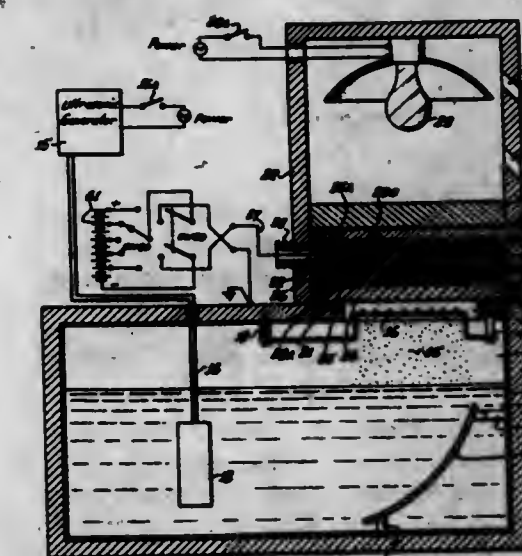
Original application May 10, 1966, Ser. No. 548,888.

Divided and this application Oct. 22, 1968, Ser. No. 803,495

Int. Cl. H01l 15/02

U.S. Cl. 29-572

3 Claims



A process for making photoconductive matrices by forming a layer of aluminum oxide by anodizing perforated aluminum, a photoconductive coating is then applied to the oxide layer, the perforations are masked, a metallic layer is then applied on the exposed photoconductive coating and the mask removed. Next a layer of

photoconductive material is applied across the perforations opposite the metallic layer, connecting the protective layer to the photoconductive material, inserting light scattering material in the perforations and finally attaching a protective transparent layer.

3,514,848

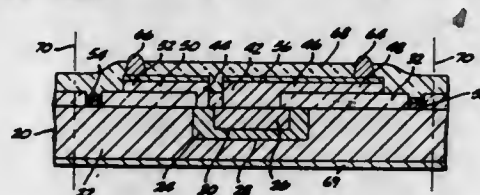
METHOD OF MAKING A SEMICONDUCTOR DEVICE WITH PROTECTIVE GLASS SEALING
Harold F. Rueffer, Costa Mesa, and Richard J. Belardi, Anaheim, Calif., assignors to Hughes Aircraft Company, Culver City, Calif.

Filed Mar. 14, 1966, Ser. No. 534,135

Int. Cl. H01L 1/10; B01J 17/00; C03C 27/02

U.S. Cl. 29-588

6 Claims



A method for providing a hermetic seal for a surface of a electrical device portion of a body of semiconductor material. An oxide layer is disposed over a portion of the semiconductor surface; the oxide layer defining an aperture exposing a portion of the surface laterally externally of and surrounding the surface intersection of an outermost p-n junction. A layer of glass is disposed over the oxide layer and over that portion of the semiconductor surface beneath the aperture. The glass is sealed to the semiconductor surface either directly or through a ring-like metal element disposed in the aperture.

3,514,849

METHOD FOR MAKING A GLASS-TO-METAL SEAL
Rafael Landron, Jr., Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

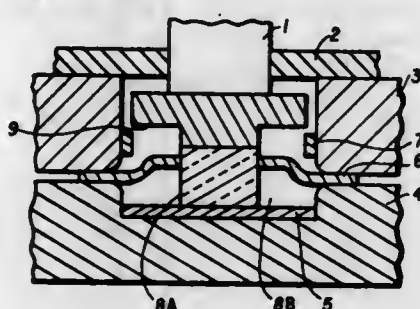
Original application Dec. 31, 1964, Ser. No. 422,801.

Divided and this application Nov. 15, 1968, Ser. No. 798,523

Int. Cl. H01L 1/10

U.S. Cl. 29-588

5 Claims



Disclosed is a method for fabricating a semiconductor device utilizing the selective dissolution of copper from a glass sealing alloy by exposing the copper and the alloy to HNO₃ solution.

3,514,850

ELECTRICAL CONDUCTORS

Anthony Clifford Barber, Lichfield, Laurence Reginald Hawtin, Birmingham, and Bryan Wilfred Hodson Lowe, Sutton Coldfield, England, assignors to Imperial Metal Industries (Kynoch) Limited, Birmingham, England, a corporation of Great Britain

Filed Sept. 16, 1968, Ser. No. 760,007

Claims priority, application Great Britain, Sept. 28, 1967, 44,142/67

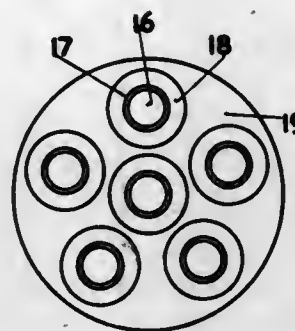
Int. Cl. H01V 11/00

U.S. Cl. 29-599

9 Claims

A method of manufacturing an electrical conductor comprising locating at least one ductile superconductor

member in a sheath comprising at least one metal selected from the group consisting of aluminium, silver, cadmium, indium, lead and tin, and providing the sheath with an exterior can of a ductile metal which will support the



sheath, to produce an assembly, and subsequently working the assembly to reduce the cross-sectional dimensions of the superconductor member or members, the sheath and the can.

3,514,851

METHOD OF MANUFACTURING A MAGNETIC HEAD STRUCTURE

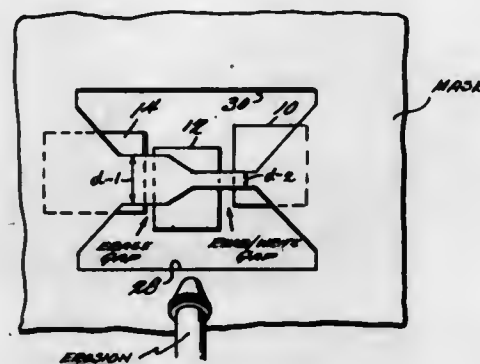
Robert L. Perkins, St. Paul, and Beat G. Keel, Prior Lake, Minn., assignors to Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota

Filed Apr. 3, 1967, Ser. No. 627,763

Int. Cl. H01F 7/06

U.S. Cl. 29-603

3 Claims



The present invention is concerned with a method of manufacturing a magnetic head structure in which the read/write and erase gaps associated with a single head are aligned and the head is precisely spaced from an adjacent head. This is accomplished by subjecting a basic head assembly to an erosion process through a template which accurately dictates the dimensional characteristics of the resultant head construction.

3,514,852

METHOD OF MAKING ARTIFICIAL TELEPHONE LINES IMPEDANCE MATCHING NETWORKS

Frank Ralph, Bishop's Stortford, England, assignor to International Standard Electric Corporation

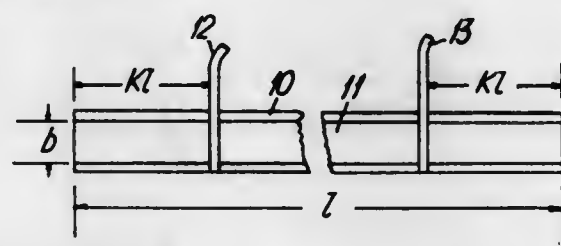
Filed Nov. 1, 1967, Ser. No. 679,764

Claims priority, application Great Britain, Nov. 11, 1966, 50,566/66

Int. Cl. H01C 1/14, 17/00

U.S. Cl. 29-621

7 Claims



There is described herein an artificial line structure consisting of a number of metalized plastic films wound into a cylindrical form. The characteristic impedance

z_0 of the structure is related to the width and the effective specific resistance of the films and effective capacitance between them. Thus, once the capacitance has been fixed by the choice of the dielectric and its thickness, z_0 is determined by the relationship between the effective specific resistance and the width of the metalized film. The present invention provides for a standardized construction of metalized films for providing a wide range of z_0 . The standardized construction is made with an impedance $z_h > z_0$ and the required z_0 is achieved by placing the contact strips a specified distance from the ends of the films. Thus, the effective capacitance remains virtually the same for a wide range of values of effective resistance.

3,514,853

DOUBLE LEVER TOOL FOR CUTTING OPEN CONTAINERS OF SHEET METAL OR PLASTIC MATERIALS

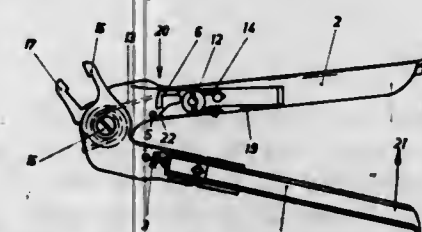
Karl Kappler, 5 Hauptstrasse, Pfingzweiler, Baden-Wurtemberg, Germany

Filed Aug. 16, 1967, Ser. No. 661,106

Int. Cl. B67B 7/30; B26B 11/00

U.S. Cl. 30-14

3 Claims



A double-lever tool for cutting open containers of sheet metal or plastic sheet material having a pair of levers pivotally connected at one end, the levers at said one end formed with a pair of projecting tongues. A spring at the one end of the levers holds the other ends of the levers apart. A knife blade is carried on a first one of the levers. A fixed jaw and spring biased movable jaw is carried on the other lever. The jaws engage a bead at the top of a container while the knife cuts open the top of the container at the bead. The knife blade is mounted in the plane of the first lever or perpendicular to the first lever to cut the side wall or top wall respectively of the container.

3,514,854

SCARIFIER FOR USE IN REMOVING WALLPAPER OR THE LIKE

John H. Norfleet, 15006 Naples St., Cleveland, Ohio 44128

Filed Sept. 28, 1967, Ser. No. 671,374

Int. Cl. B26B 3/08, 29/00

U.S. Cl. 30-292

5 Claims



The present scarifier is for use in removing wallpaper or the like from a wall. It has a body member and a plurality of rotatable saw blades for cutting engagement with the wallpaper and brush rollers for limiting the depth of the cuts made by the saw blade. In one embodiment, the present scarifier is a hand tool, and in a second embodiment, the present scarifier is a tool which is adapted to be power-driven.

3,514,855

TRIMMER FOR TRIMMING CARPETING TO A REFERENCE EDGE

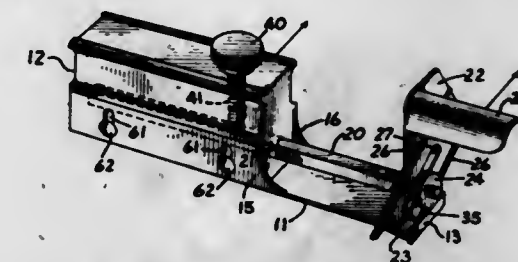
Lee M. Klekamp, Chicago, Ill., assignor to Klekamp Industries, Incorporated, Chicago, Ill., a corporation of Illinois

Filed Dec. 26, 1967, Ser. No. 693,547

Int. Cl. B26B 29/00

U.S. Cl. 30-293

6 Claims



A trimming tool for installation of carpeting which permits a second piece of carpeting, overlapping a first piece, to be trimmed off accurately, edge-to-edge with the first piece, prior to joining them together. The tool is capable of adjustment for use for related purposes as, for example, the trimming of carpeting for tucking behind a tack strip adjacent tiling or the like and for the trimming of selvage.

3,514,856

RAZOR BLADE CONFIGURATION

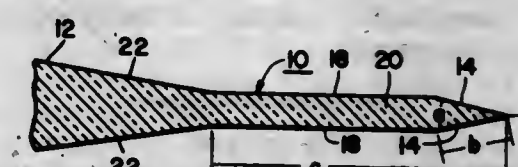
Harold E. Camp and James W. Evans, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Oct. 30, 1967, Ser. No. 678,846

Int. Cl. B26B 21/54

U.S. Cl. 30-346.53

4 Claims



Razor blade construction having defined angular and dimensional limits of the converging surfaces forming the cutting edge and an effective recessed portion immediately adjacent thereto for improved cutting ease and shaving comfort.

3,514,857

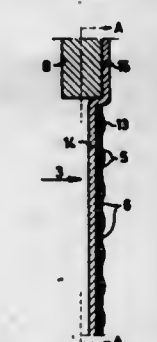
CHEESE MOULDING APPARATUS

Hans Andreas Rossen, Gram, Tiset Province, Denmark
Continuation-in-part of application Ser. No. 417,413, Dec. 10, 1964. This application May 5, 1967, Ser. No. 636,369

Int. Cl. A01J 25/13; B28B 7/36

U.S. Cl. 31-44

5 Claims

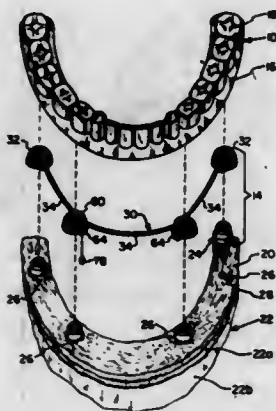


A cheese mould of the type having a slit mould wall or shell slideable into the interior of an outer mould. Said shell is composed of at least two juxtaposed and interconnected, thin plates of which at least the interior one is finely perforated. Between said plates are regularly distributed low elevations.

3,514,858
DENTURE SECURING APPARATUS
 Ralph H. Silverman, 7701 Arcadia,
 Morton Grove, Ill. 60053
 Filed Apr. 14, 1969, Ser. No. 815,864
 Int. Cl. A61c 13/00

U.S. Cl. 32-2

11 Claims



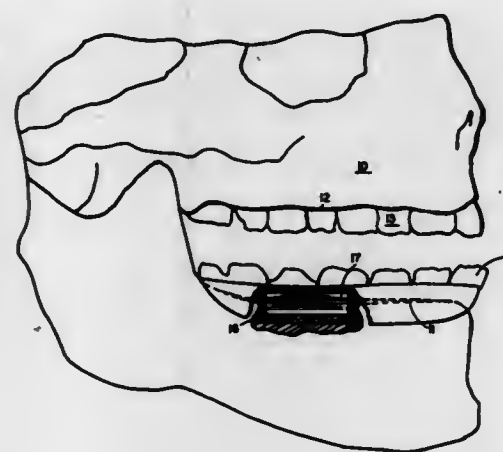
Denture securing apparatus comprising a plurality of implant pins screwable into the jaw bone in the mouth of a denture wearer, and a denture including a unit structure comprising a plurality of linked cap members mounted therein. Each of the head portions of an implant pin includes a recess therein and each of the cap members includes spring loaded ball bearing means. Upon the insertion of the denture into the mouth, the cap members receive respective head portions of the implant pins, and the ball bearings of the cap members are snapped into the corresponding recesses, to removably secure the denture in the mouth.

3,514,859
METHOD AND STRUCTURE FOR SECURING DENTAL PROSTHESIS
 Gilbert H. Peterson, 213 San Carlos Way,
 Placentia, Calif. 92670
 Filed Jan. 23, 1968, Ser. No. 699,933
 Int. Cl. A61c 13/00

U.S. Cl. 32-2

5 Claims

U.S. Cl. 34-33



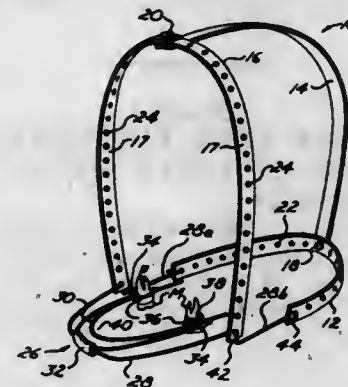
A magnet is attached to the crest of either one or both the mandible or maxilla. The magnet may be either surgically implanted under tissue on the crest of the jawbone or implanted directly into the body of the jawbone. The prosthesis includes a second magnet of opposite polarity which is attracted to the first magnet for securing the prosthesis to the crest of the jawbone. In another embodiment, a magnet and a magnetizable bar

may be used in combination. The magnet attached to the crest is encapsulated in a material which is physiologically compatible with human tissue.

3,514,860
ORTHODONTIC HEADSTRAPS
 John J. Stifter, 33084 Lake Road,
 Avon Lake, Ohio 44012
 Filed Aug. 29, 1968, Ser. No. 756,219
 Int. Cl. A61c 7/00

U.S. Cl. 32-14

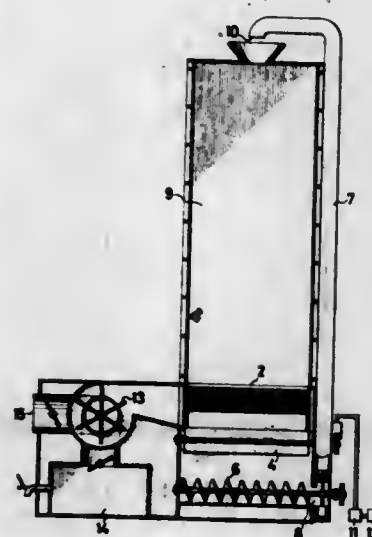
22 Claims



There is disclosed herein an orthodontic device comprising resilient strap means disposed around the back of the neck and across the top of the head of the wearer for engaging the rearwardly directed ends and intermediate portions, respectively, of a face bow, said strap means being provided with spaced apertures for attaching the same to the face bow, and the distance between adjacent of said apertures representing a predetermined increment of traction. There is further disclosed a head-strap having auxiliary strap means for applying traction to an arch wire of an orthodontic appliance.

3,514,861
CIRCULATING-GRAIN DRYING APPARATUS
 Toshihiko Satake, 2-38 Nishihonmachi, Saijocho,
 Kamo-gun, Hiroshima, Japan
 Filed May 9, 1968, Ser. No. 727,891
 Int. Cl. F26b 3/00

4 Claims



A circulated grain drying apparatus wherein a grain drying chamber is provided in which rough rice grains flow downwardly at a high speed and are dried to a moisture content so that the rice grain is not broken due to the drying operation; and a tempering tank is installed on the grain drying chamber, having a volume more than five times as large as the volume of the grain drying chamber.

3,514,862
SUPER-ELEVATION AND GRADIENT MEASURING DEVICES FOR TRACK
 Heinrich Helgemair, Gottingenstr. 23, Munich, Germany
 Filed Sept. 19, 1967, Ser. No. 668,840
 Claims priority, application Germany, Feb. 17, 1967,
 R 45,315
 Int. Cl. E01b 29/04

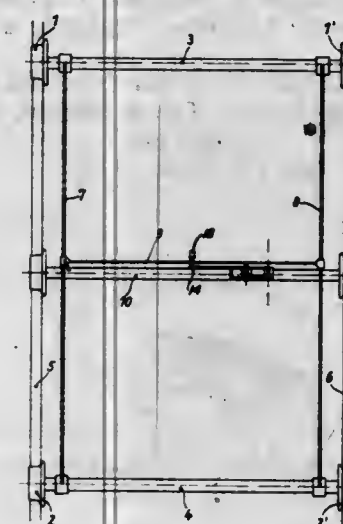
U.S. Cl. 33-60

5 Claims

U.S. Cl. 33-148

Int. Cl. G01b 5/00

11 Claims



Apparatus for measuring track super-elevation and the vertical rail error comprising two pairs of wheel assemblies mounted on the rails of a track in longitudinally spaced relation. The wheel pairs are each independently movable in a vertical direction and a connecting rod connects one wheel from one pair with the respective wheel of the other wheel pair on each rail. A transverse rod is connected between the centers of the two connecting rods and a measuring spindle parallel thereto is equipped with wheels riding on the track. The said spindle is provided with a level sensitive switch responsive to the super elevation of one rail with respect to the other. Means are provided for recording the aforesaid super elevation. Photoelectric means are mounted on the spindle to sense relative vertical movement between said spindle and transverse rod and means are provided for recording this vertical movement.

3,514,863
LAYOUT SYSTEM AND ATTACHMENT FOR FLEXIBLE COILED TAPES
 Oswin C. Moll, 1640 Chippendale Circle,
 Bethlehem, Pa. 18017
 Original application Mar. 29, 1966, Ser. No. 538,414, now
 Patent No. 3,427,721. Divided and this application
 Dec. 12, 1968, Ser. No. 822,754
 Int. Cl. G01b 3/02

U.S. Cl. 33-138

3 Claims

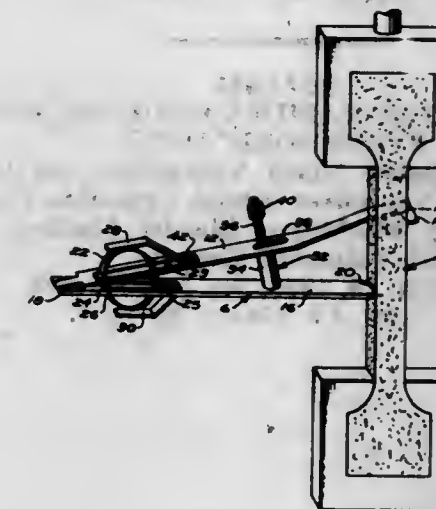


A coupling arrangement for flexible measuring tapes which is useful for measuring and laying out angles in two different planes. The coupling arrangement includes two hinge connected clips which engage the measuring tape, and a protractor which is attached to one of the clips so that the angle between the two portions of the measuring tapes can be determined.

3,514,864
EXTENSOMETER
 Frederick H. Davidson, Albert B. Curtis, Jr., and Iver D. Cayocca, Sacramento, Calif., assignors to Aerojet-General Corporation, El Monte, Calif., a corporation of Ohio
 Filed Sept. 27, 1967, Ser. No. 671,073
 Int. Cl. G01b 5/00

U.S. Cl. 33-148

11 Claims

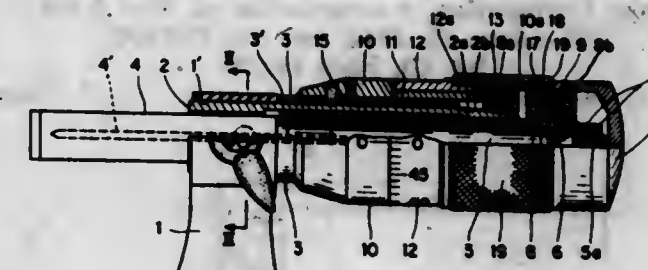


An extensometer apparatus is comprised of a lower arm having a knife-edge on one end thereof, which edge rests against one side of a test specimen and an upper, elongated arm having an offset hook on one end thereof with a knife-edge that also rests against the test specimen on another side opposite the side upon which the lower arm rests. The upper and lower arms are in operable association with each other such that a change in elongation of the test specimen, results in a change in the distance between the two knife edges, which changes are in direct relationship to each other. A measuring device, such as a linear potentiometer, is in operable association with the lower and upper arms for measuring changes in distance between the two knife edges.

3,514,865
MICROMETER HAVING A NON-ROTATING SPINDLE
 Yoshimatsu Karahashi, Kawasaki, Japan, assignor to
 Yehan Numata, Yokohama, Japan
 Filed May 31, 1968, Ser. No. 733,518
 Claims priority, application Japan, July 15, 1967,
 42/60,978
 Int. Cl. G01b 3/22

U.S. Cl. 33-166

3 Claims



A micrometer having a non-rotating spindle and comprising an outer cylinder provided with an external axial guide groove and internal screw threads, a spindle extending through said cylinder and retained against rotational movement relative thereto, a tube rotatably mounted on said spindle and provided with external threads meshing with said internal threads, an axially slidable basic-scale tube guided by the guide groove in

said cylinder, and a thimble-scale tube which rotates on said basic-scale tube and drives said spindle, with the scale-bearing surfaces of said thimble-scale tube and said basic-scale tube in alignment with each other.

ERRATUM

For Class 33—174 see:
Patent No. 3,514,869

3,514,866

METHOD OF RAPIDLY COOLING HOT PYROPHORIC DUST

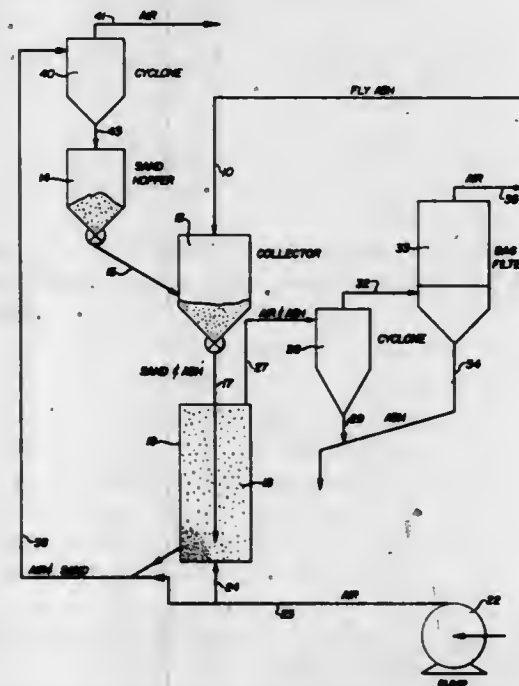
Thomas McManus, North Vancouver, and Jan C. Hollemans, Vancouver, British Columbia, Canada, assignors to MacMillan Bloedel Limited, Vancouver, British Columbia, Canada

Filed Oct. 28, 1968, Ser. No. 771,051

Int. Cl. F26b 3/00

U.S. Cl. 34—9

7 Claims



The method of rapidly cooling hot pyrophoric dust including mixing the hot dust with a cool, inert and incombustible particulate material, forming a bed of this mixture, fluidizing the bed with a gas further to cool and to entrain the dust, and separating the dust-laden gas from the particulate material. The entrained dust is mechanically separated from the gas.

3,514,867

CLOTHES DRYERS WITH REVERSING DRUM

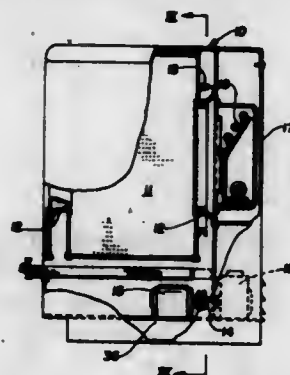
Russell L. Patrick, Jamestown, N.Y., assignor to Blackstone Corporation, a corporation of New York

Filed June 21, 1968, Ser. No. 739,055

Int. Cl. F26h 19/00

U.S. Cl. 34—45

7 Claims



A drum type clothes dryer is provided to eliminate balling and reduce wrinkling by rotating the drum in one

direction with heated air flowing through the drum for a first period of time and then reversing the rotation of the drum and continuing the flow of heated air for a second period of time, preferably at a higher rate of flow.

3,514,868

APPARATUS FOR THE DISTRIBUTION OF GAS IN A VESSEL

Malcolm Leslie Hoggarth, Solihull, England, assignor to The Gas Council, London, England, a British body corporate

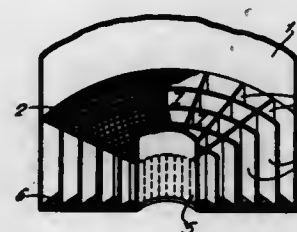
Filed Jan. 21, 1969, Ser. No. 792,660

Claims priority, application Great Britain, Jan. 31, 1968, 4,958/68

Int. Cl. F26b 17/14

U.S. Cl. 34—57

3 Claims



Apparatus, for providing a uniform distribution of gas in a vessel having a sloping or undulating floor used to support a fluidized bed, wherein the floor is supported on a plurality of gas conduits of varying length, each conduit containing a bed of particulate material and being arranged such that the ratio between the cross-sectional area of a conduit and the mean height of the walls forming that conduit remains constant across the floor assembly.

3,514,869

CONTOUR TRACING APPARATUS

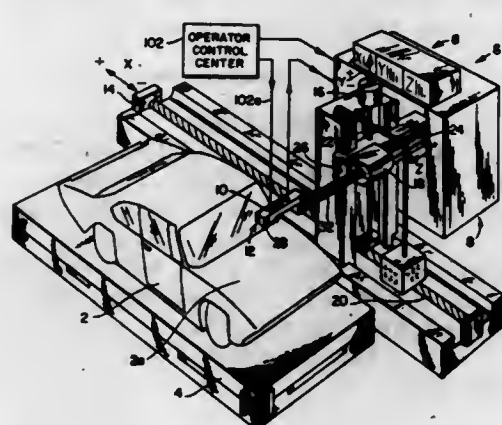
Leroy U. C. Kelling, Waynesboro, Va., assignor to General Electric Company, a corporation of New York

Filed July 27, 1967, Ser. No. 656,453

Int. Cl. G01b 7/28

U.S. Cl. 33—174

18 Claims



An apparatus for tracing the three dimensional contours of a surface of a body. A non-contact type sensing probe is maintained a short distance from the surface and substantially perpendicular thereto as it translates over the surface. Translation and directional orientation of the probe are controlled from a manually operable control center and act through orienting and translating mechanisms. A plurality of resolvers are provided to resolve signals from the probe and control center so that the probe tip will automatically remain a given distance from the surface, the probe will translate as desired, and the movement of the probe will be converted into outputs indicative of the dimensions of the contour of the surface as it is being traced.

3,514,870

DRYING APPARATUS

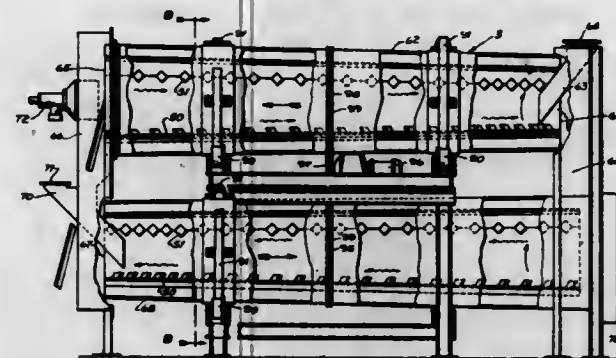
Arthur C. Avril, Cincinnati, Ohio, assignor to A & T Development Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed Oct. 9, 1968, Ser. No. 766,243

Int. Cl. F26b 11/20

U.S. Cl. 34—108

13 Claims



The disclosure relates to drying apparatus, for example, a heat exchange apparatus which is used in dehydrating sand and aggregates, such as raw, moist sand and gravel, involving the use of a pair of rotating drums, one constituting a sand heating drum and the second constituting a heat exchange drum, wherein the hot, dehydrated sand is commingled with the raw, moist gravel to drive off the moisture from the gravel by heat exchange, and, at the same time, to bring down the temperature of the mixture for immediate packaging.

Both drums are provided with lifting vanes which extend longitudinally and generally parallel with the axis of rotation of the drums. The vanes are provided with inclined impeller flights which slope with respect to the lifting vanes. The impeller flights produce a fanning or cascade action to disperse the material toward the center of the drums for faster drying and also, by virtue of the slope of the blades, to aid in advancing the material longitudinally through the drums, thus increasing the capacity of the apparatus.

3,514,871

WIDE ANGLE VISUAL DISPLAY

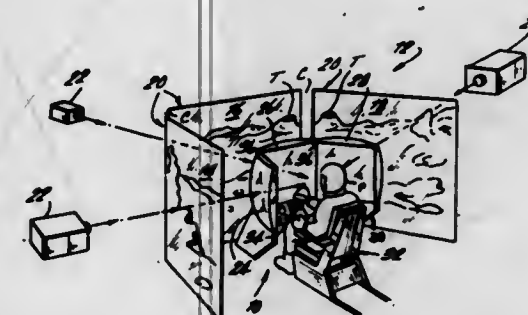
Arthur R. Tucker, Hilledale, N.J., assignor to Dalto Electronics Corporation, Norwood, N.J., a corporation of Delaware

Filed May 9, 1967, Ser. No. 637,108

Int. Cl. G09b 9/08

U.S. Cl. 35—12

2 Claims



A visual display for a flight simulator viewed through a comparatively wide angle and consisting of several pictorial displays and virtual image lenses positioned between the viewer and the pictorial displays to, firstly, give the viewer the apparent impression that the pictorial displays are at a considerably distance removed from the simulator and, secondly, to accommodate to the viewer's binocular vision as a result of which the spaced-apart marginal adjacent edges of the pictorial displays are seen as a single, fused or registered visual impression.

875 O.G.—2

3,514,872

DEVICES FOR BUILDING CIRCUIT ARRANGEMENTS

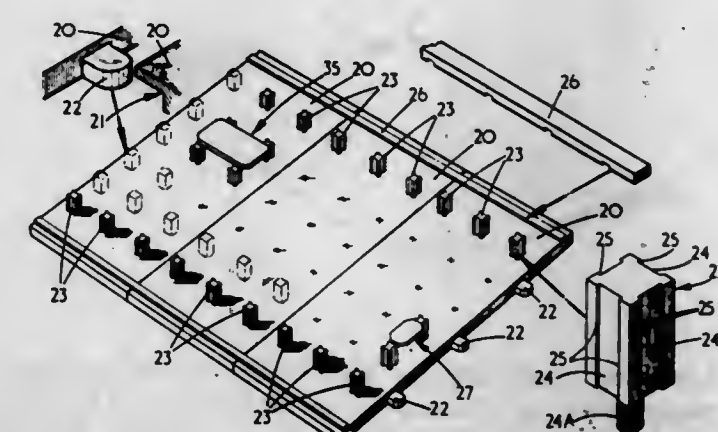
James Bradley, Oldham, England, assignor of 1/2 to A. M. Lock & Company Limited, Oldham, England, a British company

Filed Aug. 11, 1967, Ser. No. 660,014

Int. Cl. G09b 23/18; H02b 1/04

U.S. Cl. 35—19

6 Claims



An electronic-circuit building arrangement having an assembly panel with a number of contact stations on one surface of it, adjacent contact stations being electrically connected by electronic-circuit components each including a component element and a viewable legend of the component element and/or kind.

3,514,873

EDUCATIONAL DEVICE FOR INDIVIDUAL STUDENT USE

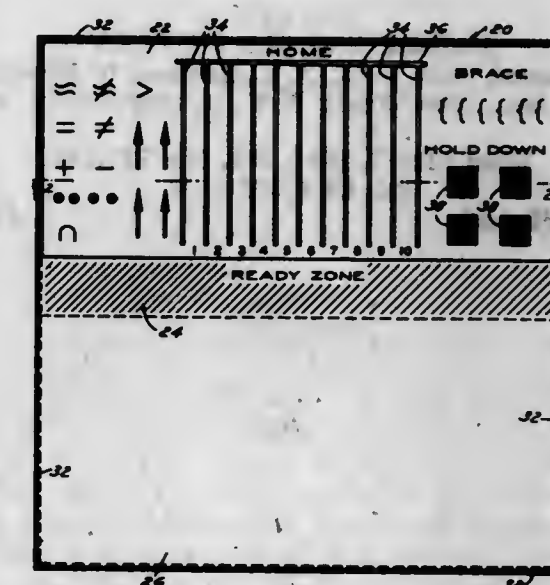
Paul J. Stobbe, 20212 Braille, Detroit, Mich. 48219

Filed Sept. 16, 1968, Ser. No. 759,894

Int. Cl. G09b 1/08; G09f 7/04

U.S. Cl. 35—31

8 Claims

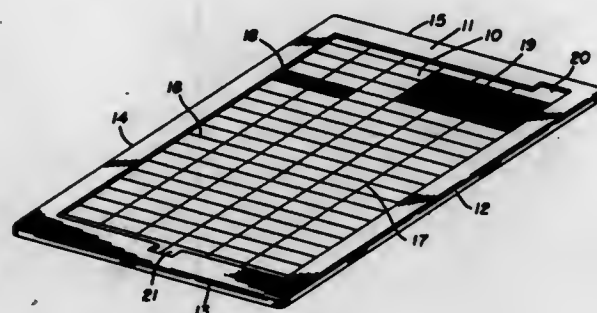


An educational device for individual student use comprising a board and a series of mathematical elements in the form of symbols, units and so on which are held on the board by a force added to gravity such as magnetic attraction, the board having defined areas for storage of the symbols and elements and the presentation of the units and elements, the storage area having positioning channels for guiding and locating the elements for storage.

3,514,874
LONGHAND-WRITING GUIDE
 Raymond A. Strohl, 230 E. Wheeling St.,
 Lancaster, Ohio 43130
 Filed Feb. 27, 1968, Ser. No. 709,589
 Int. Cl. G09b 11/04

U.S. Cl. 35—37

4 Claims



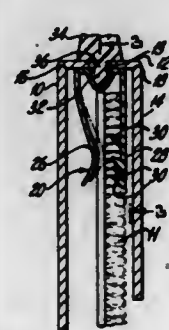
A writing guide for use with sheets of various types of paper, such as translucent unruled sheets of stationery, as a guide for obtaining proper margins, straight lines across the sheet, lateral positioning and vertical alignment of indentations, etc. It preferably consists of a platen or flat board providing a supporting surface on which the sheet is positioned and which is provided with a border or frame for overlapping the edges of the sheet on its two sides and top and bottom, the overlap being such as to provide the desired margins on the sheet when the writing is confined to the exposed upper face of the sheet as well as to grip and hold the sheet firmly but releasably. The platen is provided with horizontal and vertical guide lines and other indicia which show through the sheet to help the writer keep straight lines and vertical alignment of paragraph and other indentations as well as to locate other areas. Also, the inner edge of the frame or border may be provided with notches for locating page numbers or the like and which are located in a selected manner relative to the grid provided on the platen by the horizontal and vertical lines.

3,514,875
FABRIC SAMPLE DISPLAY
 Fred Howard, New York, N.Y., assignor to Howard Displays, Inc., New York, N.Y., a corporation of New York

Filed May 7, 1968, Ser. No. 727,181
 Int. Cl. G09f 3/04

U.S. Cl. 35—55

4 Claims



A fabric sample display, especially for carpet samples, comprising a backing member and a short front flap, hingedly connected by an upper flat middle section, with an elongated fabric gripping, resilient jaw member mounted on the underside of the middle section. The jaw member is mounted by means of a holding member with protuberances which project through apertures into a downwardly extending and enlarging cavity in the

jaw member whereby the display member may be assembled in a simple inexpensive manner without the use of the usual multiplicity of rivets and other fastening members.

3,514,876
EDUCATIONAL DEVICE
 Jack Sellers, 12361 Emrys Ave.,
 Garden Grove, Calif. 92640
 Filed Nov. 30, 1967, Ser. No. 686,862
 Int. Cl. G09b 1/28

U.S. Cl. 35—75

9 Claims



An educational device formed with a plurality of movable alphabet bars for arranging words viewable through a window or frame. Such alphabet bars are arranged to make such words by use of a template, and each alphabet is T-shaped in cross-section and is movable in a U-shaped channel.

3,514,877
BOOTS
 Joseph R. Coppola, Beverly, Mass., assignor to USM Corporation, Flemington, N.J., a corporation of New Jersey

Filed June 26, 1968, Ser. No. 740,224
 Int. Cl. A43b

U.S. Cl. 36—2.5

5 Claims



A boot having an outer sole which is molded upon the bottom of the upper and has at its toe portion, heel portion, and inside forepart portion reinforcing projections which extend upwardly from the sole and are molded around the mentioned portions of the upper to which they are secured by being injection molded thereon. The toe, heel and inside forepart of the boot are, as a result, sufficiently protected to withstand the unusual wear to which those areas of the boot are subjected during use in connection with motorcycles, motor scooters, and the like.

3,514,878
FOOTWEAR
 Noel H. Midgley, 361 Dandenong Road,
 Armadale, Victoria, Australia
 Filed Jan. 22, 1969, Ser. No. 792,959
 Int. Cl. A43b

U.S. Cl. 36—2.5

103 Claims



This invention relates to a shank blank for reinforcing the rear section of a footwear sole component. The shank blank is of generally channel shape with a strip-like web portion and a pair of opposed reinforcing flanges. The shank blank is connectable to the rear section by driving the free edges of the reinforcing flanges into the material of the rear section. The embedded shank blank is such that it may be deformed along its length together with the rear section to a desired contour to hold the rear section in that desired contour. The invention also covers a footwear sole component reinforced with such a shank blank, an article of footwear including such a reinforced sole component and a method of manufacturing such a reinforced sole component.

3,514,879
HEEL HAVING INTERCHANGEABLE SUPPORT PORTION

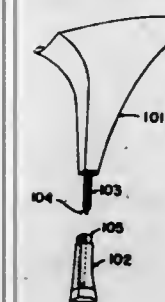
Michele Frattallone, 34-A, Prospect St.,
 Lynn, Mass. 01902

Continuation-in-part of application Ser. No. 427,300,
 Jan. 22, 1965. This application Nov. 6, 1967, Ser.
 No. 685,230

U.S. Cl. 36—42

Int. Cl. A43b 21/36

2 Claims



A heel for shoes resembling the conventional heel having a flaring upper section and narrower support section but characterized in that the support sections are detachable and interchangeable. The flaring upper section has a rigid metallic cylinder extending into a registering receiving tube in the support section. The tube projects into a registering recess in the upper section. The lower section includes the conventional "lift."

3,514,880
EXTENSIBLE INSOLES
 Peter L. Stapleton, Leicester, England, assignor to USM Corporation, Flemington, N.J., a corporation of New Jersey

Filed Sept. 26, 1967, Ser. No. 670,598
 Int. Cl. A43b 13/88

U.S. Cl. 36—44

2 Claims

A novel insole comprising discrete forepart and heel portions joined by an extensible portion, the forepart and

heel portions each having locating holes therein to facilitate positioning of the insole on the last. Preferably, the



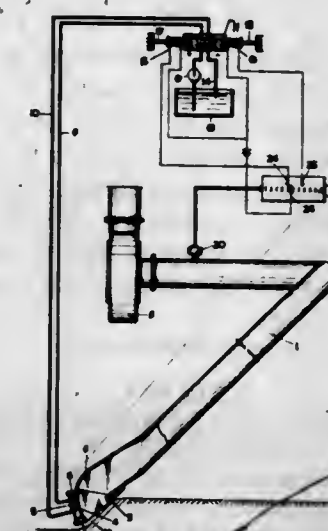
forepart and heel portions are joined by means of extensible material such as polyurethane foam interposed between overlapped margins of the two portions.

3,514,881
APPARATUS FOR ADJUSTING THE SUCTION SLOT IN A DRAG SUCTION DREDGER
 Achilles Hadjidakis, The Hague, Netherlands, assignor to Mineraal Technologisch Instituut, Delft, Netherlands
 Filed Oct. 6, 1967, Ser. No. 673,515
 Claims priority, application Netherlands, Oct. 6, 1966,
 6614098

U.S. Cl. 37—58

Int. Cl. E02f 3/92

1 Claim



A drag suction dredger has a suction pipe at least a portion of whose suction head is automatically vertically adjustable according to the suction upstream of the pump. When the suction is above or below a predetermined range, a portion of the suction head is swung up or down to increase or decrease the width of the slot between the suction head and the soil, thereby to return the suction to a value within the predetermined range.

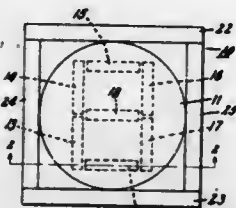
3,514,882
LIGHT CONTROLLING DISPLAY APPARATUS RESPONSIVE TO FLUID PRESSURE
 Howard W. Avery, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
 Filed July 29, 1968, Ser. No. 748,464
 Int. Cl. G09f 11/00

U.S. Cl. 40—28

10 Claims

Light for actuation of an alphanumeric display member is passed through a channel formed of an opaque

and flexible tubular material. The flexible member is movable from a position in which the channel is blocked in response to an excess pressure on the outside over the



inside of the channel to a position in which the channel is open in response to an excess of pressure on the inside over the outside of the channel.

3,514,883

PIVOTAL DISPLAY PANEL INSTALLATION

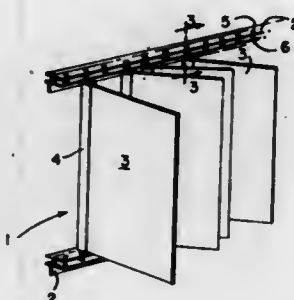
Alto O. Albright, 818 16th Ave. W.,
Kirkland, Wash. 98033

Continuation-in-part of application Ser. No. 573,371,
Aug. 18, 1966. This application Aug. 12, 1968, Ser.
No. 752,016

Int. Cl. G09f 11/06

U.S. Cl. 40-67

10 Claims



The pivotal display panel installation provides for the mounting of swingable panels between parallel mounting strips in any given position by means of aligned, longitudinally spaced holes in the strips which receive pivot pins projecting from a panel support clamp. The pivot pins are offset from the central, longitudinal axis of the panel support clamp to permit the support clamp, which grips one edge of a panel, to pivot the panel flush against a support surface.

3,514,884

COMBINATION CALENDAR AND ROOM DEODORANT

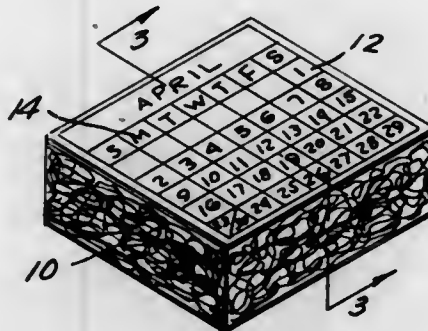
Angelo G. Passariello, 1011 Parkland Place SE.,
Albuquerque, N. Mex. 87108

Filed June 9, 1967, Ser. No. 645,056

Int. Cl. G09f 19/00; B42d 5/04

U.S. Cl. 40-107

3 Claims



A block of permeable material saturated with a deodorant, said block having on one face a calendar sheet representing one month and on the opposite face a coating or layer of pressure-sensitive adhesive.

**3,514,885
ADVERTISING SYSTEM**

Richard C. Jay, Dallas, Tex., assignor to Taxi

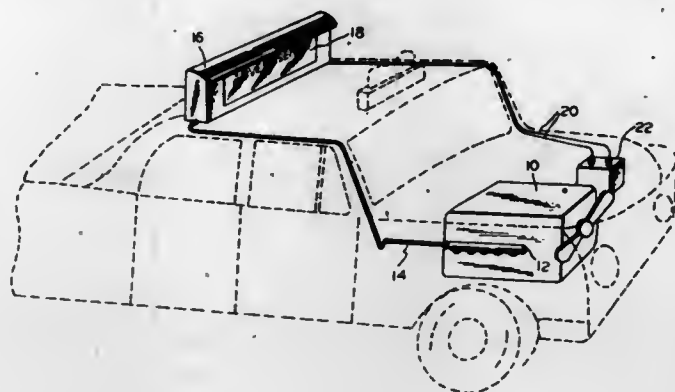
Advertising Company, Dallas, Tex.

Filed Feb. 29, 1968, Ser. No. 709,243

Int. Cl. G09f 7/00

U.S. Cl. 40-129

3 Claims



A rotatable sign has its motive unit connected to the operating arm of a windshield wiper vacuum motor whereby the sign is made to rotate by the oscillating action of the said operating arm.

3,514,886

FRAMES

David B. Drakard, 25 Clarence Road, St. Albans,
Hertfordshire, England

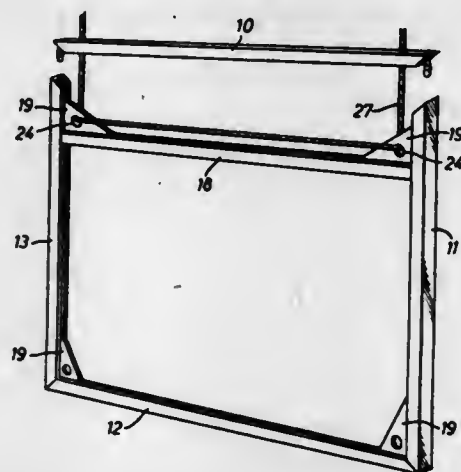
Filed Mar. 29, 1968, Ser. No. 717,216

Claims priority, application Great Britain, Mar. 31, 1967,
14,912/67; June 5, 1967, 25,773/67

Int. Cl. G09f 1/12

U.S. Cl. 40-152.1

11 Claims



A rectangular frame having four elongated frame members with a longitudinal slot. Two of the elongated members are of equal length and are secured to, at right angles, opposite ends of a third elongated member so as to form a three sided slot into which a flat rectangular article can be inserted. The fourth elongated member has the same length as the third elongated member and carries, at each end, a joining member for releasably joining it to the free ends of the first two elongated members.

3,514,887

FEEDING UTENSILS FOR CHILDREN

Beatrice A. Jacob, 269 Parker Ave.,

Hackensack, N.J. 07601

Filed Jan. 16, 1968, Ser. No. 698,333

Int. Cl. G09f 3/00

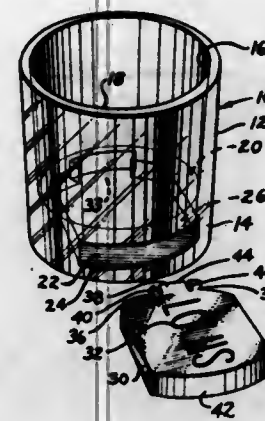
U.S. Cl. 40-324

6 Claims

A child's feeding utensil including a vessel with a transparent bottom, a cavity below the bottom and a

visual display such as a picture or a text removably retained within the cavity so that the retained display

pad the body of which is molded of solid rubber, by the formation of foam rubber-filled recesses within the end portions of the body.



3,514,890

FISHING LURE

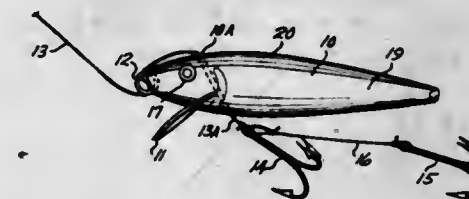
Gilbert W. Franchlyn, Rte. 4, Box 623,
Poulsbo, Wash. 98370

Filed May 1, 1968, Ser. No. 725,643

Int. Cl. A01k 85/00

U.S. Cl. 43-42.05

3 Claims



may be viewed through the transparent bottom and may be selectively removed and replaced when desired.

3,514,888

GUN BARREL OILING DEVICE

Anthony Bramley, Gosford House, Gosford,
Kidlington, Oxfordshire, England

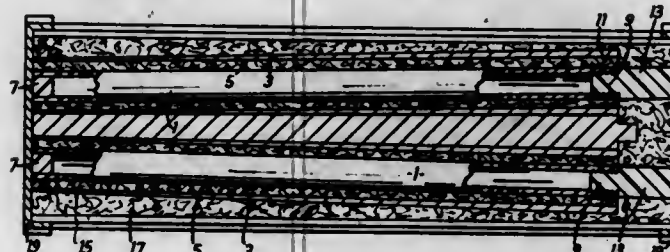
Filed Apr. 29, 1968, Ser. No. 724,770

Claims priority, application Great Britain, May 5, 1967,
21,112/67

Int. Cl. F41c 31/02

U.S. Cl. 42-1

9 Claims



A film of oil can be maintained over the entire surface of the bore of a gun barrel by means of a perforated tube, adapted to retain oil, the outside surface of which is covered with an oil-permeable material, which tube can be inserted into the barrel of the gun. Also provided is an impermeate casing the inside of which is covered with an oil-impregnated material, the material being shaped to contact the outer surface of a gun barrel when present inside the casing.

3,514,889

CUSHIONED FIREARM RECOIL PAD

Frank A. Pachmayr, 1220 S. Grand Ave.,
Los Angeles, Calif. 90015

Filed Apr. 15, 1968, Ser. No. 721,361

Int. Cl. F41c 23/00

U.S. Cl. 42-74

3 Claims



A construction for imparting supported compression cushioning to the terminal portions of a firearm recoil

A fish lure comprising a body made of floatable material and having as the only external protrusion thereon a bill assembly for causing the lure to dive and dart when pulled through the water. A line-holding clip is provided at the nose of the lure and is adapted to grip the fish line with sufficient force to permit the lure to be pulled through the water. The fish line extends through an opening in the bill or lure body to a point beneath the lure body and has fishhooks attached directly to the line without being attached to the body of the lure. When a fish strikes, the line is pulled free from the nose clip and the lure rides up the fish line.

3,514,891

SLIP-ON FISH LINE ATTACHMENT

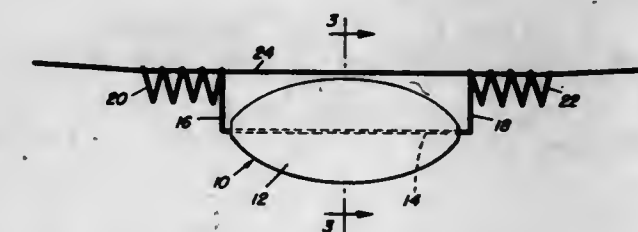
Maurice Krull, Miami Beach, Fla. (119-30 N. Bayshore
Drive, North Miami, Fla. 33161)

Filed June 19, 1969, Ser. No. 834,829

Int. Cl. A01k 93/00, 95/00

U.S. Cl. 43-44.87

1 Claim

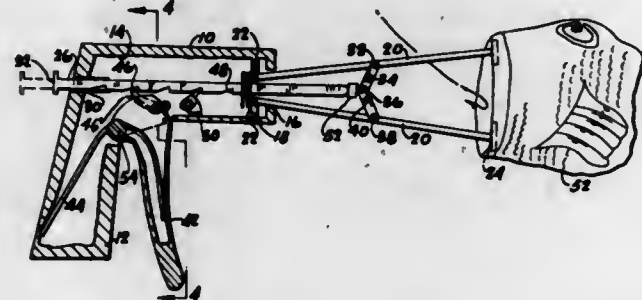


The slip-on sinker or float attachment of this invention is capable of being slidably mounted on an uncut fish line or of being anchored on an uncut, unknotted fish line. It consists of a weighty body, such as lead, iron, or other heavy sinkable material, or lightweight floatable material, is preferably elongated, and has a linear member or wire secured at opposite ends of the elongate body, preferably by extending integrally through the body, which then is turned at right angles to the longitudinal axis of the body for a distance greater than the radius of the thickness of the body, and then terminates in a coil at each end whose axis is parallel to the longitudinal axis of the attachment body. The attachment is slidably mounted on the uncut fish line by merely winding the fish line through the offset coils. It is anchored on the uncut fish line by first winding the uncut fish line through one coil, then winding the fish line about both offset portions of the wire, and then through the other of the coils. With a first sinker attachment already in place on the fish line in the water, a second or third sinker can be added thereto, when necessary, by merely slidably mounting a second or third sinker to the fish line and sliding it down on the fish line into abutment with the anchored sinker.

3,514,892
SPREADER FOR FISH JAWS
 Edward Wormsbecker, Box 426,
 Towner, N. Dak. 58788
 Filed Dec. 18, 1967, Ser. No. 691,445
 Int. Cl. A01k 97/00

U.S. Cl. 43—53.5

1 Claim



A fish jaw spreader having a housing with a pistol-like grip member projecting laterally therefrom, said housing having an open chamber with an open end. A pair of elongated members project from the housing and are pivotally mounted on the housing. A pair of linkages are provided with one linkage having one end pivotally mounted on one of said elongated members and the other linkage having one end pivotally mounted on said other elongated member, with the other ends of the linkages pivotally connected together. A notched rod is mounted within the housing to pivot the linkage apart and thereby spread the elongated members apart, with the elongated members acting to spread the fish jaws apart. A trigger is mounted on said housing and has means thereon acting to move said rod.

3,514,893
RESILIENTLY COUPLED ABUTTING MEMBERS
DISPOSABLE IN PLURAL STABLE CONFIGURATIONS

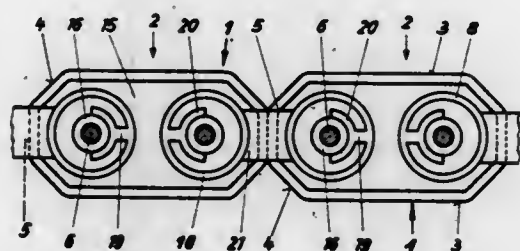
Jeno Paksy, Budapest, Hungary, assignor to Frankplastik Vertriebs GmbH & Co. KG, Furth, Bavaria, Germany, a German company

Filed Apr. 27, 1967, Ser. No. 634,291
 Claims priority, application Germany, Sept. 28, 1966,
 F 50,302

Int. Cl. A63h 33/00

U.S. Cl. 46—1

2 Claims



A plaything in the form of a chain, the links of which are polygonal and held together at any one of their sides by resilient, frictional resistance which can be overcome by appropriate force so as to permit a large number of different combinations of relative positions of the links.

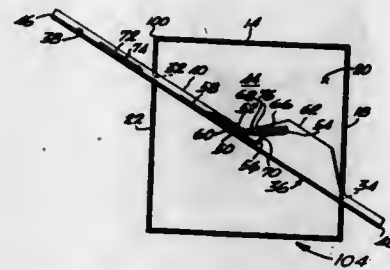
3,514,894
EDUCATIONAL TOY
 Frank L. Novak, 5308 Madison St.,
 Hollywood, Fla. 33020
 Filed Sept. 14, 1967, Ser. No. 667,808
 Int. Cl. A63h 33/00

U.S. Cl. 46—1

10 Claims

An educational toy which includes a housing and a slide traversing the interior of the housing. The slide is provided with an intermediate ledge of about zero slope so

that a first disk on the ledge is responsive to an impact by a second similarly sized disk gliding down the slide



to dislodge the first disk from the ledge. The second disk replaces the first disk and remains on the ledge.

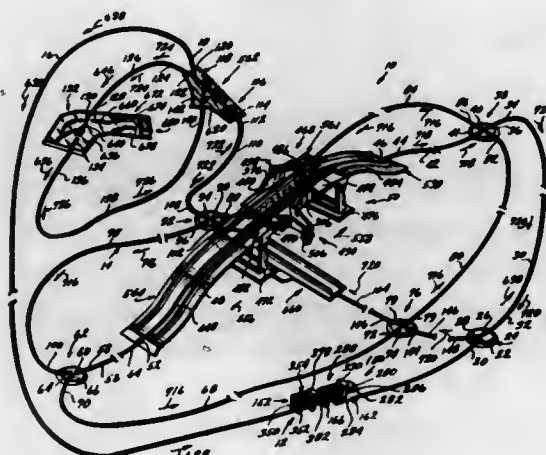
3,514,895
MATERIAL HANDLING TOY AND TRACK SYSTEM

John W. Ryan and Howard F. Newman, Los Angeles, and Lorin P. Olson, Torrance, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California

Filed Mar. 24, 1967, Ser. No. 625,809
 Int. Cl. A63h 33/30

U.S. Cl. 46—40

8 Claims



A tracking vehicle has a single, casted wheel guiding the vehicle and an associated trailer on a single-track type track system having dumping, uncoupling and pickup stations. The track system includes fixed switch points automatically directing the vehicle into the various stations in a closed system. The dumping station includes elevated hoppers into which the vehicle and the trailer automatically dump marbles. The vehicle and the trailer have hopper-type boxes for directing the marbles to a discharge chute. The track system automatically directs the vehicle and trailer under the elevated hoppers for automatic reloading.

3,514,896
TOY ANIMAL HAVING PIVOTAL FORWARD AND REAR PORTIONS

Charles W. Neufeld, Upper Ribsdon, Windlesham, England (% Neufeld Limited, Ashford Road, Middlesex, England)

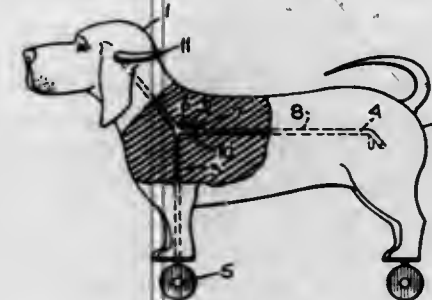
Filed Feb. 29, 1968, Ser. No. 709,291
 Int. Cl. A63h 11/10

U.S. Cl. 46—103

6 Claims

The disclosure relates to an improved movable animal toy comprising an internal skeletal structure having a pivotal joint adjacent one end of the skeletal structure, a resiliently flexible body surrounding the skeletal structure to form an animal shape, and wheels or other mov-

able means attached to the extremities of the animal shape whereby the toy is movable in either a direct or



a circular path by pivoting one end of the skeletal structure about the other.

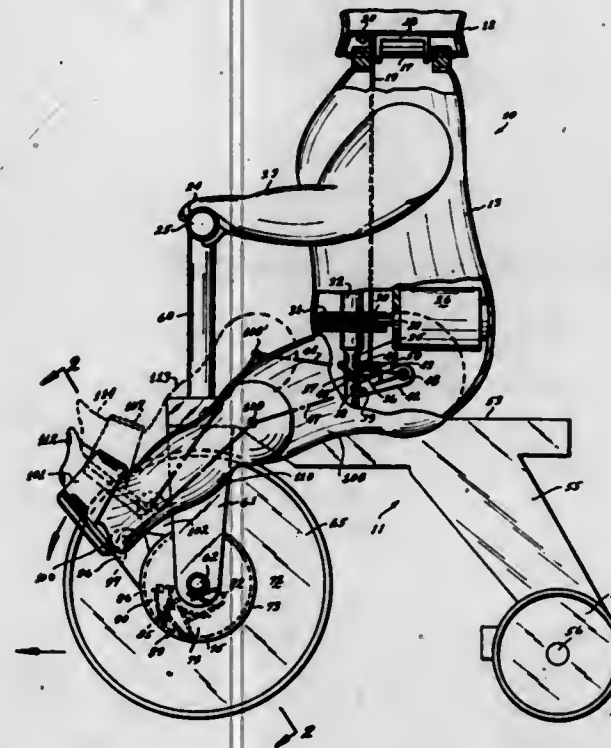
3,514,897
DOLL-DRIVEN WHEEL TOY AND RATCHET DEVICE FOR DRIVING SAME

Raymond J. Douglas, Los Angeles, Cedric E. Iwasaki, Hermosa Beach, and Joseph Kosoff, Hawthorne, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California

Filed Feb. 8, 1968, Ser. No. 704,123
 Int. Cl. A63h 17/18

U.S. Cl. 46—109

3 Claims



A figure toy in combination with a wheel driven toy, the figure toy having two legs and a body, means for driving the legs in opposite directions alternately in a pedalling motion, pedal means in driving connections in one of the wheels of the wheel driven toy, the legs of the figure toy being in a pedalling relationship with the pedal means, and the pedal means being operatively connected to drive the wheel by a one way drive means adapted to drive the wheel in accordance with movements of the doll legs in one of said opposite directions, the drive means permitting a free return of the pedal means, after they have been moved a predetermined limited amount for driving the wheel, to a predetermined position where the drive movement starts, the return movement being in accordance with the alternate movement of said legs in the other of the opposite directions.

A ratchet and pawl combination for a pair of members adapted to rotate on a common axis in which the ratchet wheel is on one of the members and the pawl has an arm pivotally mounted at one end on the other of the members

so as to be in engaging alignment with the ratchet, the other end of the arm defining the pawl, and a U-shaped flexible member on said arm and having a portion thereof adapted to ride on a generally cylindrical support on one of the members so as to bias the pawl into contact with the ratchet teeth.

3,514,898
WAND FOR USE IN PLAYING A DEXTERITY GAME

John Roy Price, Manhasset, N.Y., assignor to Paul G. Benedum, Pittsburgh, Pa.

Filed Mar. 13, 1968, Ser. No. 712,656
 Int. Cl. A63h 5/00

U.S. Cl. 46—177

1 Claim



A wand for use in playing a dexterity game in which players strike the wands together producing a clicking sound, the wand being straight and of circular cross section which is constant throughout the length of the wand except that at the ends the cross section may be somewhat enlarged, the wand having adjacent one end an internal cavity with a sound producing element in the cavity adapted to strike against the wall of the cavity when the wand is struck against another wand producing a secondary sound supplementing the clicking sound produced by striking the wands together. The wand may have a length of the order of one foot and a diameter of the order of one inch so that it may be easily manipulated by one hand.

3,514,899
DOLL HAVING ELECTRICAL ACTION-PRODUCING MECHANISM RESPONSIVE TO ACTUATORS ON SEPARATE ARTICLES

Joseph L. Bonanno, South Orange, Sidney Tepper, Millburn, and Hyman Boydman, Springfield, N.J., assignors to Topper Corporation, a corporation of Delaware

Filed Apr. 26, 1968, Ser. No. 724,400
 Int. Cl. A63h 33/26

U.S. Cl. 46—232

16 Claims



Doll has electrical action mechanism, e.g., motor-operated crying and/or appendage-moving mechanism, and circuit for energizing mechanism. Circuit includes

two parallel current paths, and a switch means at each end of the current paths for alternatively connecting one or the other path to the remainder of the circuit. One switch means may be a single pole, double throw switch behind the doll's mouth operable by a nursing bottle, and other switch means may comprise two switches in doll's body operable alternatively by elements carried by garments, e.g., diapers, placed on the doll.

3,514,900 METHOD FOR RAPIDLY REPRODUCING ORCHIDS

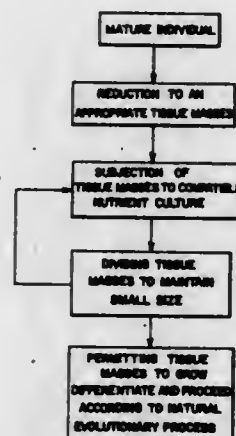
Everest McDade, 344 Royal Pines Drive,
Skyland, N.C. 28776

Continuation-in-part of application Ser. No. 622,832,
Dec. 27, 1966. This application Aug. 11, 1967, Ser.
No. 672,407

Int. Cl. A01g 31/00

U.S. Cl. 47-58

4 Claims



The steps of reducing a mature plant individual or seedling to an undifferentiated tissue mass, subjecting the tissue mass to a compatible nutrient media under conditions favoring the rapid undifferentiated growth of the tissue mass, dividing the growing undifferentiated tissue mass to provide a plurality of undifferentiated tissue masses of relatively small size, and permitting the plurality of tissue masses obtained from the single tissue mass to grow, differentiate and mature into a plurality of identical plants.

3,514,901 FARM GATE

Carey C. Leonard, Rte. 2, Cumberland, Ohio 43732
Filed Jan. 8, 1969, Ser. No. 789,705

Int. Cl. E06b 11/04

U.S. Cl. 49-191

2 Claims



A farm gate having a pair of substantially parallel gate bars, one of which is hinged to a gatepost, and a cross linkage means comprising a plurality of parallel members each pivotally connected to the gate bars. The

cross linkage means includes at least one rigid compression crossbar and tension members, which may be ordinary barbed fence wires, above and below the compression member. The cross linkage and the parallel gate bars form a parallelogram which may be shifted upwardly or downwardly so that the free gate bar may rest upon the ground in both opened and closed positions, regardless of any upward or downward slope of the ground from the hinged gate bar. The cross linkage means may be adjusted horizontally so that the gate may fit a wide variety of gate openings. When the tension members are tightened, they hold the gate bars parallel and in a plane. In the preferred embodiments, the tension members are wires pivoted to adjustable eyebolts for maintaining tension, the pivot points of the wires being slightly closer together in all adjusted positions than the pivot points of the central compression member so that there is no danger of slackening and tangling the wires when the free gate bar is raised or lowered, the slight increase in tension in the wires being insufficient to interfere with upward and downward movement of the free gate bar.

3,514,902 TOP DOOR MECHANISM FOR TOP LOADING REFUSE VEHICLE

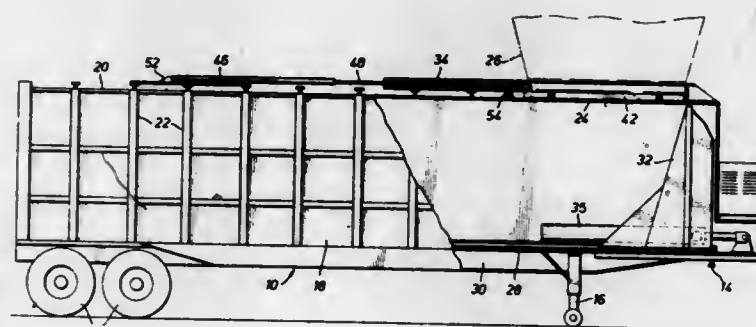
Orin M. Anderson, P.O. Box 14147,
San Antonio, Tex. 78214

Filed Feb. 14, 1969, Ser. No. 799,207

Int. Cl. E05d 15/10

U.S. Cl. 49-213

1 Claim



Top door mechanism for refuse vehicles of the top loading type having a door which is movable longitudinally of the vehicle into and out of closing relation to a top opening in the vehicle body. The mechanism includes a trackway having rails extending along the sides of the door opening and beyond one end thereof and each of which is formed with a main rail portion spaced above the top of the body and longitudinally spaced turnout portions positioned within the front and rear edges of the door opening and extending downwardly from and in parallel relation to said main portion, and along which trackway the door is movable on rollers. The door is movable along the trackway from an open position in which the door is supported on said main rail portions spaced above the top wall of the body to a closed position supported on said turnouts with the inner face of the door in engagement with said top wall and closing said opening. Means is provided for holding the door against the movement of the door rollers into the turnouts until the door is nearly closed whereby joining of the door during its closing movement is prevented.

The door is supported in closed position with its inner face substantially in the plane of the top wall of the body to form a substantially continuous inside surface throughout the length of the top of the body when the door is closed.

3,514,903 MANUFACTURE OF REGULATED WINDOW OPENINGS

Federico Garcia Roche, Nuestra Senora del Coll 117,
Barcelona, Spain

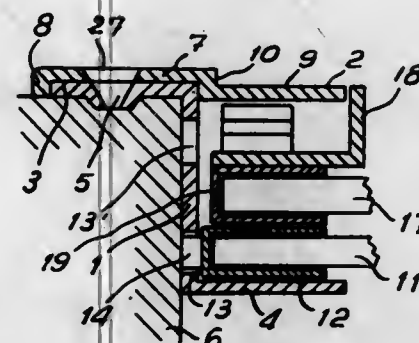
Filed Dec. 10, 1968, Ser. No. 782,608

Claims priority, application Spain, Dec. 21, 1967,
349,177

Int. Cl. E05d 15/16

U.S. Cl. 49-416

5 Claims



An improvement in the manufacture of regulated window openings includes a guiding frame comprising two coupled sections conjointly defining a mounting and guiding channel to receive box elements placed at the ends of fixed panes and to receive box elements placed at the ends of sliding panes, the fitting of either type of panes into their respective box elements being achieved through resilient means, and the whole assembly being detachable to facilitate maintenance and repair.

3,514,904 ADJUSTABLE HANDLE FOR SLIDING SASH

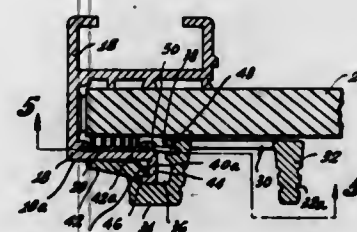
Harry M. Riegelman, Long Beach, Calif., assignor to
Ador Corporation, Fullerton, Calif., a corporation of
California

Filed Mar. 28, 1968, Ser. No. 716,782

Int. Cl. E05b 1/00

U.S. Cl. 49-460

5 Claims



A spring-biased, vertically adjustable handle including a camming surface adapted to cooperate with a stile flange so that the handle can be snapped into its mounted position upon the stile by rotating the handle over the stile extrusion in such a manner as to bring the camming surface into interlocking engagement with the flange.

3,514,905 HYDRAULIC METHOD AND APPARATUS FOR DISPENSING GRANULAR MATERIAL UNDER PRESSURE

William L. King, John F. King, and Loyal W. James,
Eugene, Ore., assignors, by mesne assignments, to
McKenzie Pump Corporation, Springfield, Ore., a corporation of Oregon

Filed July 3, 1967, Ser. No. 650,932

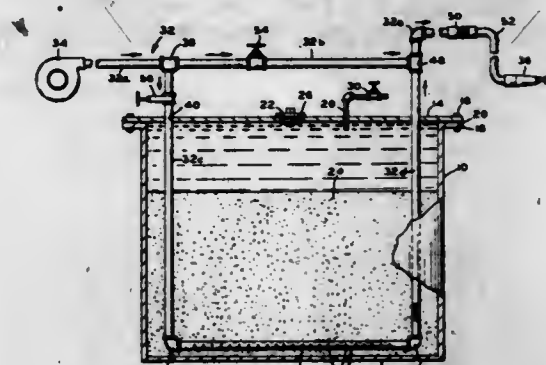
Int. Cl. B24c 3/00

U.S. Cl. 51-12

14 Claims

The apparatus described herein includes a tank for storing a liquid and a granular material, such as water and sand, under an internal hydraulic pressure. A pipeline extends from a liquid pump to an outlet having a nozzle

for emitting a stream of liquid under pressure. The pipeline downstream from the pump includes first branch line including a perforate pipe section extending generally horizontally within the tank and below the upper level of granular material within the tank. The pipeline includes a second branch line in parallel with the first branch line so that a portion of the flow from the pump can bypass the tank. Flow control valves are provided in both branch lines for regulating the proportion of total flow through each branch and thereby the concentration of grit in the



flow at the nozzle. The tank is provided with a top filler opening for adding granular material and a closable air vent to permit filling the tank with liquid at line pressure.

As liquid flows from the pump through the perforate pipe section with the tank under an internal hydraulic pressure approximating the line pressure, granules from the tank pass through the perforations in the perforate pipe section and become entrained in the flow, which carries them to the nozzle where they are discharged in a high pressure liquid spray.

3,514,906 CUT-OFF MACHINE

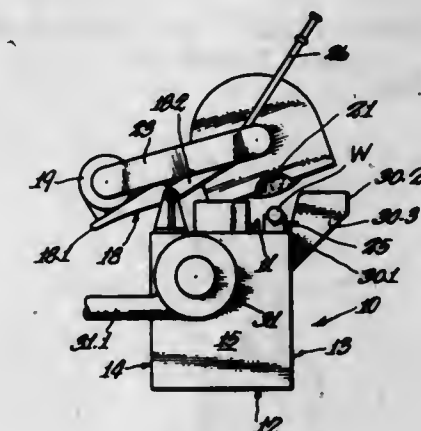
Charles T. Everett, Warren, Ohio, assignor to Everett
Industries, Inc., Warren, Ohio, a corporation of Ohio

Filed Nov. 24, 1967, Ser. No. 685,621

Int. Cl. B24b 55/06, 27/04, 27/06

U.S. Cl. 51-99

7 Claims

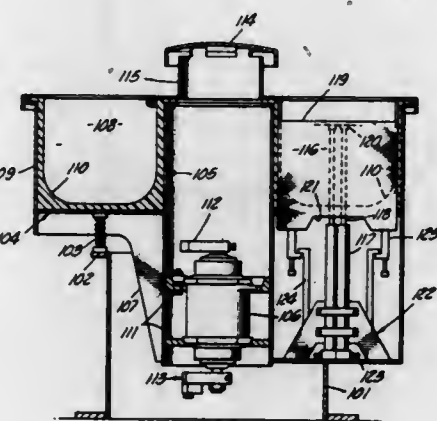


An abrasive cut-off machine for disposition in an enclosed space and having a hollow, substantially totally enclosed base on which a rotatably mounted, abrasive cut-off wheel is transversely movable toward and away from stock to be severed. The base has an opening adjacent the cut-off wheel for receiving waste products of the cutting operation and a high volume air moving device has its inlet communicating with the interior of the base and its outlet communicating with the exterior of the enclosed space in which the machine is disposed. The air

moving device creates below atmospheric pressure within the base for drawing the waste products of the cutting operation into the base through the base opening and such device discharges smoke and fumes to the exterior of the space in which the machine is disposed while solid particles are trapped within the base for removal at appropriate intervals.

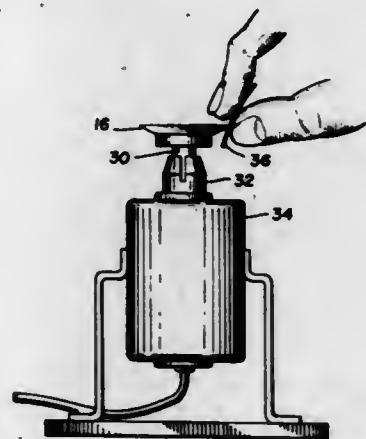
3,514,907 VERTICAL DAM

John Rutledge Strom, Fullerton, Calif., assignor to Sweco, Inc., a corporation of California
Filed Apr. 17, 1967, Ser. No. 631,229
Claims priority, application Great Britain, May 4, 1966, 19,653/66
U.S. Cl. 51-163 26 Claims



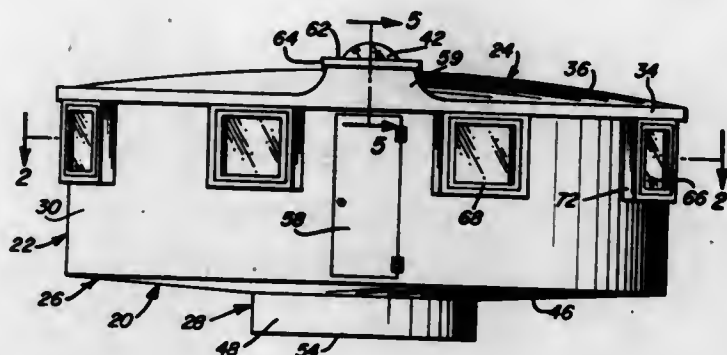
A vibratory finishing apparatus having a generally toroidal finishing bowl in which a charge of parts to be finished and a finishing media are subject to vibration and in which a vertical weir or dam is provided to aid in controlling both the motion of the charge and unloading and separating the parts.

3,514,908
PROCESS FOR FINISHING CONTACT LENSES
Douglas K. Herbert, Glen Mills, Pa., and Kenneth R. Gill, Rochester, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 29, 1967, Ser. No. 686,568
Int. Cl. B24b 1/00
U.S. Cl. 51-284 5 Claims



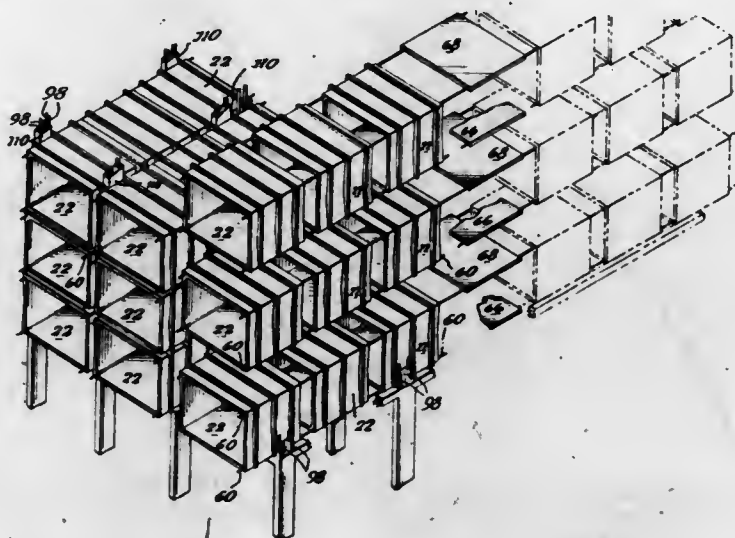
An improved process for finishing the edge of a contact lens. In particular the process is applicable for finishing the edges of contact lenses manufactured by spin casting cross-linked hydrophilic polymers.

3,514,909
MONOLITHIC BUILDING
Ricardo J. Nevarez (Ocampo), Mexico City, Mexico, assignor to Technical Investment Corporation, Miami, Fla., a corporation of Florida
Original application Nov. 2, 1967, Ser. No. 680,103, now Patent No. 3,436,052, dated Apr. 1, 1969. Divided and this application Mar. 28, 1969, Ser. No. 811,470
Int. Cl. E04b 1/34; E04h 1/02, 7/18
U.S. Cl. 52-73 7 Claims



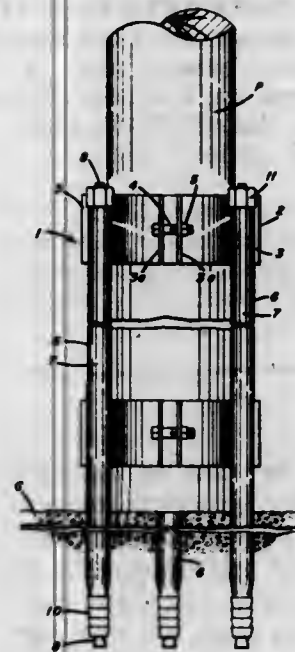
A building construction of monolithic reinforced concrete having a single pedestal-type support resting upon the ground surface. A novel form arrangement is employed for enabling the complete building to be formed in a single operation by employing a form which will completely form all components of the building and be subsequently removed for reuse. The building is capable of being constructed entirely by rather unskilled laborers by virtue of the specific construction of the form and the simplicity of use of the form in constructing a building.

3,514,910
MODULAR BUILDING CONSTRUCTION
Daniel Comm, Highland Park, Ill., assignor to Dano Modules, Inc., a corporation of Delaware
Filed Feb. 14, 1968, Ser. No. 705,391
Int. Cl. E04b 1/348; E04c 3/34
U.S. Cl. 52-79 12 Claims



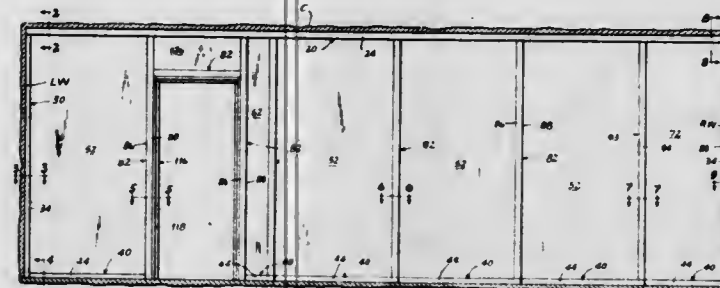
A building constructed from a number of prefabricated modules. Each of the modules has solid spacing ribs on its outer surface, which ribs cooperate with similar ribs on adjacent modules to define a series of spaces between adjacent modules. The modules are stacked and arranged according to a predetermined building plan, and selected spaces defined by adjacent sets of cooperating spacing ribs are filled with poured concrete to form support columns for the building.

3,514,911
LINE POLE ROCK ANCHOR BRACKETS
Radovan N. Preradovich, Lac Lemoyne, Quebec, Canada, assignor to Gerole International Inc., Val d'Or, Quebec, Canada
Filed Apr. 2, 1969, Ser. No. 812,598
Claims priority, application Canada, May 6, 1968, 19,245
Int. Cl. E02d 5/74; E04c 3/30
U.S. Cl. 52-165 10 Claims



An anchor bracket suitable for installing a pole on rocky ground includes a clamp-like body for receiving and gripping the pole, and at least three parallel legs extending from the body, each leg including a hollow outer casing, an inner member relatively movable within the casing, and actuating means adjacent the body for causing relative movement between the casing and the inner member, the free end portion of each leg remote from the body being laterally expandable by said relative movement such that the legs can be anchored in respective holes in the ground.

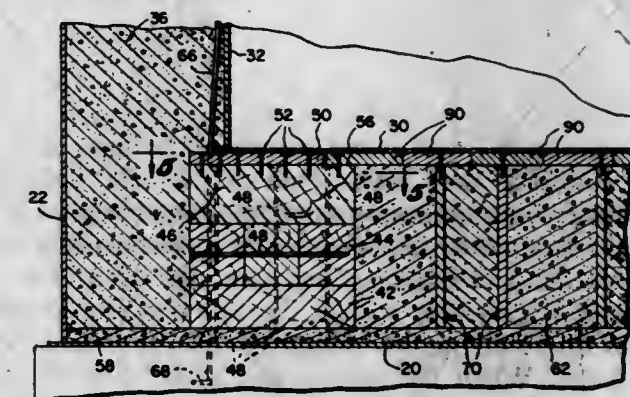
3,514,912
PARTITION WALL INSTALLATION
Everett K. Smith, 224 Roderick Drive, St. Louis, Mo. 63137
Filed Sept. 23, 1968, Ser. No. 761,438
Int. Cl. E04h 1/06; E06b 1/18
U.S. Cl. 52-204 7 Claims



Partition wall structure that may be removably erected in an office building and the like without any securing or supporting means therefor being attached to the floor. The structure includes a ceiling channel and opposed wall channels, the ceiling channel extending from one wall to the other, and each wall channel extending from the floor to the bottom edge of the ceiling channel. These channels once installed comprise the only permanent elements of the installation. The wall-to-wall and floor-to-ceiling dimensions having been determined in advance, the paneling and the additional supporting means therefor can be prefabricated, transported to the site, and installed

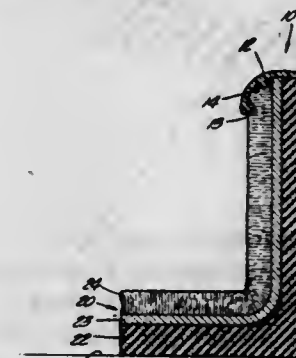
without the use of any tools whatever. Should it subsequently become desirable to remove the partition wall, it may likewise be dismantled without the use of tools. Except for the ceiling and wall channels that would remain, no evidence of the earlier partition wall installation would be visible because no damage whatsoever had been inflicted on the floor. This is considered to be one of the more important features of the invention.

3,514,913
INSULATING FOUNDATION FOR A LOW TEMPERATURE STORAGE TANK
Ardell H. Nelson, Coraopolis, Pa., assignor to Pittsburgh-Des Moines Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 2, 1968, Ser. No. 702,746
Int. Cl. E04b 1/32; E04g 11/04
U.S. Cl. 52-249 2 Claims



An inner tank is supported in spaced relationship to an outer tank, the inner tank being supported by a plurality of spaced hollow modules each of which is formed of a plurality of interconnected wooden members. The space between and within the hollow modules as well as the space between the walls of the inner and outer tanks are filled with an insulating material. The various modules supporting the inner tank are interconnected by wooden planking so as to unitize and rigidize the support means for the inner tank.

3,514,914
CARPET CAP STRIP
Erwin F. Bergquist, 22242 Del Valle, Woodland Hills, Calif. 91364
Continuation of application Ser. No. 592,422, Nov. 7, 1966. This application Aug. 22, 1968, Ser. No. 755,514
Int. Cl. E04c 2/08; E04f 19/02
U.S. Cl. 52-273 3 Claims



Carpet coping and protective bumper strip for use about the upturned edge of carpeting and formed of resilient material securable to the wall by adhesive material without need for tools or fasteners. The coping strip is of inverted J-shape in cross section and includes inwardly projecting dirt-excluding ribs along the interior of its trough-shaped portion and a resilient feathered rib along its upper wall-engaging edge readily conformable to irregularities and imperfections in the wall surface.

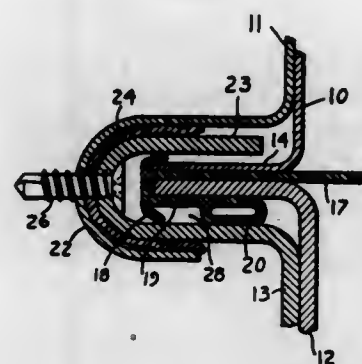
3,514,915 SHEET METAL WALL PANEL WITH COMPRESSIBLE EDGE SEAL

Thomas B. Johnson, Ambridge, Pa., assignor to Plasteel Products Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 3, 1968, Ser. No. 756,894
Int. Cl. E04b 1/38, 1/74

U.S. Cl. 52—393

5 Claims



A sheet metal wall panel member has inner and outer walls and side joint walls. One of the side walls has a laterally projecting tongue extending lengthwise of it, with a gasket secured to the tongue and provided with a compressible bead extending along one side of it. The other side wall is provided with a recess extending lengthwise thereof for receiving the tongue and gasket of an adjoining wall panel. When the tongue and gasket are inserted in the recess of an adjoining panel the bead is compressed.

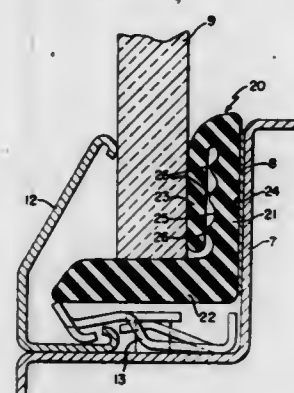
3,514,916 SEALING STRIP

William Hoverman, Jr., Wapakoneta, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 717,238, Mar. 29, 1968. This application May 29, 1969, Ser. No. 830,926

Int. Cl. E04b 1/62; E06b 3/62; B32b 3/04
U.S. Cl. 52—400

11 Claims



A sealing strip of elastomeric material for mounting glass panes in window openings such as those in automotive vehicles. The sealing strip is an elongated member of uniform cross section having an intermediate portion, a base portion integral with one edge of the intermediate portion, and a resilient windowpane sealing lip integral with the intermediate portion with both the base portion and the resilient sealing lip extending laterally outwardly from the outer side of the intermediate portion. In order to prevent the sealing lip from sticking to the intermediate portion, the intermediate portion is provided with either a series of longitudinal ribs or corrugations or with an auxiliary lip similar to the sealing lip. An additional lip may be provided on the inner side of the intermediate portion to define a channel for receiving a pinch weld or

a portion of the window frame. When the windowpane is pressed into position against the seal strip, it bends the windowpane sealing lip inwardly against the intermediate portion, and the pressure of the lip against the windowpane creates a leak-proof seal. A trim strip holds the windowpane against the seal strip.

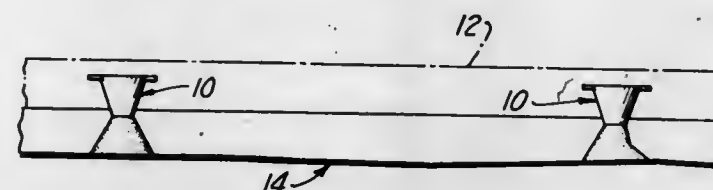
3,514,917 CONCRETE INSERT

James Merrill, Sr., 1505 Randall Way, West Covina, Calif. 91790

Filed Sept. 17, 1967, Ser. No. 666,698
Int. Cl. E04b 1/38

U.S. Cl. 52—704

5 Claims



An insert to be cast in a ceiling-floor slab of a reinforced concrete structure for attaching a load support, such as a hanger, to the slab, the insert having a combined shield and supporting base for supporting the insert on reusable pan joists over which a concrete slurry is poured to form the slab and shielding the load attachment means of the insert against blockage by the slurry, and the base being plastically deformable or otherwise adjustable to compensate for irregularities in the pan joists. A concrete insert and a load hanger of the character described embodying an acoustic barrier for inhibiting transmission of acoustic vibrations from the supported load to the supporting slab.

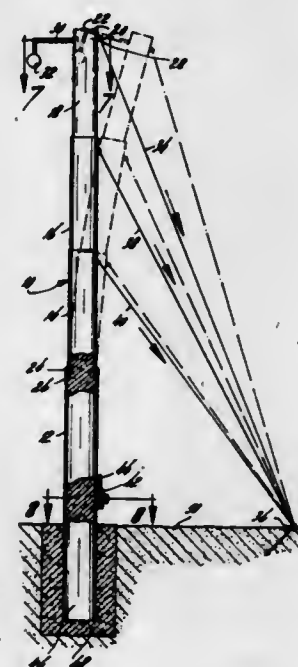
3,514,918

METHOD OF PRE-STRESSING A COLUMN
Bill Archer, 717 Highway 45 N., Meridian, Miss. 39301, and John L. Low III, 518 W. 18th St., Laurel, Miss. 39440

Continuation-in-part of applications Ser. No. 676,286, Oct. 18, 1967, and Ser. No. 702,406, Feb. 1, 1968. This application Sept. 23, 1969, Ser. No. 860,386

Int. Cl. E04c 3/34; E04g 21/12
U.S. Cl. 52—741

9 Claims



Method for pre-stressing a concrete column or utility pole of the type developed by pumping concrete into one of several aligned and interlocking telescoping sections.

As the concrete is pumped, the sections vertically extend from a rigid base. Prior to setting of the concrete, a tension is drawn from one or more vertically spaced points at the top of the column and laterally away from the column, so as to bend said column away from its vertical axis as a pre-stress against anticipated lateral load upon the column.

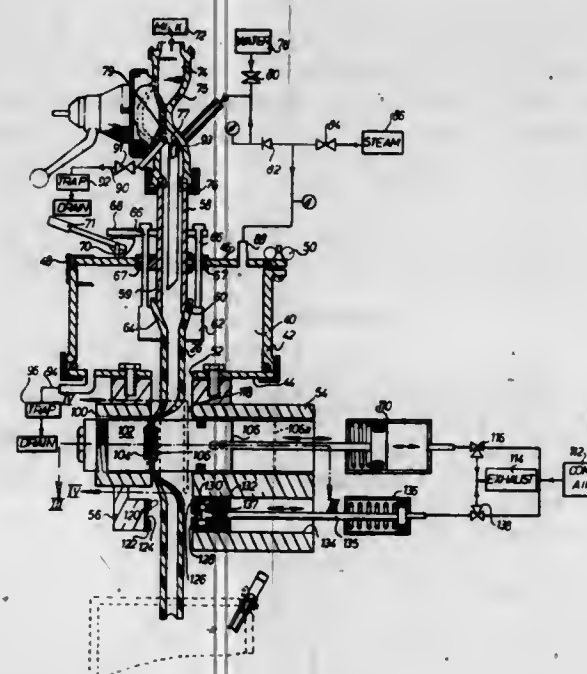
3,514,919 PACKAGING FLUIDS

Thomas Richard Ashton, Bromley, and Victor Claude Herbert Cottle and David Jackson, London, England, assignors to Express Dairy Company (London) Limited, London, England, a British company, and Reed Corrugated Cases, Limited, London, England, a British company

Filed May 22, 1967, Ser. No. 640,258
Claims priority, application Great Britain, May 23, 1966, 22,884/66; Aug. 10, 1966, 35,713/66
Int. Cl. B65b 51/30, 55/06, 55/14

U.S. Cl. 53—21

2 Claims



There is disclosed methods of filling presterilized containers aseptically with a sterilized fluid. Each container has a filling pipe which is initially sealed or closed at its outer end with the container in an empty flattened state in which it is sterilized at least internally. The filling pipe is clamped closed near to its outer end and the outer end is then opened and attached to a filling nozzle. Sterilizing medium is then introduced into the outer end of the filling pipe. The temporary clamp is opened and the sterilized fluid filled into the container. Part of the pipe or container includes a portion of heat sealable plastics material which is then heat sealed to seal the container and to isolate the container from the filling pipe. Several forms of filling pipe are disclosed together with forms of apparatus suitable for use in filling containers with such filling pipes.

3,514,920

APPARATUS FOR OVERWRAPPING A PACKAGE
William B. Hoffer, Henrico County, and Thomas E. Kirby, Jr., Chesterfield County, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Apr. 17, 1968, Ser. No. 722,010

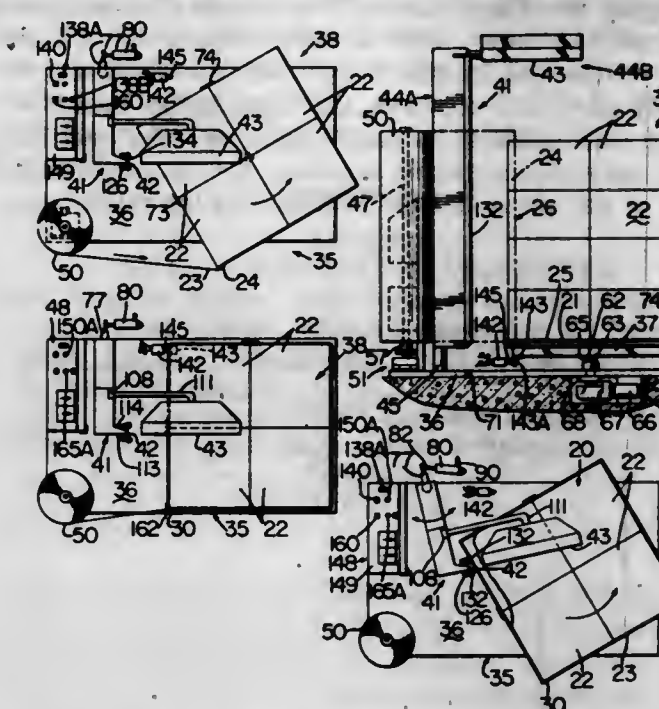
Int. Cl. B65b 53/06, 11/48, 49/00

U.S. Cl. 53—64

16 Claims

This disclosure relates to an overwrapped package comprised of a pallet and one or more containers supported on such pallet and the pallet and containers have

a film of plastic heat shrunk therearound to provide a unitary package which is easy to handle and transport.



This disclosure also relates to an improved apparatus for and method of providing such a package.

3,514,921 DEVICE FOR REFUSE DISPOSAL BY COMPRESSION

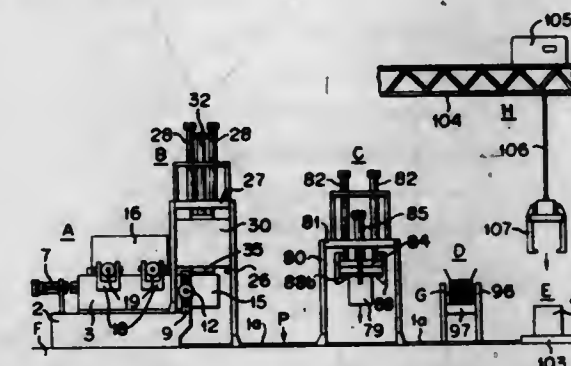
Kunitoshi Teruka, 34 7-chome, Minamimura-machi, Koto-ku, Tokyo, Japan

Continuation-in-part of application Ser. No. 569,991, Aug. 3, 1966. This application May 6, 1968, Ser. No. 726,972

Claims priority, application Japan, June 30, 1967, 42/41,531

Int. Cl. B65b 1/24, 37/06, 43/54
U.S. Cl. 53—124

11 Claims



Device for refuse disposal by compression applied to the refuse, particularly of garbage, trash, waste and the like, comprising means for shaping and compressing the refuse into substantially solid refuse blocks of predetermined shape, including a bed, a shaping box and a force plate reciprocable in the box for treating the refuse; wrapping means for applying a cover to the solidified refuse blocks; and means for coordinating the successive shaping and wrapping steps for continuous operation of the device.

3,514,922

FIVE PANEL FOLDER MACHINE

Robert D. Cravens, Stevensville, Mich., and Ernest T. Depass, Bound Brook, N.J.; said Depass assignor to Union Camp Corporation, New York, N.Y., a corporation of Virginia

Filed Sept. 28, 1966, Ser. No. 583,661

(Filed under Rule 47(b) and 35 U.S.C. 118)

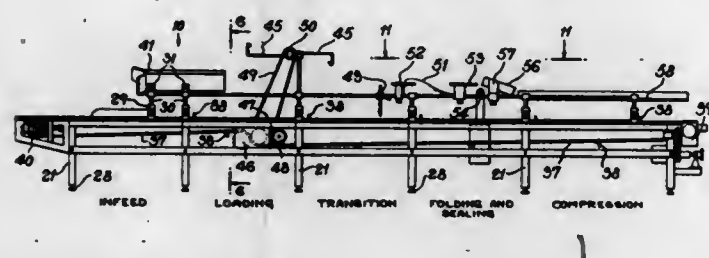
Int. Cl. B65b 7/20

U.S. Cl. 53—374

4 Claims

A carton handling and closing machine adapted for feeding in carton blanks set up to form a carton, load-

ing the desired contents into the carton with the carton top flaps open, closing, folding and sealing the flaps and discharging the filled carton. The machine is adjustable to the desired length and to accommodate to different carton widths and heights by providing a series of substantially identical modules and detachable means for securing said modules to each other, whereby each said module may hold a specific accessory for the performance of one of the above defined functions in the related steps



of the operation of the machine, these assembled modules constituting stations along which a conveyor moves the carton. Opposing supports are secured to each module, one of the supports being fixedly attached to the module while the other is shiftable and is attached to the module to permit a variation of spacing between the supports for the cartons of varying dimensions. The movement of the supports adjusts to cartons of different width and different height.

3,514,923

ELECTROSTATIC PRECIPITATORS

Hermann C. Werner, Ridgewood, N.J., assignor to Alretron Engineering Corporation, Midland Park, N.J., a corporation of New Jersey
Filed Sept. 4, 1968, Ser. No. 757,292
Int. Cl. B03c 3/36

U.S. Cl. 55-130

4 Claims



An electrostatic precipitator having a plurality of spaced discharge electrodes interposed between a plurality of spaced collection plates, a first portion of the discharge electrodes between adjacent collection plates being eccentrically spaced closer to one of said adjacent collection plates, a second portion of said discharge electrodes being eccentrically spaced closer to the other, said discharge electrodes being adapted to produce a substantially unidirectional electrostatic field on the side thereof facing the more distant of said adjacent collection plates.

3,514,924

DUST ARRESTOR

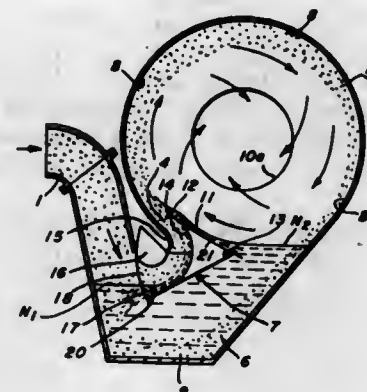
Rolf Johan Flebu, Bjornsvikveien 25, Sandvika, Norway
Continuation of application Ser. No. 740,787, Apr. 3, 1968. This application Aug. 20, 1969, Ser. No. 853,604
Int. Cl. B01d 47/02

U.S. Cl. 55-237

6 Claims

A dust arrestor for washing dust containing air having a cylindrical horizontal chamber with a water reservoir having an air contacting surface defined within the bottom of the chamber. Nozzle means disposed closely

adjacent the water reservoir for introducing the dust containing air into the chamber and establishing a peripheral air current about the chamber in a direction initially moving away from the reservoir. A second air contacting surface may be provided exteriorly of the chamber for removing a portion of the dust prior to introduction of the air into the chamber.



A baffle member separating the two air contacting water surfaces having an upwardly forming surface extending from the nozzle to the water reservoir and a lateral surface defining a portion of the nozzle. The baffle member may be rotatably mounted to provide for adjustment of the angle of inclination of the upper facing surface and the cross-section of the nozzle opening.

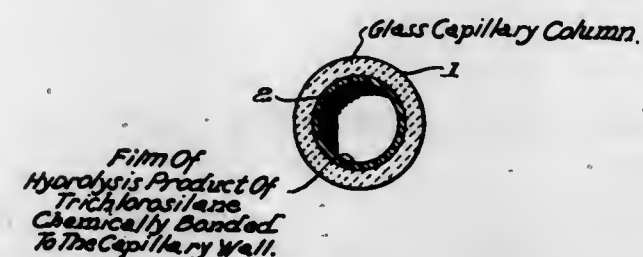
3,514,925

GAS CHROMATOGRAPHY COLUMN AND METHOD OF MAKING SAME

Clayton J. Bossart, Monroeville, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 5, 1967, Ser. No. 665,444
Int. Cl. B01d 15/08

U.S. Cl. 55-386

6 Claims



An open tubular chromatography column is prepared by applying an etching agent to the bore of a glass capillary tube, removing the etchant, then coating the bore with a hydrolyzable organosilane compound of the group di- and tri-halogenated organosilanes and di- and tri-alkoxyorganosilanes, hydrolyzing said compound and removing volatile hydrolysis products and water, the hydrolyzed organosilane portion of said compound reacting with the silicate surface of said bore to form a chromatographic film bonded to the bore surface. Tubes so prepared are used in the practice of gas chromatography.

3,514,926

LEVELER FOR A REEL-TYPE LAWN MOWER

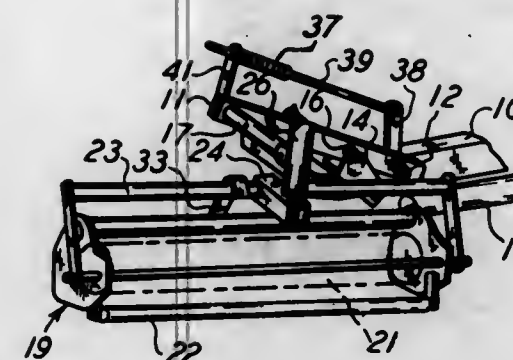
Sherman C. Heth and Vernon R. Kaufman, Racine, Wis., assignors to Jacobsen Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Filed Oct. 23, 1968, Ser. No. 769,886
Int. Cl. A01d 75/30

U.S. Cl. 56-7

5 Claims

A leveler for a reel-type lawn mower, with a lift arm for raising and lowering the mower on a tractor or the

like. A shaft and sleeve are telescoped together and disposed for interconnection between the mower and lift arm for pivotal movement of the mower about the axis of telescoping. One of the two telescoped members is rotatable, and a control arm is affixed to the rotatable member and



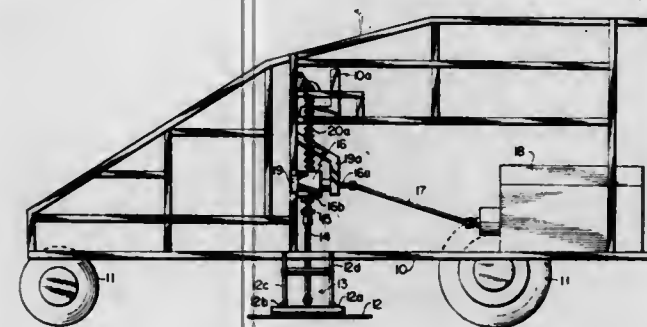
there is an abutment which engages the control arm when the mower is raised, for holding the control arm, and an abutment cooperative with the control arm for restraining rotation of the rotatable member and to thereby hold the mower in a level position when raised.

3,514,927

CANE CUTTING LEVEL CONTROL DEVICE
Jacob A. Giardina, Kenner, La., assignor to Cane Machinery & Engineering Company, Inc., Thibodaux, La., a corporation of Louisiana
Filed Oct. 7, 1968, Ser. No. 765,284
Int. Cl. A01d 45/10

U.S. Cl. 56-16

5 Claims



The instant disclosure relates to a device for raising and lowering a sugar cane cutter carried by a harvester or other mobile frame movable through a cane field which engages sugar cane stalks to be cut a predetermined level above the earth and which device will regulate the raising and lowering of the cane cutter incident to the cutter blade engaging earth or foreign matter other than sugar cane stalks which will cause a counter torque to be generated in a gear box drive which drives the sugar cane cutter in such a way that the box being pivoted to rotate about its horizontal axis and having a signal arm extending therefrom will raise and lower the arm about the pivotal axis of the gear box. The sugar cane cutting blade assembly is raised and lowered by a hydraulic cylinder and ram one end of the cylinder being connected to the mobile frame of the harvester or mobile frame and the other being connected to raise and lower the cane cutter blade assembly. Secured between the mobile frame and the signal arm is a servo-cylinder and ram which will regulate the fluid flow to the raising and lowering cylinder of the cane cutter. When the blade of the cutter engages the earth and a torque greater than the torque necessary to cut a cane stalk is generated, the resultant

force will cause the gear box to rotate about its horizontal axis and raise the signal arm causing the servo-cylinder to immediately change the fluid flow to the cane cutter raising and lowering cylinder which will instantly raise or lower the blade dependent upon the amount of torque generated by the blade engaging the object, such as the earth or rocks or any foreign material encountered in a sugar cane field.

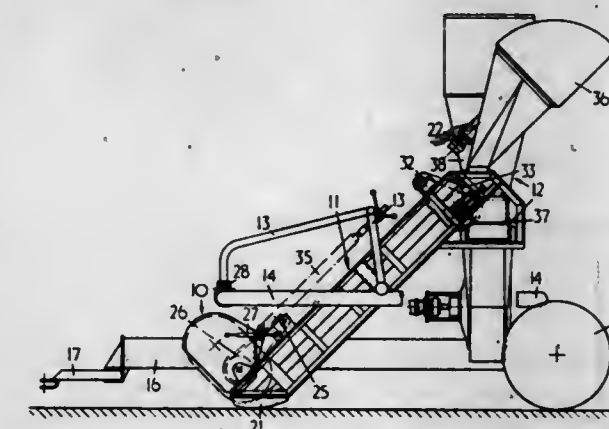
3,514,928

BEAN HARVESTING MACHINES

Jack Kenyon, Bolton, and Richard Lees Fletcher, Harwood, near Bolton, England, assignors to Mather & Platt Limited, Manchester, Lancashire, England, a British company
Filed Apr. 3, 1967, Ser. No. 628,049
Claims priority, application Great Britain, Apr. 26, 1966, 18,162/66

Int. Cl. A01d 45/22
U.S. Cl. 56-19

12 Claims



A bean harvesting machine having at its front a picking reel which is mounted on the machine so that its position relative to the direction of travel of the machine can be varied from one in which it is at right angles to said direction and to one in which it forms an acute angle to said direction to vary the number of rows of beans being picked.

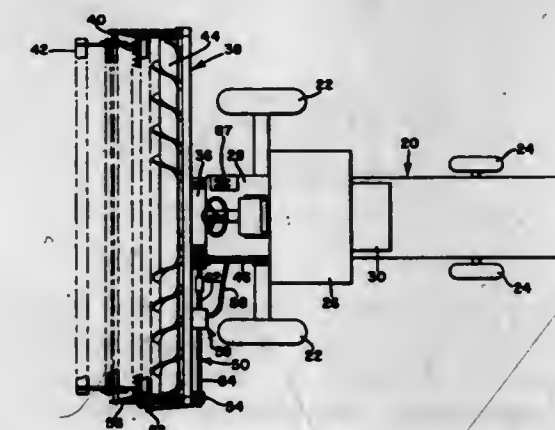
3,514,929

CONTROL SYSTEM FOR A HARVESTING MACHINE

George Kent Cornish and Gary Farley Penfold, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Aug. 21, 1967, Ser. No. 662,015
Int. Cl. A01d 41/02

U.S. Cl. 56-21

6 Claims



A self-propelled combine having an infinitely-variable speed propulsion drive, a grain harvesting header, a torque sensing device in the header drive shaft for producing an

electric signal proportionate to the torque in the header drive, and a control system for maintaining the ground speed of the combine at a rate which provides a constant predetermined torque in the header drive within a predetermined maximum combine speed.

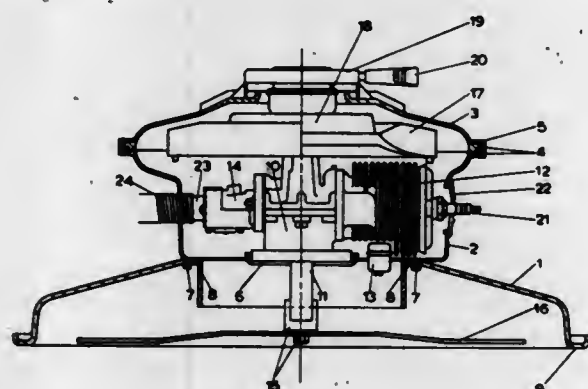
3,514,930 MOWERS

Thomas M. Griffiths, General Beyer St. Extension, Bloemfontein, Orange Free State, Republic of South Africa

Filed Mar. 27, 1967, Ser. No. 626,332
Claims priority, application Republic of South Africa, Apr. 7, 1966, Ser. No. 66/2,049
Int. Cl. A01d 35/26

U.S. Cl. 56—25.4

5 Claims



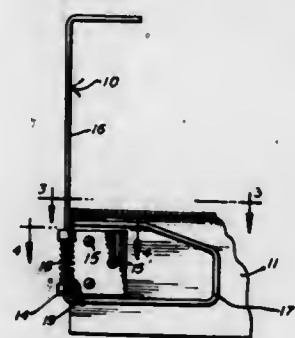
This invention concerns lawn mowers of the type wherein air pressure generated by a blower is used to lift the mower off the ground to enable cutting to be effected by a rotating blade and is more particularly concerned with the utilization of heat generated by the engine to increase the effectiveness of the air compressed by the blower as a lifting medium. The invention thus involves the utilization of heat energy normally wasted in machines of this type to increase the efficiency of operation of the mower.

3,514,931 GRASS CLOG CLEARING DEVICE FOR ROTARY MOWERS

Finn O. Solheim, 179 Elleen Drive, Bloomfield Hills, Mich. 48013
Filed Nov. 3, 1967, Ser. No. 680,540
Int. Cl. A01d 55/18

U.S. Cl. 56—255

4 Claims



A grass clog ejecting apparatus for expelling clogs occluding the exit opening of a rotary mower having an arm pivotally mounted on the housing and movably spring biased against the housing swingable by a handle or pedal in an arc in a direction outwardly of the exit opening so as to eject an occluding clog; the arm being a wire member such as a loop to avoid interference with air circulated and centrifugally propelled grass cuttings so as to clear the clog without stopping grass cutting emission by the mower.

3,514,932 ADJUSTING DEVICE FOR OSCILLATING CUTTER MECHANISM

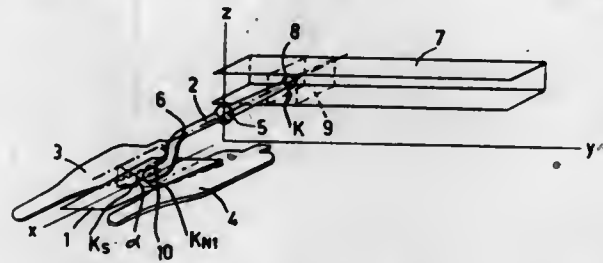
Alexandre Horowitz, Eindhoven, and Bernard Joseph Beusink, Oerle, Netherlands, assignors, by mesne assignments, to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware

Filed May 3, 1967, Ser. No. 635,764
Claims priority, application Netherlands, May 11, 1966, 6606404

Int. Cl. A01d 55/26

U.S. Cl. 56—293

4 Claims



The drive arms of the oscillating knives of the cutter mechanism are adjustably connected to the bearing block within the reciprocating drive bar by means of a second spring urged wedge-shaped block slidably contacting the bearing block to displace same and thereby control the degree of contact between the oscillating and stationary knives.

3,514,933 RECIPROCATING CUTTER MECHANISM

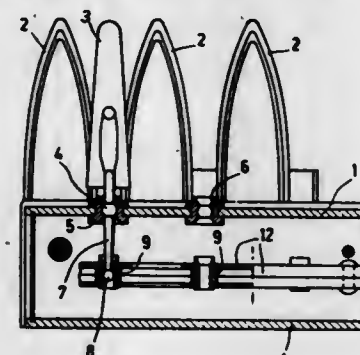
Alexandre Horowitz, Eindhoven, and Bernard Joseph Beusink, Oerle, Netherlands, assignors, by mesne assignments, to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware

Filed May 3, 1967, Ser. No. 635,765
Claims priority, application Netherlands, May 11, 1966, 6606403

Int. Cl. A01d 55/26

U.S. Cl. 56—293

8 Claims



A protective device for a reciprocating cutter mechanism wherein a series of pivoting blades overlies a series of stationary blades to form a sickle bar cutter. Each of said pivotal blades is spring mounted on the drive bar such that if the pivoting motion of one or more pivoting blades is interrupted by engaging an obstruction the remaining blades will pivot while the spring mounting permits relative motion between the obstructed blades and the drive bar.

3,514,934 CUTTING ASSEMBLY

Samuel G. Cassidy, 3434 Montreal Way, Tucker, Ga. 30084

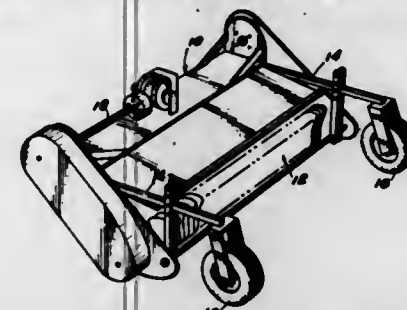
Filed Apr. 10, 1967, Ser. No. 629,447
Int. Cl. A01d 55/20

U.S. Cl. 56—294

11 Claims

A mowing machine cutting assembly comprising a plurality of axially aligned substantially elliptical blade assemblies angularly mounted on a rectangular rotatable drive shaft. The blade assemblies are appropriately arranged and separated from one another along the length of the drive shaft by spacing members which serve to transmit the rotational velocity of the drive shaft to the

blade assemblies while also supporting those assemblies during the cutting operation. Each blade assembly has a pair of opposed slightly overlapping arcuate cutting surfaces which define, in rotation, a right circular cylinder.



The cutting surfaces of the blade assembly overlap adjacent cutting surfaces of adjacent blade assemblies so that a series of integrated right circular cylinders are created by the rotation of the drive shaft and the cutting assembly.

3,514,935 CUTTING ATTACHMENT FOR MOWER BLADES

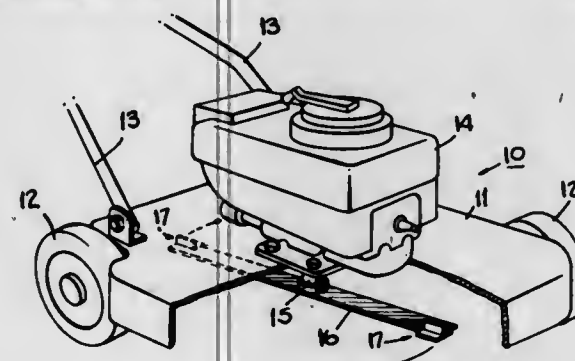
Charles A. Benson, 14 New Highway 50, Ridge Manor, Fla. 33525

Filed Sept. 13, 1966, Ser. No. 579,055

Int. Cl. A01d 55/18

U.S. Cl. 56—295

16 Claims



The cutting attachment is provided with a forward knife edge portion and a rear attachment portion which are separated from each other by a central upstanding portion. The central upstanding portion protects the securing means for securing the attachment portion to the cutter blade against wear and external damage while at the same time functioning to cause air turbulence during rotation of the cutter blade so that the grass clippings can be ejected.

3,514,936 BERRY HARVESTER

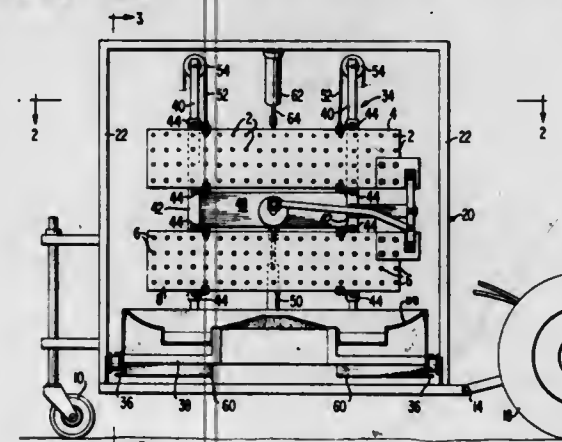
Blanchard H. Grover, Vincentown, N.J., assignor to Holly Hydraulics, Inc., a corporation of New Jersey

Filed Oct. 18, 1967, Ser. No. 676,239

Int. Cl. A01g 19/00

U.S. Cl. 56—330

6 Claims



A berry harvester is provided with plural sets of elongated shaker rods which extend into a vine. The shaker

rods are oscillated simultaneously in opposite horizontal directions to shake berries from the vine. A tray beneath the shaker rods catches the fallen berries.

3,514,937 CROP PICKUP MECHANISM

Stephen L. Batog, Moline, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Filed Feb. 5, 1968, Ser. No. 703,158

Int. Cl. A01d 87/04

U.S. Cl. 56—345

3 Claims



A crop pickup mechanism for pivotally mounting on a harvester machine, or the like, in front of the machine and having support structure pivotally mounted to the machine. Crop pickup fingers are supported on a belt moveably mounted on the support structure for sweeping the ground and conveying the crop into the machine. The belt has a horizontally extended portion disposed adjacent the ground for presenting the fingers to the ground along a distance fore-and-aft of the machine for complete and uniform pick up of crop. Also, the support structure is arranged to maintain the belt taut and to maintain the horizontal belt portion in a horizontal position, with both features being achieved throughout all pivoted positions of the pickup mechanism with respect to the harvester machine.

3,514,938 PSYCHEDELIC CLOCK

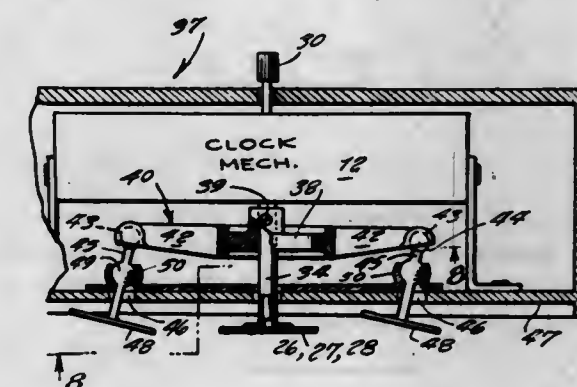
George W. Miller, Friends Academy, 1088 Tucker Road, North Dartmouth, Mass. 02747

Filed Apr. 1, 1969, Ser. No. 812,013

Int. Cl. G04b 19/30, 45/00

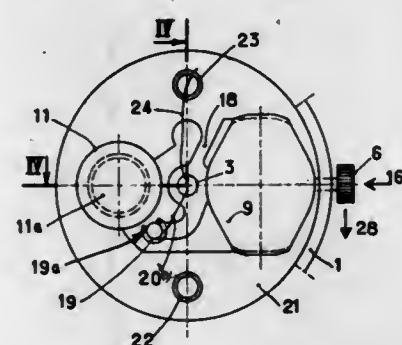
U.S. Cl. 58—2

3 Claims



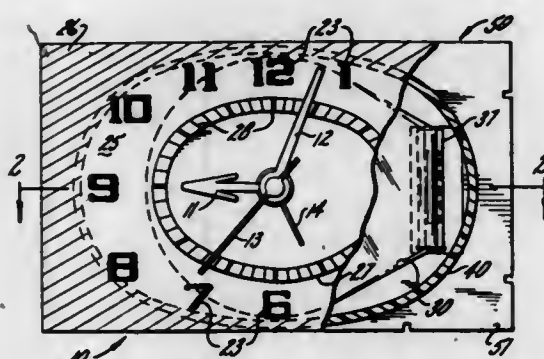
A clock arrangement having three separate dials for indicating the hours, minutes and seconds, respectively. Each dial has a pivotally mounted light reflective surface positioned at the twelve divisions of a conventional clock. The light reflective surfaces are caused to pivot by an eccentrically mounted cam arrangement driven by a clock mechanism.

3,514,939
MULTIPLE-READING WATCH WITH BUILT-IN ELECTRIC LIGHTING MEANS
 Emile Césaire Cattin, Morteau, France, assignor to Société Cattin & Cie S.A., Morteau (Doubs), France, a corporation of France
 Filed Dec. 9, 1968, Ser. No. 782,351
 Claims priority, application France, Mar. 21, 1968, 144,856
 Int. Cl. G04b 19/30
 U.S. Cl. 58—50 4 Claims



The invention comprises a watch wherein the watch face has, in addition to the normal watch dial, a dial or dials of an ancillary instrument such as a thermometer, barometer, a source of illumination being provided in the watch face in the form of an electric bulb. For this purpose the casing of the watch is provided with a body part having two recesses, one of which is adapted to house an electric battery and the other the watch movement, control of the circuit being by means of a switch accessible from the exterior of the casing.

3,514,940
ILLUMINATING ASSEMBLY FOR A CLOCK
 Raymond A. Keane, Jr., Athens, and James N. Adams, Winterville, Ga., assignors to General Time Corporation, Stamford, Conn., a corporation of Delaware
 Filed Apr. 11, 1969, Ser. No. 815,472
 Int. Cl. G04b 19/30
 U.S. Cl. 58—50 5 Claims

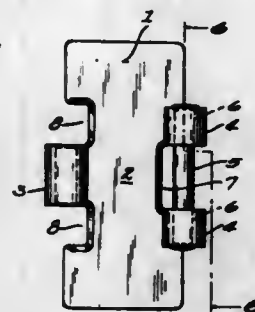


An illuminating assembly for a clock having a lamp providing illumination which is invisible during the day and in which visible illumination for nighttime use is sharply restricted to a central field.

3,514,941
CONVEYOR CHAIN LINK AND METHOD OF FORMING SAME
 Clair W. Mueller, Wauwatosa, Wis., assignor to Rex Chainbelt Inc., Milwaukee, Wis., a corporation of Wisconsin
 Filed May 24, 1968, Ser. No. 731,916
 Int. Cl. B21 11/00
 U.S. Cl. 59—35 4 Claims

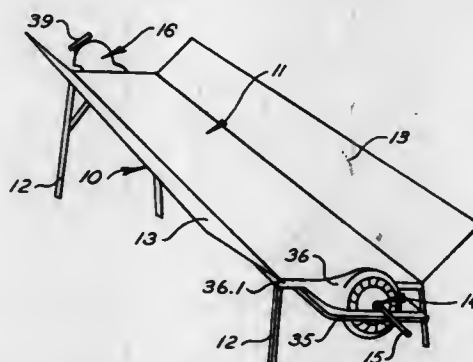
In a flat top conveyor chain with links formed from

sheet metal blanks having tongues which are curled to form interfitting, pin-receiving knuckles, improved links



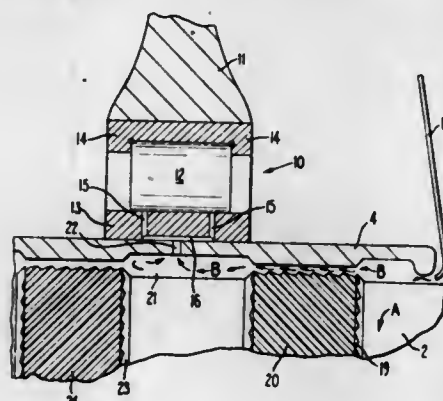
whose tongues are formed with swaged beveled edges before curling and the method of so forming said links.

3,514,942
SOLAR HEAT TRANSDUCER APPARATUS
 William F. Kyryluk, Apt. 704, 550 W. 12th, Vancouver 10, British Columbia, Canada
 Filed Feb. 14, 1968, Ser. No. 705,398
 Claims priority, application Great Britain, Feb. 15, 1967, 7,206/67
 Int. Cl. F03g 7/02
 U.S. Cl. 60—26 8 Claims



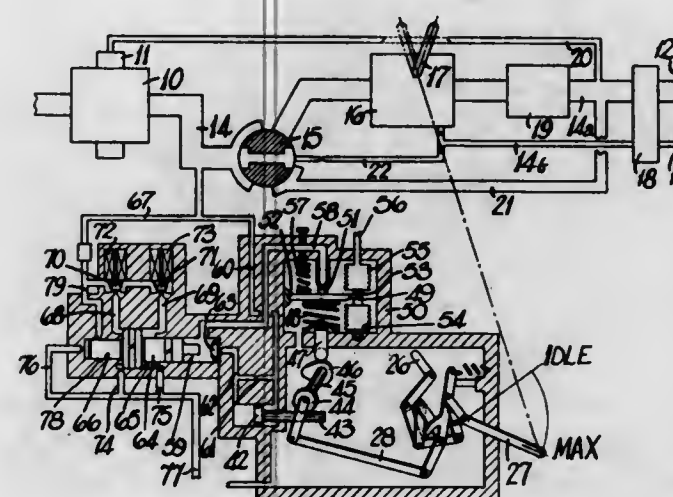
A solar heater in which fluids such as air and water are heated in inclined elongated spaces by an absorption transformer and the heated air rising from one of the spaces drives a turbine.

3,514,943
LUBRICATION SYSTEM FOR A BEARING
 Jack Britt, Ambergate, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
 Filed Oct. 19, 1967, Ser. No. 676,435
 Claims priority, application Great Britain, Nov. 17, 1966, 51,597/66
 Int. Cl. F02c 7/06; F16n 7/18
 U.S. Cl. 60—39.08 4 Claims



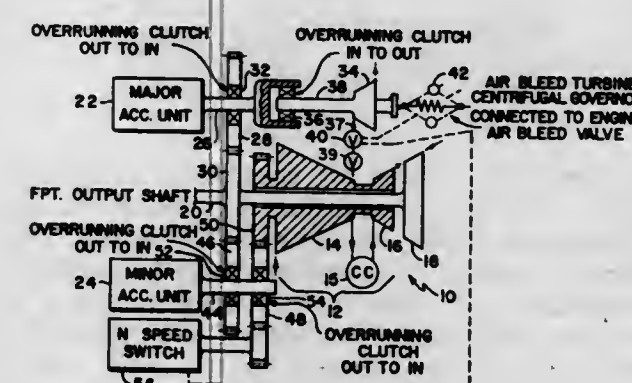
The high pressure shaft of a two shaft gas turbine engine is mounted within a bearing which is lubricated by oil which is moved towards the bearing by helical grooves on the low pressure shaft.

3,514,944
FUEL SYSTEMS FOR GAS TURBINE ENGINES
 Denis Gascoigne, Alcester, and Eugene Harold Warne, Solihull, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England
 Filed Nov. 30, 1967, Ser. No. 686,962
 Int. Cl. F02c 9/06, 7/22
 U.S. Cl. 60—39.09 6 Claims



A fuel system for a gas turbine engine having main and emergency passages, with the emergency passages by-passing a fuel control device, a selector valve acting as a second throttle when the emergency passages are selected, a linkage affording control of the emergency fuel supply by means of a main manual throttle control on the device, and a device responsive to an engine parameter, such as compressor pressure, operable when a valve is actuated upon selection of the emergency system.

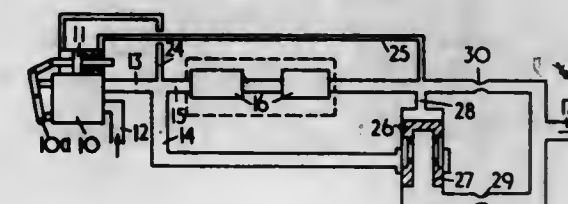
3,514,945
GAS TURBINE ACCESSORY POWER DRIVE UNIT
 Kenneth A. Austin, Hove, England, assignor to Avco Corporation, Stratford, Conn., a corporation of Delaware
 Filed Oct. 4, 1968, Ser. No. 765,195
 Int. Cl. F02c 3/10, 7/02
 U.S. Cl. 60—39.16 7 Claims



The disclosure illustrates an accessory drive unit for a gas turbine engine comprising a gas generator unit and a power turbine. A major accessory load requiring a substantial power input, even when the power turbine is not rotating, is driven by an air turbine which receives bleed air from the compressor of the gas generator. A centrifugal governor regulates the flow of bleed air to the air turbine to maintain a given output speed. The major accessory load is coupled to the power turbine through a set of gears and a one-way drive so that the major accessory load is coupled to the power turbine

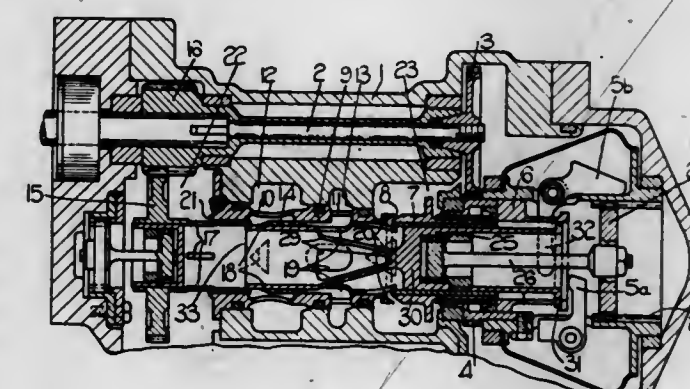
as soon as the power turbine is rotating at a rate sufficient to drive the accessory. Use of the compressor bleed air for accessory power at low power turbine speeds eliminates compressor surge and use of the power turbine at higher speeds minimizes the maximum gas generator temperatures. A minor accessory may be selectively driven by the power turbine or the rotating portion of the gas generator compressor through a series of one-way clutches to minimize the gas generator maximum temperatures imposed by operation of the minor operation load.

3,514,946
FUEL SYSTEMS FOR GAS TURBINE ENGINES
 Eugene Harold Warne, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
 Filed Feb. 6, 1968, Ser. No. 703,429
 Int. Cl. F02c 9/06, 9/08, 9/10
 U.S. Cl. 60—39.28 7 Claims



A fuel system for a gas turbine engine comprising a pump, a main passage and a further restricted passage for fuel to the engine, control apparatus in the further passage for varying the flow therethrough, a device communicating with both the main and the further passages, said device being responsive to the pressure at the downstream side of the apparatus, and being arranged to maintain equality of pressure in the two passages.

3,514,947
CONTROL SYSTEMS
 Joseph Lewis Bloom, Bale D'Urfe, Quebec, Canada, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
 Filed Nov. 5, 1968, Ser. No. 773,570
 Int. Cl. F02c 9/08
 U.S. Cl. 60—39.28 2 Claims



A fuel control apparatus for a gas turbine engine comprising a first valve having a fixed outer sleeve, an axially movable outer sleeve, a first axially movable inner sleeve within the outer sleeves, the movable sleeves being movable in response to engine speed and pressure changes respectively, and a second valve having a further inner sleeve axially movable within the first inner sleeve in response to engine speed changes, the inner sleeves having openings through which flow of fuel to the engine takes place, the relative axial positions of the inner and outer sleeves determining the fuel flow to the engine.

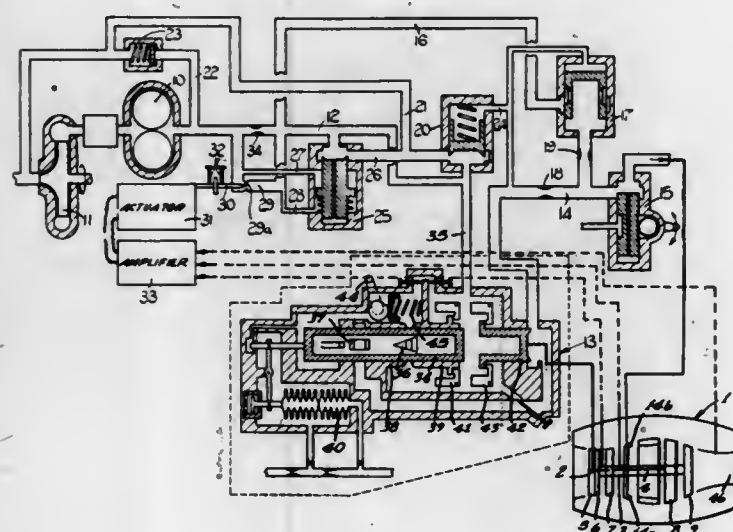
3,514,948 FUEL CONTROL SYSTEMS FOR GAS TURBINE ENGINES

Eugene Harold Warne, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

Filed June 6, 1968, Ser. No. 734,934
Int. Cl. F02c 9/08, 3/06

U.S. Cl. 60—39.28

5 Claims



A gas turbine engine fuel control system comprising a pump, passage means from the pump to the engine, a fuel control means in the passage means, a spill passage with a spill valve sensitive to the pressure drop created by the fuel control means, and a further spill valve sensitive to changes in one or more parameters related to engine running conditions.

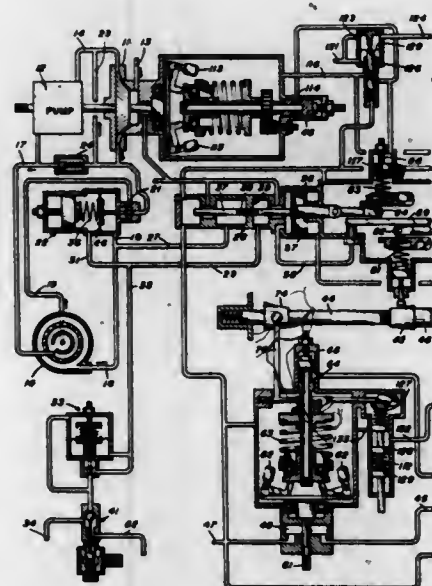
3,514,949 TURBOPROP FUEL CONTROL FOR USE WITH CONTAMINATED OR VARIED FUELS

John J. Fredlake, Milton F. Keck, and Glennon V. Schwent, Tempe, Ariz., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed June 18, 1968, Ser. No. 737,958
Int. Cl. F02c 9/08

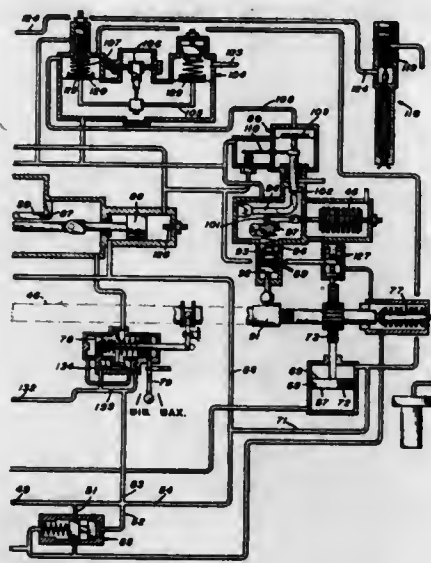
U.S. Cl. 60—39.28

11 Claims



An engine power control system for a turbo-prop engine equipped with a constant speed propeller governor is provided with means to manipulate fuel flow in re-

sponse to the corrected torque and corrected speed of the engine. The computer section of the engine power control system uses engine oil as the working media. These



features enable the use of contaminated fuel, or fuels of varying quality, without requiring filtration or compensating adjustments to the control system.

ERRATUM

For Class 60—39.74 sec:
Patent No. 3,515,040

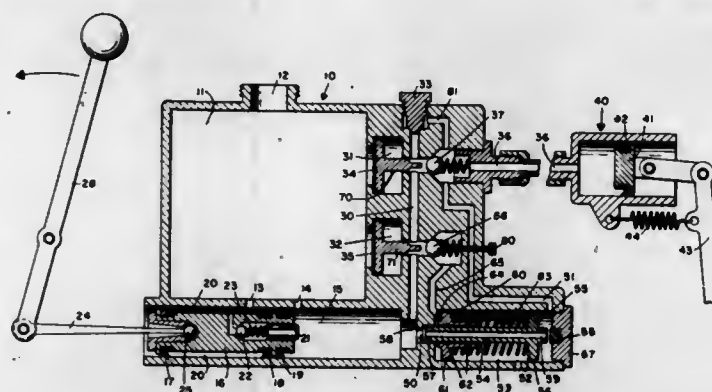
3,514,950 HYDRAULIC SYSTEM

Wes H. Davenport, Irving, Tex., assignor of one-half to Thomas L. Miles, Jr., Irving, Tex.

Filed Apr. 16, 1968, Ser. No. 721,635
Int. Cl. F15b 7/00, 7/08

U.S. Cl. 60—54.5

10 Claims



Disclosed is a system for controlling distribution of fluids within an apparatus including a master cylinder for controlling one or more remote slave cylinders. The system includes a check valve which allows fluid flow only in one direction and means for providing fluid flow in the opposite direction which is responsive to relative pressures at various points in the system. The disclosed system also includes a pressure sensitive control valve for maintaining pre-set pressures in the slave cylinder.

3,514,951 REGENERATIVE AIR TURBINES

Edward Kolodziej, 5616 W. 5th Ave., Gary, Ind. 46406

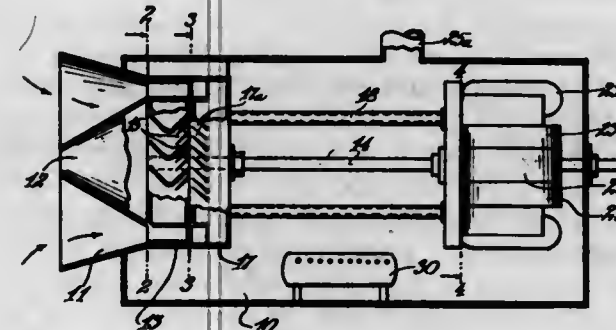
Filed Apr. 21, 1969, Ser. No. 817,820
Int. Cl. F01d 1/00; F01k 3/18

U.S. Cl. 60—59

5 Claims

The invention deals with the feed of a fluid medium to the rotor of a turbine. A plenum chamber opposite the receiving side of the rotor contains the medium under

pressure; and conduits from the plenum chamber lead the medium toward such side. Adjacent to the conduits are a series of circularly-spaced headers straddling the periphery of the turbine rotor and formed with end pockets opening in the region of the rotor vanes on the receiving and departing sides respectively. The fluid



medium from the conduits enters the receiving side of the first header in a series, and is deflected into the receiving side of the turbine rotor. After the medium passes through the latter the header trains it across to enter the second header and return into the receiving side of the rotor. This action is repeated through each header series to lend its medium regenerative properties.

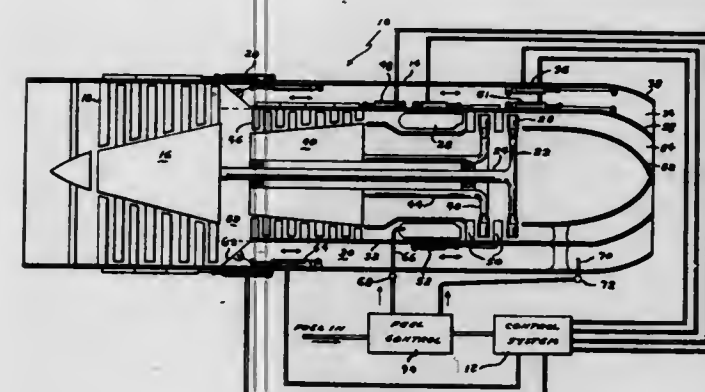
3,514,952 VARIABLE BYPASS TURBOFAN ENGINE

Howard E. Schumacher and Jack Richens, Dayton, and Marvin F. Schmidt, Xenia, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force

Filed July 1, 1964, Ser. No. 380,121
Int. Cl. F02h 7/06

U.S. Cl. 60—225

1 Claim



1. A variable bypass turbopan engine comprising in combination: a first compressor section having variable stator blades, a transition chamber, a second compressor section having variable stator blades, a first combustion apparatus, a first turbine section having variable stator blades, a second turbine section having variable stator blades, and an exhaust nozzle arranged coaxially for series flow therethrough in the order named, and with said first turbine section rotatably joined to said second compressor section and said second turbine section rotatably joined to said first compressor section; an afterburner section terminating at the rear in a variable area exhaust nozzle coaxially surrounding said exhaust nozzle and adjustable between zero area and full area positions; a bypass duct means joining said transition chamber to said afterburner section; a valve means joined to said bypass duct; the variable area exhaust nozzle on said afterburner section and said valve means, singly and in combination, controlling the flow in said bypass duct between

the limits of zero flow and a predetermined maximum percentage of the total flow through said first compressor section; a second combustion apparatus within said afterburner section; means for selectively and variably adjusting the stator vanes in said compressor and said turbine sections; and means for selectively and variably supplying fuel to said first and said second combustion apparatuses.

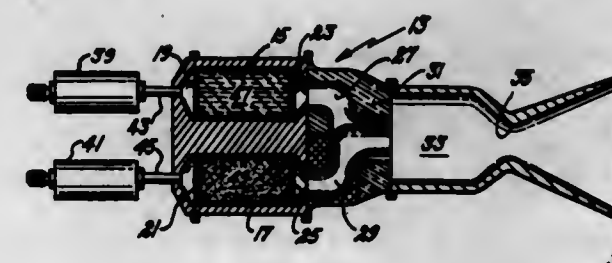
3,514,953 TRIMODE ROCKET ENGINE

Jimmy F. Kephart, Edwards AFB, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Oct. 21, 1968, Ser. No. 769,353
Int. Cl. F02k 9/02

U.S. Cl. 60—258

5 Claims



A trimode rocket engine having two separate catalyst beds for decomposing two propellants after which they are injected and mixed in a single combustion chamber for providing thrust in varying amounts. Means are provided for injecting either propellant singly to allow the engine to operate as a monopropellant type in the medium or low thrust ranges depending on which of the two propellants is used or the engine can operate in the bipropellant mode (both propellants simultaneously) to provide high thrust.

3,514,954 GAS TURBINE BY-PASS ENGINE

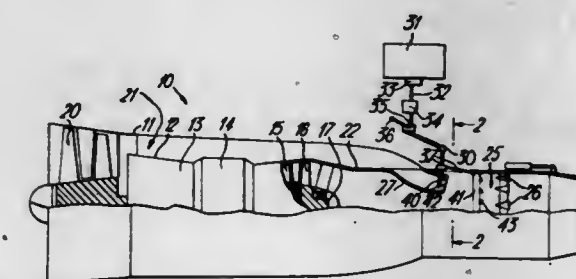
Rowan Herbert Colley, Sunny Hill, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed June 3, 1968, Ser. No. 734,055
Claims priority, application Great Britain, June 16, 1967, 27,961/67

U.S. Cl. 60—261

Int. Cl. F02k 3/10

4 Claims



A gas turbine by-pass engine has in flow series compressors, main combustion equipment, turbines and a jet pipe which receives the turbine exhaust gases. The jet pipe has reheat combustion equipment mounted in it, and there is also provided by-pass ducting which is arranged to by-pass the main combustion equipment and the turbines, the by-pass ducting communicating with the jet pipe upstream of the reheat combustion equipment. The upstream portion of the by-pass ducting is supplied with compressed air, and one set of fuel injectors mounted in the by-pass ducting to inject reheat fuel into the compressed air flowing through the by-pass ducting towards

the reheat combustion equipment. A second set of fuel injectors are mounted in the jet pipe for injecting reheat fuel into the turbine exhaust gases flowing through the jet pipe towards the reheat combustion equipment.

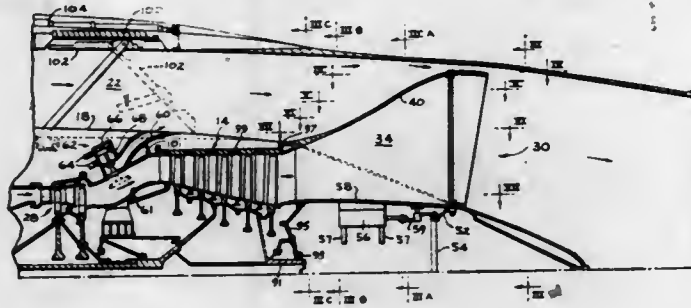
3,514,955

MIXING STRUCTURES AND TURBOFAN ENGINES EMPLOYING SAME

Elmir E. Paulson, Topsfield, and Daniel M. Judge, Saugus, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 28, 1968, Ser. No. 716,942
Int. Cl. F02k 3/04; B01f 5/00

U.S. Cl. 60—262

7 Claims



A turbofan engine in which the hot gas stream of its core engine is mixed by a lobed mixer with the pressurized fan stream. The mixed streams are discharged from a common propulsive nozzle. The mixer is a lightweight construction, formed by side walls radially of the axis of a duct through which the fan stream passes. The lobe side walls, which define the hot gas stream passageways, have a decreasing included angle from the hot gas stream inlets to outlets. A flapper valve forms one side wall of each lobe, and means are provided for swinging the flapper valve to reduce the hot gas stream discharge area therethrough to reduce fan speed and the noise generated by the fan.

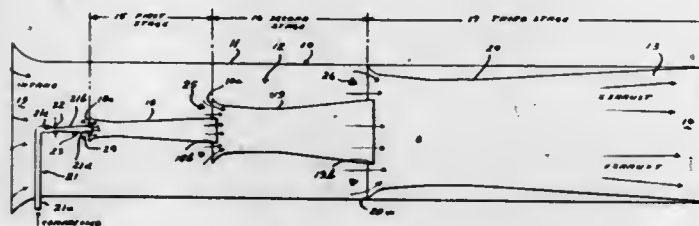
3,514,956

INJECTOR-RAM JET ENGINE

William R. Bray, 610 Memorial Drive, Fort Walton Beach, Fla. 32548
Filed Mar. 11, 1968, Ser. No. 712,279
Int. Cl. F02k 7/10

U.S. Cl. 60—269

4 Claims



A plurality of divergent nozzles are mounted in a continuous line and in overlapping relation to each other in the main nozzle passage of a ram jet engine tube having main air intake and exhaust openings. These divergent nozzles are of increasing size and greater divergency in the downstream direction and each includes an inlet opening section sufficiently enlarged both to accommodate the insertion therewithin of the exhaust opening section of the nozzle positioned next upstream thereof, and to receive a primary fuel-air mixture produced in said passage by the inducement therein of a primary supply of air admitted through the main air intake and its subsequent mixture with fuel. The last divergent nozzle terminates in an exhaust opening section coinciding with the main exhaust opening. A unique engine self-starter

tube is mounted to the main tube just downstream of the main air intake, and it includes an auxiliary divergent nozzle tube section that projects into the inlet opening section of the divergent nozzle positioned in the main passage nearest the main air intake, and an auxiliary compressed air supply tube section for supplying compressed air for mixture with fuel in the first-named section to thereby produce an auxiliary fuel-air mixture. A spark plug is mounted in the nozzle tube section for igniting this fuel-air mixture and exhausting the products of combustion resulting therefrom into the divergent nozzle located nearest the main air intake. The exhausting products of combustion induce a primary fuel-air mixture into the enlarged inlet opening section of the first divergent nozzle, which fuel-air mixture is immediately ignited by the initially formed products of combustion in the self-starter tube and is thereafter accelerated downstream at ever-increasing velocities to thereby produce an increasingly larger-and-larger thrust.

3,514,957

HIGH SPEED PROPULSION ENGINE

Robert C. Evans, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 27, 1967, Ser. No. 619,892
Int. Cl. F02k 7/08

U.S. Cl. 60—270

9 Claims



The disclosure shows a propulsion engine 12 of the ramjet type. The engine inlet ducts 20 for ram air are formed in such a manner that an internally disposed plug 30, providing an annular flow path through the engine, is supported outside of the flow path to reduce the heat load on the plug 30. With this arrangement, the plug 30 is displaceable for controlling the area change of the flow path to provide efficient operation from supersonic to hypersonic velocities.

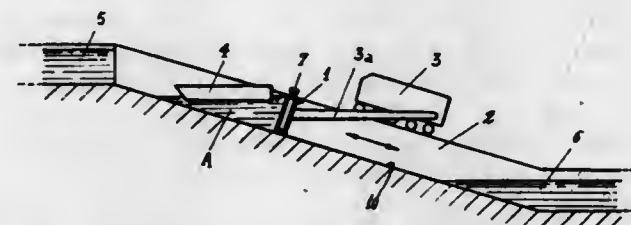
3,514,958

WATER-SLOPE SYSTEM FOR A MOVABLE RETENTION BARRIER

Jean Aubert, 8 Rue la Boetie, Paris, France
Filed Sept. 3, 1968, Ser. No. 756,792
Claims priority, application France, Sept. 15, 1967, 121,232
Int. Cl. E02c 3/00

U.S. Cl. 61—9

27 Claims



A device for raising ships to the level of a higher body of water, in which a pusher forces a body of water, with

a ship floating in it, up an incline to the higher body of water. The pusher has seals along its side and bottom edges, to retain the pushed water, and these seals are in the form of rollers that roll along the sides and bottom of the channel up which the water is pushed.

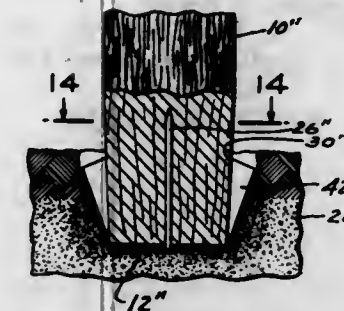
3,514,959

PEDESTAL TIMBER PILE SHOE

John J. Dougherty, Jr., 262 Rutherford Blvd., Franklin Lakes, N.J. 07014
Filed Sept. 3, 1968, Ser. No. 756,841
Int. Cl. E02d 5/26

U.S. Cl. 61—53

1 Claim



A shoe for the bottom end of a timber pile having a flat body with peripheral radial wings adapted to be bent against the side surface of the timber pile. The flat body has a central hole for receiving a fastening element for fastening the shoe to the pile.

3,514,960

METHOD OF, AND MEANS FOR REDUCING THE TRACTIVE EFFORT ON AN AGRICULTURAL TOOL

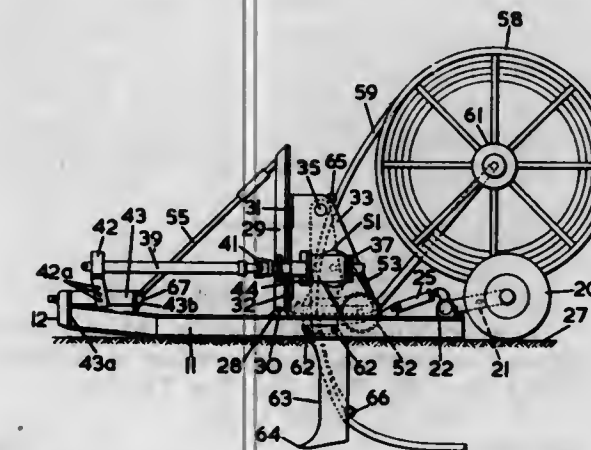
John Arthur Howard, West Horndon, England, assignor to Rotary Hoes Limited, West Horndon, Essex, England

Filed Mar. 24, 1967, Ser. No. 625,864

Int. Cl. F16l 1/100; A01b 35/00

U.S. Cl. 61—72.6

6 Claims



An earth-working tool is supported from a sledge and oscillated backwards and forwards so to be tilted for easing its passage through the ground.

3,514,961

MINE ROOF SUPPORTS

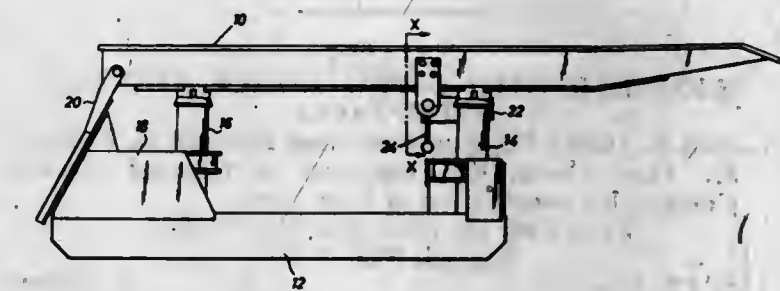
Peter Shuttleworth, Horsea, England, assignor to Mastabar Mining Equipment Company Limited, Marfleet, Hull, Yorkshire, England
Filed Nov. 19, 1968, Ser. No. 777,016
Claims priority, application Great Britain, Sept. 10, 1968, 42,891/68
Int. Cl. E21d 15/44

U.S. Cl. 61—45

9 Claims

This invention concerns mine roof supports and the provision of controls for adjusting the height and position of same. The invention provides control means which

may be mounted on one or other or both sides of a support and is accessible without an operative having to stand under the support itself. Linkage means is also provided by the invention in interconnecting the control



means when duplicated controls are provided and a device is also disclosed by which limited independent operation of the control means on one side of the support can be effected relative to the control means on the other side of the support.

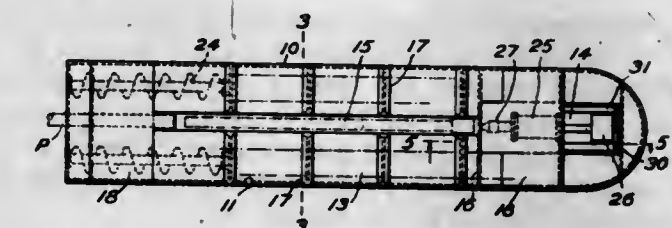
3,514,962

SUBMERSIBLE PIPE LAYING BARGES

Norman M. Poole, Lafayette, Calif.
(16694 Maple St., Fountain Valley, Calif. 92708)
Filed Oct. 8, 1968, Ser. No. 765,769
Int. Cl. F16l 1/00; B25j 5/00

U.S. Cl. 61—72.3

6 Claims



A surface controlled, submersible, barge type pipe laying vessel adapted to automatically feed, align and connect successive sections of threaded and coupled steel pipe, the vessel being adapted to reposition itself at the completion of each cycle of operations.

3,514,963

HANDLING AND STORAGE OF OZONE

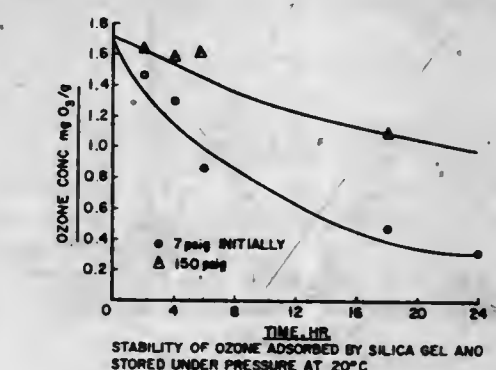
Herbert K. Reimschuessel, Morristown, George R. Kubanek, West Orange, and George A. Mountford, Rockaway, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Feb. 9, 1968, Ser. No. 704,451

Int. Cl. F17c 11/00; C01b 13/10

U.S. Cl. 62—48

8 Claims



Unexpectedly high quantities of ozone can be stored adsorbed on silica gel by adsorption at a low temperature, for example $-80^{\circ}\text{C}.$, and subsequent storage at a substantially higher temperature, for example $20^{\circ}\text{C}.$ Such

a method of adsorption and storage results in substantially higher retention of ozone in the adsorbent than if the ozone had been adsorbed and stored at the higher temperature, and relatively high temperature storage allows use of the process at normal laboratory facilities.

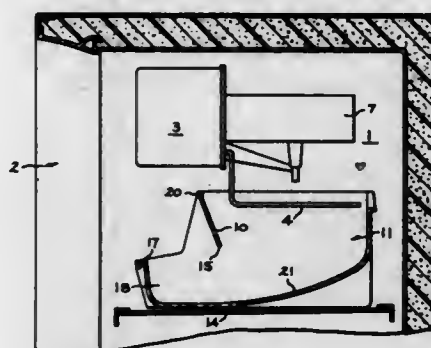
3,514,964

ICEMAKER WITH IMPROVED ICE STORAGE RECEPTACLE

Gerald F. Dodge III, Louisville, and Howard D. F. True, Jr., Fern Creek, Ky., assignors to General Electric Company, a corporation of New York
Filed Feb. 10, 1969, Ser. No. 797,945
Int. Cl. F25c 5/18

U.S. Cl. 62-137

2 Claims



A household refrigerator containing an automatic ice service including an automatic icemaker having an ice level sensing member for sensing a predetermined level of ice and improved ice storage receptacle operatively associated with the sensing member and designed to provide usage of stored ice pieces in the order in which they are manufactured by the icemaker.

3,514,965

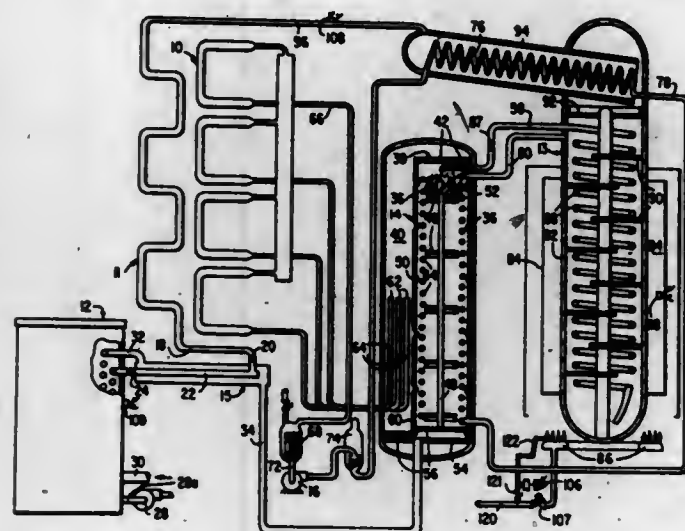
REFRIGERATION SYSTEM HAVING GENERATOR TEMPERATURE CONTROL MEANS

Earl L. Brown, Indianapolis, Ind., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Aug. 27, 1968, Ser. No. 755,640
Int. Cl. F25b 15/00

U.S. Cl. 62-148

2 Claims



A refrigeration system comprised of a generator, solution-cooled absorber, primary absorber, condenser, liquid-suction heat exchanger, and chiller, wherein there is incorporated in the system circuitry embodying temperature

responsive switch means located exteriorly of the generator in the vaporous flow path leading therefrom and operable as an auxiliary means to sense abnormally high temperature conditions interiorly of the generator, indicative by way of illustration of a low refrigerant level therein, and effecting through the circuitry provided herein termination, or at least a significant reduction, of fuel input to the generator.

3,514,966

DEFROSTING CONTROL CIRCUIT FOR ELECTRIC REFRIGERATOR

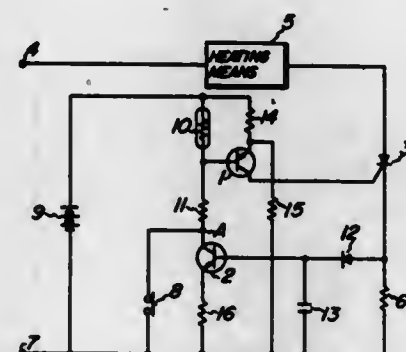
Zenji Kusuda and Hiroshi Shimomura, Ibaragi-shi, Japan, assignors to Matsushita Electronics Corporation, Osaka, Japan, a corporation of Japan

Filed Dec. 16, 1968, Ser. No. 783,792
Claims priority, application Japan, Dec. 23, 1967, 42/82,491

Int. Cl. F25d 21/06

U.S. Cl. 62-156

5 Claims



A defrosting control circuit for an electric refrigerator comprising a first transistor adapted to trigger a solid-state switching element with control electrode depending upon the variable resistance of a temperature detecting element representative of the temperature in the freezer of the refrigerator and a second transistor for resetting the control circuit subsequently to completion of a defrosting operation. In the present defrosting control circuit, a defrosting operation is automatically stopped when the temperature in the freezer reaches a predetermined temperature at which accumulated frost in the freezer is completely removed, so that an excessive temperature rise in the freezer and incomplete defrosting can be prevented.

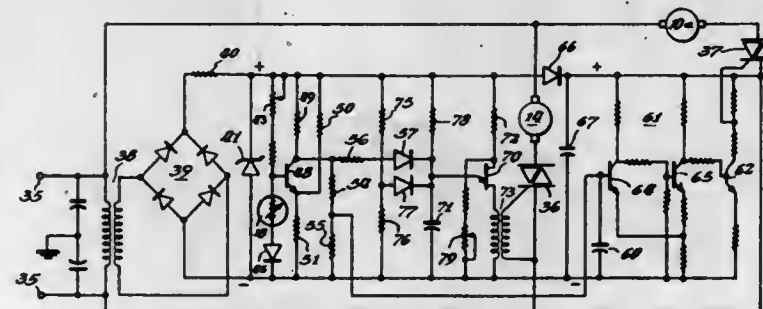
3,514,967

AIR CONDITIONER CONTROL
Donald R. Vander Molen, Stevensville, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed June 20, 1968, Ser. No. 738,592

Int. Cl. F25d 17/00

U.S. Cl. 62-180

8 Claims



An air conditioner control in which the compressor is cycled on and off and the fan speed is modulated. Several solid state control circuits for the compressor and fan motor are illustrated.

3,514,968

ELECTRIC REFRIGERATOR WITH COMPRESSOR CONTROL

Zenji Kusuda, Ibaragi-shi, and Takeji Kobayashi, Kyoto, Japan, assignors to Matsushita Electronics Corporation, Osaka, Japan, a corporation of Japan

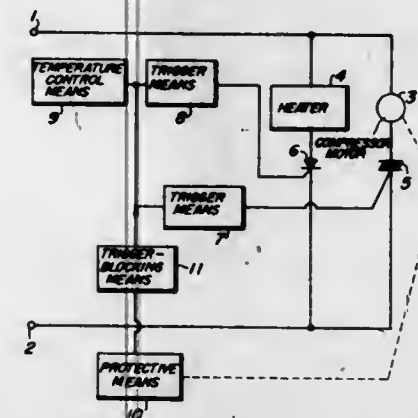
Filed Aug. 27, 1968, Ser. No. 755,668

Claims priority, application Japan, Aug. 31, 1967 (utility models), 42/75,173, 42/75,174, 42/75,175

Int. Cl. F25b 1/00

U.S. Cl. 62-227

3 Claims



An electric refrigerator having an electronic temperature controller which is sensitive to the temperature within the apparatus so as to selectively energize the heater disposed within the apparatus as well as the compressor motor thereby to continuously maintain the optimum temperature within the apparatus, and having means for protecting the compressor motor from undesirable overload, thereby ensuring excellent refrigerating performance and a high degree of safety.

3,514,969

FREEZING APPARATUS FOR GARBAGE DISPOSAL

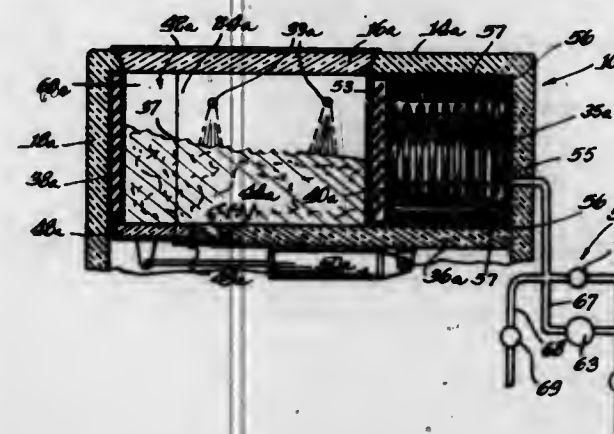
Richard D. Harza, 400 W. Madison St., Chicago, Ill. 60606

Filed Oct. 23, 1967, Ser. No. 677,206

Int. Cl. B30b 15/34

U.S. Cl. 62-341

11 Claims



A garbage disposal unit including means for moistening refuse received therein with a freezable substance, means for compressing the moistened refuse, and means for freezing the moistened, compacted refuse into solid pellets.

3,514,970

ABSORPTION REFRIGERATION MACHINE

Keith V. Eisberg, Martinsville, Ind., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed June 7, 1968, Ser. No. 735,230

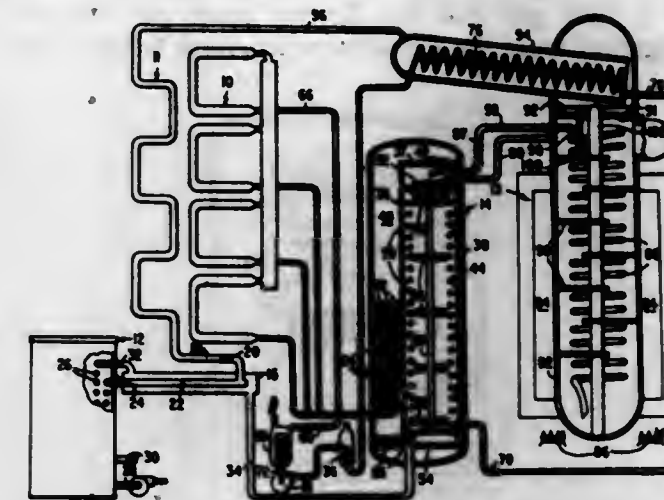
Int. Cl. F25b 15/00

U.S. Cl. 62-476

2 Claims

An absorption refrigeration machine employing cool weak solution from the absorber as the condensing me-

dium in the rectifier to condense absorbent solution, thereby providing high quality refrigerant to the condenser. A reflux plate is provided between the analyzer and rectifier



to increase machine efficiency by mass heat transfer between the rectifier condensate and the vapor passing to the rectifier from the analyzer.

3,514,971

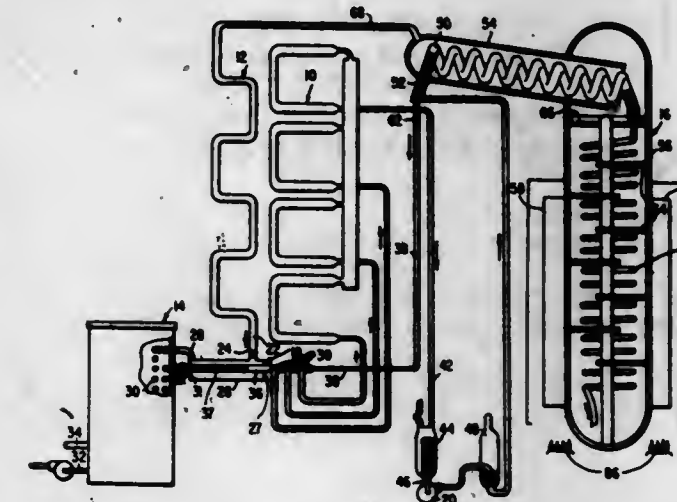
ABSORPTION REFRIGERATION MACHINE
Lowell A. McNeely, Indianapolis, Ind., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Sept. 3, 1968, Ser. No. 756,812

Int. Cl. F25b 15/00

U.S. Cl. 62-476

4 Claims



An absorption refrigeration system employing a liquid and gas refrigerant heat exchanger having combined therein a distributor to provide a mixture of refrigerant vapor and strong solution to separate circuits of a multi-circuit absorber.

3,514,972

ABSORPTION REFRIGERATION APPARATUS OF THE INERT GAS TYPE

Wilhelm Georg Kügel, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Filed Sept. 25, 1968, Ser. No. 762,426

Claims priority, application Sweden, Sept. 29, 1967, 13,436/67

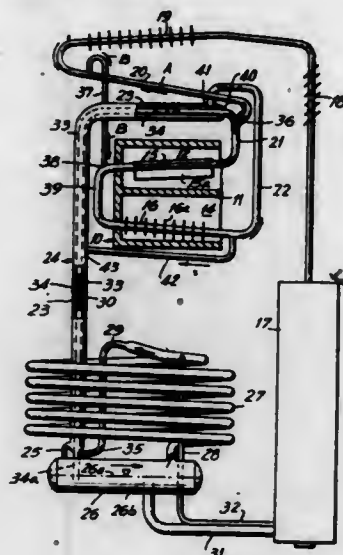
Int. Cl. F25b 15/00

U.S. Cl. 62-490

8 Claims

Absorption refrigeration apparatus of the inert gas type in which refrigerant vapor is expelled from solution at a place of heating and condensed at a place of condensation, a circuit for circulating inert gas which

includes an absorber and evaporator structure having a plurality of evaporator sections respectively operable at low and higher temperatures, the circuit having a weak gas line for flowing inert gas weak in refrigerant from the absorber to the low temperature evaporator section and a rich gas line for flowing inert gas enriched in refrigerant from the evaporator structure to the absorber,

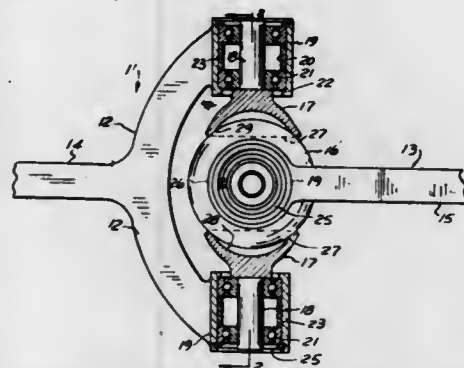


conducting liquid refrigerant from the condenser to the evaporator structure in a path of flow which includes a pre-cooler, conducting inert gas in the inert gas circuit to the pre-cooler and conducting inert gas, after flowing in physical contact with liquid refrigerant in the pre-cooler, to a zone of the evaporator structure at which the inert gas is at least partially enriched in refrigerant.

3,514,973
UNIVERSAL JOINT
Henry Kozerski, 3350 Greenfield,
Royal Oak, Mich. 48072
Filed Jan. 27, 1969, Ser. No. 794,198
Int. Cl. F16d 3/30

U.S. Cl. 64-17

4 Claims



A universal joint with constant velocity including drive and driven forks, each fork mounting a pair of spaced opposed sockets, and a ball interposed between and compressively engaged by said sockets, with bearings mounting said sockets and serving as end thrust means to bias said sockets against said ball.

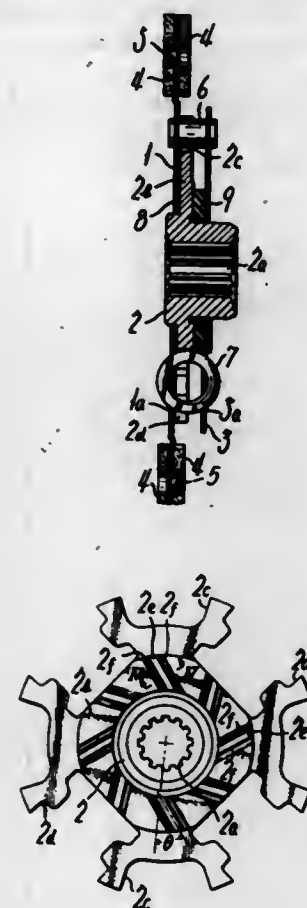
3,514,974
NOISE PREVENTION DEVICE IN TORSIONAL VIBRATION
Kazuma Adachi, Osaka, Japan, assignor to Kabushiki Kaisha Daikin Seisakusho, Osaka, Japan
Filed May 22, 1968, Ser. No. 731,074
Claims priority, application Japan, June 10, 1967, 42/37,246
Int. Cl. F16d 3/12

U.S. Cl. 64-27

4 Claims

This invention relates to the prevention of noises invariably produced in a relative relation between driving

shafts and driven shafts, for instance in power transmitting means such as a clutch disc, by disposing a wear-proof rubberlike elastic material of special geometry

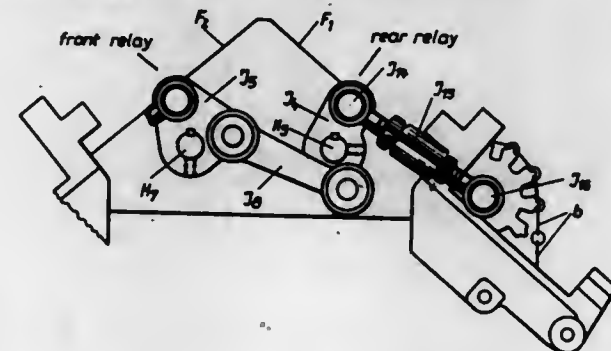


between driving members driven by engine and members driven by rotation transmitted therefrom on the peripheries of the hubs of said members.

3,514,975
CONTROL MECHANISM FOR THE JACQUARD DEVICE OF A RECTILINEAL KNITTING MACHINE
Jean-Michel Chappex, 7 Route des Prairies,
Monthey, Switzerland
Filed Apr. 25, 1968, Ser. No. 723,992
Int. Cl. D04b 15/66

U.S. Cl. 66-75

5 Claims



A high speed rectilinear knitting machine in which the Jacquard device is controlled by a mechanism adapted to translate rotary motion into oscillatory motion.

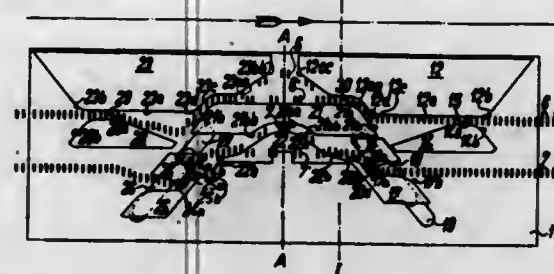
3,514,976
CAM BOX FOR FLAT KNITTING MACHINES
Pierre Joseph, Neuchatel, Switzerland, assignor to Edouard Dubied et Cie (Societe Anonyme), Couvet, Neuchatel, Switzerland
Filed Feb. 2, 1968, Ser. No. 702,561
Claims priority, application Switzerland, Feb. 6, 1967, 1,682/67
Int. Cl. D04b 7/04

U.S. Cl. 66-78

4 Claims

A flat knitting machine comprises two needle beds which are inclined one relative to the other in the shape

of an inverted V and having knitting members such as needles and pushers connected to the needles, said knitting members being each provided with two butts co-operating with the cams of at least one cam box for each needle bed. The cam box comprises cams having working faces for cooperation with the butts of the knitting members. Groups of two opposite working faces

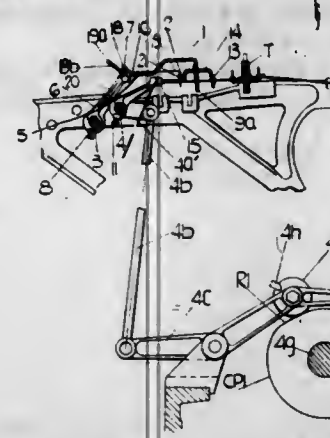


on two cams act together on the butts of the knitting members to positively control the knitting members in all regions of the cam box where the knitting members have to affect a longitudinal movement. The arrangement of the cams is such that at the end of one working face acting on one of the two butts begins another working face oriented in the same direction as the previous working face and acting on the other butt.

3,514,977
FULL FASHIONED KNITTING MACHINE
Leonard Brown, Nottingham, and Ernest William Booles, Loughborough, England, assignors to William Cotton Limited
Filed Aug. 26, 1966, Ser. No. 575,298
Claims priority, application Great Britain, Sept. 4, 1965, 37,897
Int. Cl. D04b 15/52

U.S. Cl. 66-126

7 Claims



A full fashioned knitting machine in which a pair of rigid yarn deflector arms on inter-connected rods are oppositely cam operated to kink yarn for drawing additional yarn and to release the latter at the end and start of a thread carrier traverse, the arms are alignable for straight running of the yarn during the major part of a draw, and are cam operated for slight kinking of the yarn towards the end of a draw, a resilient adjustable spring arm acts on the additionally drawn length of yarn for accurate control during knitting movements of the yarn.

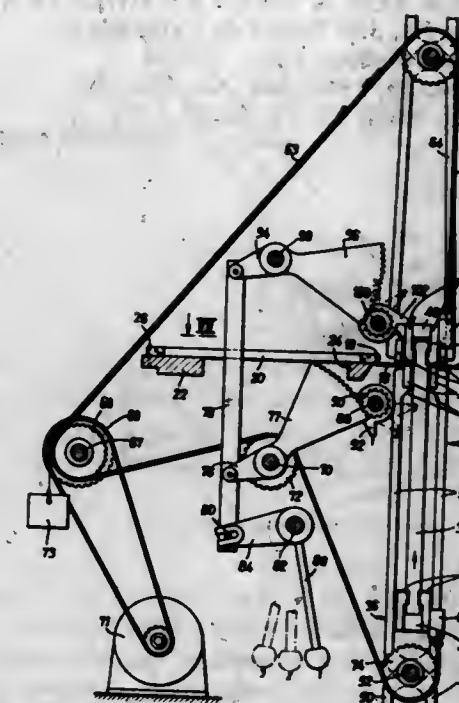
3,514,978
MAGAZINE BAR FOR TRANSFERRING KNITTED FABRIC
Heinz Biederhäuser, Bortlingen, Germany, assignor to Gebrüder Boehringer Gesellschaft mit beschränkter Haftung, Goppingen, Germany, a limited-liability company of Germany
Filed Sept. 26, 1968, Ser. No. 762,680
Int. Cl. D04b 9/40

U.S. Cl. 66-148

8 Claims

The novel magazine bar which serves to transfer knitted fabric from a knitting machine having needles

spaced in accordance with a first pattern to another knitting machine having needles spaced in accordance with a second pattern. For this purpose means are provided for so varying the spacing of the needles, that this spacing may be selectively adjusted in accordance



with said first pattern or in accordance with said second pattern. The adjusting means may comprise a gate having converging rods which engage between the magazine needles and displace the same laterally thereby changing their distance, when the gate is moved transversely to the needles.

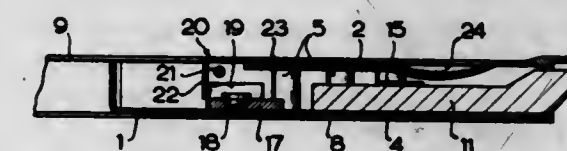
3,514,979
THIN SPRING LOCKS AND UNLOCKING MEANS THEREFOR

Herbert-Ludwig Wiesmann, Velbert, Germany, assignor to Stanley Works GmbH, Velbert, Germany, a company of Germany

Filed Dec. 18, 1967, Ser. No. 691,318
Claims priority, application Germany, Dec. 30, 1966, St 26,326

Int. Cl. E05b 65/44; E05c 1/12
U.S. Cl. 70-81

9 Claims



A flat, thin spring lock for use in narrow confined spaces, as in a thin cabinet door or similar closure, particularly adapted for airplanes or other vehicles where protruding handles or knobs are undesirable. The lock and door are operated by a bell crank lever pivoted on the lock casing having one lever arm within the lock casing and attached to the latch actuating mechanism, and the other lever arm outside and overlying the casing and adjacent thereto so that it does not protrude when the door is locked. To unlock, the outside lever arm is moved first by a finger to an unlocking position where it is angularly related to the door and thereafter it may be grasped by several fingers to exert a door-opening force thereon. In another embodiment, the lever arm is biased by a spring in an unlocking direction but

is prevented from moving therein by a trip means. A push button disables the trip means whereby the spring moves the lever arm into its projected position where it may be used as the door handle.

3,514,980

SAFETY LOCK FOR A TRAILER COUPLER

John B. Doyle, 330 Ponce de Leon Blvd.,

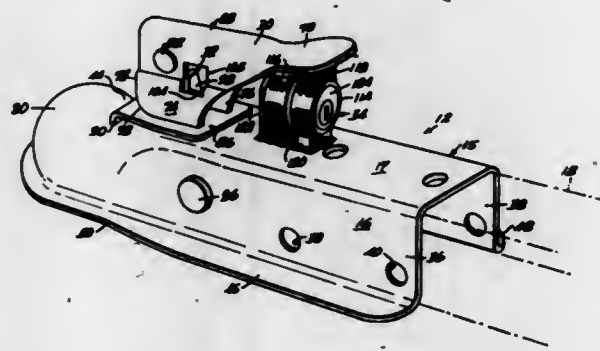
Coral Gables, Fla. 33134

Filed Sept. 20, 1968, Ser. No. 761,105

Int. Cl. E05b 65/12; B60d 1/12

U.S. Cl. 70-258

7 Claims



A lock assembly for a lever type trailer coupler composed of (a) a pair of ring members, one on the lever and one of the coupler housing, with the openings of the rings being similarly sized and arranged in coaxial relation when the lever is in the latched position, and (b) a cylindrical barrel lock in co-axial relation with the rings and extending into each of the openings to prevent the lever from being moved to the unlatched position except upon use of a key to remove the barrel lock from the opening; an appropriate backing plate is provided on one of said ring members to act as a stop when the barrel is being positioned within the rings.

3,514,981

LOCK BOX

Arthur M. Esquibel and Arthur E. Esquibel, both of

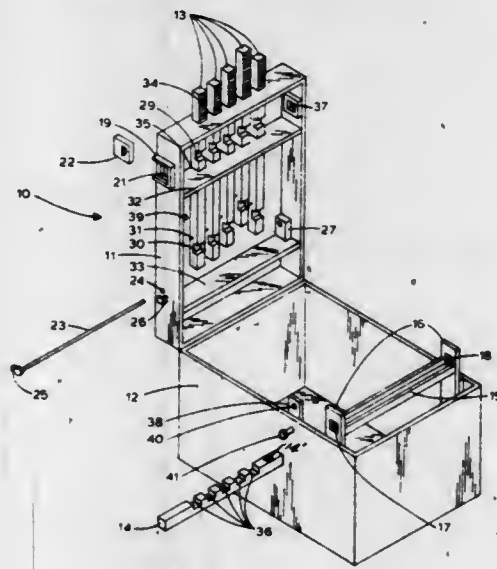
11504 Haines NE., Albuquerque, N. Mex. 87112

Filed May 15, 1968, Ser. No. 729,342

Int. Cl. E05b 37/16, 65/52

U.S. Cl. 70-298

6 Claims



A lock box having an upper and a lower portion with a plurality of slide bars slidably retained in the upper portion and a locking bar slidably retained in the lower portion, the upper and lower portion being removably secured together by the interlocking action of the slide bars and locking bar.

3,514,982

LOCK WITH ADJUSTABLE TUMBLER ASSEMBLY

Kavalli Alverius Bergendahl, Goteborg, Sweden, assignor

to E. A. Rosengrens Aktiebolag, Goteborg, Sweden, a

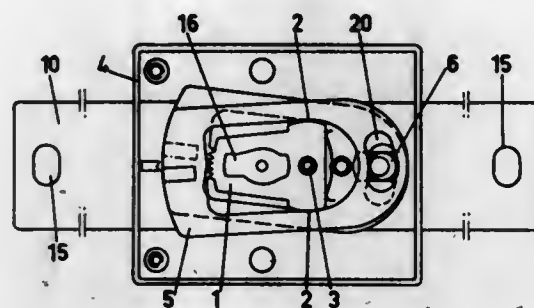
Swedish joint-stock company

Filed Oct. 16, 1967, Ser. No. 675,663

Int. Cl. E05b 25/00

U.S. Cl. 70-355

5 Claims



A lock having a tumbler assembly which is adjustable to adapt the lock to be operated by a new key without requiring removal or disassembly of the lock. Each tumbler of the tumbler assembly has two portions, one of which is actuated by the key and pivotally mounted on a pin in the lock box. The other portion is mounted on the first portion so that both portions are pivotal as a unit about said pin during normal operation of the lock. Means are provided to permit relative pivotal and linear displacement between the inner and outer portions when adjusting the tumbler assembly to accommodate a new key.

3,514,983

MOUNTING ASSEMBLY FOR ACTUATORS OF CYLINDER LOCKS

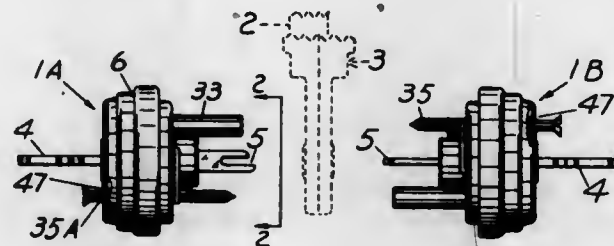
Edwin J. Krook, Grand Rapids, and Jack E. Suess, Wayland, Mich., assignors to Kysor Industrial Corporation, Cadillac, Mich.

Filed Nov. 1, 1968, Ser. No. 772,694

Int. Cl. E05b 9/06

U.S. Cl. 70-370

10 Claims



A housing for the actuator of a cylinder lock has inner, outer, and intermediate circular plates with coaxial flanges and detents holding the plates in axially spaced concentric alignment. The outer plate has a circular hole for the cylinder, while the other two plates have aligned holes with radial slots receiving the flange on the actuator. Radial slots open from the sides of the holes in the inner and intermediate plates. Connecting posts are received in the radial slots, with peripheral grooves in the ends of the posts retainingly engaging the intermediate plate. When the cylindrical actuator is placed in the holes in the plates it blocks removal of the posts from the radial slots and the housing. An L-shaped retaining clip overlies the inner end of the flange on the actuator with an ear engaged on the outer side of the inner plate and a screw securing the other end of the clip to the inner side of the inner plate.

3,514,984

APPARATUS FOR CONTROLLING THE FLOW OF A COOLING MEDIUM ONTO WORKPIECES

John W. Cook, Williamsville, N.Y., assignor to West-

inghouse Electric Corporation, Pittsburgh, Pa., a cor-

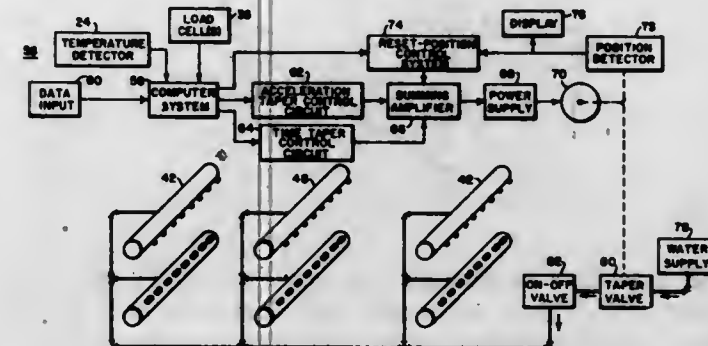
poration of Pennsylvania

Filed Jan. 16, 1968, Ser. No. 698,224

Int. Cl. B21b 37/00

U.S. Cl. 72-7

5 Claims



This disclosure relates to apparatus for operating a steel mill, and proposes in particular to increase the cooling medium directed onto a strip of steel, as a function of the acceleration of the strip, and to reduce the flow of the cooling medium, as a function of heat loss resulting from the varying delays of portions of the strip, from the time the strip leaves the heating furnaces.

3,514,985

PROFILING OF METAL BILLETS

Jacob Marcovitch, Johannesburg, Republic of South Africa, assignor of one-third to Rotary Profile Anstalt, Vaduz, Liechtenstein

Filed Aug. 14, 1967, Ser. No. 660,247

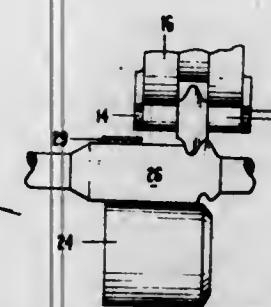
Claims priority, application Republic of South Africa,

Aug. 22, 1966, 66/5,031

Int. Cl. B21b 13/14

U.S. Cl. 72-241

5 Claims



The invention provides a method and apparatus for forming metal articles from blanks and billets by rotating a series of work rollers in an orbit, and mounting a blank for its surface zone to be intersected in turn by successive rollers, for the metal to be plastically deformed to the contour of the rollers, without significant disturbance of the metal beyond the surface zone.

3,514,986

COOLING MEANS FOR EXTRUDED MATERIAL

Peter Habscheidt, Dusseldorf, and Helmut Rohra, Mulheim (Ruhr), Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany, a German company

Filed May 31, 1967, Ser. No. 642,414

Claims priority, application Germany, June 2, 1966,

Sch 39,058

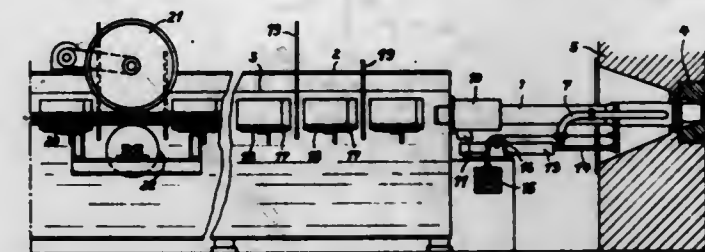
Int. Cl. B21c 23/00

U.S. Cl. 72-253

1 Claim

Means, including an open tank of liquid, for cooling an extruded product, particularly copper or copper alloys, issuing from a horizontal extrusion press, comprising a

horizontal tubular extension connecting the tank and the die, below the surface level of the liquid in the tank, and spraying nozzles, inclined in the direction of motion of the extruded product. The tubular extension is preferably axially displaceable, and is provided with outlet apertures,



between conically tapering annular shoulders, surrounded by a closure piece. The tank is preferably equipped with evenly spaced guiding bodies for an extruded product, and with ejecting means for lifting an extruded product out of the tank.

3,514,987

HORIZONTAL HYDRAULIC EXTRUSION PRESSES, INCLUDING TUBE PRESSES

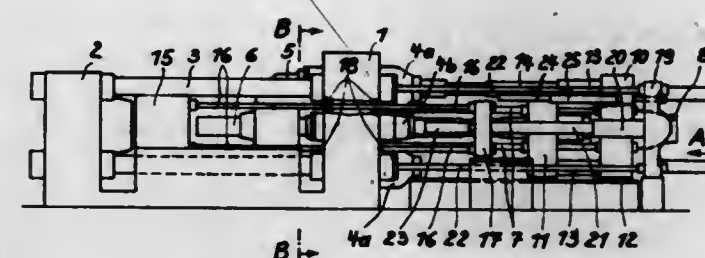
Horst-Hans Groes, Mettmann, Germany, assignor to Schloemann Aktiengesellschaft, Dusseldorf, Germany, a German company

Filed Sept. 13, 1967, Ser. No. 667,544

Int. Cl. B21c 23/08

U.S. Cl. 72-265

3 Claims



A horizontal four-column extrusion press with four extrusion cylinders arranged between the columns and with container-displacing means behind the cylinder cross-beam, container-displacing rods extending beside a cylinder cross-beam, two opposite extrusion cylinders being of such dimensions as to accommodate displacing rods between each of them and the adjacent columns, and the other two opposite extrusion cylinders being of large size, occupying the space between two columns, and furnishing a larger share of the power required.

In a tube-extrusion press, piercing means is arranged behind the cylinder cross-beam, and stationary crossbars carrying cylinders for pressing the container against the die are arranged behind the piercing-cylinder crossbar.

3,514,988

TOOL FOR MAKING CORDWOOD MODULE

Robert E. Klein and James E. Driver, Sr., Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation, a corporation of Delaware

Original application Nov. 29, 1963, Ser. No. 327,130.

Divided and this application May 29, 1967, Ser.

No. 652,644

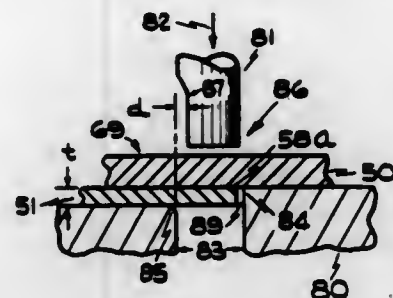
Int. Cl. B21d 31/02, 53/00

U.S. Cl. 72-332

3 Claims

A tool for use in fabricating multi-layered printed circuit boards comprising a punch and die set for providing passage apertures in the boards having tabs contiguous to said apertures. The die has apertures therein which

in cooperation with punches cause the current carrying layers of the boards to shear in part and bend in part. The bent part forms a shim which causes the base por-



tion of the board to shear around the entire circumference of the aperture in the die to thereby form the passage apertures having the tabs thereat.

3,514,989

METHOD FOR DIE FORMING FLEXURES USING EDGE CONSTRAINT

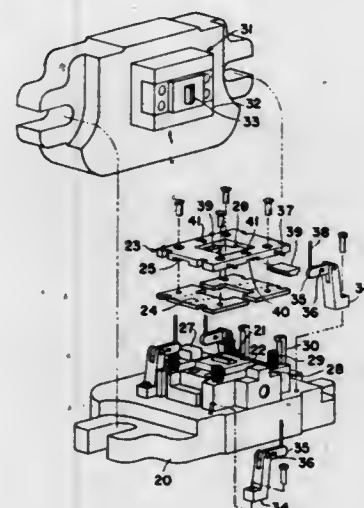
Robert J. Robinson, Lexington, Mass., assignor to the Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Filed Oct. 4, 1967, Ser. No. 672,909

Int. Cl. B21d 31/00; E05d 7/00

U.S. Cl. 72—377

1 Claim



A method for forming a metal flexure by compressing a transverse portion of a metal bar and simultaneously urging constraint shoes inwardly against the metal bar.

This invention relates to flexures, particularly as used in industrial instruments.

3,514,990

TOOL ADJUSTMENT DEVICE

Paul D. Bauknight, Cranford, and Robert Lahrheim, Colonia, N.J., assignors to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey

Filed Dec. 18, 1967, Ser. No. 691,442

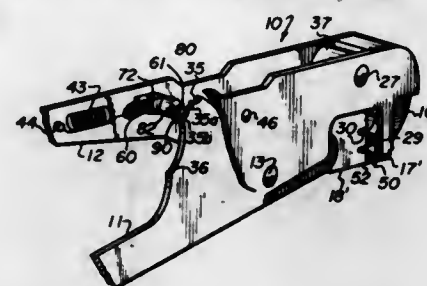
Int. Cl. B21d 7/06

U.S. Cl. 72—410

6 Claims

This disclosure is directed to a tool adjustment device and more particularly an adjustment device for operation with the full-stroke compelling mechanism. The disclosure provides an adjustment device to compensate for the build-up and varying tolerances of hand tools having full-stroke compelling mechanisms. In order to insure that the full-stroke compelling mechanism will release at the proper point in the compression cycle the disclosure provides an adjustable pawl cooperating with the ratchet of

the full-stroke compelling mechanism. The pawl is mounted upon an eccentric pawl pin which may be rotated in order to position the pawl adjacent the desired land, or tooth, of the full-stroke compelling mechanism ratchet. Locking means are provided to lock the pawl to the eccentric pawl pin to prevent relative motion therebetween.



The eccentric portion of the eccentric pawl pin is provided with range of eccentricity between the best and worst case conditions so that the tool may be continually readjusted to compensate for variances in the size of the crimping dies and tolerance variations occurring during manufacture and dimensional changes due to wear of the various operative portions of the crimping tool.

3,514,991

BENDER TABLE ASSEMBLY

Neal W. Merrill, Bethlehem, and William H. Schenck, York, Pa.; said Schenck assignor to Kroy Company, York, Pa., said Merrill assignor to Bethlehem Steel Corporation, a corporation of Delaware

Filed June 12, 1968, Ser. No. 736,396

Int. Cl. B21j 13/10

U.S. Cl. 72—420

13 Claims



A bender table assembly includes an entry end conveyor table aligned with a discharge end conveyor table. The conveyor tables are positioned on opposite sides of a metal bender for conveying metal stock to be bent to and from the bender. The discharge end conveyor table includes a movably mounted stop gauge assembly, and there is another movably mounted stop gauge on the bender. Both stop gauges are mounted on carriages and are motor driven, and the bender stop gauge is pivotable out of stopping position. The discharge end table stop gauge includes a collapsible stop plate movable to prevent bent bars from wedging into the stop plate. Vertically movable lifters on both sides of the bender lift the stock from bender pins and a pusher pushes the lifted stock out of the path of the bender pins. Stacking rolls on at least one side of the bender stack several bars in a vertical plane for simultaneous bending. The entry end conveyor table includes a stock table and discharge booster bars between conveyor rolls. Other booster bars are in the discharge end conveyor table.

3,514,992

COLD HEADER

Frederick W. Braun, Bloomfield Hills, and Samuel Oree, Jr., Detroit, Mich., assignors to Braun Engineering Company, Detroit, Mich., a corporation of Michigan

Filed Nov. 29, 1967, Ser. No. 686,663

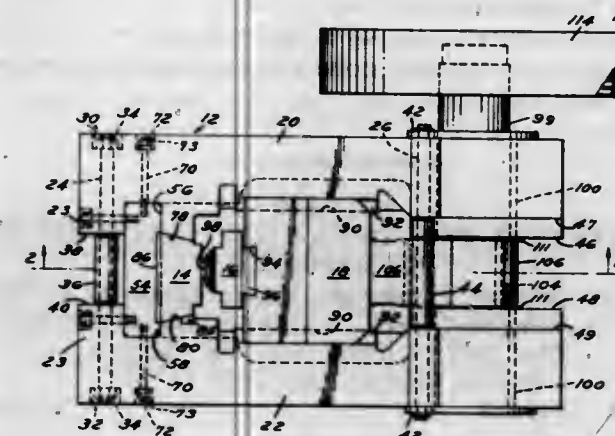
Int. Cl. B21j 13/04

U.S. Cl. 72—455

9 Claims

The invention is embodied in a cold header assembly of the type having a die block assembly and a ram-mounted punch assembly mounted on a composite frame. The composite frame is composed of laterally spaced, separate,

elongated side rails connected together by tie bars and held in predetermined spaced relation by spacers sleeved on the tie bars. A bolster plate extends between and is



carried by the side rails and supports the die block assembly, and a crankshaft is journaled on the side rails to reciprocate the ram assembly.

3,514,993

APPARATUS AND METHOD FOR AUTOMATIC CRYSTAL POINT DETECTION

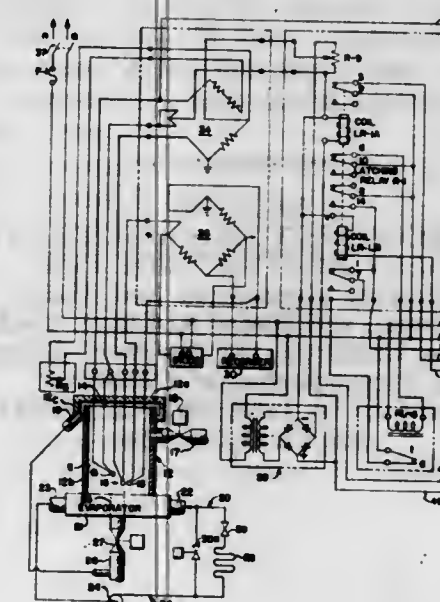
Samuel W. Simpson, Florissant, Mo., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Jan. 24, 1968, Ser. No. 700,198

Int. Cl. G01n 25/02

U.S. Cl. 73—17

9 Claims



Apparatus and method for detecting the crystal point of a normally liquid composition having constituents which crystallize upon being cooled by placing a sample in a container which contains a point source measuring device. A pair of thermistors forming opposite legs of a Wheatstone bridge normally balanced when they are at the same temperature are disposed in the sample. One of the thermistors is on substantially the same horizontal plane as the measuring device; the other is disposed a short distance above. As the sample is cooled from the bottom up, the bridge is unbalanced. Crystals begin to form on the measuring device, the latent heat given off from the crystals heats the lowermost thermistor and rebalances the bridge, thereby indicating the crystal point of the sample.

3,514,994 PROBE AND TEST CHAMBER FOR MOISTURE SENSING DEVICE

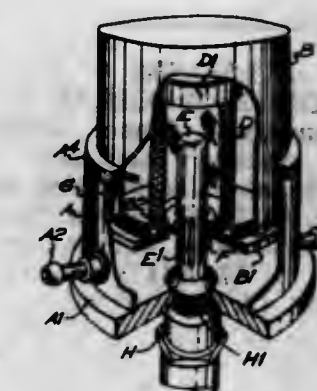
John Leonard Shaw, 22 Rawson Road, Westgate, Bradford, Yorkshire, England

Filed May 12, 1969, Ser. No. 823,548

Int. Cl. B01d 53/18

U.S. Cl. 73—76

3 Claims



In an apparatus for determining the moisture content of samples of air, liquids or gases using a moisture probe, the improvement comprising the combination of a probe and a first container defining a testing chamber into which a sample can be introduced, a second container defining a drying chamber to contain a desiccant, and means for sealing these chambers from each other and from the surrounding atmosphere, the containers being interconnected and the probe being supported so that relative movement between the probe and the second container acts alternatively to isolate said probe element in the drying chamber when a test is not being made and to expose said probe element to a sample in said testing chamber when a test is to be made, the arrangement being such that this transition can be effected without exposing the probe element to any other surround influences. Preferably the second container telescopes within the first container and the probe is mounted on the latter to project into the former.

3,514,995

ENGINE TESTING SYSTEM

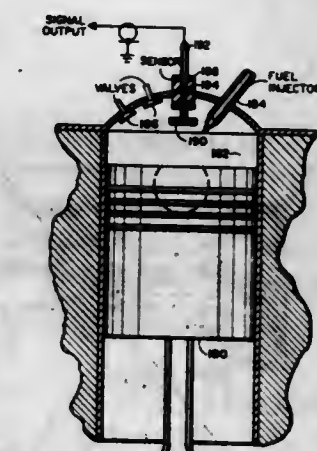
Harold R. Dobson, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware

Filed Feb. 23, 1968, Ser. No. 707,729

Int. Cl. G01m 15/00

U.S. Cl. 73—117.2

15 Claims



Systems and devices for testing engines which are described include passive sensor elements which are adapted to detect mechanical motion of engine parts and also the

flow of engine fluids, both liquids and gases. The passive sensors can be in the form of probes of conductive material so spaced and shaped so as to be especially sensitive to distortion in the electromagnetic field in the portion of the engine where motion or flow is to be sensed. The system also includes an amplifier for processing the signal from the sensor and display recording or indicating devices which are adapted to show or analyze the condition under test.

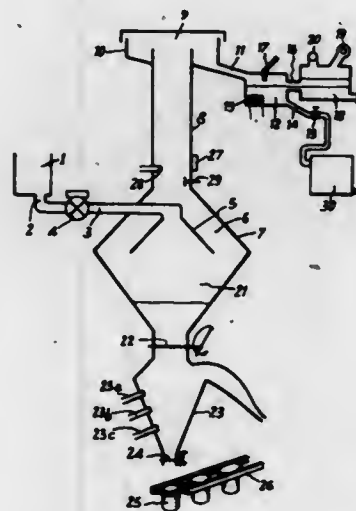
3,514,996

APPARATUS FOR GEOLOGICAL SURVEYING
Robert Coustan, Sauvagnon, France, assignor to Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine Courbevoie, a corporation of France
Filed Sept. 30, 1968, Ser. No. 763,629
Claims priority, application France, Oct. 18, 1967, 124,941

Int. Cl. E21b 49/00

U.S. Cl. 73-153

6 Claims



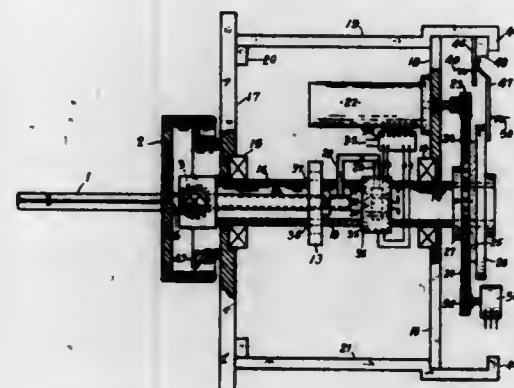
Various fundamental operations of geological surveying, which up to now have been carried out manually, are carried out automatically by means of novel apparatus arranged to receive the mud or slurry derived from a drilling operation. In this way various physico-chemical parameters of the mud or slurry are measured.

3,514,997

AIRSTREAM DIRECTION DETECTOR
Edward S. Gwathmey, James N. Davidson, and John M. Ziegler, Charlottesville, Va., assignors to Teledyne, Inc., Hawthorne, Calif., a corporation of Delaware
Filed Dec. 23, 1968, Ser. No. 785,957
Int. Cl. G01c 21/00

U.S. Cl. 73-180

3 Claims



This instrument comprises a novel double tapered wedge type probe attached to a cup which is spaced from and rotatable around a short flanged tube fixed to the casing

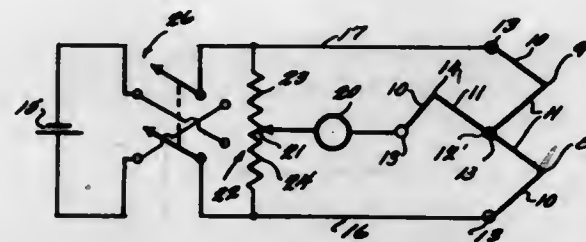
of the instrument. The probe is mounted so that it can have a limited pivotal movement with respect to the axis of the instrument. This pivotal movement, due to air flow, causes movement of a tube or arm on which a magnetic core element is mounted. Movement of this core with respect to two aligned windings produces electrical signals which cause energization of a servo-motor which rotates mechanism carrying the probe and cup until the probe is aligned with the airstream and then has no pivotal displacement.

3,514,998

D.C. CIRCUIT FOR OPERATING ASYMMETRIC THERMOPILE
James M. Benson, Hampton, Va., assignor to Teledyne Inc., Los Angeles, Calif., a corporation of Delaware
Filed July 22, 1968, Ser. No. 746,543
Int. Cl. G01p 5/10; G01l 21/14

U.S. Cl. 73-204

9 Claims



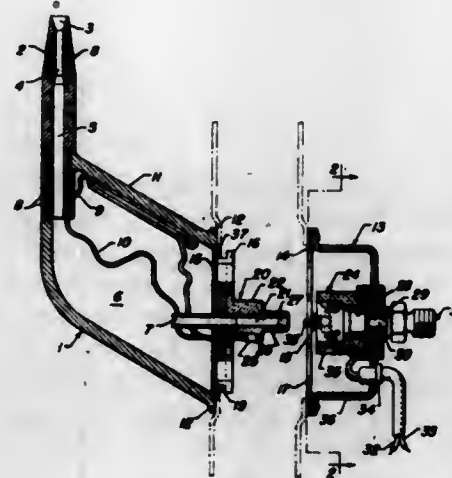
A D.C. circuit, including a reversing switch, for operating a thermopile device and including a variable resistor coupled across the thermopile so as to form a bridge circuit therewith wherein the bridge circuit is balanced by adjustment of the resistor for each of two positions of the reversing switch. When the bridge is balanced a galvanometer coupled between the variable resistor and the thermopile will indicate only the desired thermoelectric signal from the thermopile and will not reflect any asymmetric characteristics which may be present in the thermopile.

3,514,999

QUICK DISCONNECT MEANS WITH ELECTRICALLY HEATED PITOT TUBE
Jacques G. Mejean, Greenwich, and Halsey O. Bagg, Riverside, Conn., and Henry B. Klatte, Yonkers, N.Y., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Feb. 19, 1968, Ser. No. 706,501
Int. Cl. G01n 1/00

U.S. Cl. 73-212

3 Claims



A quick disconnect arrangement for an electrically heated Pitot tube, where the outer bayonet section is pushed straight into place within a fixed mounting section

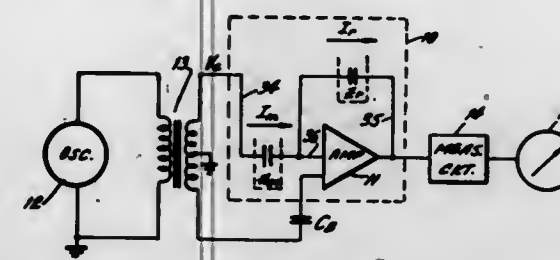
and a partial turn effects a locking engagement with a segmented screw construction. Plug means on the Pitot section is also provided to engage socket means on the base section and in turn provide for electrical current and air pressure transmission between such sections. A preferred design uses a snap-out lock-pin from the mounting section to prevent undesired rotation and maintain proper alignment between the two separate sections.

3,515,000

LIQUID GAUGE
Joseph Baumel, Jericho, N.Y., assignor to Controlotron Corporation, Farmingdale, N.Y., a corporation of New York
Filed Aug. 6, 1968, Ser. No. 750,601
Int. Cl. G01f 23/26

U.S. Cl. 73-304

3 Claims



A liquid gauge is provided with a measuring probe and a reference probe both immersed in the same liquid whose level is to be measured whereby the impedance between the measuring and reference probes and a common electrode are determined by the electrical properties of the same liquid, and by the area of each probe immersed in the liquid. The measuring probe is connected in the input circuit of an operational amplifier and the reference probe is connected in the feedback circuit of the operational amplifier thereby giving the operational amplifier a gain equal to the ratio of the impedance between the reference probe and common electrode to the impedance between the measuring probe and the common electrode. This ratio directly indicates the level of liquid independent of the electrical properties of the liquid.

3,515,001

INSTRUMENT FOR MEASURING THE ADIABATIC SATURATION TEMPERATURE (THERMODYNAMIC WET-BULB TEMPERATURE) OF A VAPOR-GAS MIXTURE
Lewis Greenspan and Arnold Wexler, Rockville, Md., assignors to the United States of America as represented by the Secretary of Commerce
Filed Jan. 8, 1969, Ser. No. 789,782
Int. Cl. G01n 25/62

U.S. Cl. 73-338.6

7 Claims



A thermally insulated saturator tube is disposed in a thermally insulated enclosure. A wick is disposed in the saturator tube, and a heat exchanger is disposed about the saturator tube. A sample stream of a vapor-gas mixture is flowed serially over the wick and the heat exchanger. A stream of liquid corresponding to the condensed vapor of the vapor-gas mixture is counterflowed through the heat

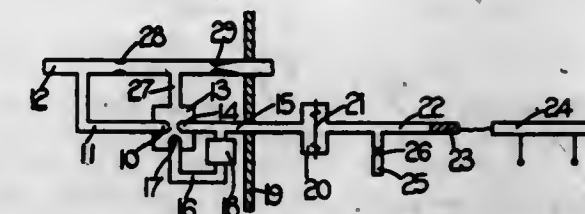
exchanger to the wick. The temperature of the sample stream is measured upstream and downstream of the wick, and the pressure of the sample stream flowing over the wick is measured.

3,515,002

TEMPERATURE SENSING APPARATUS
Kenneth Percival Palmer, Barford, near Warwick, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Feb. 14, 1968, Ser. No. 705,447
Int. Cl. G01k 11/00

U.S. Cl. 73-357

3 Claims



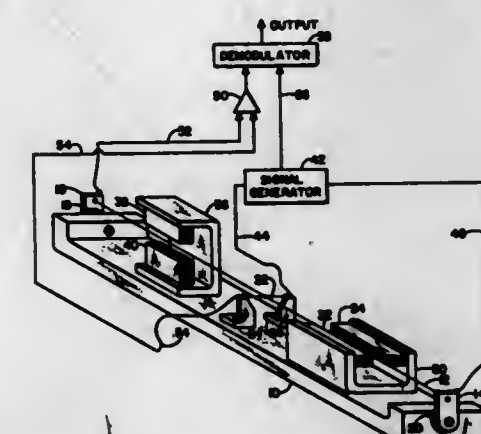
A temperature sensing apparatus for fluids where a first nozzle is connected to a source of the fluid the temperature of which is to be sensed and an aligned receiving nozzle communicates through time delay means with a further nozzle arranged to interfere with flow between the first and receiving nozzles at intervals, the frequency of the pulses on the receiving nozzle being related to the temperature of the fluid whereby an electrical signal is provided which varies with the pulse frequency.

3,515,003

VIBRATING WIRE ANGULAR RATE SENSOR
Daniel G. Taylor, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed July 25, 1966, Ser. No. 567,760
Int. Cl. G01p 15/10

U.S. Cl. 73-505

6 Claims



A vibrating wire gyroscope in which a flexible electrical connection at the center of the wire serves to permit vibration to pass from one portion of the wire to the other while electrically isolating the drive signal in the first portion from the output signal in the other portion.

3,515,004

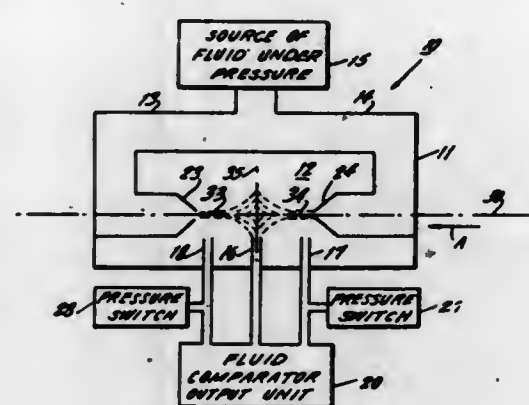
FLUID JET ACCELEROMETER
Frank V. Ponterio, Staten Island, N.Y., assignor to Sperry Rand Corporation, Long Island City, N.Y., a corporation of Delaware
Filed Feb. 6, 1967, Ser. No. 614,171
Int. Cl. G01p 15/02

U.S. Cl. 73-515

10 Claims

An accelerometer having opposed fluid jets acting along the measuring axis to form a fluid plane perpendicular to

this axis, with such plane constituting the acceleration detecting element. In one embodiment, auxiliary flow means is provided to modify the jets for improved linearity in



output pressure versus acceleration and to increase dynamic range. In another embodiment, the output signal is pulse length modulated to provide a more readily integrated output.

3,515,005

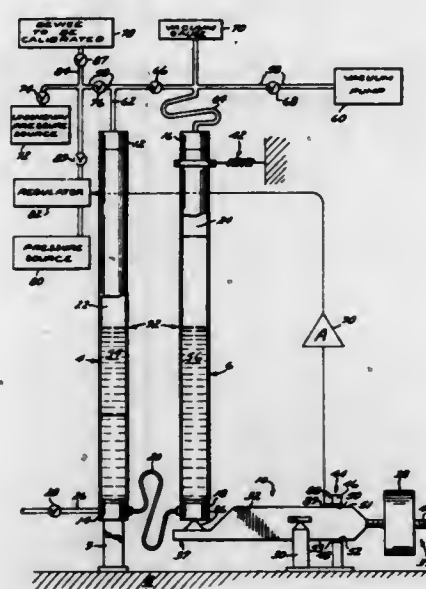
HIGH-PRECISION SYSTEM FOR MEASURING AN UNKNOWN FLUID PRESSURE AND FOR GENERATING A PREDETERMINED FLUID PRESSURE
George J. Brown, Riverside, Calif., assignor to Transmetrics Incorporated, Newport Beach, Calif., a corporation of Delaware

Filed Aug. 7, 1967, Ser. No. 658,929

Int. Cl. G011 7/02

U.S. Cl. 73-405

13 Claims



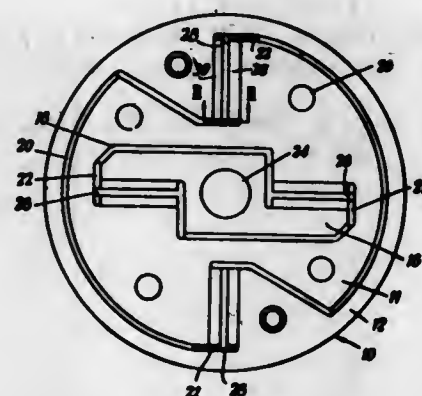
In the pressure measuring embodiment the fluid is introduced into one of a pair of interconnected mercury filled manometer tubes and the mass of mercury which transfers from one tube to the other is measured by weighing one of the tubes. The measured mass is proportional to the unknown pressure. The only parameters needed to determine the proportionality factor are the measured mass of transferred mercury, the cross-sectional area of the bore of each tube, and the value of acceleration due to local gravity. Since mercury density is not a parameter, the system is essentially temperature independent. In the pressure generating embodiment, by unbalancing the weighing means a predetermined amount, and then introducing gas from a regulator into said one tube until the scale balances, an exact predetermined pressure is generated.

3,515,006
SPRING PIVOTS
Ivan Alfred Duck, Watford, England, assignor to S. G. Brown Limited, Watford, England, a British company
Filed Feb. 24, 1966, Ser. No. 529,751
Claims priority, application Great Britain, Nov. 6, 1965, 47,162/65

Int. Cl. G01c 19/02

U.S. Cl. 74-5

3 Claims



Flexural spring pivots for use in precision instruments such as gyroscopes and particularly dynamically tuned free rotor gyros are provided wherein each of said pivots comprise a pair of spring strips which cross on the pivot axis and extend across a gap separating the parts. The strips are secured between the parts and overlying clamping elements. The effective dimension of each strip can be accurately determined by removal of material from the elements before insertion of the strips, to align edges of the elements with the sides of the gap. The elements can be angle strips secured to tapered faces of the parts adjacent the gap and divided as part of the edge adjustment step. The gap can be a slot formed in a single piece of metal wherein the slot is extended after securement of the spring strips to divide the piece into the parts.

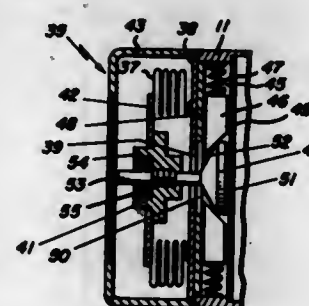
3,515,007

GYROSCOPE DAMPING MECHANISM
George C. Cusiter, Lexington, and Charles S. Whalen, Danvers, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Feb. 23, 1968, Ser. No. 707,678

Int. Cl. G01c 19/42

U.S. Cl. 74-5.5

1 Claim



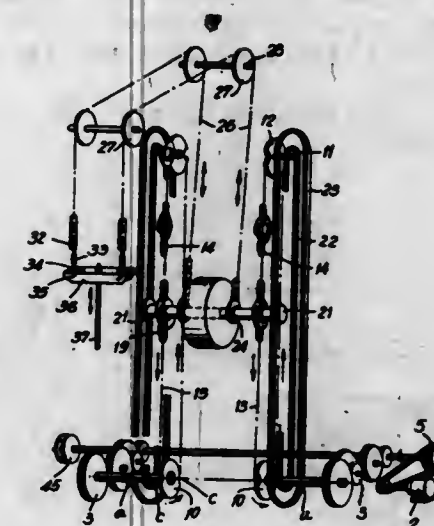
A rate or rate-integrating gyroscope instrument having a constant damping ratio over a full ambient temperature range including a self-regulating mechanism of a deformable compensating member and cooperating cam actuator-piston assembly for controlling the flow of a viscous damping fluid disposed in the region between the gimbal assembly and the case in response to angular displacement of the gimbal assembly and fluid expansion.

3,515,008
PUMPING UNIT FOR BOTTOM-HOLE PUMP DRIVE
Grigore Davidescu, Str. Olteni 68, and Gheorghe Poenita, Str. Alea Circular B3, both of Bucharest, Rumania
Filed June 3, 1968, Ser. No. 733,941
Claims priority, application Rumania, June 8, 1967, 53,988

Int. Cl. F16h 55/30

U.S. Cl. 74-37

9 Claims



A pumping unit having a polished rod driven with vertical reciprocation by a pair of chains each having one end connected to a beam supporting the rod and an opposite end connected to a bolt which is driven along a closed path having ascending and descending portions by a pair of endless chains in turn driven in synchronism from a drive means through a speed reducer.

3,515,009

DRIVE FOR ROTARY BODIES HAVING LARGE DIMENSIONS AND GREAT WEIGHT
Siegfried Matusch, Abbenen, near Pelm, and Hans-Dieter Backofen and Helmut Schaper, Braunschweig, Germany, assignors to Braunschweigische Maschinenbauanstalt, Braunschweig, Germany, a corporation of Germany

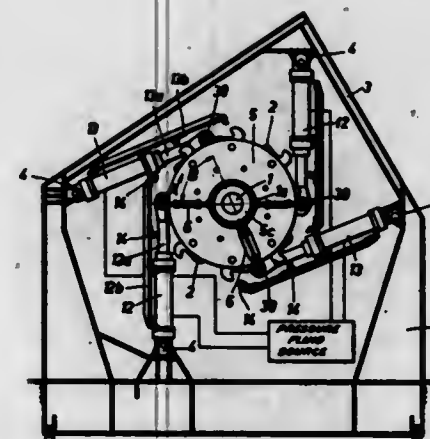
Filed June 24, 1968, Ser. No. 790,890

Claims priority, application Germany, June 24, 1967, 1,625,017

Int. Cl. F16h 41/22

U.S. Cl. 74-128

6 Claims



A drive for rotary bodies having large dimensions and great weight, particularly for a diffusion arrangement in the sugar industry, which comprises an immovable frame and a rotary body. At least two pressure fluid motors of substantially equal output are distributed over

the periphery of the rotary body. The latter has a drive wheel at its end face. The pressure fluid motors are operatively connected with the drive wheel. A joint pressure fluid source feeds the pressure fluid motors. The latter comprise at least two pairs of slide piston motors operating alternately, working at equal phases and engaging on diametrically opposite points of the drive wheel, as well as performing overlapping, periodically controllable working strokes. The drive wheel has driver elements distributed over its periphery, and the driver elements are formed as driver crosses rotatable about axes parallel to the rotary axis of the drive wheel and automatically arrestable in predetermined positions.

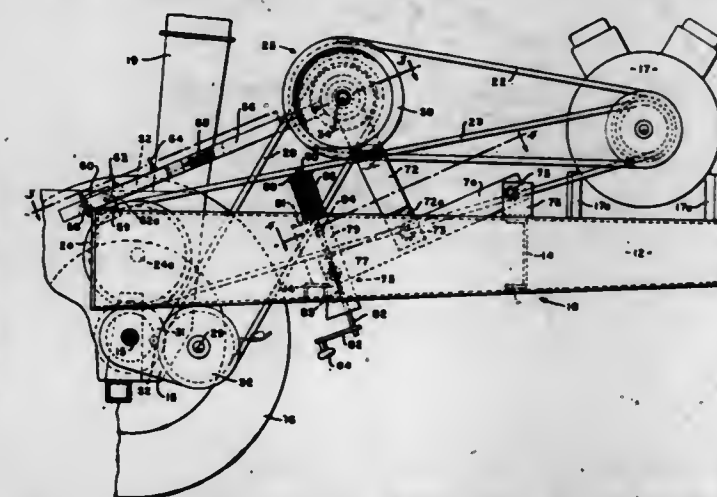
3,515,010
SPRING LOADED VARIABLE SHEAVE SUPPORT FOR A V-BELT DRIVE

Robert A. Wagstaff and Thomas W. Waldrop, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Sept. 12, 1968, Ser. No. 759,265

Int. Cl. F16h 55/56, 7/10

U.S. Cl. 74-230.17

12 Claims



A variable V-belt drive for a harvesting machine comprising a variable diameter sheave assembly, interposed between an engine and a transmission, and operable to provide a variable speed drive for each gear ratio, a pivotally mounted spring biased support mounted on the machine frame and adjustably positionable to vary the tension applied to the V-belts running between the sheave assembly and the engine and the transmission, and actuating means remotely operable to vary the diameter sizes of the sheave assembly.

3,515,011
LUBRICATION AND COOLING OF HIGH SPEED GEARS

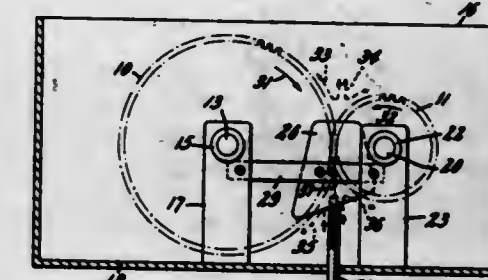
Robert H. Johnson, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 29, 1968, Ser. No. 756,192

Int. Cl. F16h 29/100; F16h 57/04

U.S. Cl. 74-467

6 Claims



A pair of gears operating at high peripheral speed in a gaseous environment are provided with a pair of side

plates on the side of the gears where the peripheral portions diverge from one another to inhibit axially directed flow of gas and create a low pressure region between the plates. Lubricating and cooling liquid is injected into this low pressure region to effect lubrication and cooling of the gears.

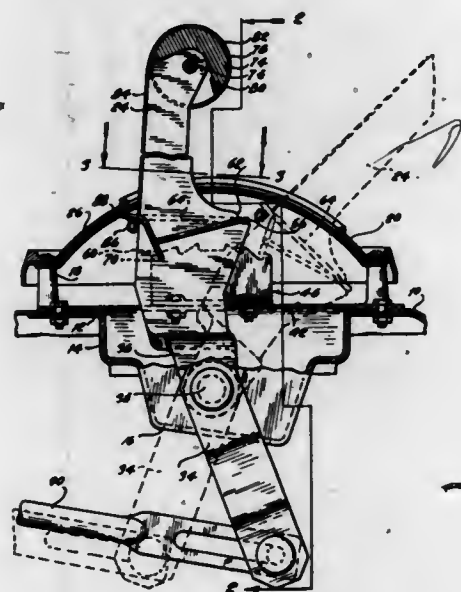
3,515,012 AUTOMATIC TRANSMISSION DRIVE RANGE SELECTOR LEVER

Carmeli Adahan, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Jan. 10, 1969, Ser. No. 790,343
Int. Cl. G05g 9/16

U.S. Cl. 74—473

16 Claims



A manually operated gearshift mechanism for controlling selection of drive ranges for a transmission mechanism in an automotive vehicle driveline, said mechanism comprising a shift lever mounted on a stationary portion of the vehicle chassis, one end of the lever being connected mechanically to the transmission range selector, a handgrip in the form of a rotatable knob at the other end of the lever and a yieldable spring strap engageable with the knob whereby the lever is conditioned for adjustment to any selected range position upon shifting movement of the knob.

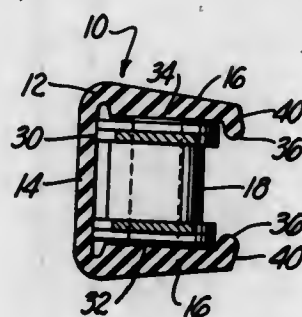
3,515,013 RESILIENT CHAIN PROTECTOR

Claude E. Wykes, Temple City, Calif., assignor to Layne & Bowler Pump Company, La Puente, Calif., a corporation of California

Filed Aug. 5, 1968, Ser. No. 750,091
Int. Cl. F16p 1/00

U.S. Cl. 74—611

6 Claims



A resilient, generally U-shaped, chain protector having an elongated body including a web portion with opposed flange portions extending from the sides thereof

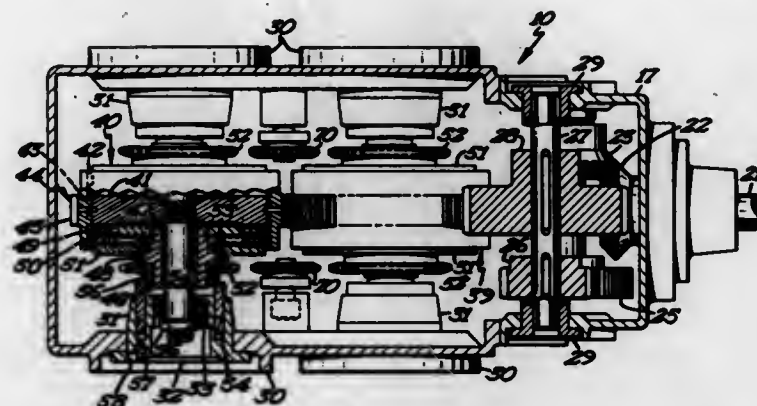
and means defining a longitudinal groove along the inside face of each of said flange portions adjacent said web portion, said grooves defining a shoulder on each of said flange portions for preventing lateral movement of said protector relative to the chain.

3,515,014 TRANSMISSION SYSTEM

Donald H. Hagen, Brooklyn Center, Minn. 55429
Continuation-in-part of application Ser. No. 698,570,
Jan. 17, 1968. This application July 18, 1969, Ser.
No. 843,168

Int. Cl. F16h 3/08, 37/06
U.S. Cl. 74—665

6 Claims



A transmission device includes a compact housing which has a pair of shafts journaled therein each having a gear keyed thereto for rotation therewith. The gears are disposed in meshing relation with respect to each other, and an input shaft is drivingly connected with the gears so that the gears are continuously revolved. A pair of output shafts are provided and each output shaft is selectively maintained in a non-drive condition, or drive in a forward or reverse direction from the gears by suitable clutches. The clutches are shiftable into and out of engaging relation with the associated gears by hydraulic arms.

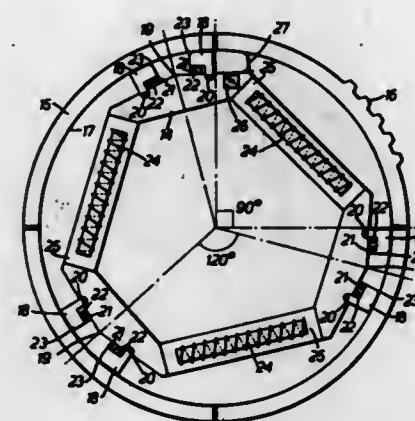
3,515,015 STEERABLE AERIAL INSTALLATIONS

Eric Davenport Gilbert, Essex, England, assignor to The Marconi Company Limited, London, England, a British company

Filed Nov. 29, 1968, Ser. No. 780,000
Claims priority, application Great Britain, Jan. 26, 1968,
4,212/68

Int. Cl. F16h 1/28; B61l 3/00; F16c 17/06
U.S. Cl. 74—802

12 Claims



A steerable tracking aerial including a journal bearing having an inner member supported on arcuately spaced bearing pads within an outer member. The outer member is built of segments so arranged and constructed that one of them can be removed while still leaving the inner member supported within the outer member.

3,515,016 ADJUSTABLE VARIABLE DELIVERY PUMP

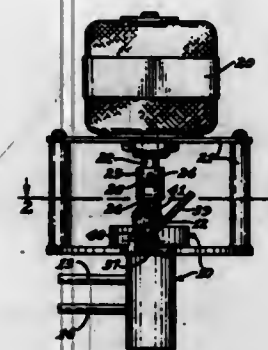
Volney M. Jemson, Phoenix, Ariz., assignor to Minijector Corp., Phoenix, Ariz., a corporation of Arizona

Filed July 18, 1968, Ser. No. 745,902

Int. Cl. F04b 7/06, 19/22, 49/00

U.S. Cl. 74—828

1 Claim



An adjustable variable delivery pump having a rotating and reciprocating pump plunger having an angular groove engaging a stroke controlling ball bearing operating in a lost motion slot together with adjustable control means to vary the amount of lost motion movement of the stroke controlling ball to vary the output of the pump.

3,515,017 DRILLING APPARATUS

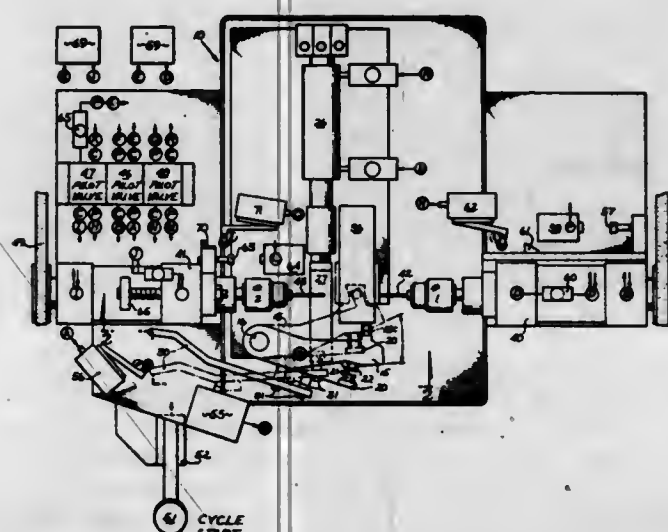
Charles J. Ulrich, 11423 Van Owen, North Hollywood, Calif. 91605

Filed May 22, 1968, Ser. No. 731,224

Int. Cl. B23b 47/28

U.S. Cl. 77—63

8 Claims



Drilling apparatus for boring and counterboring small parts has a drilling fixture of novel design for holding the workpiece in exact orientation during the drilling operation. The fixture is hand-loaded but drilling cycle is automatic to termination when the cycle is automatically stopped.

3,515,018 DEVICE FOR STRIPPING WIRES

Irving R. Metcalf, St. Charles, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware

Filed Dec. 4, 1967, Ser. No. 687,824

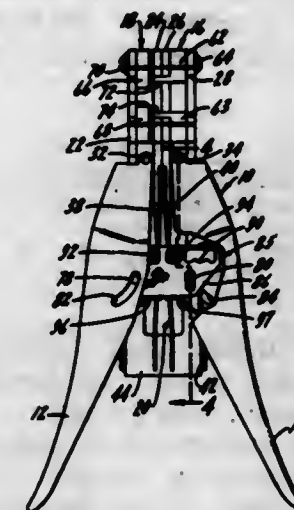
Int. Cl. H02g 1/12

U.S. Cl. 81—9.5

12 Claims

A device for stripping insulation from wire having a pair of interconnected handle members with operable ele-

ments including flexural means and paired sets of gripping and cutting jaws with each set of jaws being opposed to each other and movable to define an opening and closing



action. In addition, one set of paired jaws is separable from the other set of paired jaws describing a parallel motion when separated.

3,515,019 MACHINE FOR CUTTING FIBER GLASS BOARDS TO FORM DUCTS

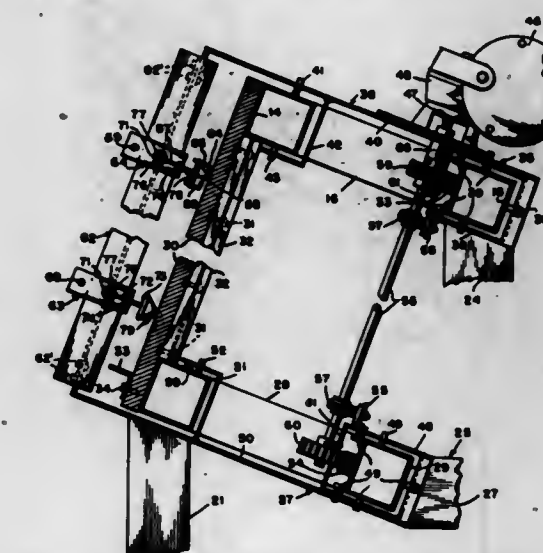
Clarence C. Tyler, Jr., 4233 Prospect Drive, Carmichael, Calif. 95608

Filed Apr. 10, 1968, Ser. No. 720,077

Int. Cl. B26d 3/06

U.S. Cl. 83—5

3 Claims



A power operated machine having a plurality of cutters carried by a traveling unit of the machine for simultaneously producing all or any of the cuts required in a fiber glass board to enable the board to be converted into an air duct or a portion of an air duct of rectangular cross section. The blade holders supporting the cutting blades are adjustably supported on a tool bar, forming a part of the traveling unit of the machine, for cutting the fiber glass boards for producing ducts of different sizes and rectangular shapes.

3,515,020 APPARATUS FOR SCORING SHEET GLASS

Jacques Max Charles Dryon, Auvelais, Belgium, assignor to Ateliers Heuze, Malvez et Simon Reunis Societe Anonyme, Auvelais, Belgium, a company of Belgium

Filed Mar. 4, 1968, Ser. No. 710,225

Claims priority, application Belgium, May 24, 1967,
44,059

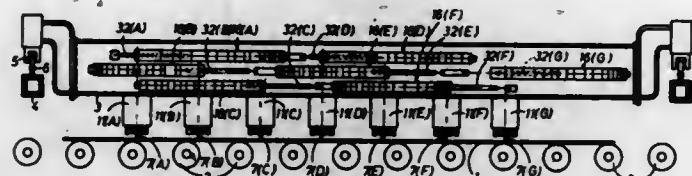
Int. Cl. B26d 3/08

U.S. Cl. 83—11

5 Claims

Apparatus for scoring sheets of glass conveyed through a breaking station on a horizontal transporter, comprises

a girder arranged parallel to the transporter and adapted for transverse displacement above the sheet of glass for scoring the same by means of tools distributed over the entire length of the girder each mounted on a carriage capable of limited longitudinal displacement on the girder in a zone corresponding to a fraction of the length



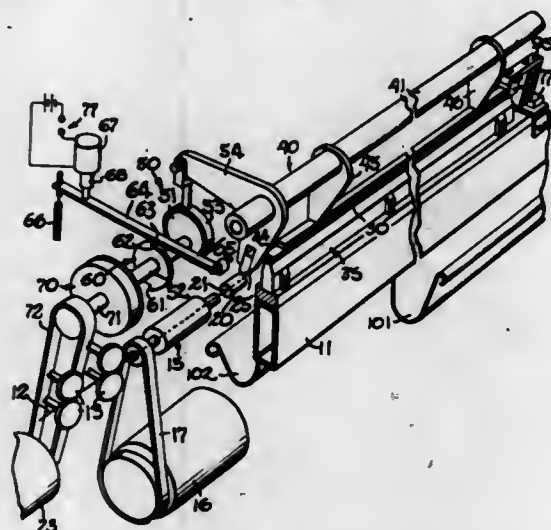
of the girder, each carriage being displaced by a set of screw jacks which are axially juxtaposed and have a maximum predetermined stroke length such that by the actuation of selected combination of jacks the associated carriage is caused to bring the tool exactly to the desired point of its zone, the zones of the different carriages overlapping each other at their extremities.

3,515,021

WIRE STRAIGHTENING AND CUTOFF MACHINE
A. Charles Walus, Chicago, and Fredric C. Muntwyler, Sr., Palos Park, Ill., assignors to Wire Machinery, Incorporated, Chicago, Ill., a corporation of Illinois
Filed June 19, 1968, Ser. No. 738,303
Int. Cl. B21f 11/00

U.S. Cl. 83-80

7 Claims



A wire straightening and cutoff machine in which a plurality of grooves are provided for receiving an on-coming continuous length of wire with means for cutting off the wire after a predetermined length has been fed into one of the grooves and for thereafter indexing a new groove into receiving position while permitting the cut piece of wire to drop into a storage receptacle. Adjustable gauge rods are provided at the far end of each of the grooves for obstructing the leading end of the wire thereby to trigger the cutting and indexing movement.

3,515,022

TOOL MANUFACTURE

William H. Burkhardt, Jr., 29 Dryden Terrace,
Short Hills, N.J. 07078

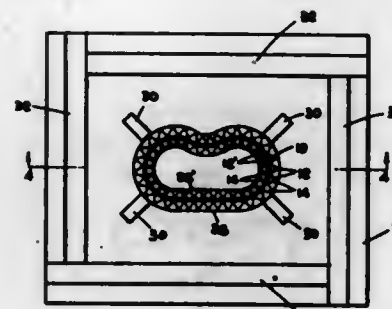
Application Apr. 1, 1966, Ser. No. 539,414, now Patent No. 3,397,599, dated Aug. 20, 1968, which is a division of application Ser. No. 287,150, June 11, 1963, now Patent No. 3,285,715, dated Nov. 15, 1966. Divided and this application May 1, 1968, Ser. No. 725,658
Int. Cl. B26f 1/14

U.S. Cl. 83-685

6 Claims

A tool which employs a plurality of shearing elements of substantially equal dimensions arranged in adjacent

parallel relationship. The elements each terminate in a shearing edge so that the contiguous edges of the plurality of elements furnish a total shearing edge selectively con-



toured to conform to the desired outline of the tool at its working face. A matrix is provided to maintain the shearing elements in their desired curvature.

3,515,023

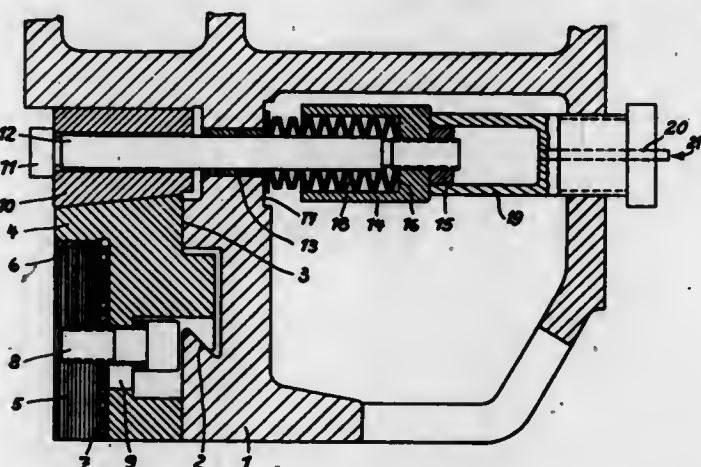
SHEAR BLADES FOR CUTTING METAL SHEETS OR PLATES

Josef Schiffer, Monchen-Gladbach-Rheindahlen, Germany, assignor to Schloemann Aktiengesellschaft, Dusseldorf, Germany, a company of Germany
Filed May 8, 1968, Ser. No. 727,572

Claims priority, application Germany, May 11, 1967, Sch 40,693
Int. Cl. B26d 1/00; B23d 35/00

U.S. Cl. 83-698

5 Claims



In shears for cutting metal sheets or plates, a shear-blade mounting wherein a cutting blade is connected with a filler bar to form a cutter block, which is fitted into an angular recess, preferably dovetail-shaped with a surface inclined at an angle of 45°, in the shear saddle, one or more transverse wedges, held by displaceable clamping bolts bearing resiliently against the shear saddle, with their wedge surfaces pressed against the cutter block so as to keep the inclined surface in the recess of the shear saddle in contact with the abutting surface of the filler bar.

3,515,024

STRINGED MUSICAL INSTRUMENT BODY CONSTRUCTION AND FINISH

Paul Daniel Broussard, Andrew, La.
(Rte. 2, Box 271, Kaplan, La. 70548)
Filed Apr. 29, 1968, Ser. No. 724,768

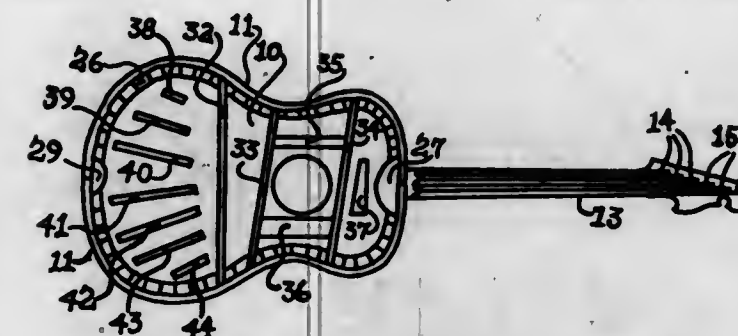
Int. Cl. G10d 3/00

U.S. Cl. 84-291

24 Claims

Basically, the treating of the bass and treble side of the resonator or soundboard of a stringed musical instrument unequally so as to provide improved sound response.

Specific examples such as by applying fewer coats of finish to the bass side of the resonator of the instrument than the treble side, securing fewer fan struts to the resonator on the bass side of the instrument than on the treble side, using narrower struts positioned on the bass side of the resonator than counterpart struts positioned on the treble



side of the resonator, using thinner struts positioned on the bass side of the resonator than counterpart struts positioned on the treble side of the resonator, reversing the respective position of the soundpost and bass bar, and wherein the wood grains of the resonator are spaced broader apart on the bass side of the resonator than the treble side.

3,515,025

NUT ASSEMBLY FOR STRINGED MUSICAL INSTRUMENTS

Jamie F. Appleton, 800 S. 7th St.,
Burlington, Iowa 52601

Filed Oct. 31, 1968, Ser. No. 772,161

Int. Cl. G10d 3/04

U.S. Cl. 84-314

3 Claims



A nut assembly for stringed musical instruments which controls the harmonic content and volume decay of a vibrating string that is unstopped so as to obtain a close duplication of the harmonic content and volume decay of a string stopped behind a fret with the flesh of a human finger.

3,515,026

CHORD ZITHER WITH TUBULAR FRAME

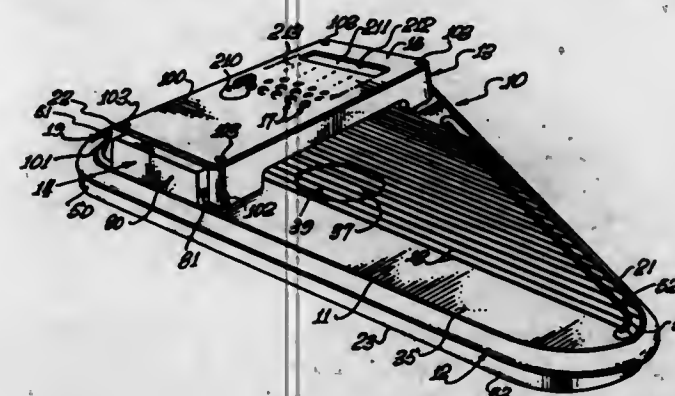
John R. Rohrbough, 535 Adella Lane,
Coronado, Calif. 92118

Filed Aug. 19, 1968, Ser. No. 753,411

Int. Cl. G10d 1/12

U.S. Cl. 84-286

10 Claims



A chord zither . . . combining a wooden sound box with a tubular metal frame, the strings being anchored to and tensioned through the latter. In the preferred

form, the chord bars are retained in an interchangeable magazine, which is slideably movable over said strings within a bridge structure which may be mounted on said sound box, but must be supported (directly or indirectly) by adjacent parts of the metal frame. The upper part of said bridge structure is a key table in which are mounted keys for operating the chord bars contained within the chord bar magazine, each chord bar being slideable under the corresponding key to permit operation for all positions of said magazine within the bridge structure.

3,515,027

TORSION CAM FASTENER

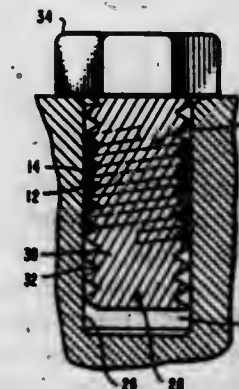
Ralph Textrom, 104 Bay Ave.,
Newport Beach, Calif. 92661

Filed July 15, 1968, Ser. No. 744,932

Int. Cl. F16b 37/12

U.S. Cl. 85-32

1 Claim



A fastening means whereby an unthreaded member may be affixed to another unthreaded member or to a threaded member, comprising a helical coil which provides not only the missing set of threads but also locks the fastener in place by a simple turn of one of the fastening members.

3,515,028

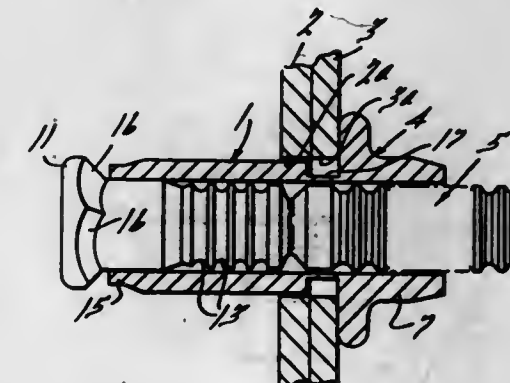
BLIND FASTENER

John P. G. Patton, Grosse Pointe Woods, Mich., assignor to Huck Manufacturing Company
Filed Mar. 21, 1969, Ser. No. 809,091

Int. Cl. F16b 13/04

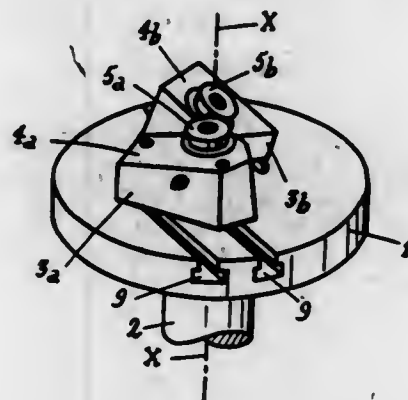
U.S. Cl. 85-77

3 Claims



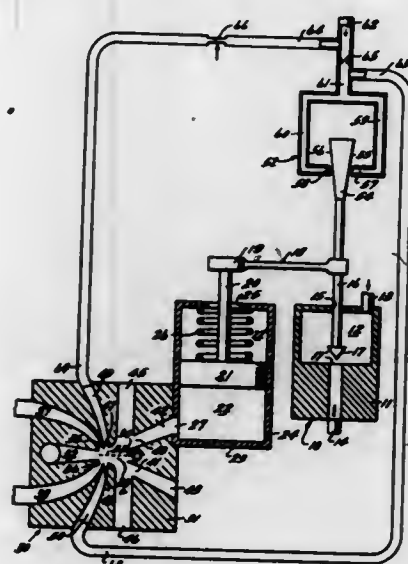
A blind fastener constructed for both ready installation and removal which comprises a headed sleeve and pin assembled within the sleeve so constructed that the sleeve projects beyond the blind side of the parts being secured together, with the head of the sleeve on the outside so that upon relative movement between the pin and sleeve a blind head is formed on the blind side and the head of the sleeve is fixed to the pin on the accessible side and in which the wall of the sleeve adjacent the head is weakened so that when the fastener is set, the weakened section collapses without affecting the strength of the joint, but which facilitates removal of the fastener without injury to the hole.

3,515,029
DEVICE FOR REMOVING THE BURR FROM THE ENDS OF CYLINDRICAL PARTS
 Romain Gambini, Rue de la Chapelle, Landres, Meurthe-et-Moselle, France
 Filed Aug. 30, 1968, Ser. No. 756,552
 Int. Cl. B23c 3/02; B26d 1/12
 U.S. Cl. 90—11



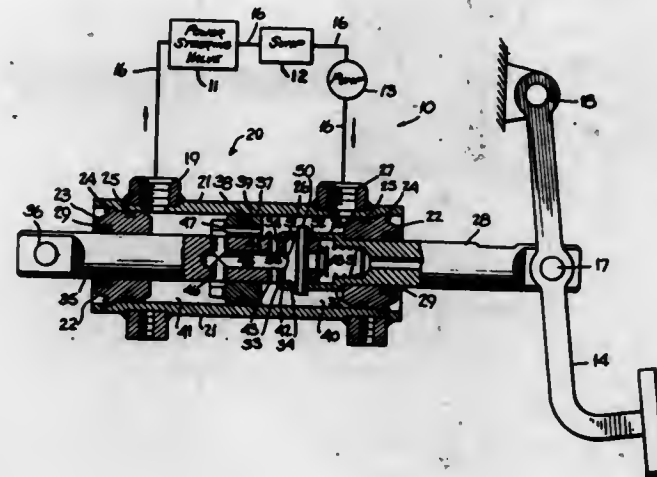
A device for removing burr from the ends of cylindrical parts such as pipes, tubes and round bars, said device comprising a rotatable plate, support-blocks adjustably mounted on the plate, cutting wheels mounted on the support-blocks respectively for free rotation and means for adjusting the position of the support-blocks relative to the axis of rotation. This device performs trimming operations at high speed with a fine surface finish for various pipe sizes.

3,515,030
FLUID AMPLIFIER MECHANISM
 Willis Anson Boothe, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
 Filed Sept. 23, 1964, Ser. No. 398,608
 Int. Cl. F15c 3/00
 U.S. Cl. 91—3



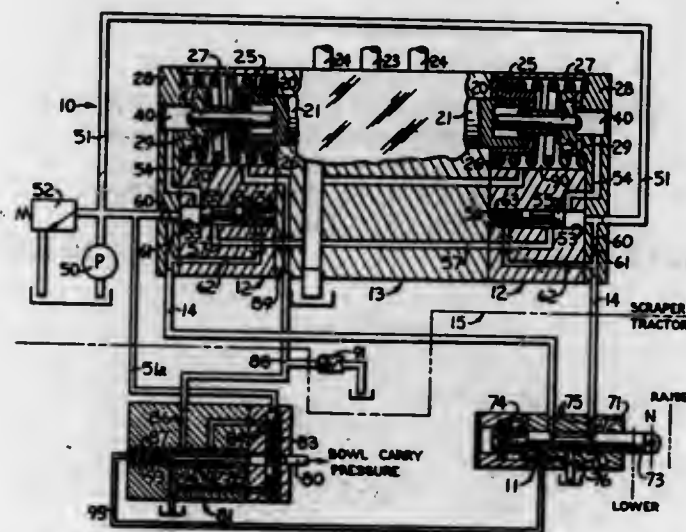
A fluid amplifier position servo is disclosed which comprises a fluid amplifier having a plurality of receivers and control flow inputs, a transducer adapted to be actuated by fluid flow through a selected receiver and control flow means responsive to the positioning of the transducer connected to the control flow input of said fluid amplifier such that when said transducer is correctly positioned said control flow diverts a portion of said fluid flow from said selected receiver.

3,515,031
HYDRAULIC BOOSTER MOTOR
 John C. McPherson, Philadelphia, Pa., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio
 Filed Nov. 6, 1967, Ser. No. 680,801
 Int. Cl. F15b 13/04, 9/08
 U.S. Cl. 91—49



A hydraulic motor for use in a hydraulic system which employs a single pump for circulating fluid to one or more hydraulic mechanisms. The motor has a piston with passages formed therein and valve means for restricting the passage openings such that free circulation of fluid is permitted in the hydraulic system at all times and free application of fluid back pressure to the system pump is permitted without affecting the motor operation.

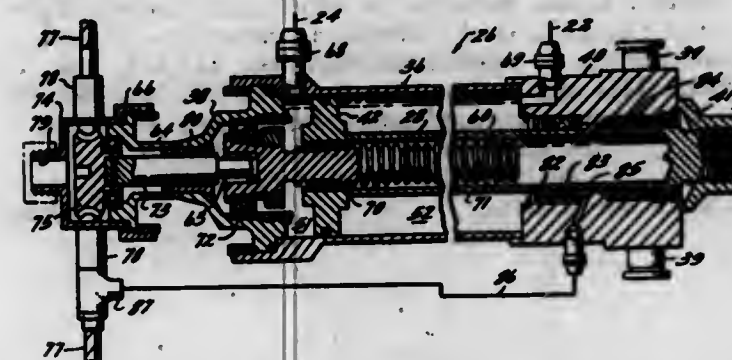
3,515,032
PILOT BLEED SYSTEM FOR REMOTE CONTROL VALVE OPERATION
 Joseph E. Dezelan, Leon E. Hicks, and Howard L. Johnson, Joliet, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
 Filed Oct. 31, 1968, Ser. No. 772,246
 Int. Cl. F15b 13/02, 21/00
 U.S. Cl. 91—51



In a master-slave control system for operating hydraulic control valves, located adjacent to their control hydraulic actuators, from a remote location, auxiliary pilot spools located in the slave unit are employed to vent hydraulic pressure on one or the other side of a double-acting hydraulic actuator connected to the control valve whereby the control valve is shifted rapidly

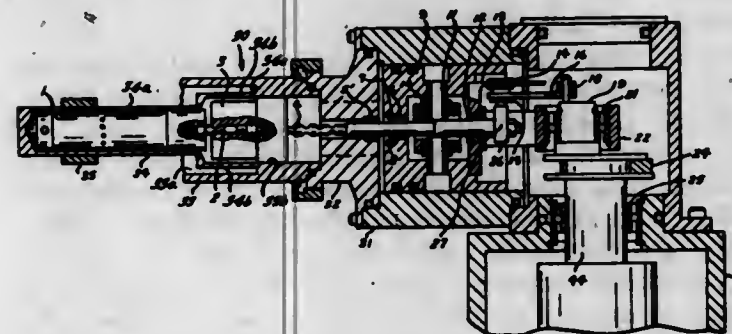
when a bleed from either one or the other of the auxiliary pilot spool control chambers is interrupted. An emergency system and a holding circuit can each be utilized in the master-slave control system.

3,515,033
ACTUATORS
 Howard M. Geyer, Dayton, Ohio, assignor to General Electric Company, a corporation of New York
 Continuation of application Ser. No. 562,914, July 5, 1966. This application Oct. 15, 1968, Ser. No. 768,223
 Int. Cl. F01b 3/00, 21/02; F01p 3/12
 U.S. Cl. 92—33



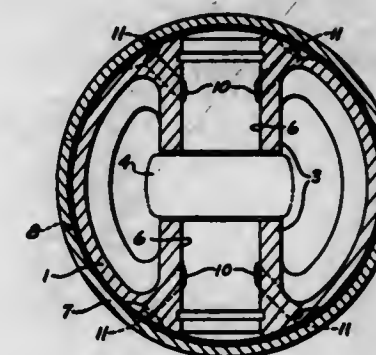
A plurality of hydraulic, piston type actuators are employed to control movement of the primary exhaust nozzle of a gas turbine engine. Each actuator is provided with a threaded shaft which is rotated in response to movement of the piston. The threaded shafts of the several actuators are interconnected and a flexible shaft connection is provided from one actuator shaft to a control device. The angular position of the flexible shaft provides a signal to the control device indicating the position of the piston and, therefore, the extent of opening of the exhaust nozzle. The interconnected shafts also provide for synchronizing of the piston positions. The opposite ends of each piston are alternately pressurized and vented to displace the pistons in one direction or another. There is a continuous bleed of hydraulic fluid from the opposite ends of the pistons back to conduit structure which surrounds the interconnecting means and the flexible shaft connection to the nozzle area control, whereby there is continuous cooling of the signal transmitting means as well as lubrication thereof by low pressure fluid.

3,515,034
CRYOGENIC REFRIGERATOR COMPRESSOR IMPROVEMENT
 Phillip R. Eklund, 3339 Stanwick Drive, Dayton, Ohio 45430
 Filed Oct. 3, 1968, Ser. No. 764,813
 Int. Cl. F04b 39/00; F16j 1/10; G05g 1/00
 U.S. Cl. 92—152



A thin, stainless steel wire brazed piston rod assembly for use in a cryogenic compressor unit and having a flexible groove arrangement to thereby improve compensation

3,515,035
PISTON PIN LUBRICATION
 Angus H. Cuddon-Fletcher, Oakbrook, Wis., assignor to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
 Filed July 5, 1968, Ser. No. 742,829
 Int. Cl. F01b 31/10; F16n 1/00; F01m 11/00
 U.S. Cl. 92—159



A floating wrist pin is lubricated by suitable holes forcing oil downwardly to the wrist pin bore at an appropriate angle from the point of maximum bearing load from individual pick-up pockets preferably just beneath the lower piston ring.

3,515,036
EASY-TO-TRANSPLANT SEEDBED HOLDER AND ITS MANUFACTURING METHOD
 Takehiro Oki, Sapporo, Akira Ota, Kawakamigun, and Teruyoshi Masuda, Obihiro, Hokkaido, Japan, assignors to Nippon Tensai Seito Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
 Filed Dec. 27, 1967, Ser. No. 693,858
 Int. Cl. B31d
 U.S. Cl. 93—1



The disclosure is directed to a seedbed holder for transplanting seedlings where the seedbed holder is formed in a serpentine shape formed from a plurality of hollow, bottomless compartments made of paper or paper-like thin membranes. The compartments are secured together in some forms of the invention by a water-soluble cement and in other instances by a water-insoluble cement, certain of the members or membranes being decomposable and others being nondecomposable in carrying out a structure which generally is of a serpentine nature forming a plurality of compartments. Through the use of the serpentine form, the seedlings cultivated in the seedbed holder may be withdrawn from the mass in a continuous series by unwinding or unfolding the serpentine forms.

3,515,037

APPARATUS AND METHOD FOR FORMING TAPED ARTICLES

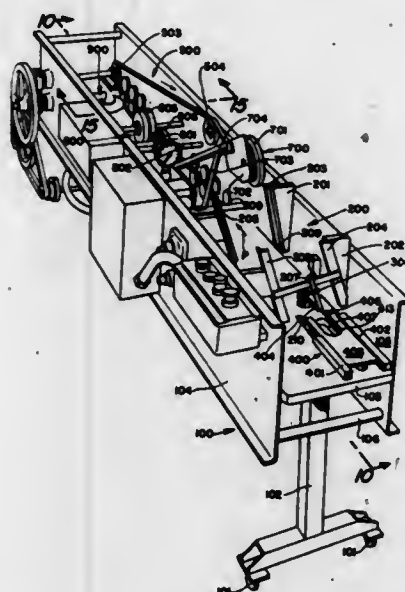
Ernest C. Pellaton, Larkspur, Calif., assignor to Fibreboard Corporation, San Francisco, Calif., a corporation of Delaware

Filed Apr. 1, 1968, Ser. No. 717,810

Int. Cl. B31d 5/00; B26d 5/20

U.S. Cl. 93—1

27 Claims



An apparatus for forming taped carton blanks comprises a magazine having a plurality of flattened blanks retained therein and a suction cup mounted below the magazine to cooperate with a shuttle mechanism to position the blanks in overlapping relationship. A continuous tape is applied to the overlapped carton blanks and a rotary cutter thereafter cuts the tape to separate the blanks.

3,515,038

HELICALLY RIBBED TUBING AND METHOD AND APPARATUS FOR MAKING THE SAME

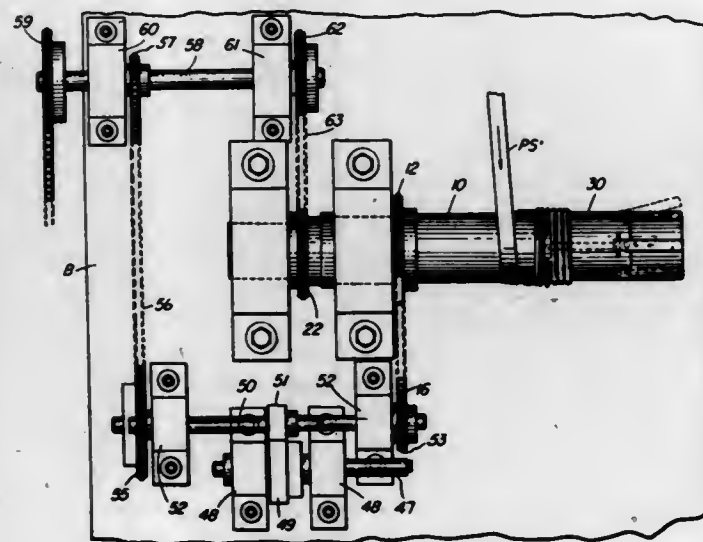
Norman J. Perusse, Bristol, and Wilbur D. Cheever, Wethersfield, Conn., assignors to The Wiremold Company, West Hartford, Conn., a corporation of Connecticut

Continuation-in-part of applications Ser. No. 523,825, Dec. 16, 1965, and Ser. No. 573,704, Aug. 19, 1966. This application Aug. 31, 1967, Ser. No. 664,841

Int. Cl. B31c 1/00

U.S. Cl. 93—80

10 Claims



One or more strips of material capable of being wound helically on a mandrel into a cylindrical tube, in single

or multi-ply form, and of having helical grooves and ridges formed therein, are acted upon internally by helical ribs on a rotating ring to create the helical ridges. The formed tubing is threaded onto one or more peripherally threaded or helically ridged elements, the convolutions of which are of progressively reduced pitch causing the helical ridges of the tubing to be pressed axially together and compacted.

3,515,039

ELECTRONIC MUSICAL INSTRUMENTS WITH TONE GENERATING, MIXING, AND DISTRIBUTING SYSTEMS

Masuo Omura, Hirakata-shi, and Masahiko Tsunoo, Osaka, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

Continuation of application Ser. No. 427,621, Jan. 25, 1965. This application Mar. 1, 1968, Ser. No. 709,749

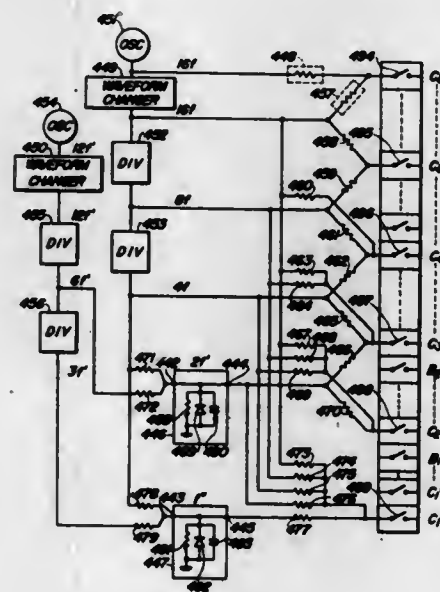
Claims priority, application Japan, Jan. 29, 1964,

39/4,356; Sept. 4, 1964, 39/50,970

Int. Cl. G10h 1/06, 5/06, 5/10

U.S. Cl. 84—1.01

12 Claims



In an electronic musical instrument of the keyboard type, comprising:

- (1) a generator system having at least twelve series of signal sources,
- (2) a keyswitch system having at least twelve series of keyswitches which are capable of switching on tone signals corresponding to depressed keys,
- (3) an output system, and
- (4) a signal distributing system which is coupled between said generator system and said keyswitch system and which includes at least twelve mixing networks,

each of said at least twelve mixing networks is coupled between each of said at least twelve series of signal sources and each of said at least twelve series of keyswitches, and has an even number of impedance elements connected in series in such a way that a bottom terminal, junction points in an even order from said bottom terminal and a top terminal of said even number of impedance elements are connected to keyswitches of each of said at least twelve series of keyswitches, respectively, and further in such a way that junction points in an odd order from said bottom terminal are connected to signal sources of each of said at least twelve series of signal sources, respectively, and produces a series of composite tone signals corresponding to said keyswitches of each of said at least twelve series of keyswitches. Said series of composite tone signals have sub-octave signals, of which the amplitude percent level shows a progressive

increase from zero percent level to 100 percent level as said composite tone signals ascend in octave with octave ascents of said keyswitches, said increase being characterized in that said increase proceeds stepwise and has the first step not more in the increase than 20 percent and each successive step not less in the increase than the previous step.

3,515,040

LIQUID FUEL ROCKET ENGINE

Manfred Schutz, Ottobrunn, Germany, assignor to Bolkow Gesellschaft mit beschränkter Haftung, Munich, Germany

Filed June 5, 1968, Ser. No. 734,598

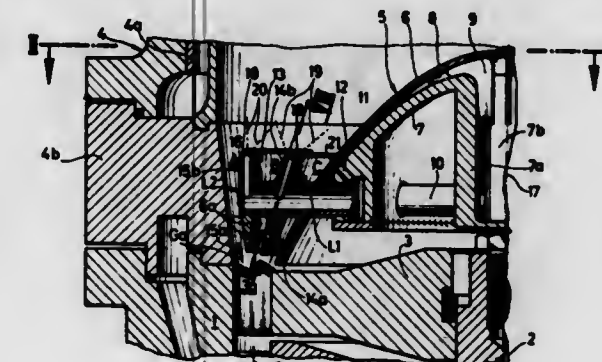
Claims priority, application Germany, June 14, 1967,

1,626,060

Int. Cl. F02k 9/02

U.S. Cl. 60—39.74

16 Claims



A liquid fuel rocket engine is formed of a main flow passageway containing a precombustion chamber and a main combustion chamber with an axial flow turbine disposed between them and arranged to be powered by gases from the precombustion chamber. A heat shield is positioned between the turbine and the main combustion chamber with an annular space about the heat shield for the passage of the exhaust gases from the turbine into the main combustion chamber. Guide means are positioned in the annular space for directing the exhaust gases and liquid fuel into the main combustion chamber in a selected flow pattern.

3,515,041

SLURRY SEAL DISTRIBUTING BOX

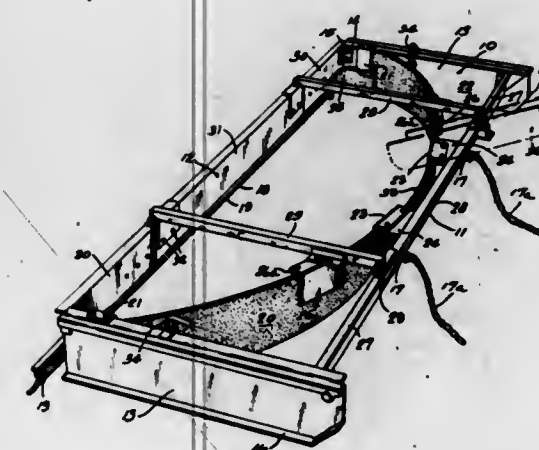
John J. Murtugh, Waukegan, Ill., assignor to Rex Chainbelt Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Feb. 5, 1969, Ser. No. 796,856

Int. Cl. E01c 19/48

U.S. Cl. 94—44

12 Claims



A slurry seal distributing box particularly adaptable for use with slurries comprising a cationic asphalt emul-

sion. A rectangular box frame supports a generally semi-circular intermediate retainer which, with the rear frame member and attached distribution squeegee, forms a slurry-retaining compartment. The semi-circular shape of the compartment provides a more rapid flow of slurry to the rear corners, and the turbulence thereby created minimizes the occurrence of a premature "break" of the slurry. The box and retainer are readily adjustable for varying the width and can be quickly disassembled for cleaning.

3,515,042

CONCRETE VIBRATING AND FINISHING MACHINE

Harold J. Austin, 1360 Acacia Ave., San Bernardino, Calif. 92405

Filed Oct. 14, 1968, Ser. No. 767,103

Int. Cl. E01c 19/30

U.S. Cl. 94—48

10 Claims



A lightweight portable machine for concurrently compacting freshly poured concrete and smoothing the surface thereof, which machine includes a vibrating plate pivotally supported between two elongate rollers in which openings are formed, and a handle extending rearwardly from the plate for not only moving and guiding the device, but which permits the plate to be placed in a first concrete smoothing and compacting position when the machine is moved forwardly, and in a second position where the plate serves the same function when it is moved rearwardly.

3,515,043

CONCRETE COMPACTING AND FINISHING APPARATUS

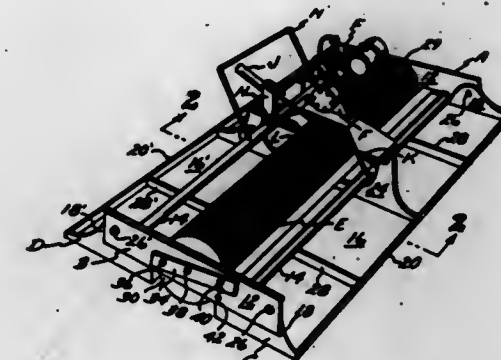
Harold J. Austin, 1360 Acacia Ave., San Bernardino, Calif. 92405

Filed Feb. 6, 1969, Ser. No. 797,150

Int. Cl. E01c 19/30

U.S. Cl. 94—48

7 Claims



A compact, lightweight, portable apparatus, which when moved across the surface of a freshly poured body of concrete, concurrently vibrates the concrete, forces aggregate therein near the concrete surface a predetermined distance downwardly therein, compacts the concrete by eliminating voids and air bubbles present therein, which in turn causes water and fines in said concrete to rise to the surface thereof to impart a desired texture to the concrete.

3,515,044

KEY FOR SMALL FILM CAMERAS

Dietrich Becker, Roland Hochstein, and Hans Lieckfeldt, Stuttgart-Möhringen, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany, a corporation of Germany

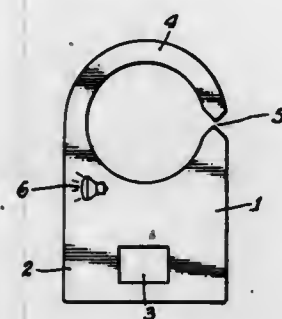
Filed Feb. 19, 1968, Ser. No. 706,577

Claims priority, application Germany, Feb. 23, 1967, Z 11,104

Int. Cl. G03b 7/00

U.S. Cl. 95—1

2 Claims



A key for use with a photographic camera provided with a socket for the insertion of a lamp which when inserted operates a filter actuating mechanism for moving a conversion filter out of alignment with the optical axis of the camera. The key is to be used when no lamp is to be inserted into the socket. The key comprises a single rectangular plate which is adapted to operate the filter actuating mechanism and has at one end a loop-shaped handle which projects from the socket of the camera when the other end of the plate has been inserted in the socket and has operated the filter actuating mechanism. The plate is of such a small thickness that the handle may be used as a tool for turning screws provided with a coin slot which may be engaged by the handle.

3,515,045

CAMERA COUPLED LIGHT MEASURING SYSTEM

Naoyuki Uno, Urawa-shi, Japan, assignor to Asahi Kogaku Kogyo Kabushiki Kaisha, Tokyo-to, Japan, a corporation of Japan

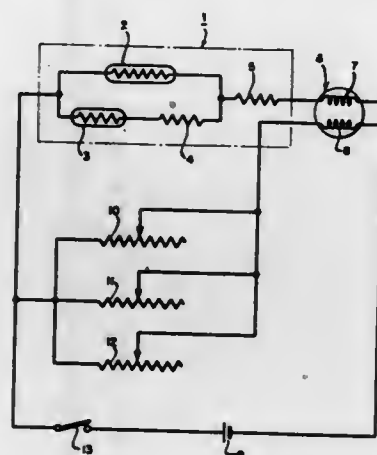
Filed Mar. 15, 1967, Ser. No. 623,380

Claims priority, application Japan, Mar. 24, 1966, 41/17,683; Apr. 2, 1966, 41/29,971

Int. Cl. G01j 1/16

U.S. Cl. 95—10

2 Claims



A camera coupled light measuring system includes a differential current meter having bucking windings, one winding being connected through a light sensing network to a battery and the other winding being connected through a plurality of parallel connected variable resistors to said battery. The variable resistors, in one form of the system, are connected to an objective diaphragm ring, a film sensitivity ring and a member varying with the degree of coupling of an associated screw

mounted objective. In another form of the system, one variable resistor is adjusted in accordance with the film sensitivity or shutter speed or a function of both and a switch controlled by an automatic-manual diaphragm selector alternatively inserts one of the other two variable resistors in parallel with the first, one of which is adjusted in accordance with the set diaphragm value. The light sensing network includes a series connected photoconductor and resistor, the photoconductor being shunted by a second series connected photoconductor and resistor.

3,515,046

PROTECTIVE INSTRUMENTATION HOUSING

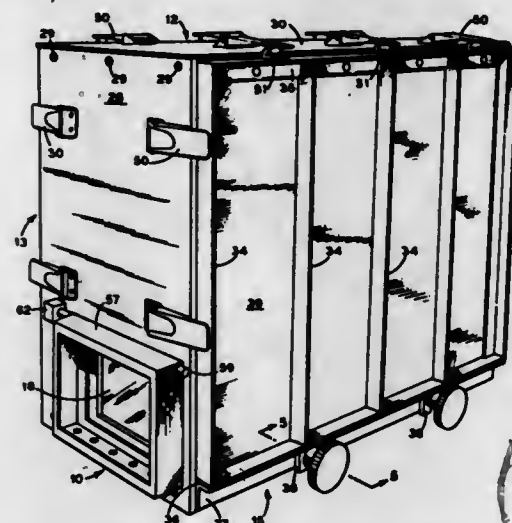
James Ippolito and Aristide Ippolito, both of 1624 Stillwell Ave., Bronx, N.Y. 10461

Filed July 21, 1967, Ser. No. 655,105

Int. Cl. G03b 17/08

U.S. Cl. 95—11

9 Claims



A housing construction for sensitive instrumentation such as photographic cameras or the like to protect the same against extreme environmental conditions including very high temperatures, cooling water, steam, deleterious gases and the like; together with structural features providing for ready accessibility to the interior thereof.

3,515,047

PHOTOGRAPHIC CAMERA WITH FLASH EXPOSURE RANGE

Johann Hahn, Stuttgart, Germany, assignor to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany, a corporation of Germany

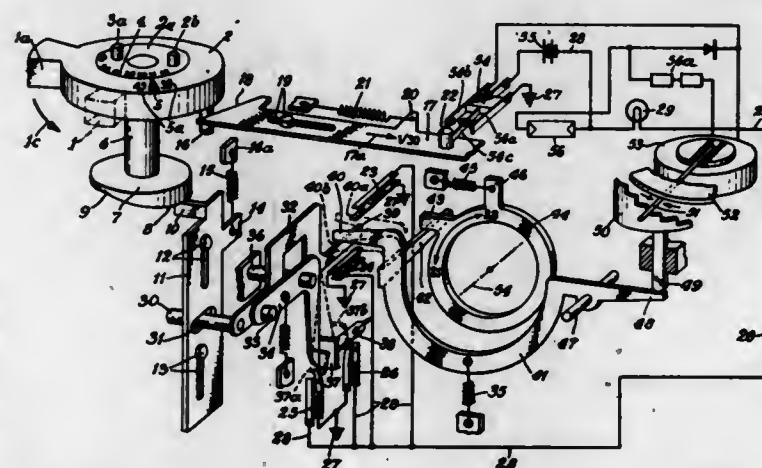
Filed Oct. 16, 1967, Ser. No. 675,509

Claims priority, application Germany, Oct. 29, 1966, Z 12,500

Int. Cl. G03b 19/00

U.S. Cl. 95—11

4 Claims



A photographic camera having a customary distance adjusting mechanism and a diaphragm adjusting mechanism is provided with a daylight exposure range and an

automatic flash exposure range. The automatic flash exposure range includes a flash guide number adjusting mechanism.

For the purpose of indicating in the viewfinder of the camera the limits of distance and diaphragm aperture within which correctly exposed flash pictures may be taken a warning light is caused to appear in the viewfinder. This warning light is arranged in an electric circuit controlled by switches actuated by the distance adjusting mechanism and guide number adjusting mechanism. When the switches are closed, the warning light is energized and indicates that the camera has been adjusted to values which would result in an incorrectly exposed flash picture.

3,515,048

MIRROR REFLEX ATTACHMENT FOR CAMERAS

Carl Koch, Schaffhausen, Switzerland, assignor to Sinar AG Schaffhausen, Feuerthalen, Switzerland

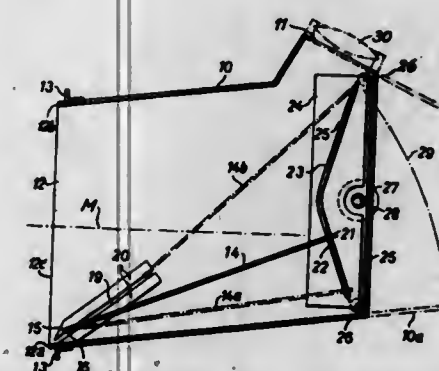
Filed July 18, 1967, Ser. No. 654,185

Claims priority, application Switzerland, July 19, 1966, 10,615/66

Int. Cl. G03b 13/24

U.S. Cl. 95—49

4 Claims



A mirror-reflex attachment for cameras having a housing in which a mirror is movable and adjustable with means to adjust the mirror toward and away from a mat plate of the camera and also at the same time upwardly and toward a sight opening in housing.

3,515,049

ROLLER BLIND SHUTTER

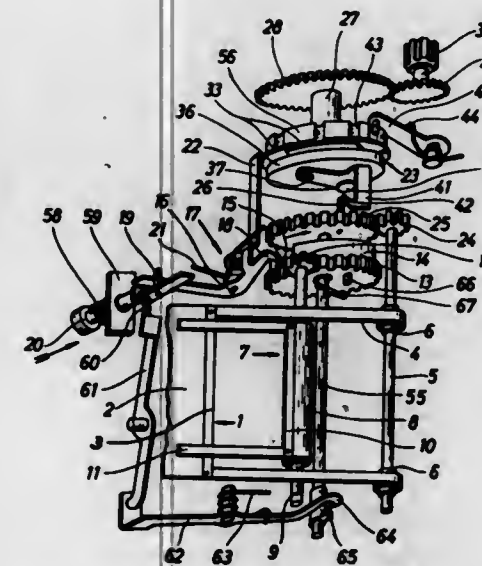
Helmut Knapp, 41 Kleiststrasse, 1 Berlin 30, Germany

Filed July 14, 1966, Ser. No. 565,295

Int. Cl. G03b 19/34

U.S. Cl. 95—57

5 Claims



Roller blind shutters or focal plane shutters, and more particularly a roller blind shutter which has a first curtain or shade which unwinds after being released by means

such as a push-button, and a second curtain or shade which winds off after being released by adjustable delay means. The delay of the second curtain or shade alters or varies the width of the slit or aperture which sweeps over the focal field and determines the exposure time.

3,515,050

AUTOMATIC FILM PROCESSING DEVICE

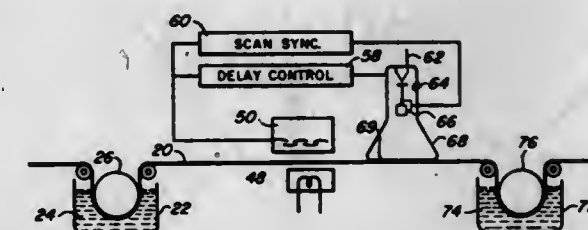
Curtis C. Attridge, 12 Devon Drive, Endicott, N.Y. 13670, and Malor Wright, Bedford Road, Lincoln, Mass. 01773

Continuation-in-part of application Ser. No. 285,290, June 4, 1963. This application Aug. 1, 1967, Ser. No. 657,558

Int. Cl. G03d 13/00

U.S. Cl. 95—89

6 Claims



Apparatus for accurately controlling the development of a film strip. The film strip is partially developed in a developing bath and then passes into a density measuring station having a light source on one side of the film strip and a photodetector on the other side of the film strip. When the film passes out of the first developing bath, it carries with it a certain amount of developing solution. The measured density is used to control the output of a cathode ray tube. Electron bombardment of the faceplate of the cathode ray tube causes emission of heat which in turn acts on the developing solution which is carried by the film strip to accurately control the development of the film. After passing by the cathode ray tube, the film proceeds to a final developing bath where developing is completed. In a second embodiment, the density measurement is made at the cathode ray tube.

3,515,051

SIDE PLATE STRUCTURE CONDUIT FOR VENTILATING OF COVERED HOPPER CARS

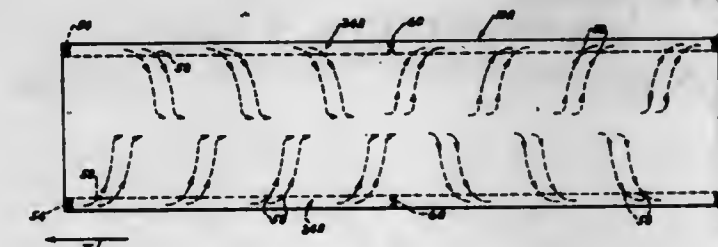
Frank C. Pulcrano, St. Charles, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Dec. 20, 1967, Ser. No. 692,153

Int. Cl. F24f 7/04; B61d 7/00; B61f 1/00

U.S. Cl. 98—6

9 Claims



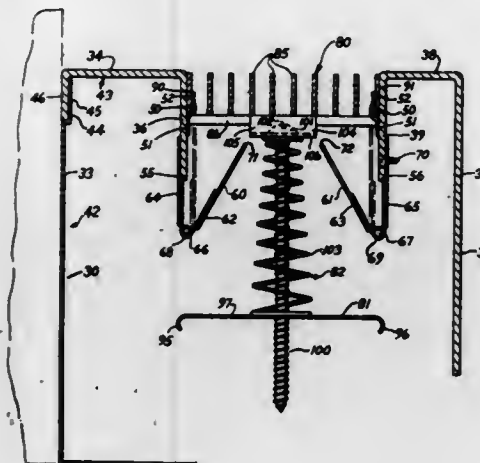
A covered hopper railway car having a hollow side plate structure forming a conduit extending along the upper portion of each side sheet for the length of the car. One of the side plate structures has an air inlet with respect to the leading end of the railway car and openings in the side plate structure communicate with the interior of the car to supply air thereto. Air is exhausted from

the interior of the car through openings in one of the hollow side plate structures communicating with the interior of the car and thence to the atmosphere from an exhaust opening in the hollow side plate structure. Upon a reversal in the direction of travel of the car or a reversal of the trailing and leading ends of the car, the flow of air through the side plate structures is reversed.

3,515,052
AIR DISTRIBUTING APPARATUS
Ernest E. Brandes, 2046 Winnebago St.,
Madison, Wis. 53704
Filed Sept. 13, 1968, Ser. No. 759,553
Int. Cl. F24f 13/06

U.S. Cl. 98—41

10 Claims

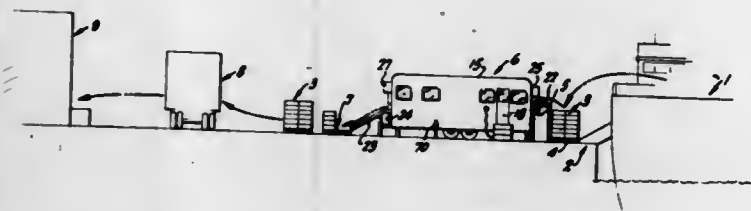


An air distributing cabinet formed of cooperating front and back cabinet sections having depending spaced apart flanges along their respective top walls to provide a continuous slot, the back section being selectable from those of different dimensions to determine widths of the cabinet and slot. A grille is fitted between the slot defining depending flanges to direct air flow and to secure portions of the cabinet sections together. A damper extends longitudinally of the cabinet and is supported in juxtaposition with the interior edges of the depending flanges by independent adjusters adjacent the opposite ends of the damper to control the rate and distribution of the air flow through the slot, and an adjustable vane is mounted on each of the depending flanges intermediate the interior edge thereof and the grille to control the velocity and pattern of the air flow at the grille.

3,515,053
MEAT INSPECTION SYSTEM AND METHOD
Gary C. Mylin, San Francisco, Calif., assignor to Import
Inspection Services, San Francisco, Calif., a corporation
of California
Filed June 14, 1968, Ser. No. 737,118
Int. Cl. A23b 1/06

U.S. Cl. 99—194

11 Claims



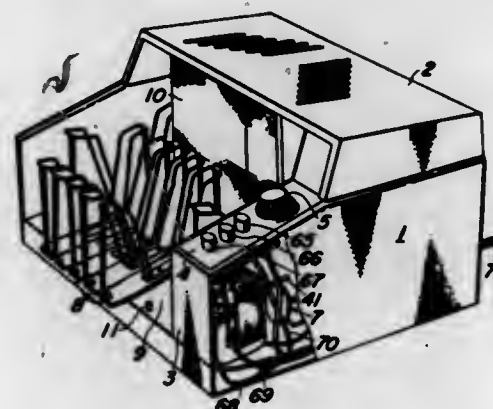
A portable apparatus for use by inspectors in inspecting imported frozen meat in accordance with required standards, comprising a vehicle adapted to be positioned

relatively close to the unloading point, which vehicle encloses a relatively sterile area including conveyors, a saw, a thaw tank, and an inspection stand in an arrangement to expedite the inspection of a uniform size portion of each block of frozen meat. The arrangement also provides a method of handling the meat.

3,515,054
ROTARY TOASTER
Tadashige Sato, Toyonaka-shi, and Shinya Tsutsumi,
Kobe-shi, Japan, assignors to Matsushita Electric
Industrial Co., Ltd., Osaka, Japan, a corporation of
Japan
Filed June 17, 1968, Ser. No. 737,535
Claims priority, application Japan, June 23, 1967,
42/40,675; Aug. 10, 1967, 42/68,925, 42/68,926,
42/68,927; May 17, 1968, 43/33,452
Int. Cl. A47j 37/08

U.S. Cl. 99—335

7 Claims

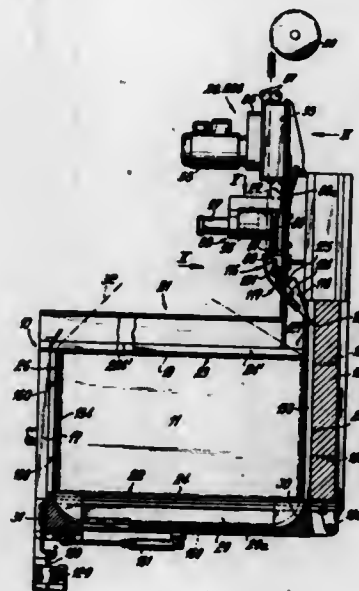


A toaster which is so designed that slices of bread are toasted to a desired extent while they make a full turn along a closed loop line and which therefore is compact in form and capable of toasting a number of slices of bread continuously and efficiently.

3,515,055
METHOD FOR APPLYING STRAPS TO PACKAGES OF COMPRESSED MATERIAL
Hans-Jochen Timmerbell and Eberhard Timmerbell,
Schwelm, Germany, assignors to Titan Eisenwaren-
fabrik G.m.b.H., Schwelm, Germany
Filed Apr. 8, 1968, Ser. No. 719,513
Claims priority, application Germany, Apr. 8, 1967,
T 33,621
Int. Cl. B65b 13/02

U.S. Cl. 100—3

5 Claims



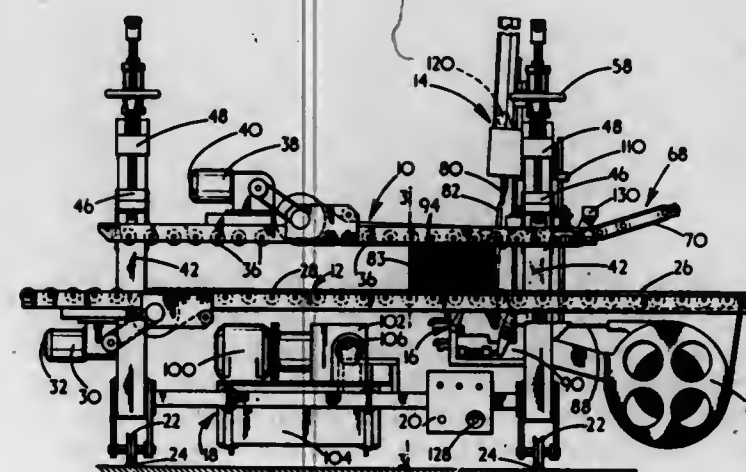
Bales are compressed in the chamber of a baler and are provided with straps prior to expulsion from the

chamber. A continuous web of band material is fed lengthwise by the feed of a strapping machine so that the leading portion of the web advances through a set of grooves provided in the walls of the chamber. The leading portion is then severed from the web by a cutoff which is operated intermittently in response to detection of information encoded on the web. The ends of the severed leading portion are joined to each other to form a hoop of predetermined length which determines the extent to which the package can expand upon expulsion from the chamber.

3,515,056
BUNDLING MACHINES
Frederick Paul Johnson, Manchester, England, assignor
to Henry Simon Limited, Cheadle Heath, England, a
British company
Filed Mar. 12, 1968, Ser. No. 712,500
Claims priority, application Great Britain, Mar. 16, 1967,
12,282/67
Int. Cl. B65b 13/20

U.S. Cl. 100—4

12 Claims

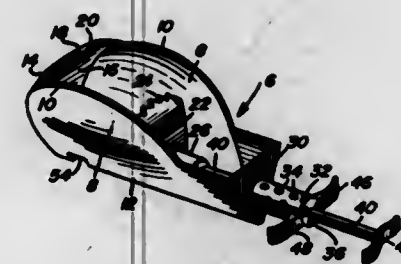


A machine for tying bundles of articles together in which a bundle of articles is conveyed to a tying mechanism at which its movement is arrested. The tying mechanism is operated by a sensor to tie the stationary bundle and when tied the bundle of articles is delivered out of the machine.

3,515,057
LEMON SQUEEZER
Silas B. Aldridge, Brunswick, Ga.
(1138 Chestnut St., Gadsden, Ala. 35901)
Filed Oct. 6, 1967, Ser. No. 673,480
Int. Cl. B30b 9/06

U.S. Cl. 100—126

5 Claims



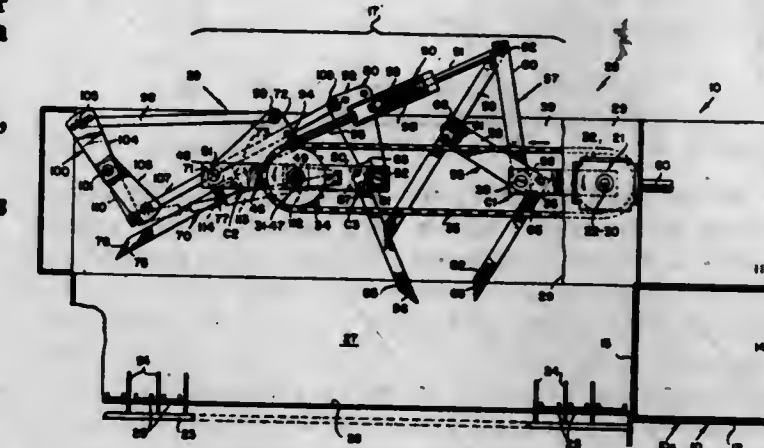
A tray for a lemon wedge which not only holds the wedge but facilitates carrying and handling it. It is V-shaped and has a juice discharge port inwardly of one end wall. This end wall has an overhanging toothed jaw. The other end wall carries a spring-loaded plunger rod equipped with a toothed jaw slidable in the tray. The

movable jaw is retracted and the lemon wedge is lodged in place. By moving the finger-grips toward each other, the lemon wedge is squeezed and the juice is discharged.

3,515,058
FORK FEED BALER
Robert M. Van Ginhoven, Lancaster, and Edwin B. Nolt,
New Holland, Pa., assignors to Sperry Rand Corporation,
New Holland, Pa., a corporation of Delaware
Filed Mar. 1, 1968, Ser. No. 709,715
Int. Cl. B30b 1/00, 15/20

U.S. Cl. 100—189

19 Claims

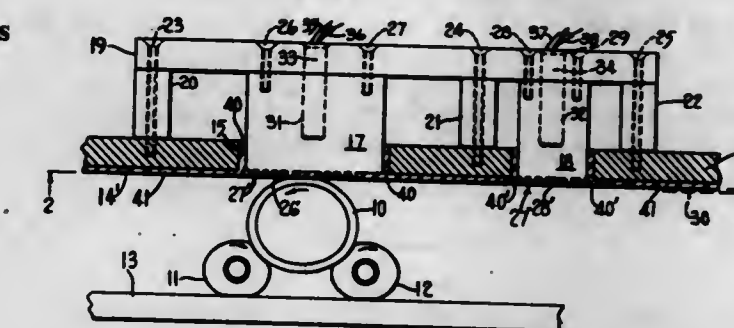


A hay baler infeed mechanism for supplying hay to a bale chamber having a reciprocable plunger, wherein an alternate pickup feed sweep of only a part of the width of the hay platform of the pickup chamber is made at any one time by plural sets of outer feed fingers each of which cooperate with a corresponding set of inner bale chamber feed fingers of an inner feed assembly; and, the attitude of all of such feed fingers are controlled by linkage mechanisms connected to a common actuator.

3,515,059
HOT STAMPING DIE HAVING INSULATED SURFACES ADJACENT THE DIE FACES
Tony Sciamme, Linden, N.J., assignor to Patent Development Corporation, Linden, N.J., a corporation of New Jersey
Original application Nov. 20, 1967, Ser. No. 689,224.
Divided and this application Mar. 5, 1968, Ser. No. 710,484
Int. Cl. B44b 5/00, 7/00

U.S. Cl. 101—31

1 Claim



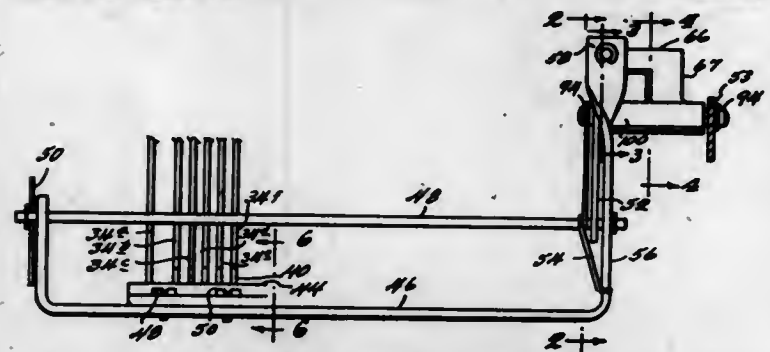
In this invention, the heatable hot stamping heat-conductive die has projecting kerns terminating with die faces. A heat-resistant heat-insulating composition is used to fill in the spaces between the kerns as well as other recessed surfaces of the die. Also, the insulating composition is applied to the border of the die in a manner whereby the thickness of the insulating layer decreases with distance away from the die edges.

3,515,060
INTERLOCK ASSEMBLY IN TRAVELING PLATEN
ROLLER IMPRINTING MACHINES HAVING
SETTABLE TYPE WHEELS

William P. Barbour, Fairfax County, Va., assignor to Farrington Business Machines Corporation, Springfield, Va., a corporation of Massachusetts
 Filed Jan. 31, 1968, Ser. No. 702,122
 Int. Cl. B41j 29/58; B41f 3/04

U.S. Cl. 101—45

9 Claims



An interlock assembly for use with imprinting devices having a source of variable data such as money amount wheels is disclosed. Between each imprinting operation all money wheels must be returned to their respective zero positions. Movement of any one of the racks respectively connected to the wheels away from the zero position tends to force a head latch into the path traveled by a shaft connected to the print head. When the head is moved from its starting position, the shaft connected thereto engages a latch release mechanism which permits the head latch to be moved into the path traveled by the shaft. However, at this time, the head has been moved past the point where the latch is moved in the path and thus the head can be moved over the print bed. The head is then moved back over the print bed toward the latch. The latch has a cammed surface which permits the head to return to the starting position. Once the head is returned to the starting position, the latch prevents the head from being moved from that position again until all racks have been returned to the zero digit wheel position. With the return of the racks to this position, the head latch is retracted to its non-latching position and the latch release mechanism so engages the latch so as to maintain it in this position until the head is moved again from the starting position.

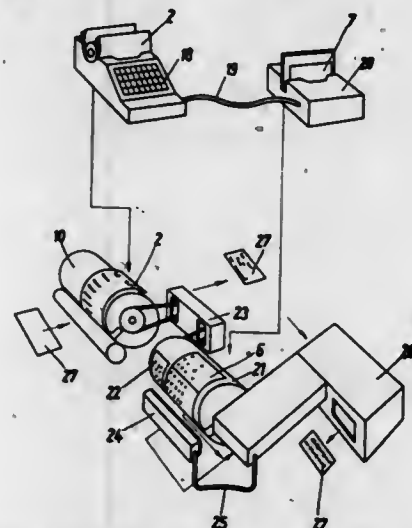
3,515,061
APPARATUS AND METHOD FOR PRINTING AND
RECORDING ON THE SAME COPY SHEET

Gerhard Ritzfeld, 21 Franzensbader Str., Berlin 33, Germany
 Filed Feb. 23, 1967, Ser. No. 621,723
 Claims priority, application Germany, Feb. 24, 1966, R 42,667

U.S. Cl. 101—91

Int. Cl. B41j 11/00; B41l 47/46

34 Claims



A master card having fields of crossing lines and columns is punched to represent in each field the informa-

tion contained in a correlated text section of a printing form. Copy sheets, such as cards, are imprinted by selected text sections of the printing form, and punched under the control of groups of sensing means correlated with the fields in such a manner that each sensing means senses a line of the respective field so that the copy sheet is imprinted and punched to represent the same information.

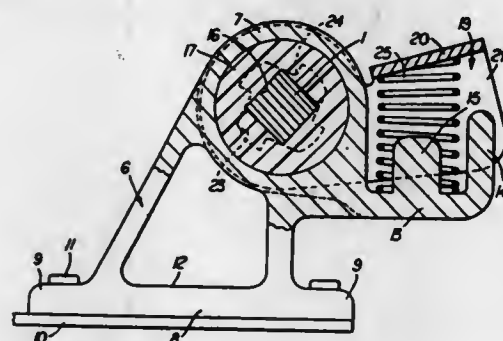
3,515,062
RELEASABLE CLAMP FOR CLAMPING A MEMBER
ON A PLAIN SIDED POLYGONAL SECTION BAR

Leonard Walter Styles, Tottenham, London, England, assignor to Gestetner Limited, London, England, a British company
 Filed Oct. 13, 1967, Ser. No. 675,170
 Claims priority, application Great Britain, Oct. 20, 1966, 47,044/66

U.S. Cl. 101—118

Int. Cl. B41l 13/06

7 Claims



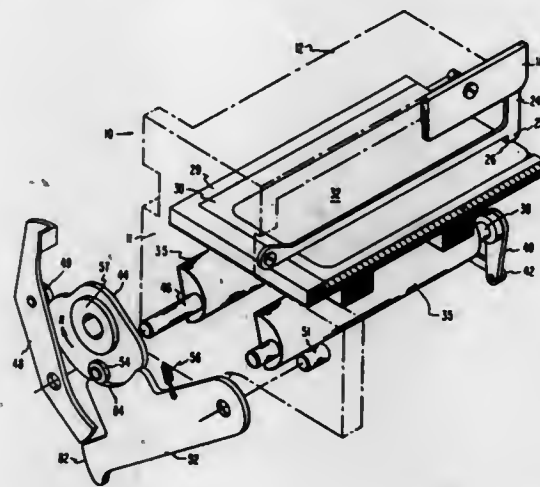
A clamp with two clamping parts for clamping a member on a polygonal cross-sectioned bar. The first clamping part has a polygonal bore fitting closely on the bar, but having some play so as to be slidable thereon. The other clamping part has a larger bore which registers with the bore in the first clamping part, and has a number of wedging projections for engaging the bar. The two parts are resiliently urged apart in a direction to tighten the projections against the bar. The clamp is particularly suitable for clamping a stripper blade on a stripper-carrying bar of a duplicating machine.

3,515,063
IMPRINTER WITH PRINT MODE SELECTION

Joseph C. Baker, Stewartville, and Thomas W. Thompson, Rochester, Minn., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
 Filed Dec. 22, 1967, Ser. No. 692,894
 Int. Cl. B41f 3/04

U.S. Cl. 101—269

8 Claims



The specification herein describes an imprinting device for printing single or multiple documents which provides

for automatically sensing the thickness of the document pad and adjusting the relationship between print member and printing platen when positive interference printing is used and for providing a desired preload with a desired initial interference and overload relief when print member and printing platen are yieldably positioned for printing. Also included is the structure which not only affords the varying position locked relationship in response to the thickness sensed but also provides for selection of a soft print wherein print member and platen are yieldably positioned with respect to one another or for a positive interference print.

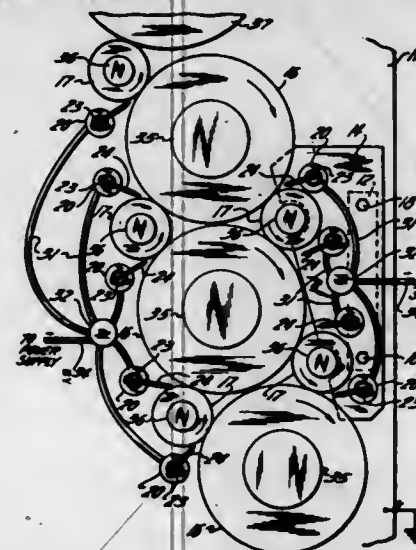
3,515,064
INK MIST PREVENTION SYSTEM USING
POINTED ELECTRODE MEMBERS

Blaine Hempstead Vlier, Glendale, Calif., assignor, by mesne assignments, to James Talcott, Inc., New York, N.Y., a corporation of New York
 Continuation-in-part of application Ser. No. 464,440, June 16, 1965. This application Oct. 4, 1967, Ser. No. 672,891

U.S. Cl. 101—349

Int. Cl. B41f 31/00

10 Claims



A system for use on printing machines to prevent the formation of an ink mist having a support member with nail-like members supported on the member uniformly spaced along its length and electrically connected together. The support member is supported at its ends in sockets and positioned parallel to a roller couple nip with the nails aimed into the nip. A high potential difference is created between the nails and the rollers so that an electrostatic field emanates from the points of the nails and onto the rollers to prevent the formation of any ink mist particles in their incipency.

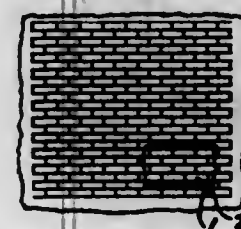
3,515,065
DRAFTING TOOL

Sidney R. Scott, 2730 N. 11th, and Glen W. Light, 3890 Ernestine Drive, both of Beaumont, Tex. 77703
 Continuation-in-part of application Ser. No. 694,781, Dec. 26, 1967. This application Aug. 9, 1968, Ser. No. 756,719

U.S. Cl. 101—368

Int. Cl. B41l 47/02

3 Claims



This invention includes an improved drafting tool or instrument for rapid reproduction of hash lines and/or

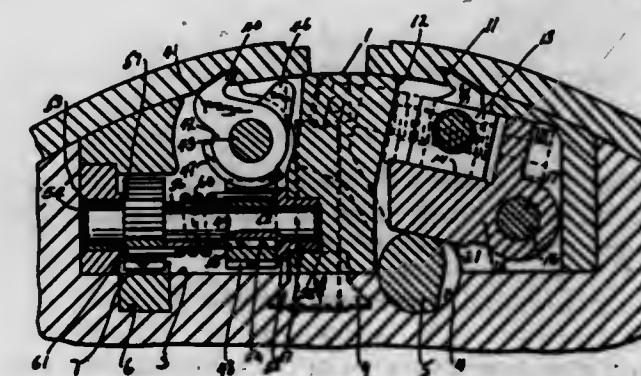
intricate detail or the like on an engineering or architectural drawing. A white or light colored plastic card or board is provided with dark or black colored relief on one surface corresponding to the lines or detail sought to be produced. When the card is placed under a sheet of drafting paper which is preferably thin and translucent, the dark relief will be visible to the draftsman whereby the card may be positioned so that the relief corresponds to other lines on the paper. A soft pencil or crayon may then be rubbed over the paper to produce the detail on the paper.

3,515,066
UNDERSIDE LOCK-UP DEVICE FOR PRINTING
PLATES

Carl H. Ringe, Hartsdale, N.Y., assignor, by mesne assignments, to James Talcott, Inc., New York, N.Y., a corporation of New York
 Filed Feb. 15, 1968, Ser. No. 705,814
 Int. Cl. B41f 27/06

U.S. Cl. 101—378

6 Claims



An underside plate lock-up device for use in clamping stereotype printing plates on the plate cylinders of rotary newspaper printing machines in which one end of the plate is positioned by circumferential adjustable register hooks and the other end is engaged by tensioning hooks. The device utilizes spring activated hooks in which reaction of the hook pressure against the actuating springs is avoided. The clamping mechanism is in the form of bench assemblies in which the spring holding force is exerted between parts which are self contained in each assembly and in which the distance of application of the spring force is reduced to a minimum, the tips of the clamping hooks being movable between a clamping position and a releasing position. The hooks are pivotally supported and a driven spiral gear element is secured to the hook member and located concentrically to its pivotal axis. Another spiral gear meshes with the driven spiral gear element for driving same and is rotatably mounted on a cross shaft which is journaled in the assembly. Spring means connect the shaft to the driving gear so that it may be turned through an angle to thereby turn the driven gear and its associated hook. The spiral angle of the driving gear is sufficiently low so that the gears bind against turning of the driving gear by the driven gear. A lost motion is provided between the driving gear element and the cross shaft.

3,515,067
IMPACT RESPONSIVE PROXIMITY INITIATOR

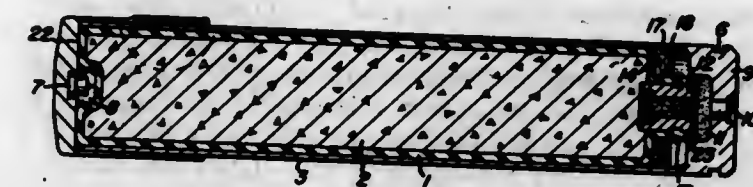
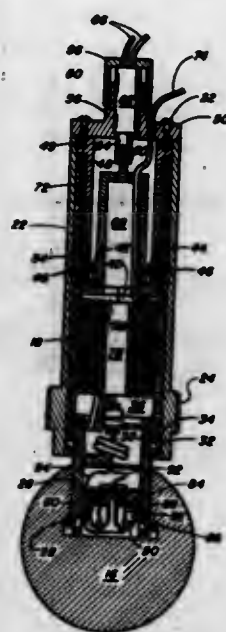
Sherman L. Min, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
 Filed July 19, 1968, Ser. No. 746,143
 Int. Cl. F42c 1/14

U.S. Cl. 102—7.4

7 Claims

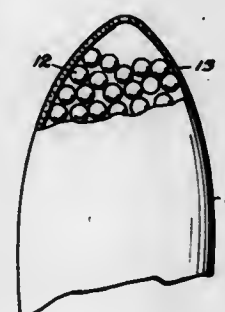
An impact responsive proximity initiator for an aerial bomb having a pair of trembler switches contained within an impact sphere, an electrical cable connecting the switches to a component within the bomb, and a ball-lock

mechanism for securing the impact sphere to the bomb until a signal from the bomb releases the ball-lock mechanism to allow the impact sphere to eject from the bomb



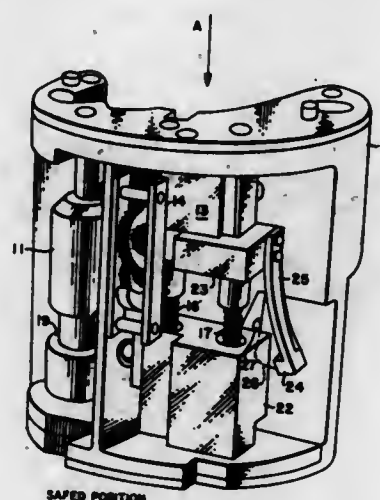
powder charge, and cap means over the open end of said case means.

3,515,070
CHEMILUMINESCENT PERAMINOETHYLENE POSITIONED WITHIN A BRITTLE CAPSULE
Milton Cutler, Baltimore, and Kenneth G. Carion, Aberdeen, Md., and Louis M. Sherman, Ocean City, N.J., assignors to the United States of America as represented by the Secretary of the Army
Continuation of application Ser. No. 490,780, Sept. 23, 1965. This application May 15, 1968, Ser. No. 729,475
Int. Cl. F42b 13/36, 13/40, 27/00
U.S. Cl. 102—60 4 Claims



A chemiluminescent marker having a brittle air-impermeable capsule containing a chemiluminescent peraminoethylene therein, whereby on the application of a stress of brittle capsule shatters thereby releasing the chemiluminescent peraminoethylene material.

3,515,071
FAIL-SAFE RETARDATION SENSING SYSTEM
Donald A. Brackman, Trotwood, Ohio, assignor to Avco Corporation, Richmond, Ind., a corporation of Delaware
Filed Apr. 8, 1968, Ser. No. 719,416
Int. Cl. F42c 15/12, 15/20, 15/24
U.S. Cl. 102—78 3 Claims



The invention is a safing and arming device designed for mounting in the nose well of high drag bombs. The device senses a failure of the drag system and thereupon

3,515,069
CARTRIDGE FOR HAND FIRING
Stanley M. White, North East, and Woodrow W. Reaves, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army
Filed July 1, 1968, Ser. No. 741,693
Int. Cl. C06d 1/04, 1/10; F42b 13/40
U.S. Cl. 102—37.4 13 Claims

A munition for delivering a payload to a target comprising a container means for said payload, case means

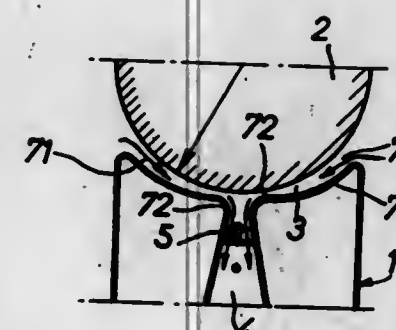
initiates the operation of instrumentalities which prevent the fuze from arming, thus causing the bomb to fall as a dud. The device thus provides a fail-safe operation in the event of improper launch or in the event insufficient forces of deceleration are generated to cause the system to operate properly. The system mechanically senses an interruption of the desired forces of deceleration and blocks the eventual release of a preset mechanical timer so that the timer is prevented from performing its normally designed function of allowing the alignment of the explosive train by which the bomb is detonated.

3,515,072
TRACER PROJECTILE
Irwin R. Barr, Lutherville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed May 2, 1968, Ser. No. 726,010
Int. Cl. F42b 11/16, 13/34
U.S. Cl. 102—87 3 Claims



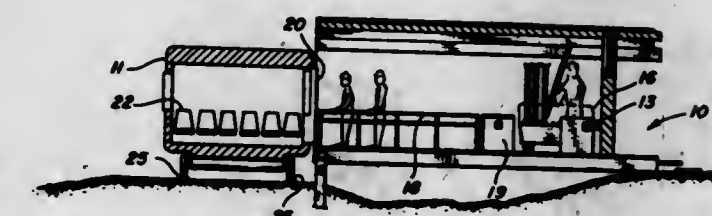
A projectile having a steel front section and a magnesium tail section. The magnesium tail section contains an igniting mixture composed of zirconium and barium chromate which upon ignition will act to initiate the burning of the magnesium tail section thereby causing a trace.

3,515,073
TRANSPORT FACILITIES WITH FLUID SUSTAINED VEHICLE
Marc Henri Jean Faure, Saint-Maur-des-Fosses, France, assignor to Bertin et Compagnie, Paris, France, a company of France
Filed Sept. 11, 1967, Ser. No. 666,822
Claims priority, application France, Sept. 14, 1966, 76,394
Int. Cl. B60v 1/02
U.S. Cl. 104—23 7 Claims



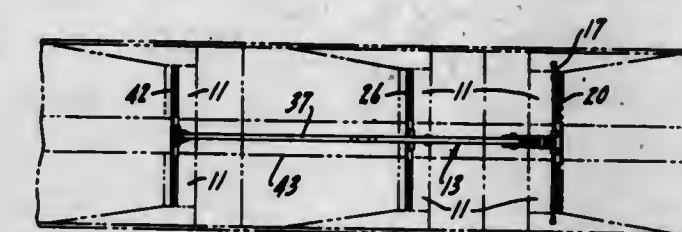
A transport system comprising a body which moves with a systematic reduced clearance below a guide track and is lifted by vacuum generating means adapted to produce an underpressure fluid layer between the track and a rigid wall of the moving body disposed opposite the track, a facility for adjusting the underpressure so devised as to reduce the same, and therefore the lifting force, being provided in the event of a decrease of the distance between the rigid wall of the vehicle and the track and vice versa, so that the moving body is stabilised in its movement along the track.

3,515,074
EQUIPMENT FOR LOADING, TRANSPORTING AND UNLOADING PASSENGERS
Jim D. Helbig, 50 S. 17th Ave. Drive, Brighton, Colo. 80601
Filed Oct. 14, 1968, Ser. No. 767,210
Int. Cl. B61b 1/00; E01f 1/00
U.S. Cl. 104—28 11 Claims



Equipment for rapid loading, transporting and unloading of skiers and other passengers, comprising a loading structure and a motor vehicle, in which the loading structure is provided with a plurality of parallel separate stalls or aisles each provided with an entrance and means for admitting only a predetermined number of passengers equal in number to the seats in a row of seats in the vehicle into which the passengers waiting in the loading stalls can pass through side openings in the vehicle which register with the stalls of the loading structure. The loading structure may also function for unloading of passengers, or separate loading and unloading structures may be provided for communication with a parked vehicle having side openings in each of its side walls.

3,515,075
HOPPER CAR DOOR ACTUATING AND LOCKING MECHANISM
Eduardo M. Dany, Apartado Postal 2041, Guadalajara, Jalisco, Mexico
Filed Sept. 6, 1968, Ser. No. 757,880
Int. Cl. B61d 7/02, 7/06, 7/18
U.S. Cl. 105—249 4 Claims

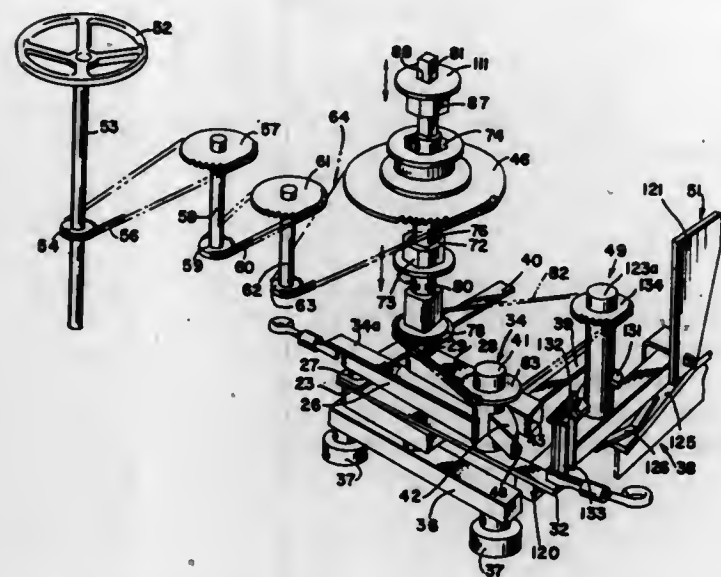


An apparatus for simultaneously locking and opening the discharge doors of a hopper car of the type having two, three or four sets of doors. Rotation of an operating rod first disengages a locking means for the door operating arms and then raises the locking means to engage and move the arms to open the doors.

3,515,076
MANUAL OR TRACKWAY CAM HOPPER CAR DOOR OPERATING MECHANISM
Herman A. Aquino, Hobart, Ind., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Feb. 23, 1967, Ser. No. 618,152
Int. Cl. B61d 7/08; E05f 9/00; B65g 67/24
U.S. Cl. 105—251 31 Claims

An arrangement for manually opening a pair of doors disposed on opposite sides of a railway vehicle with each door being mounted for swinging movement about a horizontal axis between a closed position underlying

respective hopper discharge openings provided on the underside of the vehicle and an open position disposed downwardly away from the openings. A door operating mechanism in the form of a vertically disposed and rotating crank mechanism is associated with the doors and includes a pair of opposed crank throw arms to which there is connected respective links fastened to the doors. The links are arranged, when the doors are in a closed position, to be angularly displaced in an over-center relationship

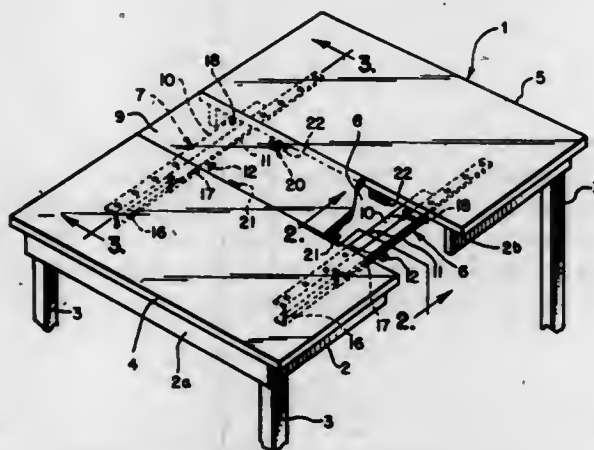


with respect to the crank arms which engage a stop, preventing further rotation of the crank mechanism in one direction. The crank mechanism has connected thereto an actuating cam follower arm which is turned to rotate the crank in a direction away from the stop by a trackway mounted camming mechanism as the railway vehicle moves along the track and thereby to automatically open the doors and to rotate the crank in the opposite direction to close the doors.

3,515,077
SLIDE ASSEMBLY FOR EXTENDABLE TABLES
Matthew P. Glowacki, 4447 N. Kenton,
Chicago, Ill. 60630
Filed June 12, 1967, Ser. No. 645,218
Int. Cl. A47b 1/02

U.S. Cl. 108—89

16 Claims



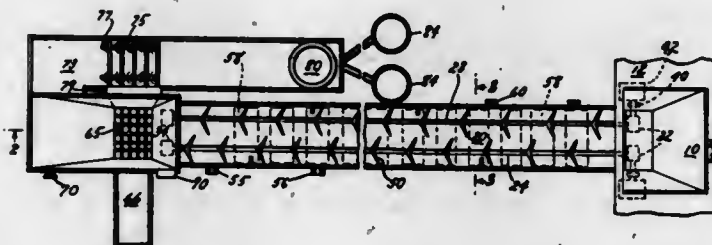
A slide assembly for an extendable table including a pair of slide structures for allowing table portions to be separated from one another for placement of a table leaf between the table portions, each structure being a pair of inter-mating relatively sliding units, and lock means holding the units in locked non-slidable engagement with

one another and whereby guide aligner means are provided on the table and leaf portions to intercouple the portions in correctly aligned relation with one another whereby each guide aligner means includes a pair of elements mounted on respective portions, the first mating element having a flat plate with corrugated lug portions for complementary alignment with a vertically extending slotted portion of the other mating element or the slide aligner means may comprise a pair of identically extruded and punched plate tab means, one of which is rotated 180° relative to the other for complementary interlocking with one another.

3,515,078
INCINERATOR
Anthony J. Matilasso, Rockaway, N.J., assignor to Scientific Incineration Devices, Inc., East Orange, N.J., a corporation of New Jersey
Filed Mar. 13, 1969, Ser. No. 806,996
Int. Cl. F23g 5/04

U.S. Cl. 110—8

7 Claims

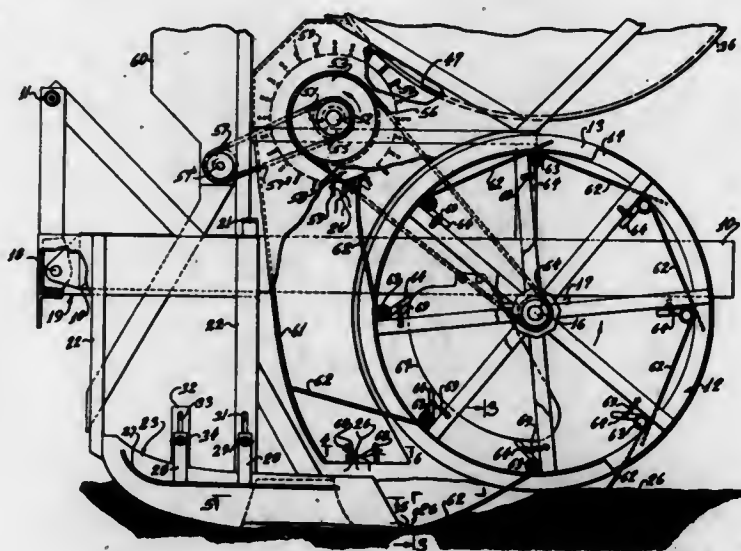


An incineration apparatus in which refuse is incinerated while traversing a stationary grate under the influence of traveling plows.

3,515,079
SPRIG PLANTER
James K. Ware, Jr., Rte. 4, Box 105-C,
Columbus, Miss. 39701
Filed Sept. 18, 1967, Ser. No. 668,513
Int. Cl. A01c 11/02; B65h 3/02

U.S. Cl. 111—3

7 Claims



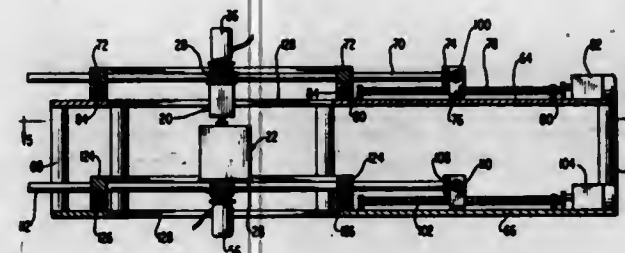
A sprig planter having a rotatable member mounted rearwardly of a furrow opener. Elongated fingers are pivotally mounted on the rotatable member and move from a position inwardly of the rotatable member to a position outwardly thereof to press sprigs sequentially into the soil. A rearwardly opening sprig supply housing encases the fingers at the downgoing side of the rotatable member.

member. Sprigs are delivered to the supply housing in a uniform manner so that the fingers move the sprigs sequentially into the furrow.

3,515,080
ELECTRONICALLY SYNCHRONIZED SEWING MACHINE
Willard A. Ramsey, Mauldin, S.C., assignor to Her Majesty Industries, Inc., Mauldin, S.C., a corporation of South Carolina
Filed Jan. 8, 1968, Ser. No. 696,440
Int. Cl. D05c 5/02

U.S. Cl. 112—121.14

20 Claims

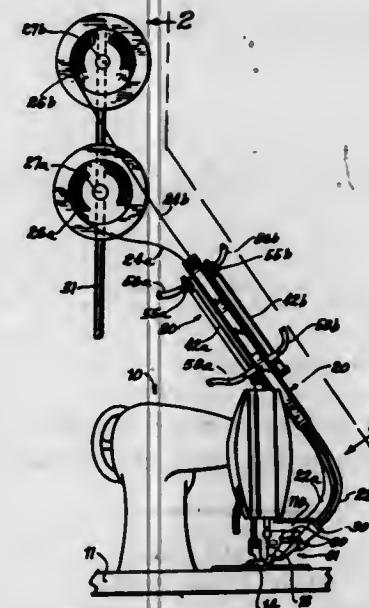


A sewing machine which embodies physically separated needle drive and bobbin drive units which cooperate to produce stitching in a workpiece. Each machine unit embodies its own servo drive means and the drive means are electrically coupled in synchronism so that the units may be operated in unison and moved together in prescribed directions without having any physical connection. A variety of workpiece supporting and feeding means may be employed depending upon the character of the work operation.

3,515,081
APPARATUS FOR FEEDING AND CUTTING STRIP MATERIAL
Samuel E. Miller, Wilmette, Ill., assignor to Quick Service Textiles, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 21, 1968, Ser. No. 777,592
Int. Cl. D05b 35/10, 37/06

U.S. Cl. 112—130

6 Claims



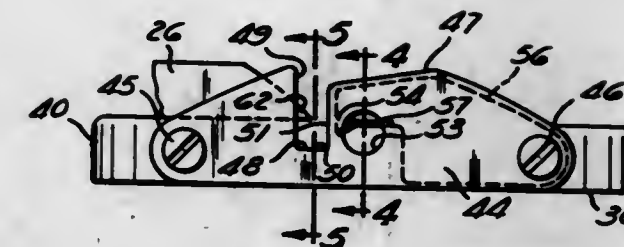
Apparatus for sewing predetermined lengths of two or more different materials in strip form to a base strip in sequence along the latter. The base strip is fed continuously to the sewing station and the successive lengths of the first-mentioned materials are fed to the sewing station selectively in sequence. The first-mentioned materials

are fed from respective sources of supply and are cut off to predetermined length cyclically by automatic or semi-automatic means.

3,515,082
SHUTTLE RACE COVER
Sidney J. Hamlett, Parma, Ohio, assignor to White Consolidated Industries, Inc., Cleveland, Ohio, a corporation of Delaware
Filed Mar. 15, 1968, Ser. No. 713,536
Int. Cl. D05b 3/02, 57/14

U.S. Cl. 112—158

9 Claims

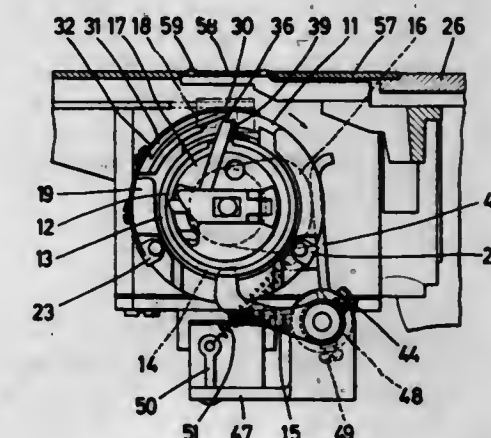


A zig-zag sewing machine of the front-facing bobbin type is arranged to produce intermittent locked stitches resulting in a stitch length greater than that determined by the feed of the machine. The shuttle race cover is provided with a deflector which prevents formation of a lock stitch in one needle position by deflecting the needle thread loop out of the path of the shuttle hook. In this needle position no lock stitches are formed while in the other needle position normal stitches are formed so that the stitch length can be controlled by proportioning the stitch formation between the two needle positions.

3,515,083
DEVICE FOR FREE THREAD PASSAGE IN THE SEWING MACHINE
Koichi Tomono, Toyonaka-shi, Yoshimasa Okada, Sakai-shi, and Koichi Takehama, Ibaraki-shi, Japan, assignors to Soryu Mishin Seizo Kabushiki Kaisha, also known as The Soryu Sewing Machine Mfg. Co., Ltd., Ibaraki-shi, Japan
Filed Aug. 26, 1968, Ser. No. 755,181
Claims priority, application Japan, Apr. 16, 1968, 43/25,691
Int. Cl. D05b 57/10

U.S. Cl. 112—232

5 Claims



A bobbin thread case is mounted in a stationary inner shuttle which is positioned in a rotary outer shuttle. The outer shuttle is rotated by a shaft which also has a cam thereon. The inner shuttle is prevented from rotating by a drag which catches an arm of the bobbin thread case

and a protrusion of the inner shuttle. A reverse lever is operated by the cam to temporarily rotate the inner shuttle reverse to the direction of rotation of the outer shuttle.

3,515,084

CONVERSION OF MAT JACK-UP DRILL PLATFORMS TO FLOATING DRILL PLATFORMS

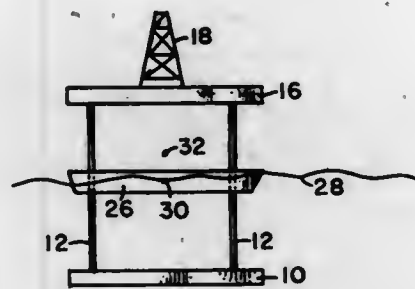
John F. Holmes, Andover, Mass., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Jan. 10, 1969, Ser. No. 790,274

Int. Cl. B63b 43/04; E02b 17/00

U.S. Cl. 114—5

8 Claims



There is herein described a method and apparatus whereby offshore oil drilling apparatus may be converted from shallow to deep water drilling operations. A floatation unit is added to the conventional mat jack-up type drill platform between the working platform and the base mat. The entire floating structure is tuned to a natural period of oscillation about its center of rotation which is longer than the period of the waves which tend to excite the structure.

3,515,085

APPARATUS FOR HANDLING FLOATING LIGHTERS

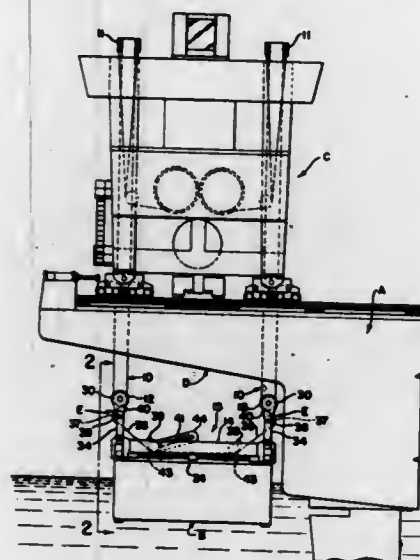
Raimunds Auzins, East Avondale, Canton, Ohio, assignor, by mesne assignments, to United Industrial Syndicate, Inc., doing business as Morgan Engineering Company, Alliance, Ohio, a corporation of New York

Filed Oct. 2, 1968, Ser. No. 764,385

Int. Cl. B63b 27/12

U.S. Cl. 114—43.5

10 Claims



A hoist mechanism for use in connection with lifting and lowering lighters respectively from and to a floating position at sea. A latch frame is suspended by rope falls for connection to the lighter and resilient members associated with the latch frame are provided for maintaining tension in the rope falls when the lighter is tossed by sea swell.

SYSTEM FOR HANDLING CARGO LIGHTERS AND CARGO HATCH COVERS ABOARD SHIP

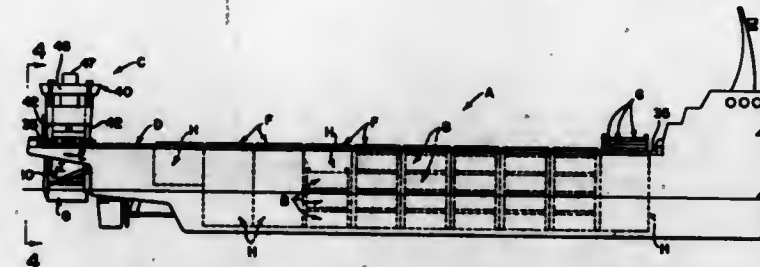
Raimunds Auzins, Canton, and Earl H. Sigman, Alliance, Ohio, and Alfred Schneider, Bremen, Germany, assignors to United Industrial Syndicate, Inc., a corporation of New York

Original application Apr. 16, 1968, Ser. No. 721,821, now Patent No. 3,469,716, dated Sept. 30, 1969. Divided and this application Apr. 14, 1969, Ser. No. 841,171

Int. Cl. B63b 27/12

U.S. Cl. 114—43.5

6 Claims



A shipboard system for transporting, guiding and positioning lighters and cargo hatch covers during vertical and horizontal travel of the lighter between a floating position outboard of a ship and a storage location in the cargo hold of a ship and vertical and horizontal travel of a cargo hatch cover between a cargo hatch and a storage location, while the lighter or hatch cover are suspended by a hoist mechanism. The vertical and horizontal travel is accomplished by a shipboard gantry crane which travels longitudinally of a lighter carrying transport ship from a position on outboard cantilevers over a loading well at the stern of the ship, across the cargo holds with the gantry legs spanning the cargo hatches.

3,515,087

PLANING BOAT

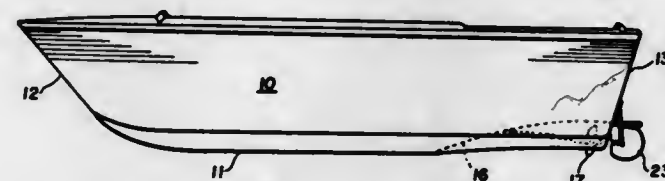
Robert B. Stuart, Penn Yan, N.Y., assignor to Penn Yan Boats, Incorporated, Penn Yan, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 722,320, Apr. 18, 1968. This application Sept. 20, 1968, Ser. No. 776,829

Int. Cl. B63b 1/18; B63h 5/16

U.S. Cl. 114—66.5

39 Claims



A planing hull having a water channel about the propeller and a rudder at the stern end of said channel.

3,515,088

BOW THRUSTER

Lars Gustav Thulin, Goteborg, Sweden, assignor to Aktiebolaget Gotaverken, Goteborg, Sweden, a corporation of Sweden

Filed Oct. 14, 1968, Ser. No. 767,257

Claims priority, application Sweden, Oct. 31, 1967, 14,888/67

Int. Cl. B63h 25/46

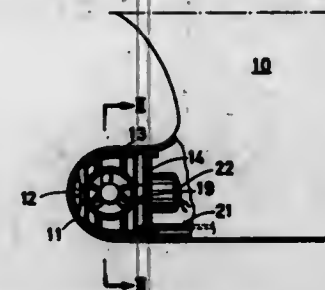
U.S. Cl. 114—148

3 Claims

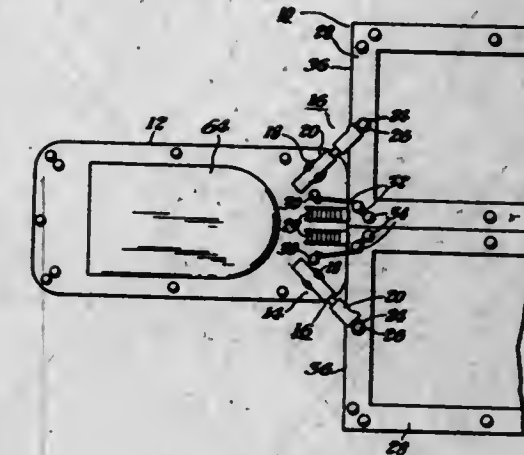
Bow thrusters for ships are easily damaged by floating objects and furthermore increase the resistance to flow.

The bow thruster is used for a short time during navigation in to or out of harbours, respectively, and is inactive during the voyage. In order to prevent damages during the voyage the tunnel structure of the bow thruster is pivotable in such a manner that it may be swung away

ally mounted on said turntable for movement through a vertical arc relative thereto, and an extendible section,



from the openings in the side plating of the ship. A considerable reduction of the resistance to flow is obtained if the tunnel structure is provided with means to cover said openings, when the thruster is inactive. When the thruster is located in a bulb projecting from the ship's fore body very high steering efficiency is obtained.



and quick-attach means mounted on said extendible section for attaching said section to a marine mooring device.

3,515,089

RUDDER

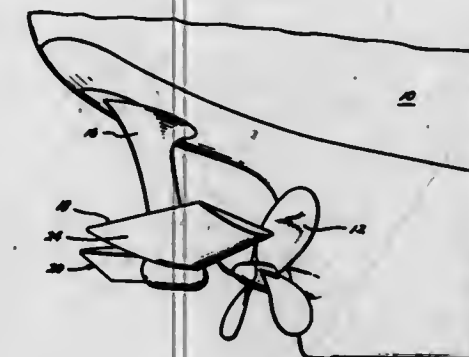
Robert Taggart, Fairfax, Va., assignor to Robert Taggart Inc., Fairfax, Va., a corporation of Virginia

Filed Sept. 30, 1968, Ser. No. 763,781

Int. Cl. B63h 25/38

U.S. Cl. 114—162

10 Claims



The present invention utilizes horizontally disposed foils rotatable about a horizontal axis or axes which foils utilize the propeller race to guide the vessel as well as bring about other substantial advantages. In the preferred embodiment disclosed herein, the foils rotate simultaneously in opposite directions so that both are raised or lowered together. The principles utilized may also be applied to other control surfaces on ships.

SHOCK INDICATOR FOR SHIPPING CONTAINER

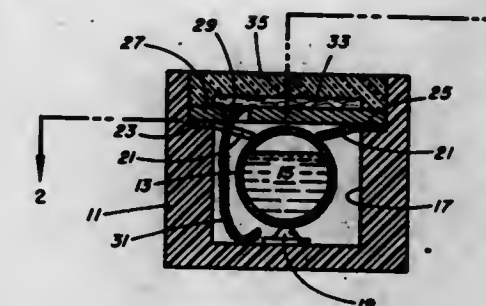
Dresden G. Smith, San Jose, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Apr. 1, 1969, Ser. No. 811,934

Int. Cl. G01d 21/00

U.S. Cl. 116—114

7 Claims



A shock indicator for use with easily damaged apparatus having an ink-filled glass vessel and an absorbent blotting pad supported within a container with at least one transparent wall. Whenever the container is subjected to an excessive shock causing the vessel to be broken, the ink is absorbed by the blotter which forthwith takes on a distinctive color visible through the transparent wall to indicate that such a shock has been experienced.

3,515,092

TENNIS GAME SET SCOREBOARD

Fritz C. Stengel, Drawer P, Mason, Tex. 76856

Filed Apr. 23, 1969, Ser. No. 818,566

Int. Cl. A63b 71/06

U.S. Cl. 116—120

6 Claims

A color coded, display scoreboard designed to inform spectators and players of the games won and progress towards set win. Two (2) sets of six (6) semi-circular color coded indicators are mounted and concealed in the scoreboard. When the game is won a player's game win indicator is rotated out of the concealed position to the displayed position. Scoring progresses from the bottom, and in the absence of a tie set, the first player to win six

3,515,090

MARINE SECURANCE MEANS FOR TOWBOATS AND THE LIKE

Edgar M. Chambers, Pittsburgh, Pa., assignor of one-half to Hymen Schlesinger, Pittsburgh, Pa.

Filed May 28, 1968, Ser. No. 732,681

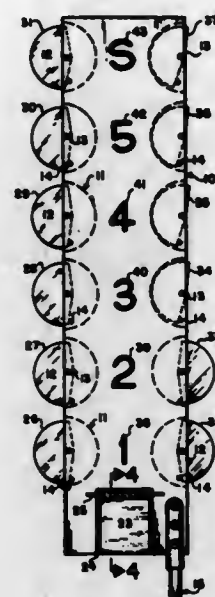
Int. Cl. B63b 21/00

U.S. Cl. 114—235

11 Claims

I disclose marine securance means for a towboat and the like, said securance means including a turntable capable of being rotatably mounted upon a deck of said towboat, a boom structure including a first section pivot-

(6) games is indicated by rotating the set indicator into the display position. A player flip panel in the bottom of



the board indicates by color coding the respective player on each side of the net.

3,515,093

PRESSURE WAVE GENERATOR

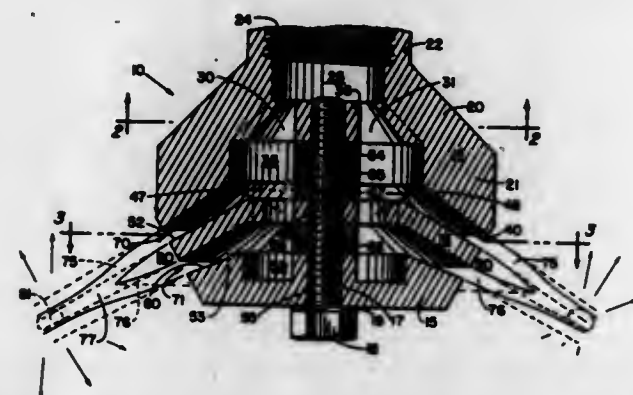
George Boyd Greene, Newport Beach, Calif., assignor to Electronic Engineering Company of California, a corporation

Filed May 10, 1967, Ser. No. 637,593

Int. Cl. G10k 10/00

U.S. Cl. 116—137

3 Claims



Pressure wave producing apparatus having a plurality of orifices which are of elongated cross-section and are adapted, when supplied with fluid under pressure, to emit closely adjacent, sheet-like jets which interact in such a way as to continually alter each other's paths, and to produce sound waves in a fluid medium surrounding the apparatus. The sheet-like jets may take the form of closed, three-dimensional figures.

3,515,094

AUTOMATIC CONTROL APPARATUS FOR LIQUID TREATING SOLUTIONS

Harold J. McVey, Walled Lake, Mich., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 333,058, Dec. 24, 1963. This application Feb. 5, 1968, Ser. No. 702,838

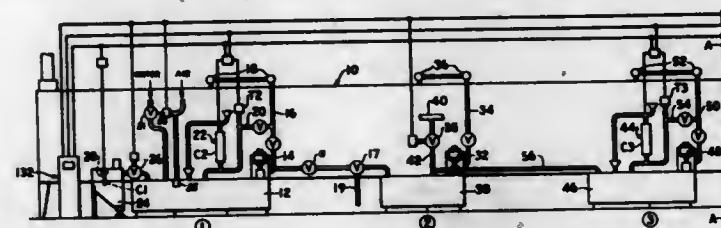
Int. Cl. B05c 11/10

U.S. Cl. 118—5

7 Claims

An apparatus for forming chemical conversion-type coatings on the surfaces of metals including a plurality of treating stations, each incorporating a conductivity cell

for sensing the electrical conductivity of the solution at that station, and a control system including a measuring bridge and a balancing bridge for electrically connecting one of each of the conductivity cells to the measuring bridge and a balancing bridge for electrically connecting one of each of the conductivity cells to the measuring



bridge in accordance with a preselected ordered sequence for monitoring the composition of the treating solution as indicated by its electrical conductivity and to automatically apply an appropriate corrective action if the conductivity thereof deviates from a preselected magnitude.

3,515,095

COATING PROCESS

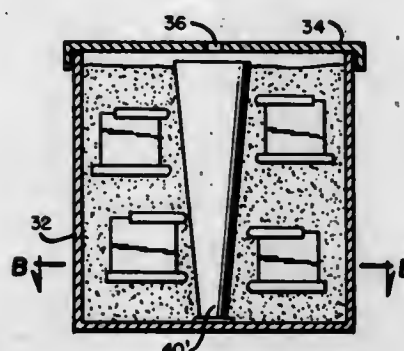
Sanford Baranow, Woodbridge, and William R. Freeman, Jr., Easton, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware

Filed May 3, 1967, Ser. No. 635,893

Int. Cl. C23c 1/08

U.S. Cl. 118—48

3 Claims



A pack coating means including a furnace-receptacle having a bed of particulate coating material therein and heating means therewith including at least one heating element comprising a tapered metal rod embedded in the coating material whereby articles to be coated and which are embedded in the particulate material, may be differentially heated.

3,515,096

FREEZE-BRANDING DEVICE

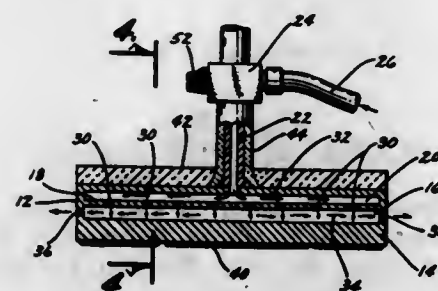
Alex Hogg, Coon, Iowa 51636

Filed Mar. 18, 1968, Ser. No. 713,578

Int. Cl. A01k 11/00

U.S. Cl. 119—1

4 Claims



The device and method for branding animals using circulated super cooled air to cool a branding iron which is applied to the skin of the animals. The freezing destroys the pigment producing cells without destroying the hair or skin and new hair is white in color.

3,515,097

AQUARIUM ASSEMBLY

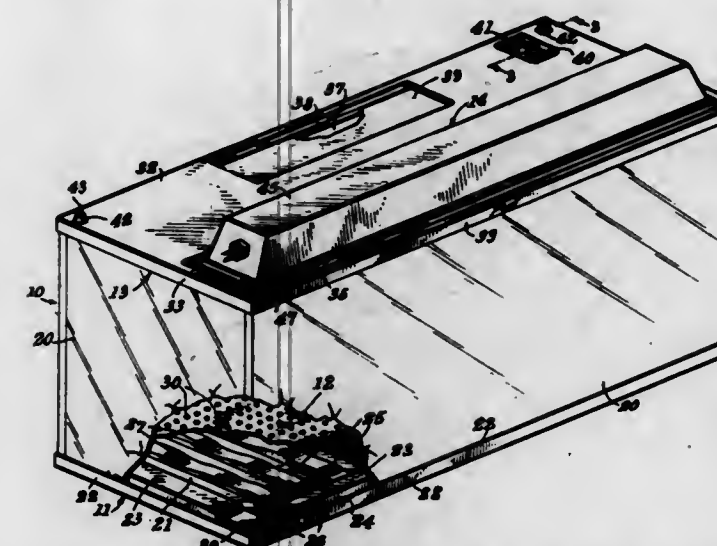
Robert M. Sherman, Beverly Hills, Calif., assignor to Aquaria, Inc., Los Angeles, Calif., a corporation of California

Filed June 2, 1969, Ser. No. 829,320

Int. Cl. A01k 64/00

U.S. Cl. 119—5

4 Claims



An aquarium assembly comprising a thin-walled, stiffened base tray of plastic material, a transparent tank body fitted into said tray, and a thin-walled top of plastic material removably fitted on said body and provided with a hinged light housing for illuminating the interior of the body from above and, when swung back on its hinge, opening an elongated opening in said top to afford access to the interior of the tank body; said base tray combining with a perforated gravel-supporting cover plate thereupon to support a biological filter for controlling the waste buildup in the tank, and the cover affording support for sundry tank-serving devices, as heaters and filters.

3,515,098

WILD LIFE FEEDER

Allen M. Thurmond, Victoria, Tex.
(4031 Galveston Road, Houston, Tex. 77017)

Filed Apr. 15, 1968, Ser. No. 721,457

Int. Cl. A01k 5/00

U.S. Cl. 119—51

4 Claims



A feeder designed particularly for feeding of deer in the wilderness, the feeder comprising a container for holding granular food which will be dispensed when the deer strikes the device with his head or antlers, and the device including a shield for preventing raccoons and other small animals from gaining access to the container.

3,515,099

MECHANICAL FEEDERS FOR LIVESTOCK

Kenneth Gould Clark, Box, and David Charles Kemp, Sheffield, England, assignors to Food Service (Livestock) Limited, Wiltshire, England, a corporation of the United Kingdom

Filed Apr. 8, 1968, Ser. No. 719,362

Claims priority, application Great Britain, Apr. 14, 1967, 17,264/67

Int. Cl. A01k 7/00

U.S. Cl. 119—75

13 Claims



A feeding and/or drinking appliance for livestock comprises a licking plate attached to a support bracket and having limited displacement when engaged by an animal, and a pump unit carried by the bracket, the pump inlet being adapted for connection to a source of supply of food stuff and the pump outlet being positioned to discharge material onto the licking plate for animal consumption. Means are provided interconnecting the licking plate and the pump so that on displacement of the plate the pump is actuated to discharge material onto the licking plate.

3,515,100

TREPAN WITH AUTOMATIC STOP MEANS

Arnold Keller, Kiel-Dietrichsdorf, Germany, assignor to Austenal Europa, Inc., Kiel-Dietrichsdorf, Germany

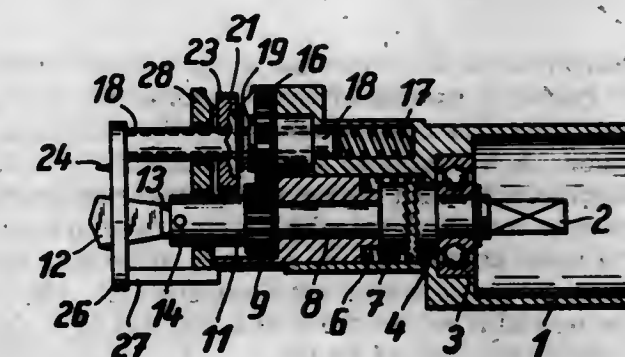
Filed June 27, 1967, Ser. No. 649,343

Claims priority, application Germany, July 4, 1966, A 52,924

Int. Cl. A61b 17/16; B23b 47/32

U.S. Cl. 128—310

2 Claims



The trepan comprises a drilling shaft which is coupled automatically to the prime mover if the drill pressure is acting. Supporting means are arranged adjacent to the drill in order to prevent penetration of the drill into the skull after termination of the drilling operation. The supporting means are automatically moved back with respect to the drill to the same extent as the drill penetrates into the skull bone.

3,515,101

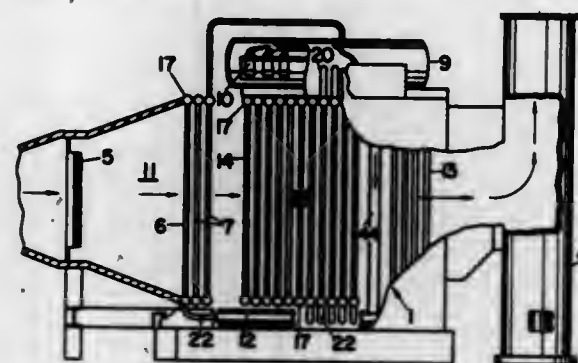
WELDED HEADER AND TUBE ASSEMBLY FOR STEAM GENERATORS

Warner V. Hambleton, Dallas, Tex., and Dean P. Unthank, Louisville, Ky., assignors to Henry Vogt Machine Company, Inc., Louisville, Ky., a corporation of Kentucky

Filed Aug. 2, 1968, Ser. No. 749,720
Int. Cl. F22b 37/22

U.S. Cl. 122-365

10 Claims



Discloses a welded header and tube assembly designed for use in water tube, natural circulation steam generators, utilizing modular banks of heat exchange tubes. Discloses upper and lower horizontally disposed cylindrical tubular headers in communication with one or more rows of vertically oriented heat exchange tubes, forming modular tube banks, in which the upper and lower ends of the heat exchange tubes project through the walls of the upper and lower cylindrical headers, respectively, and in which the major axes of said tubes are parallel to the vertical center line of said headers to communicate with the bores or interior cavities of said headers. In a preferred embodiment, the rows of tubes are laterally spaced from and parallel to the vertical centerline of the headers.

3,515,102

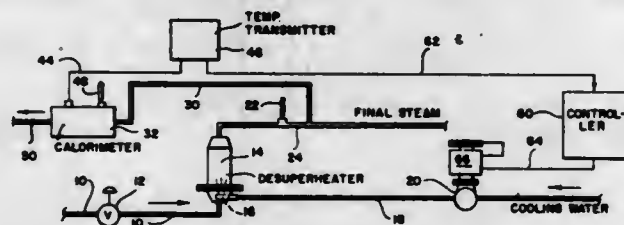
DESUPERHEATER CONTROL SYSTEM

John S. Hamilton, Jr., Monroe, La., assignor to Boiler Equipment and Controls, Inc., Monroe, La., a corporation of Louisiana

Filed Jan. 13, 1969, Ser. No. 790,716
Int. Cl. F22g 5/12

U.S. Cl. 122-479

9 Claims



A desuperheater is controlled at saturation temperatures or below. A sample of the desuperheated steam is fed into a throttling calorimeter where the sample is resuperheated. A temperature sensing element exposed to the resuperheated steam within the calorimeter develops a temperature control signal which is employed to regulate a control valve controlling the quantity of cooling water fed to a spray nozzle within the desuperheater. The control valve may also be controlled as a function of the pressure of the desuperheated steam.

3,515,103

ROTARY ENGINE

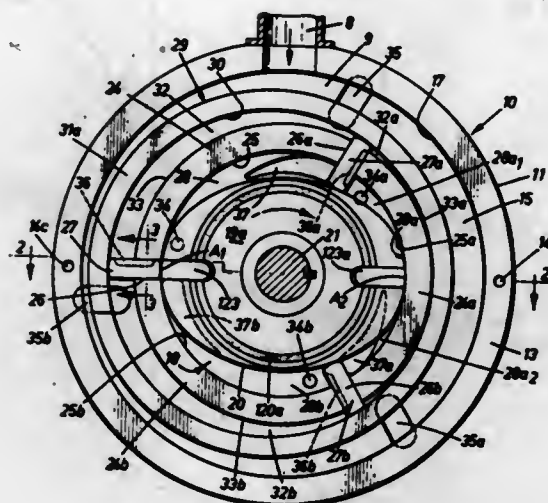
John Kaszmann, 15 Dallas Road, Willowdale, Ontario, Canada
Filed June 21, 1967, Ser. No. 647,845
Int. Cl. F02b 53/08

U.S. Cl. 418-59

8 Claims

A rotary internal combustion engine having a rotatable rotor or "piston" mounted within a cylindrical cavity. A

plurality of work chambers are defined between the peripheral surface of the rotor and the cavity end wall such that the volume and degree of offset of the chambers with respect to the cavity axis varies as the rotor revolves.



Means are provided for feeding expansile gaseous charges into the chamber from an extraneous source when the chambers are near the point of maximum offset such that the rotor is caused to revolve as the charges expand within the chambers.

3,515,104

ELECTROMAGNETICALLY CONTROLLED FUEL INJECTION ARRANGEMENT FOR INTERNAL COMBUSTION ENGINES

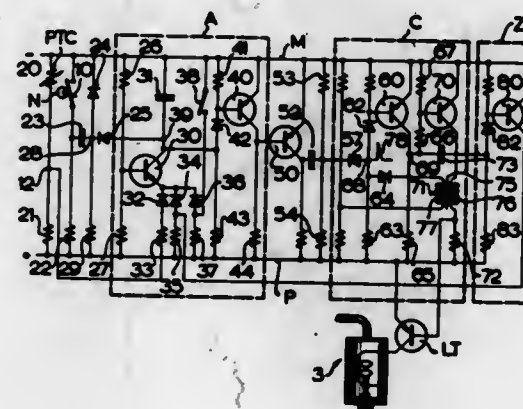
Wolfgang Reichardt, Stuttgart-Rohr, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed July 3, 1968, Ser. No. 742,252

Claims priority, application Germany, July 12, 1967, B 93,439

Int. Cl. F02d 5/02

U.S. Cl. 123-32

4 Claims



An electronic arrangement for controlling the injection of fuel into the cylinders of an internal combustion engine equipped with electromagnetically actuated valves. The valves are opened for admitting fuel into the cylinder by applying to the valve an electrical signal derived from a multivibrator circuit. The duration of the opening signal applied to the valve is, in turn, varied as a function of an operating characteristic of the engine. A signal emitter actuated for every rotation of the crankshaft of the engine transmits a signal to the multivibrator for initiating an unstable state of the multivibrator and thereby generating the signal to be applied to the fuel injection valves. An inhibiting switching circuit is connected between the signal emitter and the multivibrator for inhibiting transmis-

3,515,105

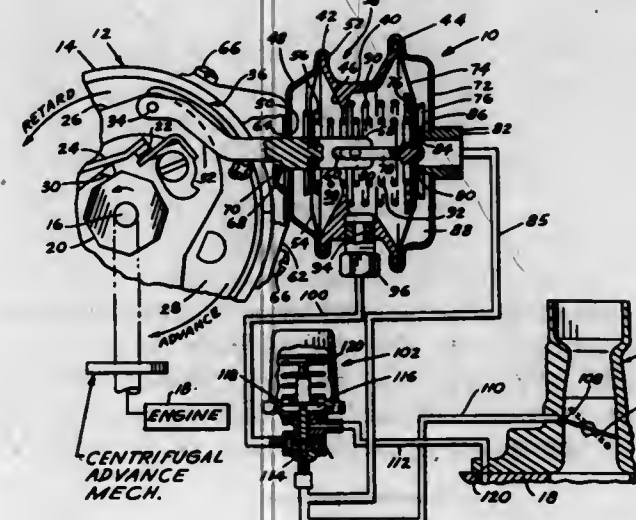
IGNITION SYSTEM

Raymond A. Soeters, Royal Oak, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan

Continuation of application Ser. No. 595,176, Nov. 17, 1966. This application Apr. 18, 1969, Ser. No. 824,724
Int. Cl. F02p 5/04, 1/00

U.S. Cl. 123-117

11 Claims



A control device for advancing and retarding the timing of an associated ignition distributor in accordance with selected parameters of engine operation and in response to engine and/or carburetor controlled vacuum has a general housing containing spaced first and second pressure responsive diaphragms peripherally retained within the housing in a manner defining at least a first chamber between the diaphragms and a second chamber between the second diaphragm and a wall of the housing; the diaphragms, operatively connected to each other by lost-motion linkage, are resiliently urged away from each other by a first spring operatively engaging each of the diaphragms; a second spring seated on a fixed seat normally urges the second diaphragm away from the first diaphragm and toward a cooperating abutment portion; the first diaphragm is connected to an actuating linkage adapted for connection to the ignition distributor to transfer thereto motion which results in either advancing or retarding the ignition-timing; and each of the first and second chambers being provided with conduit means suitable for connection to a source of vacuum controlled by the carburetor or generated by the engine in order to actuate either or both of said diaphragms in order to create the desired advance or retard of ignition timing in accordance therewith.

3,515,106

APPARATUS FOR OPERATING A SPARK IGNITION ENGINE ON TWO FUELS

Ko J. Verlinde, % Hogere Technische School, Vilsingen, Netherlands
Filed Aug. 11, 1967, Ser. No. 660,109

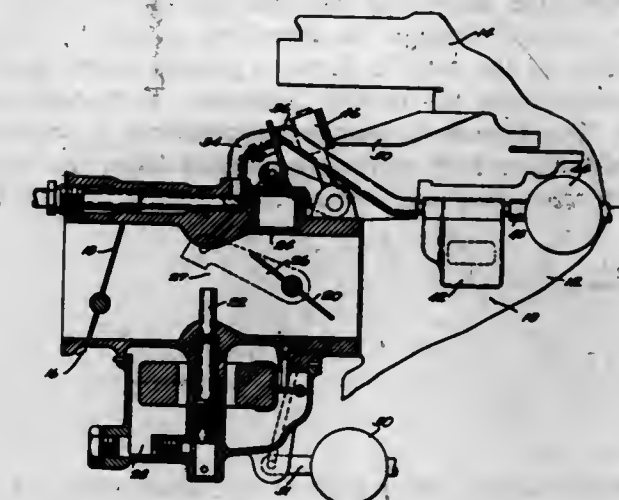
Int. Cl. F02m 1/16

U.S. Cl. 123-127

3 Claims

Disclosed herein is a method and apparatus for operating a spark ignition engine on dual fuels. A volatile fuel such as gasoline is supplied to the engine carburetor for engine starting and low speed operation. A less volatile fuel such as kerosene is supplied to the carburetor for

continuous operation at higher speeds. The dual fuels are supplied from independent supply tanks. The supply of volatile fuel is progressively decreased with increase in



engine speed by closing the volatile fuel supply by compressing a section of the volatile fuel supply conduit by a cam follower which is actuated by the throttle control.

3,515,107

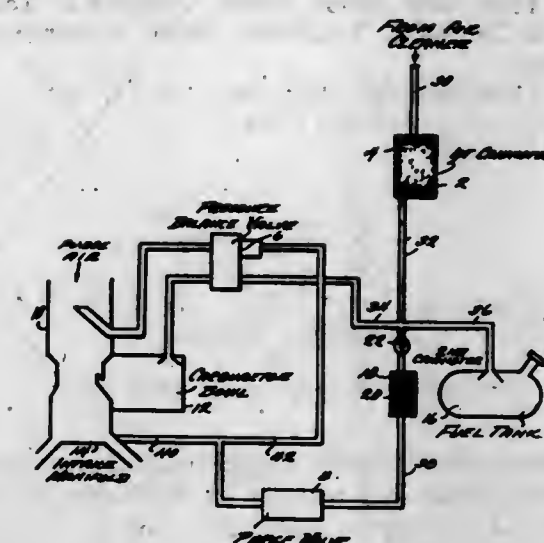
TWO-BED EVAPORATIVE LOSS CONTROL DEVICE

Ronald S. Joyce, Pittsburgh, Pa., assignor to Calgon Corporation, Calgon Center, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 31, 1968, Ser. No. 733,547
Int. Cl. F02m 67/08

U.S. Cl. 123-136

5 Claims



Minimizing of the initial surge of hydrocarbons in the purge cycle of a fuel vapor recovery system is accomplished by installing a second small carbon bed as shown in FIGS. 1 and 2. The second bed is not exposed to hydrocarbon vapors during the hot soak period.

3,515,108

VAPOR RECOVERY SYSTEM

Wendell F. Deeter, Los Alamitos, and Harold D. Daigh, Rolling Hills Estate, Calif., assignors to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 650,436, June 30, 1967. This application Dec. 2, 1968, Ser. No. 780,464

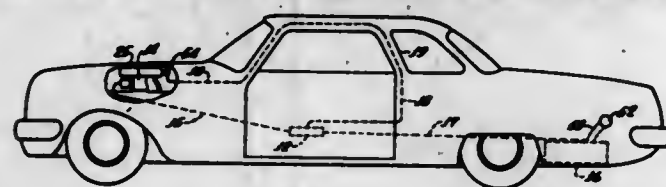
Int. Cl. F02m 57/04; B01d 50/00

U.S. Cl. 123-136

4 Claims

This application discloses a system for reducing evaporative emissions from the fuel system of an internal combustion engine driven vehicle, comprising a vent system fluidly connecting the carburetor float chamber and

fuel tank of the vehicle with a condenser receptacle disposed therein for condensing and returning condensed evaporative emissions to the fuel tank. The top portion of the condenser is vented to an adsorbent material mounted in the system for adsorbing uncondensed hydrocarbons. Fresh air is drawn through the adsorbent material during the operation of the vehicle above a predetermined level of delivered power to desorb adsorbed hydrocarbons therefrom. The system is designed to condense a portion of the evaporative hydrocarbon emissions from the carburetor and fuel tank and return them to the fuel tank.



Primary hydrocarbon vapor control and adsorption is accomplished during periods of soak, i.e., when the engine is not running and evaporative emission losses are highest and primary desorption is accomplished during periods of engine operation. The desorption is limited to predetermined levels of delivered power so that the carburetor air-fuel ratio in the induction system is not adversely affected and so that hydrocarbon and carbon monoxide exhaust emissions are not harmfully increased by induction of the desorbed hydrocarbons into the engine.

3,515,109

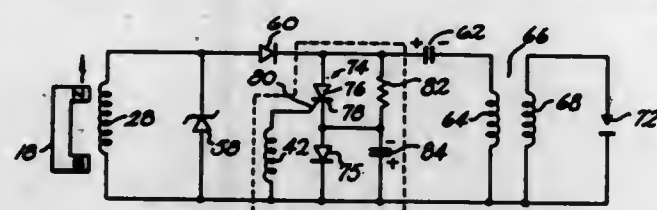
SOLID STATE IGNITION WITH AUTOMATIC TIMING ADVANCE

James B. Farr, Ann Arbor, Mich., assignor to Tecumseh Products Company, Tecumseh, Mich., a corporation of Michigan

Filed May 15, 1968, Ser. No. 729,276
Int. Cl. F02p 1/00

U.S. Cl. 123-148

27 Claims



An ignition circuit of the capacitor discharge type having a silicon controlled rectifier to discharge the storage capacitor and having an automatic timing advance for triggering the rectifier. At engine cranking speeds the rectifier is gated on in response to a lagging positive pulse at a desired retarded engine timing and at running speeds the rectifier is gated on in response to a leading negative pulse at a desired advanced ignition timing. The negative pulse is rendered effective only at running speeds by a capacitor connected in the triggering circuit.

3,515,110

CRANKCASE BOTTOM PART

Herbert Deutschmann, Stuttgart-Bad Cannstatt, Jürgen Wahnschaffe, Stuttgart-Stammheim, Wolfgang Rudert, Grunbach, Kreis Waiblingen, and Herbert Mader, Stuttgart, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

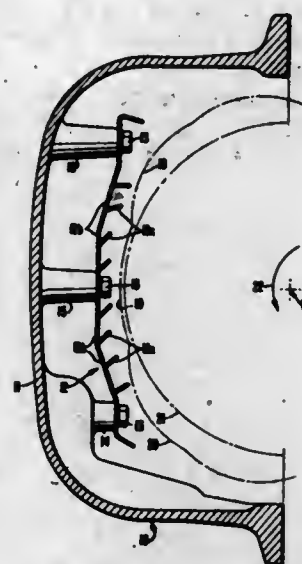
Filed June 13, 1968, Ser. No. 736,813
Claims priority, application Germany, June 15, 1967, 1,576,361

Int. Cl. F01m 9/12; F16a 31/00; F02t 7/00
U.S. Cl. 123-195

10 Claims

A crankcase bottom part for an internal combustion engine, especially with dry-sump lubrication, in which a pervious intermediate bottom is arranged between the

sump and the rotating engine parts permitting the passage of the lubricant. The pervious intermediate bottom may be provided with deflection means on the side facing the rotating parts of the engine formed by tongue-ports punched out of the pervious intermediate bottom. The



tongue-ports can be inclined so as to collect lubricant particles centrifuged by the rotating parts of the engine. Liquid-tight cover parts may also be arranged within the area of the pervious intermediate bottom above an aperture in the line system operable to suck off the lubricant.

3,515,111

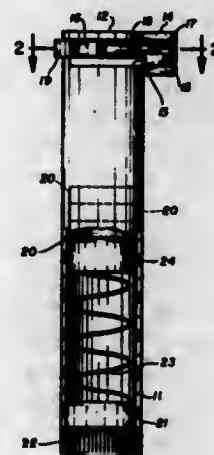
SPRING ACTUATED PROJECTILE PROJECTING DEVICE

Peter Ange, Hong Kong, British Crown Colony, assignor to Ce De Candy, Inc., Elizabeth, N.J., a corporation of New Jersey

Filed Aug. 19, 1968, Ser. No. 753,363
Int. Cl. F41b 7/00

U.S. Cl. 124-16

3 Claims



A holder for small projectiles or confections having a disc-shape, provided with a spring-loaded hammer that may be released to forcibly eject the projectile or confection from a slot in the housing.

3,515,112

PROJECTILE FIRING GUN TOY

Albert R. Baginski, Torrance, David T. Okada, Hermosa Beach, and Edwin O. Stastny, Santa Ana, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of Delaware

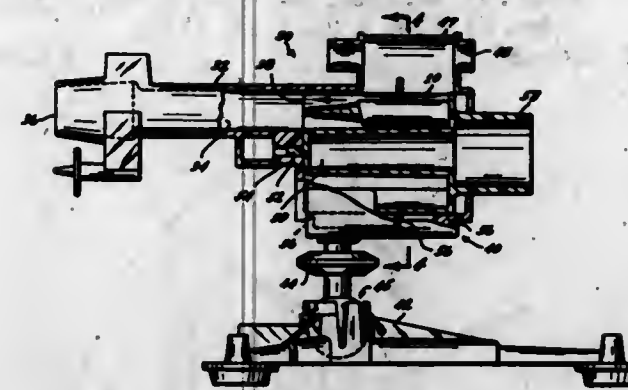
Filed Oct. 16, 1968, Ser. No. 768,096
Int. Cl. F41b 7/02; A63b 65/02

U.S. Cl. 124-19

7 Claims

A gun toy of the type including a multi-chamber rotatable cylindrical magazine, in which each chamber is

adapted to hold an energy-storing projectile. The energy stored in each projectile causes the projectile to be ejected up to several feet out of the toy's barrel when the projectile chamber is aligned with the barrel's bore. The



energy-storing projectile comprises a helical, spirally wound strip of a resilient material, e.g. Mylar. Energy is stored in the spiral strip by compressing it endwise and then inserting it into a chamber of the magazine.

3,515,113

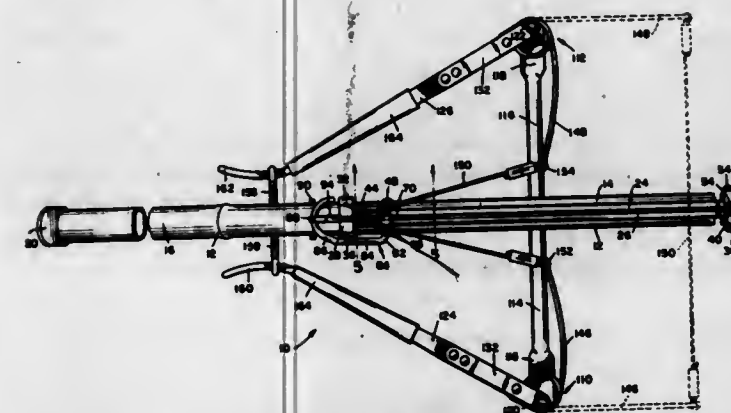
MISSILE-FIRING WEAPON

Howard L. Lawrence, 9816 E. 56th St., Indianapolis, Ind. 46236

Filed May 24, 1967, Ser. No. 641,038
Int. Cl. F41b 15/00, 5/00

U.S. Cl. 124-27

11 Claims



A missile-firing weapon comprising an elongated frame, guide means carried by the frame and arranged to support a missile for movement therealong, a pair of torsional springs carried by said frame and a lever associated with each of said springs, each spring having a first arm and a second arm. A flexible strand is connected between the first arms of the two springs and is adapted to be retracted for cooperative engagement with a missile, without significantly loading said springs. Each such lever is significantly longer than the first arm of its associated spring and is operatively connected to the second arm of its associated spring so that, after said strand has been so retracted, the levers may be individually manipulated to load said springs quite heavily so that, when the energy in the springs is released, the missile is hurled along the guide means. In a preferred embodiment, an arrow-type missile and a slug-type missile may be fired simultaneously.

3,515,114

DISC PROJECTING TOY PISTOL

Rene R. Carboneau, West Boylston, Mass., assignor to Ray Plastic Inc., Winchendon Springs, Mass., a corporation of Massachusetts

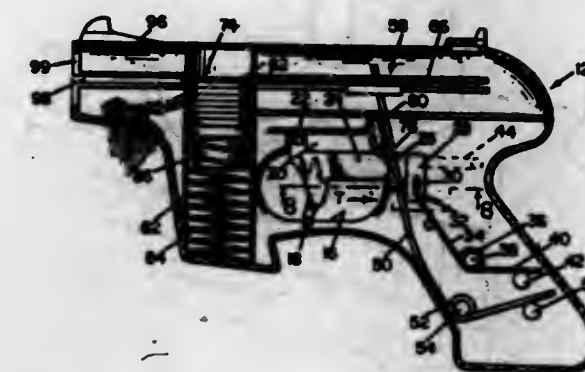
Filed Sept. 22, 1967, Ser. No. 669,862
Int. Cl. F41b 7/08

U.S. Cl. 124-27

3 Claims

A toy pistol including a retractable trigger spring pressed to impel a plunger acting to strike and impel the

top one of a stack of discs, causing the disc to ride forwardly through a guideway, which keeps it generally horizontal, and out the barrel of the piston, there being a flexible pin located in the guideway for the disc which is impinged upon by the periphery of the disc as it is im-



pelled through the guideway, the flexible pin causing the disc to spin rapidly on its axis as it leaves the barrel enhancing accuracy. The plunger includes an angled forward extension which strikes the disk at an edge thereof remote from the edge engaged by the pin.

3,515,115

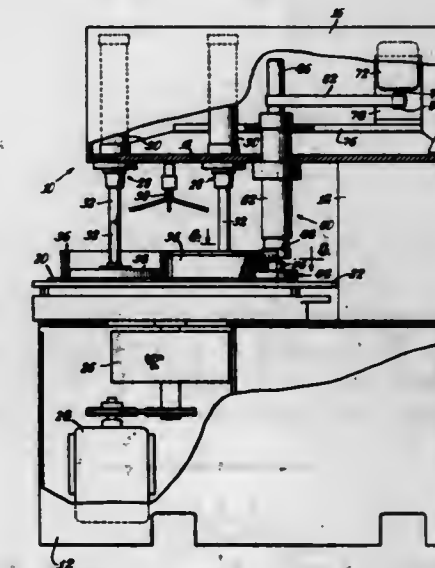
LAPPING MACHINE

Stephen A. Boettcher, Deerfield, Riverwoods, Ill., assignor to Speedfam Corporation, Skokie, Ill., a corporation of Illinois

Filed Sept. 14, 1967, Ser. No. 667,853
Int. Cl. B24b 53/02

U.S. Cl. 125-11

10 Claims



Support and drive means for a contour control member positionable with the lower surface thereof in engagement with a lapping disc for dressing the lapping surface of the disc.

3,515,116

UTENSIL HOLDER FOR A COOKING UNIT

Harald Finnstrand, Pelham, N.Y., assignor, by mesne assignments, to Automation Industries, Inc., Los Angeles, Calif., a corporation of California

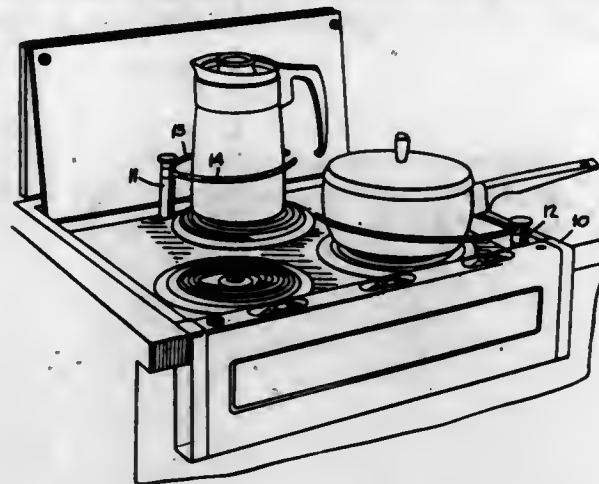
Filed May 24, 1968, Ser. No. 731,785
Int. Cl. F24c 3/12, 15/10

U.S. Cl. 126-24

13 Claims

A stove or cooking unit for the galley of a boat is provided with a vertically adjustable utensil holder preferably having a pair of arms arranged to confine a cooking vessel therebetween. The arms extend from a common support

and are laterally adjustable relative to one another. Means are provided to lock the arms in a selected lateral position and means are provided to retain the above-men-



tioned support in any of a plurality of vertically adjusted positions to accommodate cooking vessels of different heights.

3,515,117

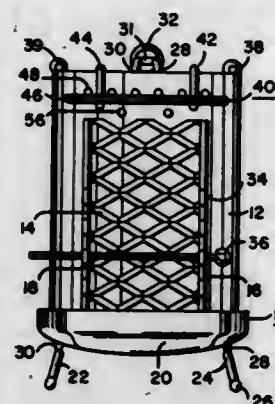
PORTABLE HEATING DEVICE

John G. McArthur, San Diego, Calif., assignor to J. Gene Laboda, San Diego, Calif.
Filed May 29, 1968, Ser. No. 733,097

Int. Cl. A47j 37/07; F24b 1/26, 3/00

U.S. Cl. 126-25

9 Claims



A portable heating device that supports fuel of the charcoal type for burning in a position before a curved reflecting shield, the combination of which radiates the heat outwardly and upwardly over an expanded area.

3,515,118

CAMPFIRE PIT

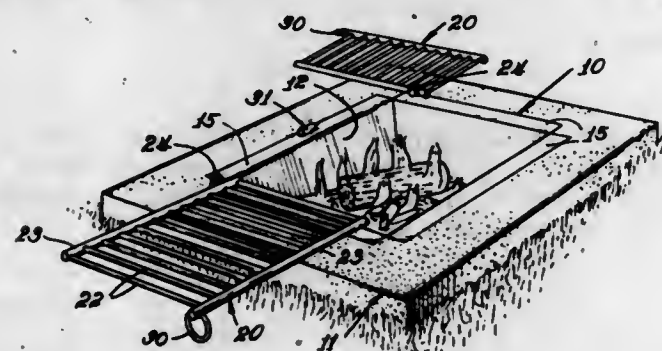
Frank W. Beller, Aurora, Ill., assignor to Belson Manufacturing Co., Inc., North Aurora, Ill., a corporation of Delaware

Filed Sept. 13, 1968, Ser. No. 759,696

Int. Cl. A47j 37/00; F24b 3/00

U.S. Cl. 126-29

7 Claims



A campfire pit-grill for permanent placement on the ground with a concrete base.

3,515,119
FOOD CARRYING AND PREPARING APPLIANCE

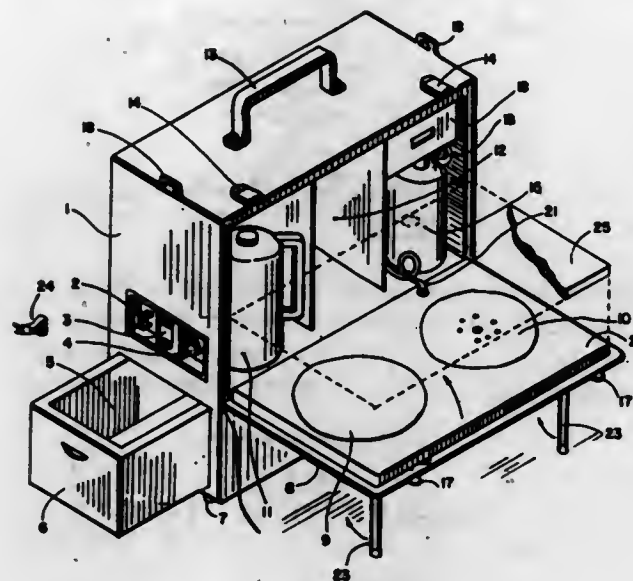
Stanley Edward Kivela, Rte. 1, Box 94,
Marengo, Wis. 54855

Filed Oct. 30, 1967, Ser. No. 678,986

Int. Cl. F24c 1/02, 1/16, 15/18

U.S. Cl. 126-37

8 Claims



This invention is a food carrying and preparing appliance that provides, in a very portable form, the following items: A drop front that can be opened to a horizontal position in which can be built one or more heating units, using various fuels, for the heating and preparation of foods and lunches. An insulated storage drawer is provided in which food can be stored for protection against excessive heat and cold. Further storage space is provided in the upper part of the item. Controls for the heating units are built into the item.

3,515,120

GROVE HEATER

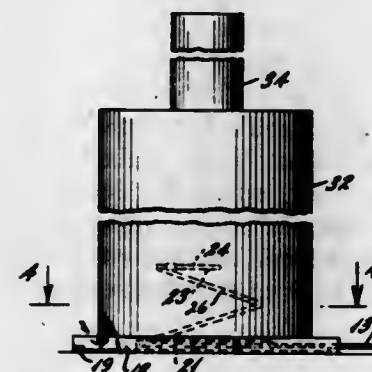
Ralph D. Baxley, P.O. Box 586,
Weirsdale, Fla. 32695

Filed June 27, 1969, Ser. No. 837,073

Int. Cl. A01g 13/06

U.S. Cl. 126-59.5

3 Claims



A grove heater including a pan mounted in a frame and adapted to rest beneath a combustion chamber forming a shell or container with a fuel line fixed thereto and spirally disposed and terminating in a closed upper end with a bottom opening or orifice through which atomized fuel is projected downwardly and burned for providing the desired heat.

3,515,121

PIPELINE CONVERSION DEVICE FOR FIELD HEATERS

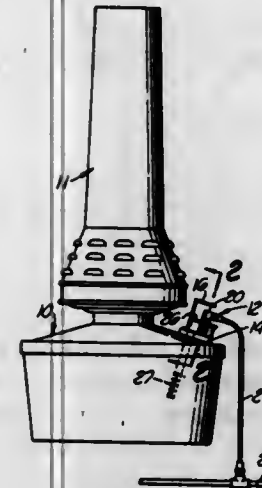
Allyn B. Schen and Joseph J. Stupak, Jr., Upland, Calif.,
assignors to Schen Manufacturing Company, Upland,
Calif., a corporation of California

Filed June 17, 1968, Ser. No. 737,579

Int. Cl. A01g 13/06; F23d 5/04; F23q 7/06

U.S. Cl. 126-59.5

10 Claims



A conversion device and system for converting existing field heaters to centrally fueled heaters. A nozzle assembly is provided which is attached at the filler opening of a field heater. The nozzle assembly includes a spray nozzle and draft deflector arrangement therefor. The assembly may include an igniter for enabling ignition of the fuel automatically.

3,515,122

FIREPLACE

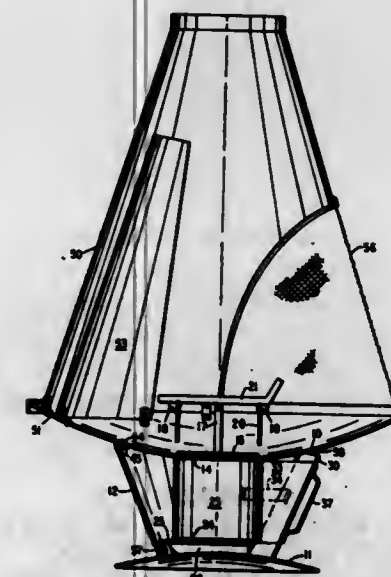
George M. Andrews, Syracuse, N.Y., assignor to Vega Industries, Inc., Syracuse, N.Y., a corporation of New York

Filed Aug. 7, 1968, Ser. No. 750,971

Int. Cl. F23j 1/00; F24b 1/18, 13/02

U.S. Cl. 126-62

5 Claims



A free standing fireplace having a hollow hearth supporting structure provided with an opening in the side wall thereof through which an ash receiving receptacle is inserted. The hearth has a central aperture closed by a removable closure, upon removal of which hearth ashes can be removed from the hearth and deposited in the receptacle. The receptacle is formed with a face plate which serves as a continuation of the supporting structure side wall, and a closure for the opening therein. The hearth supporting structure is provided with means for cooling the receptacle.

3,515,123

CIRCULATING LIQUID HEATING SYSTEM

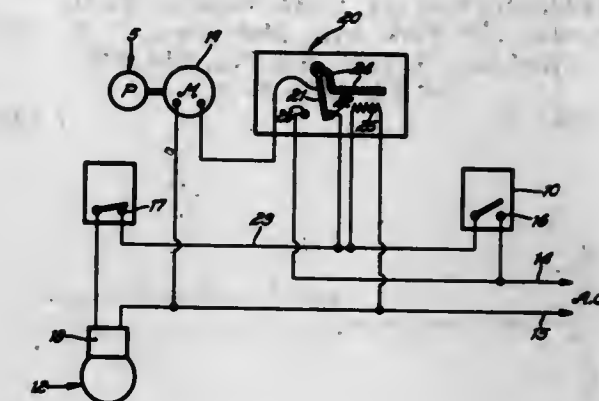
Angelo N. Duncan, Bourbonnais, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Apr. 25, 1968, Ser. No. 724,075

Int. Cl. F24d 3/02

U.S. Cl. 126-362

8 Claims



This disclosure relates to a hot water system having an instantaneous water heater connected to a storage tank having a cold water inlet and a hot water outlet.

A heater control is connected to the power line in series with a tank thermostat. A circulating pumping means is connected to the power lines through a thermal relay having a first switch connected to the power lines through the thermostat and an alternate switch connects the pump directly to the power lines. The relay includes a thermal bimetal element connected to the power lines through the thermostat to open the first switch and close the second and operable to maintain the latter for a predetermined period after the reset of the thermostat. The pump operates for a fixed time to cool the heater beyond the point of possible overheating and thermal shock of the system as a result of residual heat in the heater.

3,515,124

METHOD OF OBTAINING EXOCRINE SECRETIONS FROM LIVE ANIMALS

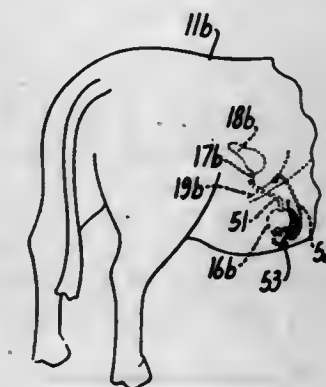
Charles Gurchot, 150 Palo Alto Ave.,
San Francisco, Calif. 94114

Filed July 24, 1967, Ser. No. 655,537

Int. Cl. A61b 17/00

U.S. Cl. 128-1

5 Claims



This invention relates to a method of obtaining exocrine secretions from live animals comprising the steps of taking a selected fraction of the output of the secretions of the glands from the animal while diverting a selected fraction of the output of the secretion to the animal for maintenance of life and good health; in its preferred form, the method includes installation of a diverting apparatus.

and a passage to the exterior of the animal whereby a selected fraction of the exocrine gland output flows through its normal channels while the fraction recovered is directed through a collecting device so as to maintain the life and health of the animal and provide a large continuous supply of exocrine secretion whereby the secretion itself and components thereof may be recovered.

3,515,125 NEUROLOGICAL DIAGNOSTIC TOOL

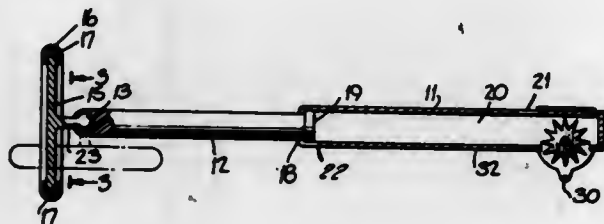
Asa P. Ruskin, 555 Park Ave., New York, N.Y. 10021

Filed June 9, 1967, Ser. No. 644,878

Int. Cl. A61b 5/16

U.S. Cl. 128—2

7 Claims



A hammer for testing neurological reflexes of a subject and comprises a handle having a grip portion and a disc-shaped hammerhead moveably mounted in a socket at the end of the handle opposite the grip portion. The hammerhead is moveable to one of two positions relative to the handle; in one position the head is parallel to the handle and in the other position the head is perpendicular to the handle. Incorporated in the handle is a Wartenberg pinwheel and a cover for the same, which has a blunt projection for testing cutaneous plantar reflexes.

3,515,126 TEST PATCH FOR DIAGNOSING ALLERGIES

Gustav Sigfrid Fregert, Planetgatan 19,
Lund, Sweden

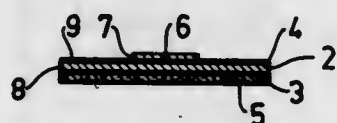
Filed Aug. 4, 1967, Ser. No. 658,461

Claims priority, application Sweden, Aug. 11, 1966,
10,891/66

Int. Cl. A61b 10/00

U.S. Cl. 128—2

3 Claims



A test patch used in proving the presence or absence of particular contact enzymes includes an adhesive plaster carrier for the test patch which is made of a metal foil and is impervious to liquids and gases. A smaller absorbent test piece is attached to the carrier. When the test patch is attached to the skin the carrier maintains a free zone around the test piece in which the skin can not be contacted or affected by any adhesives. Substances applied to the test piece cannot escape through the impervious carrier.

3,515,127 MANOSTAT PUMP

Ralph D. Reymond, 5208 Bowley's Lane,
Baltimore, Md. 21206

Filed May 19, 1967, Ser. No. 641,423

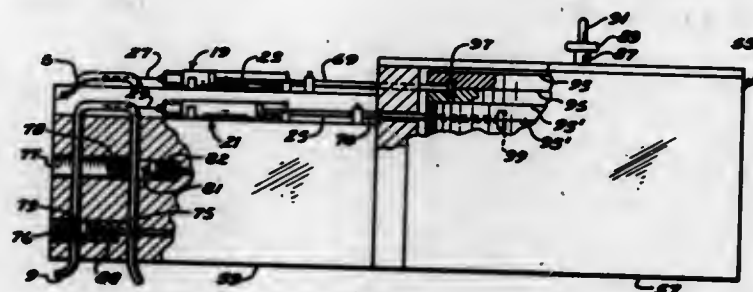
Int. Cl. A61b 5/10; A61m 1/00

U.S. Cl. 128—2

3 Claims

A mechanical manostat pump comprises a rotary cam-driven unit which operates conventional hypodermic

syringes simultaneously and at the same rate but in opposite phase to inject fluid into and withdraw fluid from a cavity at constant pressure. Conventional flexible tubing permits the desired valve action to be accomplished by a simple crimping of the tubing. To maintain constant pres-



sure when a gas is utilized a flexible bellows type of pressure vessel is constructed with a cross-sectional area which remains constant regardless of fluid volume within the vessel as the vessel is collapsed under a constant applied force of predetermined value.

3,515,128

SKIN BIOPSY PUNCH

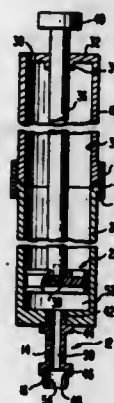
Bernard F. McEvoy, 818 Amherst St.,
Buffalo, N.Y. 14216

Filed Dec. 11, 1967, Ser. No. 689,660

Int. Cl. A61b 10/00, 17/32

U.S. Cl. 128—2

2 Claims



A disposable knife assembly for a biopsy punch operating in conjunction with a piston and cylinder body assembly to hold the skin specimen by pressure differential while being severed from the attaching fatty tissue, so to avoid damage to the specimen incidental to its being lifted and held during the severing operation.

3,515,129 SURGICAL RETRACTOR AND RETAINER DEVICE FOR SUTURES

Andrew Truhan, R.D. 3, Box 392T,
Somerset, N.J. 08873

Filed Dec. 29, 1967, Ser. No. 694,558

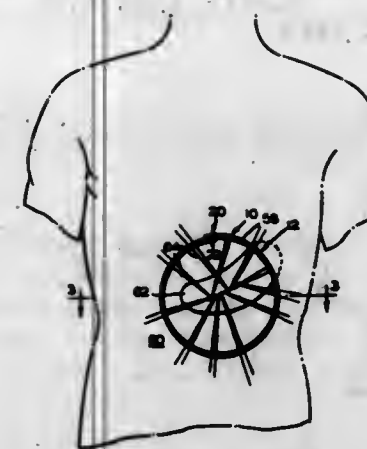
Int. Cl. A61b 17/02

U.S. Cl. 128—20

11 Claims

A surgical appliance composed of an elongated channel shaped strip of flexible plastic having overlapping ends provided with registering apertures to receive a connector for disposing the strip in generally circular form for emplacement, as a retractor, in an incision; the strip having coplanar lateral wings on its side edges and lateral fingers spacedly interposed between the wings and defining therewith suture holding slits with outer rounded ends

of the wings serving as guides for the introduction of sutures from the incised area into the slits; and winged sections being severable from the strip and attachable by thereby both immobilizing and supporting the arm and shoulder to aid in the rehabilitation of dislocation of the shoulder and fracture of the head of the humerus.



3,515,132 INTRAUTERINE CONTRACEPTIVE DEVICE

Charles Allen McKnight, Glendale, Mo.
(2914 Painted Valley Drive, Little Rock, Ark. 72207)

Filed Dec. 26, 1967, Ser. No. 693,456

Int. Cl. A61f 5/46

U.S. Cl. 128—130

12 Claims



connectors to wings on the strip to provide mounting feet in the external incision-encompassing placement of the suture holding appliance.

3,515,130

JET-INJECTION HYPODERMIC DEVICE

Jiromaru Tsujino, Tokyo-to, Japan, assignor to Kabushiki Kaisha Yuryo Kikakuhin Kenkyusho, Tokyo-to, Japan

Filed Sept. 18, 1967, Ser. No. 668,381

Claims priority, application Japan, Sept. 21, 1966,
41/61,934

Int. Cl. A61m 5/30

U.S. Cl. 128—173

7 Claims



A jet-type hypodermic injection device with an injector in which a piston pump for ejection of injection liquid is driven directly by a hydraulic piston operated by hydraulic pressure supplied by a separate hydraulic pressure supply system, the pressure supply being controlled by hand operated valves in the injector or by switches on the injector controlling electromagnetic valves in the supply system.

An intrauterine contraceptive device for positioning through the use of an applicator, in the uterus and therein control conception. The device is formed with a stem-like portion that seats upon the leading edge of the slide rod of the applicator during insertion into the uterus, while the main embodiment of the applicator remains exteriorly of said uterus and its cervix. The device is formed having resilient arms extending from the stem, and they are normally distended so as to prevent expulsion of the device when properly positioned within the uterus. But, these arms are also contractible so as to facilitate the insertion and removal of the device, and a cord attaches to the arms and may cooperate with the applicator to accomplish these functions.

3,515,133

DIVING HELMET AND AIR SUPPLY SYSTEM

Frederick A. Parker, Broomall, Pa., assignor to General Electric Company, a corporation of New York

Filed Aug. 30, 1967, Ser. No. 664,448

Int. Cl. A62b 7/04

U.S. Cl. 128—142.2

1 Claim

Closed diving dress provided with supplies of diluent or normal air and of oxygen in separate tanks has electrical power supply and control system and pumps which maintain in the suit both water and breathing air pressure exceeding by predetermined constant amount the changing external water pressure, to simulate the "stiffness" of a space suit for training purposes. Carbon dioxide is absorbed and oxygen added to maintain suitable concentration; inhalation and exhalation are assisted by pump. Water circulated in suit is heated to minimize diver's heat loss. There is an underwater diving helmet and a powered system to supply breathing fluid thereto. Breathable air is forcibly pumped to the helmet and extracted therefrom. This is done by a pressure sensing control diaphragm switch which senses the difference in pressure between ambient water pressure and the air pressure supplied to the helmet. When the air pressure is greater an electrical motor is operated to move a reversible valve in one direction and when the water pressure is greater

3,515,131

IMMOBILIZING SHOULDER SUPPORT

Daniel D. Stevens, 11 Hospital Road,
Franklin, N.J. 07416

Filed Oct. 24, 1968, Ser. No. 770,282

Int. Cl. A61f 5/40, 13/10

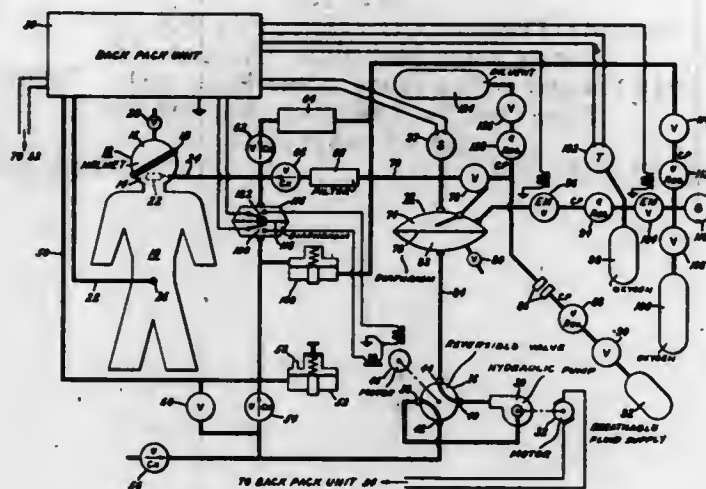
U.S. Cl. 128—94

7 Claims



An elasticized, immobilizing shoulder support having means to secure the arm and forearm to a body strap

the reversible valve is moved in the opposite direction. This reversible valve is connected to a continuously running water pump which pumps water to one side of a second pressure sensitive diaphragm. The latter diaphragm



is connected to the breathing fluid supplied to the helmet and, depending on the pressures subjected to, will forcibly supply or exhaust the breathing fluid to the helmet.

3,515,134

VOLUMETRIC CONTROL DEVICE FOR POSITIVE PRESSURE BREATHING MACHINES

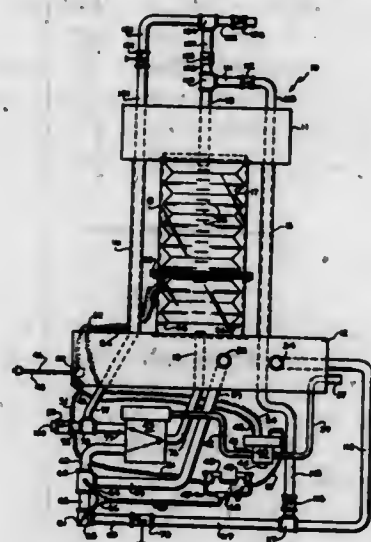
Douglas H. Taylor, Jamesville, N.Y., assignor of fifty percent to John R. Potrafka, Syracuse, N.Y.

Filed Dec. 28, 1967, Ser. No. 694,283

Int. Cl. A62b 7/00

U.S. Cl. 128-145.6

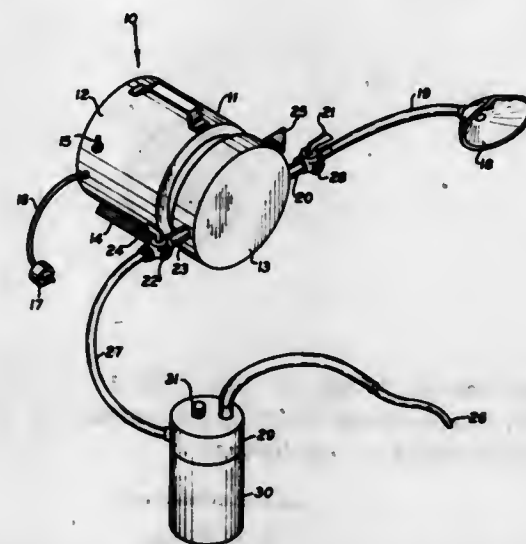
6 Claims



The device powered by an intermittent positive pressure breathing machine has a transparent hollow cylinder in which is suspended a bellows, the cylinder and bellows each being sealed at both ends except for separate passages leading to the bellows interior and cylinder interior. A pressure operated switch operates a valve arrangement to admit gas from the machine to the cylinder upon the machine-initiated inspiration half-cycle and a magnetically operated switch adjustably mounted on the cylinder initiates the expiration half-cycle, the bellows bottom carrying a cooperating magnet. During inspiration the bellows force gas to the patient and during expiration gas is forced from the cylinder to the bellows through the passages.

3,515,135
PORTABLE RESUSCITATOR UNIT
Henry C. Flower, 88 Godfrey Ave., Bayville, N.Y. 11709, and Stanley G. Ruderman, 38 Jamaica Ave., Flushing, N.Y. 11363
Filed May 22, 1968, Ser. No. 731,168
Int. Cl. A62b 7/00
U.S. Cl. 128-145.6

8 Claims



A portable resuscitator unit having combined in it inhalator and mucus removal structures forming a completed unit capable of being operated by any source of electric potential.

3,515,136
ANKLE SUPPORT
Jack R. Baker, Lincoln, R.I., assignor to Jariba Corporation, a corporation of Delaware
Filed June 23, 1967, Ser. No. 648,484
Int. Cl. A61f 13/02
U.S. Cl. 128-166

1 Claim



An ankle supporter made from a single piece of inelastic material which has a single joint at the ankle and comprises an arch member and a member encircling the Achilles' tendon with an elastic fastening means over the instep portion whereby the entire member may be tightened around the ankle.

3,515,137
INTRAVENOUS CATHETER UNIT WITH INSERTER MEANS FOR SEQUENTIAL FEEDING OF CATHETER
Louis S. Santomieri, Martinez, Calif., assignor to Deseret Pharmaceutical Company, Incorporated, Salt Lake City, Utah, a corporation of Utah
Filed Oct. 26, 1966, Ser. No. 589,684
Int. Cl. A61m 5/00
U.S. Cl. 128-214.4

11 Claims

A catheter unit having a stylet comprised of a leading needle, an elongated rod in the form of a flexible wire rigidly secured to the trailing end of the needle, and a trailing handle-forming male plug joined to the trailing end of the wire. The unit also comprises a catheter tube

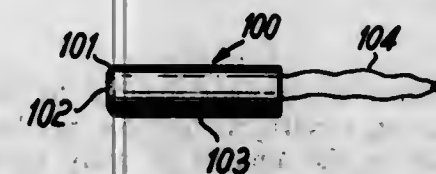
telescopically surmounting the stylet so that the sharpened end of the needle tip is exposed beyond the distal tip of the catheter tube. The catheter tube loosely surrounds the flexible wire and terminates in a female fitting which mates with the male plug in the assembled position. A relatively short catheter inserter in the form of a compressible clamp surrounds a portion of the catheter tube and



is provided with opposed axially aligned jaws which may be manually squeezed together to close the inserter in gripping relation upon the catheter tube for joint manipulation. When the jaws are released the memory of the material from which the inserter is fabricated accommodates return of the inserter to the open position for free relative movement of the inserter with respect to the catheter tube.

3,515,138
PROCESS AND APPARATUS FOR TREATING ELONGATED DEFORMABLE ARTICLES
Josef Hochstrasser, Grafenberger Allee 39, Dusseldorf, Germany, and Justus Wolff, Richard-Strauss-Allee 20, Wuppertal-Barmen, Germany
Filed July 5, 1967, Ser. No. 651,167
Int. Cl. A61f 13/20
U.S. Cl. 128-270

9 Claims



A tampon consisting of an elongated body of deformable absorbent material. The tampon body has a leading end adapted to be introduced into a cavity in advance of the remainder of the tampon. The tampon body further has a side surface which extends rearwardly from the leading end, and an endless rounded exterior edge which forms a transition area between the leading end and the side surface.

ERRATUM

For Class 128-300 see:
Patent No. 3,515,100

3,515,139
ATRAUMATIC CLAMP
Rudolph F. Mallina, Hastings-on-Hudson, N.Y., assignor to Codman & Shurtleff, Inc., a corporation of Massachusetts
Filed Aug. 29, 1966, Ser. No. 575,743
Int. Cl. A61b 17/28
U.S. Cl. 128-322

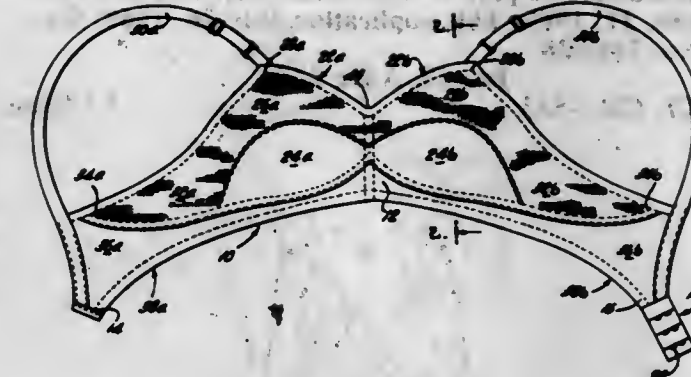
10 Claims



Surgical forceps are constructed with two opposing, movable jaws, one of which has at least two longitudinal grooves positioned to receive protuberances removably mounted on the opposite jaw, whereby secure clamping may be obtained by the application of uniformly distributed pressure to the tissue.

3,515,140
BRASSIERES
Ludwig Strauss, Elkins Park, Pa., assignor to Kayser-Roth Corporation, New York, N.Y., a corporation of New York
Filed Oct. 18, 1968, Ser. No. 768,622
Int. Cl. A41c 3/00
U.S. Cl. 128-425

6 Claims



A brassiere used by women as a bust support. The brassiere has an elongated body-encircling band terminating in a pair of free ends adapted to be detachably connected to each other at the back of the wearer. A pair of cups are located over a front central region of this band, and these cups respectively have lower portions connected to and extending upwardly from the band and upper portions connected to and extending upwardly from the lower portions. The upper cup portions extend laterally beyond the lower cup portions along the upper edge of the band to which the upper cup portions are connected, and these upper portions are uninterrupted from the region where they are situated over the lower portions along their lateral extensions where they are situated over the band, beyond the lower cup portions, so that in this way the integral extensions of the upper cup portions and the band portions connected thereto form for the brassiere lateral side wings, without requiring separate wing panels for this purpose.

3,515,141
FOUNDATION GARMENT
Eileen Rockwell Black, New York, N.Y., assignor to Flexnit Company, Inc., a corporation of Delaware
Filed July 21, 1967, Ser. No. 655,203
Int. Cl. A41c 1/00
U.S. Cl. 128-533

6 Claims



Foundation garment, such as a girdle or the like, provided with wedge-shaped elastic fabric means of greater stretch than the garment body disposed at the side waist-line regions to enable the garment to adjust for non-standard waist sizes and to added pressures caused by shifting

of the underlying flesh when the wearer sits, stoops, bends, or the like, thus eliminating any tendency of the waistline region to roll over or wrinkle.

3,515,142

FOUNDATION GARMENT

Eileen Rockwell Black, New York, N.Y., assignor to Flexnit Company, Inc., a corporation of Delaware
Continuation-in-part of application Ser. No. 655,203, July 21, 1967. This application July 26, 1968, Ser. No. 748,038

Int. Cl. A41c 1/00

U.S. Cl. 128—533

4 Claims



Foundation garment, such as a girdle or the like, provided with wedge-shaped elastic fabric means of greater stretch than the garment body disposed at the side waistline regions to enable the garment to adjust for non-standard waist sizes and to added pressures caused by shifting of the underlying flesh when the wearer sits, stoops, bends, or the like, to eliminate any tendency of the waistline region to roll over or wrinkle, and means at the rear of the garment for transmitting forces developed therein to the torso at locations away from the lower spinal region enabling the garment to provide positive figure control, and proper support in the lower region of the back, while yet enabling the garment to be completely comfortable during use.

3,515,143

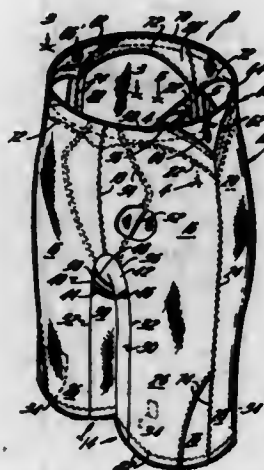
FOUNDATION GARMENTS

Eileen R. Black, New York, N.Y., assignor to Flexnit Company, Inc., a corporation of Delaware
Continuation-in-part of applications Ser. No. 655,203, July 21, 1967, and Ser. No. 748,038, July 26, 1968. This application Feb. 10, 1969, Ser. No. 797,980

Int. Cl. A41c 1/00

U.S. Cl. 128—533

23 Claims



Foundation garments, such as girdles or the like, provided with means in the waistband region of the garment for automatically adjusting for increased pressures caused

by non-standard developments and flesh shifting when the wearer sits, stoops or bends so that the tendency of the waistband to roll over may be substantially reduced or eliminated without substantially adversely affecting the control or slimming power of the garment.

3,515,144

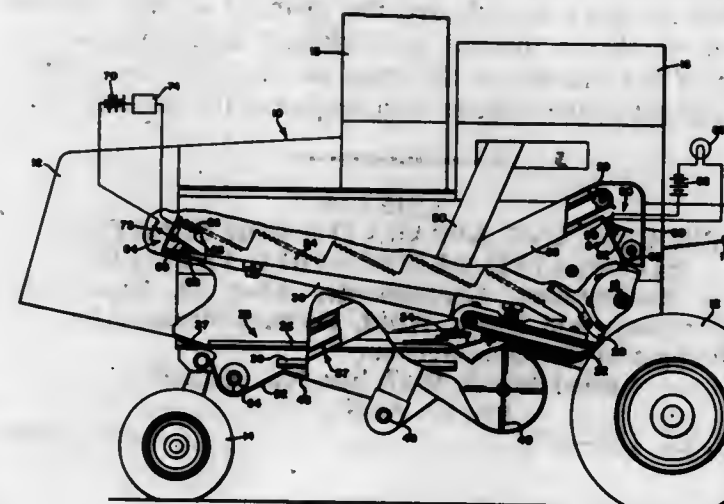
DEVICE FOR SENSING OPERATING CONDITIONS IN A HARVESTING MACHINE

Charles Samuel Morrison, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed July 19, 1967, Ser. No. 654,469

Int. Cl. A01f 7/00

U.S. Cl. 130—26

5 Claims



A self-propelled combine having fore-and-aft straw walkers and an electric system for producing a signal proportionate to the amount of grain separated by the rearward portion of the straw walkers, a cleaning shoe beneath the straw walkers with a tailings elevator for delivering the cleaning shoe tailings to the threshing mechanism and an electric signaling system associated with the discharge end of the tailings elevator to actuate an indicator when the flow of tailings exceeds a predetermined rate.

3,515,145

THRESHING CONCAVE

Franz J. Herbsthofer, Kassel-Harleshausen, Germany, assignor to Massey-Ferguson G.m.b.H., Kassel, Germany
Filed Dec. 20, 1967, Ser. No. 692,001
Claims priority, application Great Britain, Dec. 30, 1966, 58,302/66

Int. Cl. A01f 12/24

U.S. Cl. 130—27

3 Claims



A concave for a threshing mechanism is disclosed in which each cross bar consists of two composite parts being secured together. Each part has notches which, upon combining the two parts into one cross bar, leaves holes in the bar through which wires pass.

3,515,146

AROMATIC FILTER

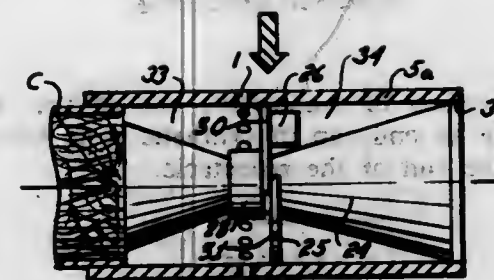
Raymond N. Neale, 11 Harvest Road, Levittown, Pa. 19056

Filed June 27, 1967, Ser. No. 649,289

Int. Cl. A24d 1/06; A24f 7/04

U.S. Cl. 131—10.1

5 Claims U.S. Cl. 131—59



The invention relates to a filter for cigarettes and cigars which enables the same to be smoked under aromatic or non-aromatic conditions, the aromatic condition being obtained by simply squeezing the filter element between the fingers, the effect of which is to fracture a chamber containing the aromatic and thereby releasing the same to mix with the smoke.

3,515,147

MACHINE AND METHOD FOR MAKING CIGARETTES

Jesse Herbert Sledge, Richmond, Va., and Carl Szybalski, Walnut Creek, Calif., assignors to Sutliff Tobacco Company, Richmond, Va., a corporation of California

Filed June 25, 1968, Ser. No. 739,840

Int. Cl. A24c 5/40, 5/08, 5/52

U.S. Cl. 131—29

6 Claims



A machine for rolling filter cigarettes by depositing filters and tobacco in a pocket in a flexible apron and compressing and rolling the filters and tobacco onto a piece of cigarette paper in a moving bight in the apron formed between a roller and a plate is provided with a magazine for supplying a sequence of filters and measured amounts of tobacco to the pocket; resetting means for reforming the pocket; holding means for holding the paper on the apron in advance of the fold therein and a blade for cutting rolled cigarettes to proper length.

3,515,148

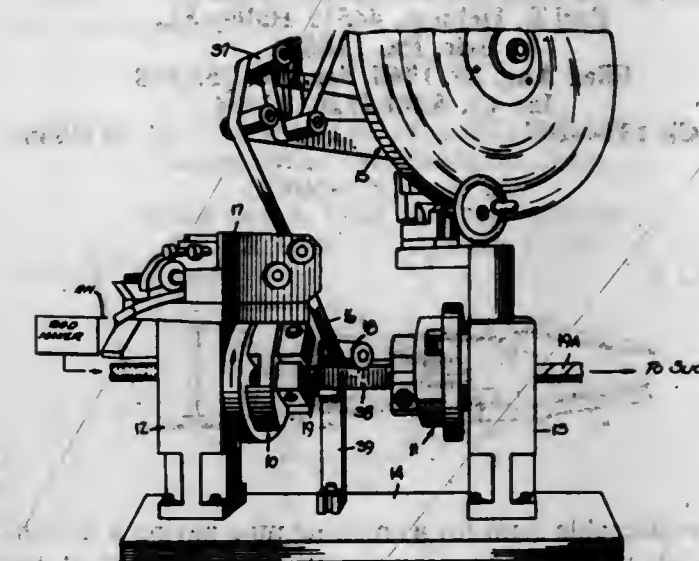
CIGAR WRAPPING MACHINE

Bert H. Wallace, Uniondale, N.Y., assignor of fifteen percent to Michael Ebert, New York, N.Y.

Filed June 4, 1968, Ser. No. 734,264

Int. Cl. A24c 1/26, 1/30

10 Claims



A cigar wrapping machine comprising a pair of rotating chuck assemblies disposed in spaced relation and in axial alignment, each assembly being provided with a set of rollers which turn about respective axes at right angles to the axis of chuck rotation and which frictionally engage a tobacco rod passing through the assemblies. The rollers function to advance the rod along its longitudinal axis as the rod is concurrently rotated by the assemblies. Supplied to a wrapping zone in the space between the spaced assemblies bridged by the cigar rod along a path obliquely directed with respect to the longitudinal axis of the rod, is a strip of wrapper material to whose undersurface paste is applied, the strip being wound on the rotating and advancing rod to form a helical wrapper thereabout.

3,515,149

APPARATUS FOR SMOOTHING AND DESTALKING TOBACCO LEAVES

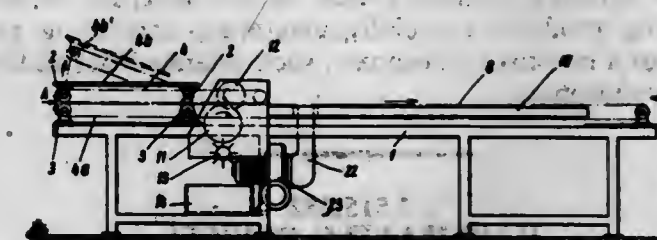
Erich Meyer, Spradow, near Bunde, Germany, assignor to Brockfeld & Meyer, Spradow, near Bunde, Germany
Filed Mar. 18, 1968, Ser. No. 713,887

Claims priority, application Germany, Mar. 17, 1967, B 91,653

Int. Cl. A24b 5/14

U.S. Cl. 131—125

6 Claims



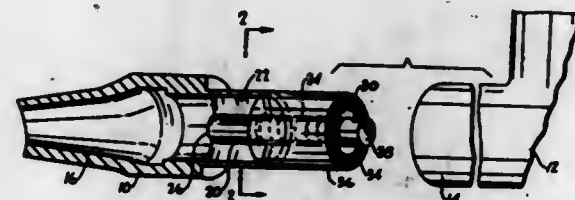
Tobacco leaves are spread open, smoothed and destalked in an automatic machine wherein the central stems of successive leaves are engaged by a pair of endless belts to move lengthwise toward a cutting device which severs the leaves at both sides of the stems to separate the stems from laminae. The laminae are smoothed

by a pair of smoothing units, one on each side of the endless belts, during travel of respective stems toward the cutting station. Each unit has several pairs of parallel carded aprons which make acute angles with the advancing direction of the endless belts.

3,515,150
STEM FOR SMOKING PIPE
Earl E. Helman, 445½ Halley St.,
Erie, Pa. 16511
Filed Aug. 20, 1968, Ser. No. 753,928
Int. Cl. A24f 1/20, 13/04

U.S. Cl. 131—207

5 Claims

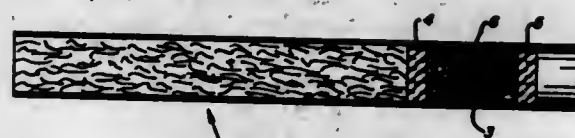


A replaceable stem for a smoking pipe having a mouthpiece at one end and a smoke treating member at the other. The smoke treating member includes a central elongated hollow cylindrical member having plural parallel prongs radiating outwardly from the outer surface thereof and a roll of relatively thick absorbent paper wrapped in several layers about a portion of the exterior of the cylinder over the prongs for retention thereon, the roll being covered by an outer layer of relatively thin smooth paper which also engages the prongs and is retained thereon thereby. The upstream end of the cylinder is open and the downstream end thereof is closed, and the wall portion adjacent to the downstream end has a passage therethrough for smoke.

3,515,151
CIGARETTE WITH FILTER
George Brent, 357 E. McMurray Road,
McMurray, Pa. 15317
Filed May 14, 1968, Ser. No. 729,009
Int. Cl. A24f 7/04, 13/02

U.S. Cl. 131—265

3 Claims



The invention concerns itself with a filter, for tobacco smoking products especially cigarettes, containing particles of a non-toxic phosphate, such as anhydrous sodium tripolyphosphate.

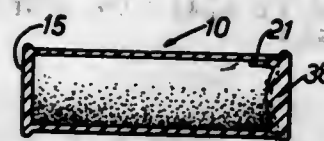
3,515,152
HAIR WAVING DEVICES
Malcolm Loughton, Birmingham, England, assignor to Lady Jayne (Hair Products) Limited, Birmingham, England, a British company
Filed Jan. 18, 1968, Ser. No. 698,912
Claims priority, application Great Britain, Jan. 27, 1967, 4,101/67
Int. Cl. A45d 4/14

U.S. Cl. 132—33

6 Claims

A process of manufacturing a hair waving roller of the kind comprising a closed tubular receptacle con-

taining a heat storing charge which on heating from normal atmospheric temperature to a higher temperature, undergoes a phase change from solid to liquid and the

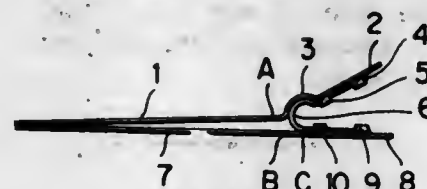


particular method of sealing the end of the receptacle by moulding an end cap of synthetic resin over a plug located in the end of the receptacle.

3,515,153
HAIR CLIPS
Sukeyoshi Sanada, 10 1-chome, Shimomae, Toda-shi,
Saitama-ken, Japan
Filed Jan. 18, 1968, Ser. No. 698,900
Claims priority, application Japan, Jan. 20, 1967, 42/3,998
Int. Cl. A45d 8/24

U.S. Cl. 132—48

8 Claims

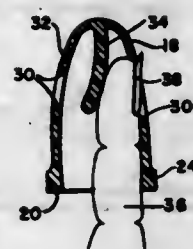


The diverging leaves of an R-shaped leaf spring are fastened to the diverging ends to be gripped of a pair of hair clip plates with the front curved surface of the R-shaped spring seated on a complementary arcuate support surface extending transversely of one of the plates.

3,515,154
COMBINATION MASK-CLOSURE CAP
Carl J. La Morgese, 146 Ketay Drive,
East Northport, N.Y. 11731
Filed Jan. 3, 1968, Ser. No. 695,422
Int. Cl. A45d 29/11

U.S. Cl. 132—88.5

9 Claims

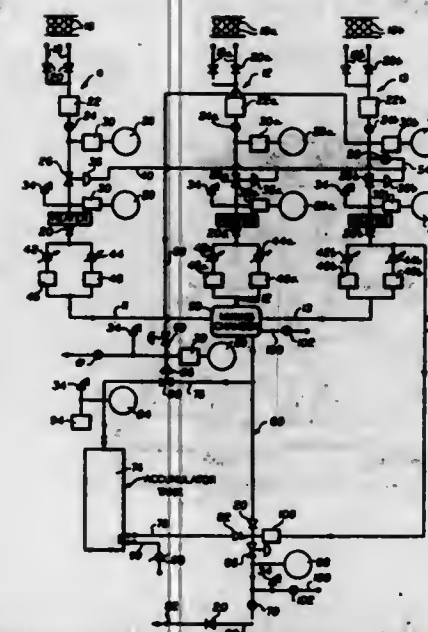


A closure cap for an aerosol spray can containing fingernail polish is provided, the closure cap having at least one fingernail opening projecting therethrough and an internal flexible flange depending from the inner top of the cap. The opening through the cap serves as a shield so that the application of the fingernail polish from the spray dispenser will coat only the fingernail which projects through the opening, while the internal downwardly projecting flange supports the finger as the nail projects through the opening. The cap is made of a flexible plastic, preferably a polyolefin, such as polyethylene, to which the fingernail polish will not adhere so that after spraying the cap may be cleaned by merely peeling the polish therefrom.

3,515,155
GAS MIXTURE PROPORTIONER
Mark P. Haffner, East Orange, and George R. Spies, Murray Hill, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 24, 1967, Ser. No. 618,371
Int. Cl. F17d 1/00; G05d 11/00; B67d 5/54
U.S. Cl. 137—7

41 Claims

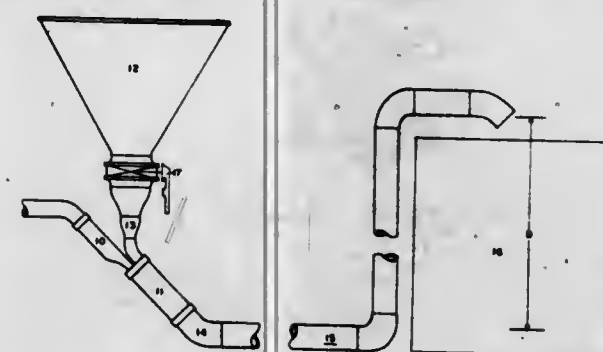


This invention relates to the mixing of gas to obtain desired proportions of different gases; for use in chemical processes; and for supplying breathing atmospheres of different composition for divers at different depths. A supply line for each gas leads to a mixing chamber. There are metering valves, of different capacities, connected in parallel in each supply line. By using different combinations of metering valves in the supply lines, various mixtures can be obtained. Back pressure on the metering valves is maintained at a constant value. An accumulator, in parallel with a delivery line, can be dumped before changing mixture proportions, or at any time without dropping the pressure in the delivery line.

3,515,156
HIGH LIFT MUD HOPPER
Frank J. Schuh, Dallas, Tex., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 30, 1967, Ser. No. 664,560
Int. Cl. F17d 1/14
U.S. Cl. 137—13

3 Claims

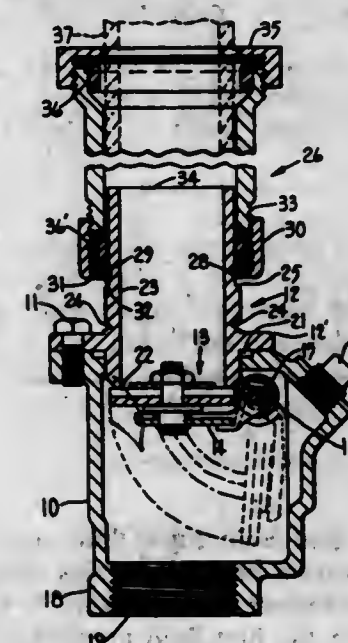


Adding ingredients from a hopper to drilling mud circulating in a pipe. The flow of the drilling mud through a jet nozzle into an expansion chamber causes a vacuum to be applied to the hopper sucking the ingredients into

the expansion chamber. The drilling mud may be discharged against a positive back pressure by employing an expansion chamber and a jet nozzle which have predetermined cross-sectional areas relative to each other while controlling the flow rate of drilling mud through the jet nozzle. Plugging of the hopper nozzle is prevented by inclining the expansion chamber with respect to the horizontal and introducing the ingredients in the downward direction of the incline above and parallel to the flow of the drilling mud.

3,515,157
FROST HEAVE-PROTECTED SHUT-OFF VALVE
August Milo, 1015 Schleifer Drive,
Hillside, N.J. 07205
Filed Oct. 8, 1968, Ser. No. 765,809
Int. Cl. F16l 27/12; F16k 17/36
U.S. Cl. 137—68

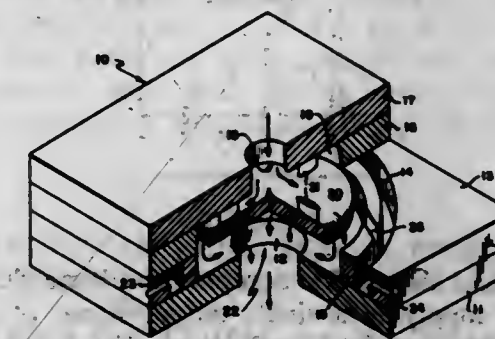
2 Claims



A shut-off valve having a shearable bonnet nipple, and over which a sealing sleeve is mounted by means of a lower union member, is made safe against leakage by frost heaving by providing a circumferential groove over which the union member is slipped. Thereafter, a ring is slipped over the nipple end and set in the groove. The flange of the union member is provided with a beveled edge which bears against the ring when the union member is tightened, whereby the union member is prevented from slipping off the nipple end when a frost heave takes place.

3,515,158
PURE FLUIDIC FLOW REGULATING SYSTEM
Gary E. Utz, Ferndale, Mich., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 24, 1967, Ser. No. 685,667
Int. Cl. F15c 1/16, 1/08
U.S. Cl. 137—81.5

7 Claims



A fluid flow limiting system includes an improved vortex amplifier controlled by a fluidic flip-flop. Pressure

changes in the flow stream are sensed by a pressure sensor which changes the state of the flip-flop which introduces a control input to the vortex amplifier through which the flow stream passes. The output of the vortex amplifier will be limited and the flow rate in the system controlled.

3,515,159

FLUID MAJORITY GATE

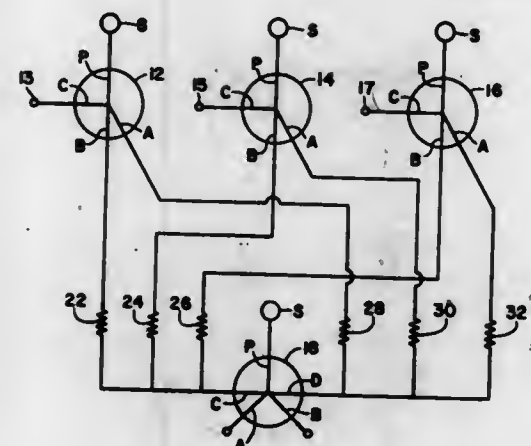
Thomas W. Bernel, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Apr. 23, 1968, Ser. No. 723,475

Int. Cl. F15c 1/12

U.S. Cl. 137—81.5

11 Claims



A fluid majority gate including a fluid amplifier having first and second opposed control nozzles and a plurality of fluid amplifier-inverters, each having a stable outlet passage connected to the first fluid amplifier control nozzle and each having an unstable outlet passage connected to the second fluid amplifier control nozzle. The fluid flowing in the fluid amplifier outlet passages is indicative of the number of fluid signals present at the inputs of the fluid amplifier-inverters.

3,515,160

MULTIPLE INPUT FLUID ELEMENT

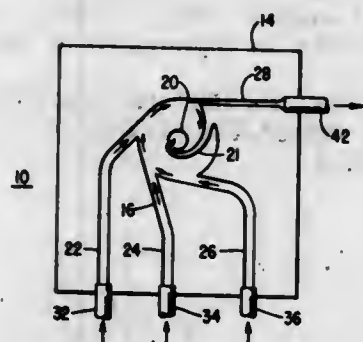
Kenneth W. Cohen, Chesterland, Ohio, assignor to Bailey Meter Company, a corporation of Delaware

Filed Oct. 19, 1967, Ser. No. 676,440

Int. Cl. F15c 1/16

U.S. Cl. 137—81.5

5 Claims



A pure fluid device for accepting multiple fluid input signals and supplying a single output signal of a maximum predetermined flow level, which flow is independent of the number of inputs present and the flow level of the various input signals. A vortex chamber consisting of tangential inlets and a flow barrier which provide de-

coupling of the input signals, and a vent which exhausts to atmosphere the input fluid which is in excess of the maximum predetermined output flow level.

3,515,161

FLOW CONTROL APPARATUS

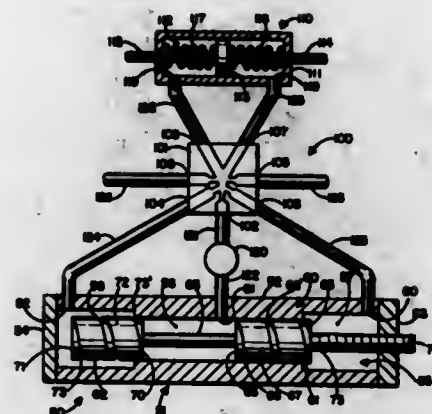
Holger C. Kent, Anoka, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed May 6, 1968, Ser. No. 726,900

Int. Cl. F15c 1/14, 3/02

U.S. Cl. 137—81.5

6 Claims



A flow controller comprising a capillary passage of variable length formed by a channel in the side of a piston which is partially located within a cylindrical chamber. Impedance to flow through the controller is varied by varying the portion of the piston which is within the chamber, thus varying the length of the passage.

3,515,162

TILT-RING PNEUMATIC CONTROL DEVICE

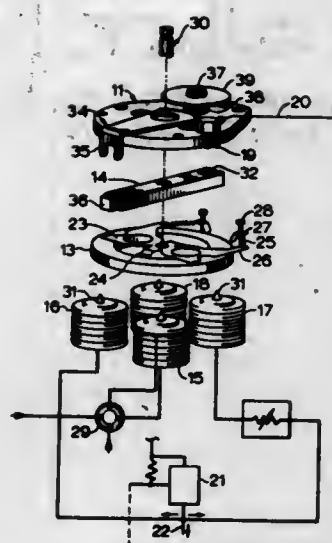
Hoel L. Bowditch, Foxboro, Mass., George F. Williams, Riverside, R.I., and Richard A. Bertone, Franklin, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Filed Nov. 1, 1968, Ser. No. 772,600

Int. Cl. F15b 5/00

U.S. Cl. 137—86

8 Claims



In fluid operated control, a precision, balanceable tilt system using a universal flexure support for tiltable means in said system, with essentially fixed force spring zero adjust means. In combination with such means, also, geared means for adjustment of proportion in the bal-

anceable system, and/or means for reversing forces applied to such tiltable means, and/or special bellows construction for such tilt system.

3,515,163

RESPIRATORY APPARATUS

Maurice Frederick Freeman, Cumnor Hill, Oxford, England, assignor to H. G. East & Company Limited, Oxford, England, a British company

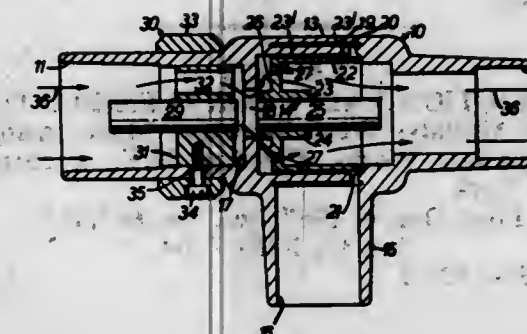
Filed Feb. 26, 1968, Ser. No. 708,139

Claims priority, application Great Britain, Mar. 14, 1967, 11,857/67

Int. Cl. A61m 16/00; G05b 7/00; F16k 15/02

U.S. Cl. 137—102

7 Claims



Respiratory apparatus comprising a non-rebreathing valve capable of regulating the breathing of a patient during medical treatment where air or other gas to be administered to the patient is pressurized for forced ventilation. The valve comprises a valve body containing a control valve member movable either to close an exhaust valve and simultaneously permit communication between an inlet and an outlet to the patient or to close the inlet and simultaneously allow communication between the outlet to the patient and the exhaust outlet. A manually adjustable device controls a biasing force which tends to urge the control valve to close the inlet. When the pressurized air or other gas fed to the inlet causes the control valve member to move to open such inlet the inlet gas pressure is applied also to the outlet side of the control valve so that the control valve is then substantially entirely under control of the biasing force.

3,515,164

FLOW DELIVERY SYSTEM

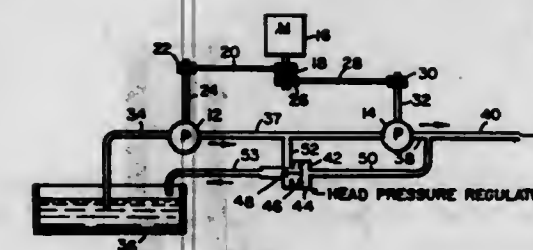
Jack Dunnous, Philadelphia, Pa., assignor to Servoflo Corp., Lexington, Mass., a corporation of Massachusetts

Filed Oct. 16, 1968, Ser. No. 768,095

Int. Cl. F04b 23/04, 49/00; F04d 15/00

U.S. Cl. 137—154

2 Claims



A fluid system for delivering and maintaining a constant flow of fluid comprising one or more pumps having a manually adjustable regulator positioned in the outlet line to maintain the magnitude of flow in fixed proportion with a secondary flow of fluid.

3,515,165

PRESSURE REGULATOR

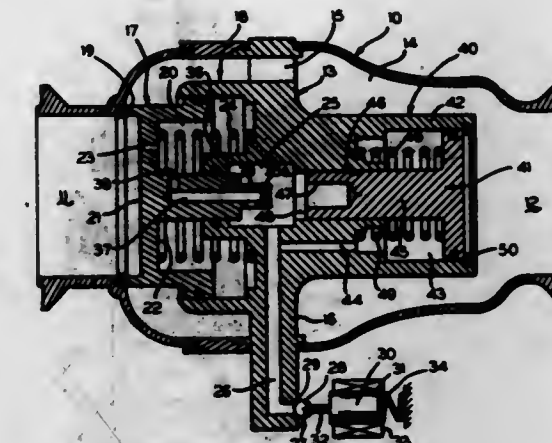
Vijay K. Zadoo, Mount Prospect, Ill., assignor to Vapor Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 16, 1968, Ser. No. 767,949

Int. Cl. F16k

U.S. Cl. 137—220

10 Claims



Pressure regulator for controlling the flow of fluid at a set pressure including a housing having an inlet and an outlet and valve means supported therein responsive to the pressure at the outlet for controlling the fluid flow through the inlet, wherein the valve means coacts with a pressure responsive means positioned at the outlet.

3,515,166

SAFETY VALVES

Gilbert Paccard, Saint-Etienne, France, assignor to Benes Marrel, Saint-Etienne, Loire, France, a French joint-stock company

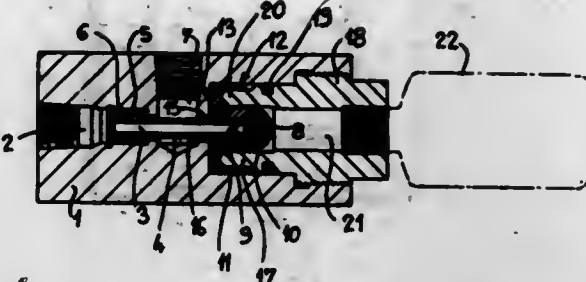
Filed Jan. 5, 1968, Ser. No. 696,065

Claims priority, application France, Jan. 13, 1967, 48,160; June 28, 1967, 48,848; Oct. 30, 1967, 49,269

Int. Cl. F16k 15/14; E21d 15/11

U.S. Cl. 137—525

12 Claims



In a hydraulic mine prop a safety valve comprising a hollow needle within which the prop liquid is fed under pressure, one or more apertures defined at or near the end of said needle, a flexible joint in the form of a sheath covering said apertures in the end of said needle, and elastic means to hold said joint in close contact with a peripheral cylindrical face of said hollow needle.

3,515,167

HYDRAULIC AND ELECTRICAL POWER UNIT

Ernest J. Svenson, 2330 23rd Ave.,

Rockford, Ill. 61105

Filed Aug. 22, 1968, Ser. No. 754,687

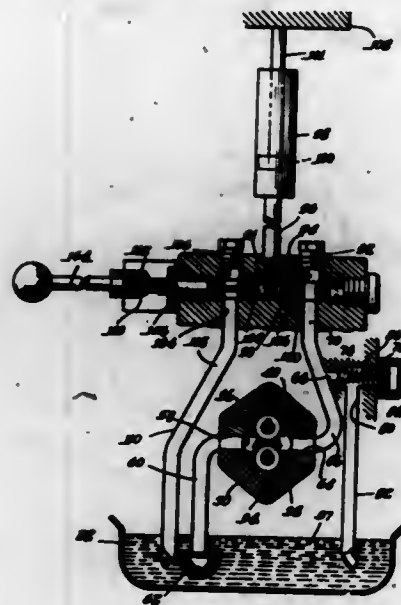
Int. Cl. E03b 11/16; F15b 15/18

U.S. Cl. 137—565

10 Claims

There is disclosed an electrically driven hydraulic pump unit having a motor end bell which serves as a valve and

fluid passage housing in which an outlet check valve and member and a camming element positioned to cam the a release valve are coaxially arranged. An oil reservoir is roller to seat the diaphragm. A second roller urges another



connected with the valve and is constructed for minimizing aeration or foaming of oil returned to the reservoir.

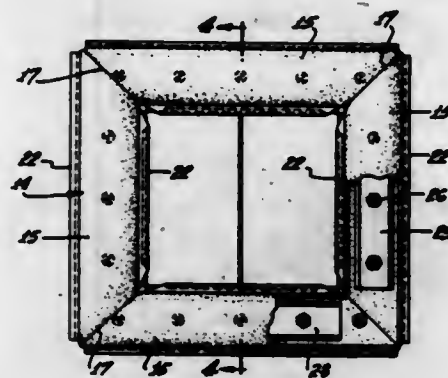
3,515,168

STREET CLEANER SUCTION SEAL
Simon Tamny, Los Angeles, Calif., assignor to Wayne Manufacturing Company, Pomona, Calif., a corporation of California

Filed May 31, 1968, Ser. No. 733,530
Int. Cl. F16I 25/00

U.S. Cl. 137-565

9 Claims



The invention is directed to an air seal for incorporation in blower suction ducts of vehicular street cleaning equipment, the seal structure interposed between relatively movable duct sections employing a rectangular arrangement of rubber hose segments in mitered terminal inter-engagement and maintained in compressed deformation between the duct sections.

3,515,169
SHUTOFF COCK

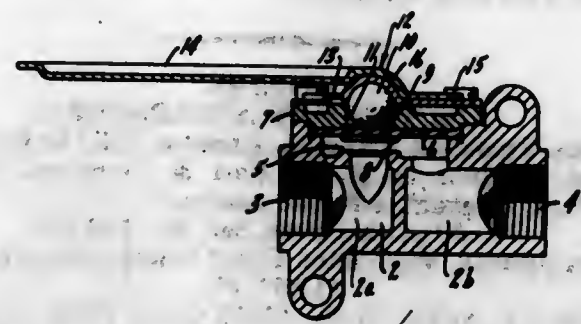
Stanley Berg, Skokie, and Harold L. Dobritin, Highland Park, Ill., assignors to Berg Mfg. & Sales Co., Des Plaines, Ill., a corporation of Illinois

Filed May 13, 1968, Ser. No. 728,456
Int. Cl. F16k 31/60, 7/16, 15/14

U.S. Cl. 137-625.25

8 Claims

A shutoff cock incorporating a diaphragm, a roller



portion of the diaphragm into a position closing an exhaust passage.

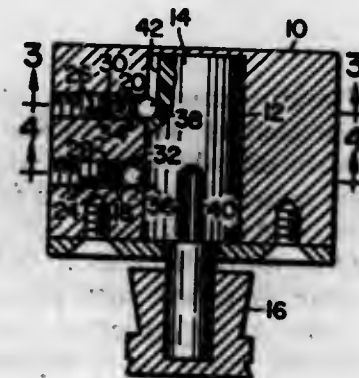
3,515,170

CONstriction VALVE FOR FLEXIBLE TUBES
Robert B. Mullaly, West Roxbury, Mass., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Dec. 4, 1967, Ser. No. 687,603
Int. Cl. F16k 7/04

U.S. Cl. 137-636.1

3 Claims



A valve having multiple inlets in the form of flexible tubes communicating with a single outlet. The inlet tubes are pinched closed by the action of beads which bear against a cylindrical plug in the housing which supports the tubes. At selected positions of rotation of the plug the beads fall partially into indentations in the plugs, thereby selectively opening the inlet tubes and permitting fluid flow therethrough.

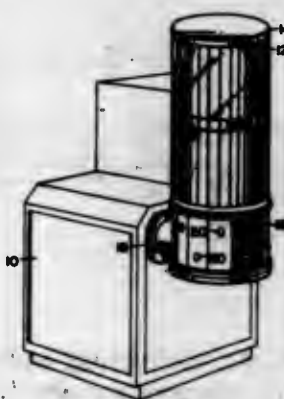
3,515,171

SIDE PUMPED VACUUM COLLAR
Richard P. Riegert, Montecito, Calif., assignor to Sloan Instruments Corporation, Santa Barbara, Calif., a corporation of California

Filed July 23, 1968, Ser. No. 746,883
Int. Cl. F04b 37/02; F04f 9/00

U.S. Cl. 137-798

2 Claims



A vacuum system is provided having a side pumped polygonal collar as part of the working chamber.

3,515,172
WATER STORAGE AND PRESSURE MAINTAINER FOR WELL PUMPS

Charles E. Hahn, Jr., 5138 Red Cedar Court,
St. Louis, Mo. 63128

Continuation-in-part of application Ser. No. 770,218,
Oct. 24, 1968. This application May 12, 1969, Ser.
No. 823,757

Int. Cl. F04b 11/00; E03b 11/16

U.S. Cl. 137-798

10 Claims



A water storage and pressure maintainer for a jet-type well pump having a conduit for conveying high speed water from the pump into the well and an expandable tube forming a wall of the conduit for expanding and storing water pumped into the well, a pipe within the conduit for returning well water to the pump, with upper and lower manifolds to which the pipe and tube are connected, the manifolds each having isolated chambers so that the pumped delivery water is kept isolated from the well water.

3,515,173

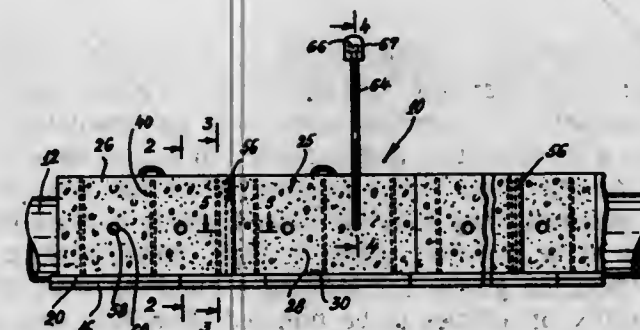
SHIELDED SAFETY GAS MAIN ASSEMBLY

John A. Regal, Box 139, R.D. 2, Rockaway Valley Road,
Boonton Township, N.J. 07005

Filed Jan. 12, 1968, Ser. No. 697,497
Int. Cl. F16I 55/00

U.S. Cl. 138-104

8 Claims



The disclosure describes a shielded safety gas main assembly in which a gas main located under the surface of a street or roadway is enclosed in a cast concrete shell. Fibrous pads inserted in the shell at intervals serve as gas stops or blocks in the event of gas leaks. Vent pipes inserted in knockout holes are extended up to the atmosphere. The vent pipes are provided with screens. They also have high pitch whistles operated at low gas velocities. The shells are reinforced by ribs which provide passages for leaking gas. Shells are prefabricated in short lengths and interfitted at their ends with sealing strips.

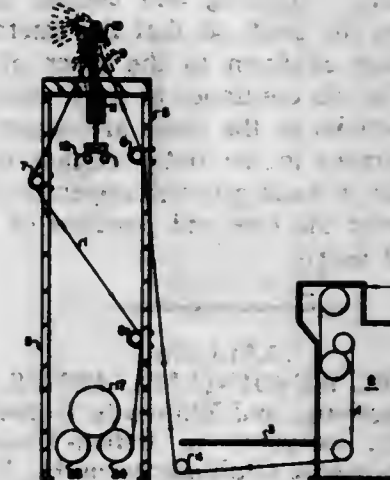
3,515,174
APPARATUS FOR TREATING THERMOPLASTIC FABRIC DURING WEAVING

Wolfgang Herkenberg, Ontario, Canada, assignor, by
mesne assignments, to Thibokol Chemical Corpora-
tion, Bristol, Pa., a corporation of Delaware

Filed Jan. 18, 1968, Ser. No. 698,364
Int. Cl. D03d 49/00

U.S. Cl. 139-291

1 Claim



Thermoplastic fabric is continuously heat treated as it is woven while free shrinkage and longitudinal tension are prevented so that the fabric will not develop unmanageable shrinking tendencies during later use.

3,515,175

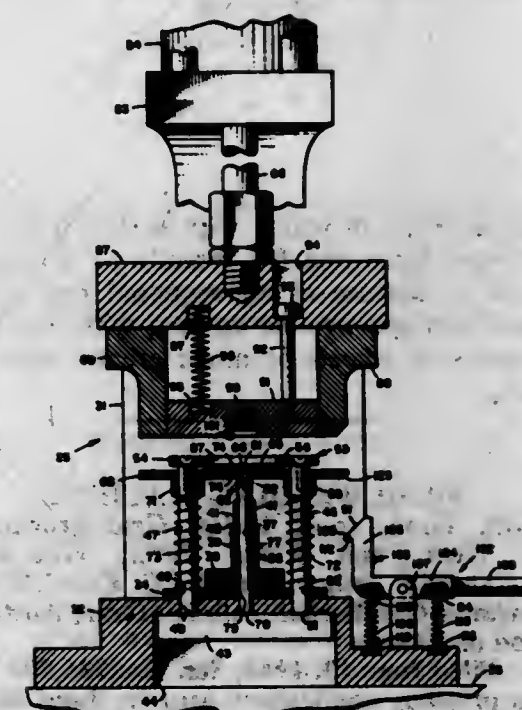
METHODS OF AND APPARATUS FOR FORMING LEADS OF ARTICLES

William W. Hudson, Columbus, Ohio, assignor to
Western Electric Company, Incorporated, New
York, N.Y., a corporation of New York

Filed May 29, 1968, Ser. No. 733,030
Int. Cl. B21f 1/00, 45/00

U.S. Cl. 140-1

16 Claims



Intermediate and free-end portions of leads which extend perpendicularly from a common side of a body of a semiconductor device and in a parallel relationship with each other are spread at acute angles with respect

to the axis of the body and away from each other. Thereafter, the end portions of the leads are formed in a direction parallel with and spaced from the axis of the body and are cut to a predetermined length. Each lead is thereby formed with parallel end portions spaced and connected by an acutely formed intermediate portion.

Initially, the leads of the semiconductor device are positioned over a free end of a forming rod and a fanning sleeve is moved over the rod toward the leads so that a tapered end of the sleeve fans the intermediate and free end portions of the leads outwardly at an acute angle. Thereafter, a forming and cutting die is moved engagingly along the leads so that the intermediate portions of the leads conform to the taper of the end of the sleeve. As the die continues to move along the leads, the free end portions of the leads are urged into associated grooves formed in the outer surface of the sleeve where a shoulder in each groove cooperates with the die to pinch and sever the free end portions of the leads to a predetermined length.

3,515,176

COIL WINDING MACHINES

Josef Lukas, Augsburg, and Klaus von Dohlen, Haunstetten, Germany, assignors to Patent-Treuhand-Gesellschaft für Elektrische Glühlampen mbH., Munich, Germany, a corporation of Germany

Filed May 28, 1968, Ser. No. 732,655

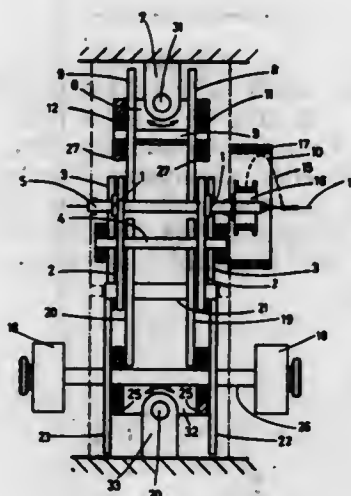
Claims priority, application Germany, June 2, 1967,

P 42,270

Int. Cl. B21f 3/04

U.S. Cl. 140—71.5

12 Claims



Coiling machine in which wire is drawn from its reel by centrifugal force and fed directly to a rotating spindle, which, in absence of conventional bearings, is supported and retained by line contact with and transverse to peripheries of wheels of much greater diameter than the spindle.

3,515,177

MESH WELDING MACHINE

Hans Gött, Graz, Josef Ritter, Graz-Kroisbach, Gert Ritter, Graz, and Klaus Ritter, Graz-Kroisbach, Styria, Austria, assignors to EVG Entwicklungs- und Verwertungs-Gesellschaft m.b.H., Graz, Austria, a corporation of Austria

Filed June 13, 1968, Ser. No. 736,800

Claims priority, application Austria, June 16, 1967,

A 5,639/67

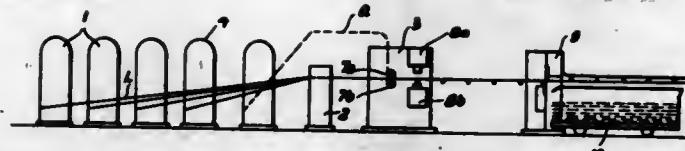
Int. Cl. B21H 27/10

U.S. Cl. 140—112

8 Claims

A machine for welding wire mesh of the kind in which longitudinal wires advancing longitudinally through the machine are welded at their crossing points to transverse

wires inserted into the machine from the side is provided with a device for inserting the transverse wires comprising two parallel transverse wire guides extending across the machine, one guide extending on one side of the path of advance of the longitudinal wires and the other guide extending on the other side of the path of advance of the longitudinal wires and a single transverse wire insertion



mechanism for feeding transverse wires into both the transverse wire guides. The delivery line of the insertion mechanism is aligned successively with the transverse wire guides on the two sides of the paths of the longitudinal wires by means of a switching wire guide which is situated between the insertion mechanism and the two transverse wire guides.

3,515,178

AUTOMATIC BUNDLING STRAP INSTALLING TOOL

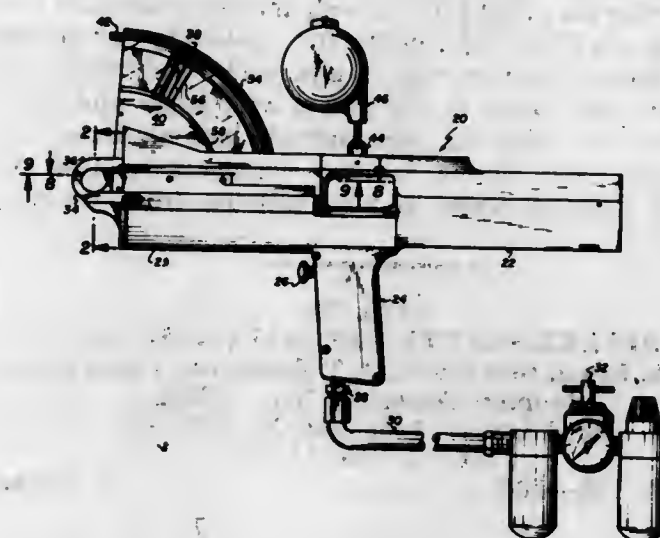
Laszlo Hidassy, Elizabeth, N.J., assignor to Thomas & Betts Corporation, Elizabeth, N.J., a corporation of New Jersey

Filed Feb. 13, 1968, Ser. No. 705,046

Int. Cl. B21f 9/00, 21/00

U.S. Cl. 140—123.6

21 Claims



The invention is directed to an automatic, cartridge loaded, fluid operated bundling strap installing tool. The tool consists of a housing containing the main tool elements, a fluid control unit mounted in a tool handle and a set of selectively operable jaws. With the jaws in the open position, they may be placed about a plurality of objects to be bundled, while in their closed position the jaws form the guides for looping a bundling strap about a plurality of articles to be bundled. Bundling straps, of the twist to lock type, are fed from a radial cartridge and position in the path of a reciprocating, fluid driven plunger. As the bundling straps are advanced by the plunger, the bundling strap passes about the plurality of articles to be bundled until the tail end portion of the bundling strap enters and passes through the apertured head end portion. On the return stroke of the plunger the tail end portion of the bundling strap is, in successive steps, drawn by a gripping device until a predetermined tension exists in the bundling strap, rotated to lock the strap, the excess strap is cut off at the head end portion and the excess ejected from the tool.

3,515,179

OFFSHORE LOADING/UNLOADING OF TANKERS

Wouter H. van Eek, The Hague, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Apr. 5, 1967, Ser. No. 628,697

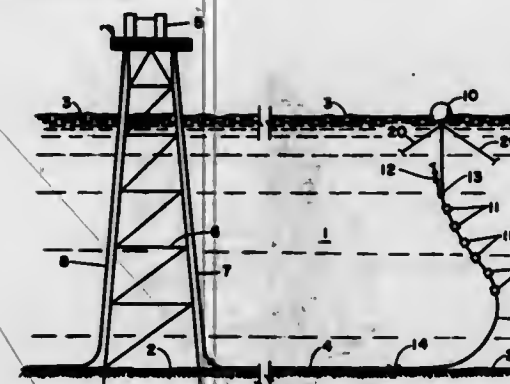
Claims priority, application Netherlands, Apr. 6, 1966,

6604597

Int. Cl. B65b 1/04, 3/04

U.S. Cl. 141—1

7 Claims



Offshore loading/unloading of tankers in which an end of a submerged fluid line is attached to a cable, suspended from a buoy. A tanker arriving at the buoy picks up the end of the line, whereafter said end is secured to the loading/unloading lines of the tanker and loading/unloading takes place. The tanker may be provided with dynamic positioning means so that use of mooring lines or anchors is not necessary.

3,515,180

METHOD AND APPARATUS FOR FILLING CONTAINERS WITH BEVERAGES USING A PACKED LINE PRINCIPLE

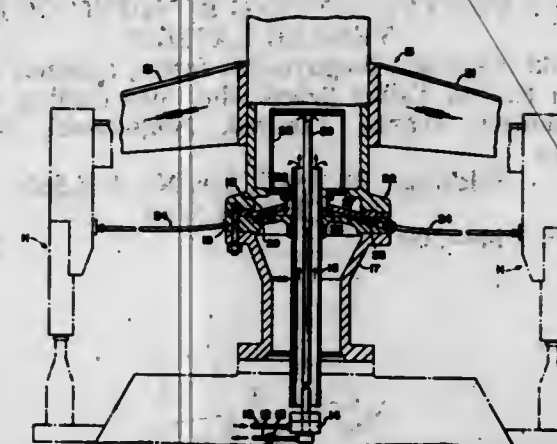
Kenneth F. Friendship, Akron, Ohio, assignor, by mesne assignments, to Automatic Sprinkler Corporation of America, Cleveland, Ohio, a corporation of Ohio

Filed July 21, 1967, Ser. No. 655,072

Int. Cl. B67c 3/06; C02d 1/00

U.S. Cl. 141—6

9 Claims



The filling apparatus has a distributor head with a plurality of outlet members connected to individual filling heads and means supply a flow of beverage under pressure to the distributor head. A free gas disposal chamber is provided positioned above the distributor head and connected to the beverage supply means, and the distributor head preferably has the outlet members extending downwardly at an acute angle with relation to a vertical axis of the supply means. A return tube is positioned within the supply means and has an open inlet end adjacent the top of the free gas disposal chamber.

3,515,181

MEANS FOR TRANSFERRING CHEMICAL INTO A PNEUMATIC TIRE

Lawrence R. Spierburg, 6740 Fleeth Drive,

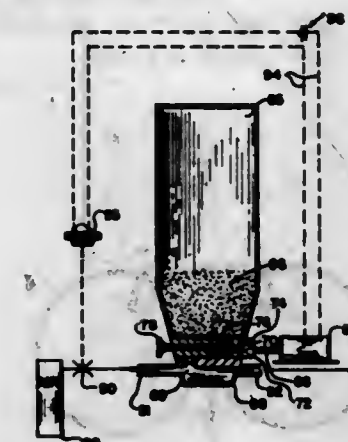
El Paso, Tex. 79912

Filed Sept. 5, 1967, Ser. No. 665,607

Int. Cl. B65b 31/00

U.S. Cl. 141—38

6 Claims



An apparatus which may be placed in series with a tire inflating flow line for the purpose of inflating a pneumatic tire with air associated with a chemical substance which reacts with the oxygen contained within the inflating medium to thereby provide an inert atmosphere within the air chamber of the tire. The apparatus includes a chemical containing reservoir having means associated therewith for transferring a predetermined amount of chemical into a predetermined volume of air to thereby assure complete removal of the free oxygen from the air chamber of the tire.

3,515,182

ONE-POINT MOORING SYSTEM FOR LOADING OR UNLOADING A FLUID INTO OR FROM A SHIP

Alexander F. Dickson, John G. B. Coombe, and Francis G. West, London, England, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 5, 1967, Ser. No. 636,466

Claims priority, application Great Britain, May 6, 1966,

20,159/66

U.S. Cl. 141—387

8 Claims



A one-point mooring system arranged for loading or unloading fluid-cargo ships. The system includes a fixed member anchored to the water floor which carries a rotatable member having a mooring line connected thereto. The fixed member carries a first fluid line which is rotatably connected in fluid communication with a second fluid line carried by the rotatable member. The second fluid line is provided with a swivel to permit swivelling of the second line along a horizontal axis and is attached to a hose connectable to a ship for completing a flow path between the ship and the first fluid line. When the system is not accommodating a ship, the free ends of the hose and mooring line may be attached by means of a cable to a surface buoy to facilitate recovery of the mooring line and hose when the ship approaches.

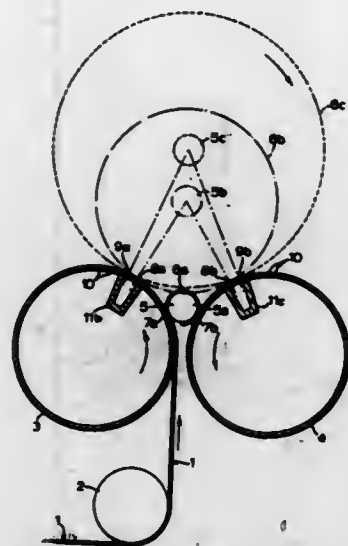
3,515,183

WINDERS FOR PAPER MACHINES

William Kenneth Voss, St. Catharines, Ontario, Canada, assignor to Parex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Aug. 14, 1968, Ser. No. 761,883
Int. Cl. B65h 17/08

U.S. Cl. 242—66

5 Claims



Apparatus and method for controlling the nip pressure between the roll and the winder drums of a paper machine winder, consisting in introducing a variable controlled air pressure at the nips formed by the paper roll and the drums, the pressure being applied through perforations in the winder drums.

3,515,184

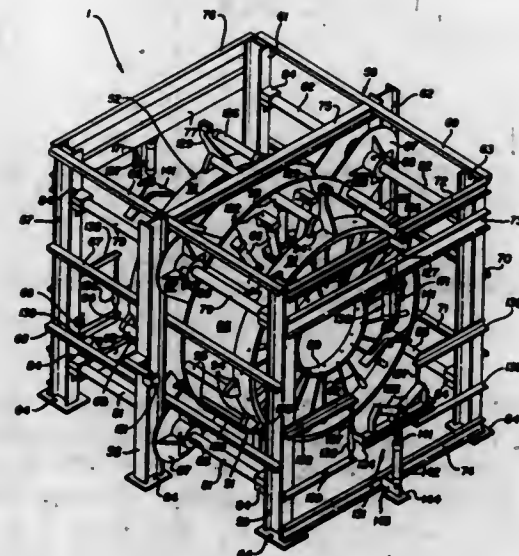
APPARATUS FOR DEEP INCISING POLES

Alfred J. Jacobs, San Leandro, and Joseph T. Napier, Alameda, Calif., assignors to J. H. Baxter & Co., San Francisco, Calif.

Filed Apr. 27, 1966, Ser. No. 545,686
Int. Cl. B27k 3/00

U.S. Cl. 144—2

8 Claims



An apparatus for deep incising wooden poles to prepare such poles for impregnation with a suitable preservative. The incising head has incising elements for incising a predetermined longitudinal section of a pole to a predetermined depth about its full periphery in a single step without rotation of the pole about its longitudinal axis.

**3,515,185
APPARATUS FOR REMOVING BRANCHES AND BARK FROM TREES**

Georg Wehr and Gotthold Gotze, Rotenburg an der Fulda, Germany, assignors to Rotenburger Metallwerke G.m.b.H., Rotenburg an der Fulda, Germany
Filed Mar. 31, 1967, Ser. No. 627,534
Claims priority, application Germany, Apr. 6, 1966, R 43,824

Int. Cl. B27l 1/00

U.S. Cl. 144—3

13 Claims



Apparatus for stripping branches and bark from tree trunks having a main frame over which the trunks are fed, two assembly frames slidably mounted on the main frame, and a pair of chain cutters movably mounted over guide pinions provided on the assembly frames, the chain cutters being adapted to run over and under said tree trunks. Means to independently adjust the tension of said chain cutters are also provided, along with a plurality of motor saws which have rotating saw chains in cross formation sloping toward the direction of feed of said tree trunks.

3,515,186

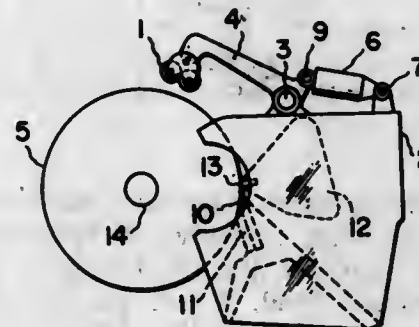
DEVICE FOR PREVENTING BENDING OF LOGS IN VENEER LATHES

Noriyuki Nagaoka, Nagoya-shi, Japan, assignor to Kabushiki Kaisha Taihei Sengakusho, also trading as Taihei Machinery Works, Limited, Nagoya-shi, Aichi-ken, Japan

Filed Jan. 30, 1967, Ser. No. 612,563
Int. Cl. B27l 5/04

U.S. Cl. 144—209

2 Claims



A promptly operatable device mounted on and moving with the feedable tool head frame of a veneer lathe instantly operates, when a log undergoing rotary cutting is reduced to a diameter tending to result in vibration de-

flection of the log, to press rollers against the log from each pair including two differently and compensatively the side thereof opposite the knife held by the tool head shaped adjacent rolls adapted to rotate in the opposite frame thereby to prevent vibration deflection of the log. direction to one another.

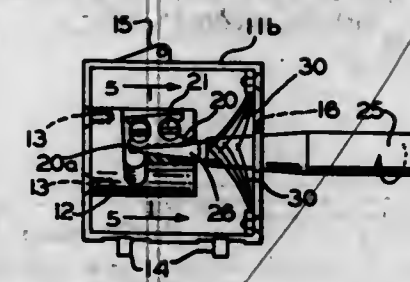
3,515,187

PENCIL LEAD POINTER

Robert Scofield Condon, 112 Clady Lane, Berlin, Conn. 06037
Filed Oct. 10, 1967, Ser. No. 674,271
Int. Cl. B43l 23/08

U.S. Cl. 145—3.3

2 Claims



A pencil pointer having a blade support secured inside a hollow housing. A hole in the support axially aligned with an orifice in the housing opens into a downwardly extending recess providing a flat surface for the hard carbide blade which has a cutting corner curved at one end for tangential contact with the lead. Cap screws acting as dowels in opposed V-shaped slots in the blade secure the blade to holder and an adjusting screw regulates the position of the blade. Two interengaged brushes clean the point when withdrawn.

3,515,188

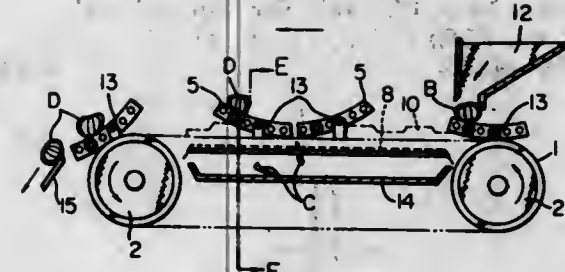
PREPARED CITRUS FRUIT PROCESSING APPARATUS

Yonekichi Morikawa, Shimizu, and Kunro Takano, Takahashi, Japan, assignors to Daiwa Can Co. Ltd., Tokyo, Japan

Filed Aug. 21, 1968, Ser. No. 754,239
Int. Cl. A47j 17/00

U.S. Cl. 146—3

4 Claims



An apparatus for processing a prepared citrus fruit comprising a framework; a pair of laterally spaced parallel chain conveyors trained over sprocket wheels rotatably mounted on said framework at the inlet and discharge ends of said apparatus, each chain conveyor having the upper run travelling from said inlet end to said discharge end; drive means journaled in said framework for driving said sprocket wheels; a plurality of fruit processing means rockably supported on said chain conveyors in an end-to-end spaced relation to one another; and a hopper for receiving a supply of said prepared citrus fruit and discharging said fruit onto selected ones of said fruit processing means, each of said fruit processing means comprising plural pairs of rolls

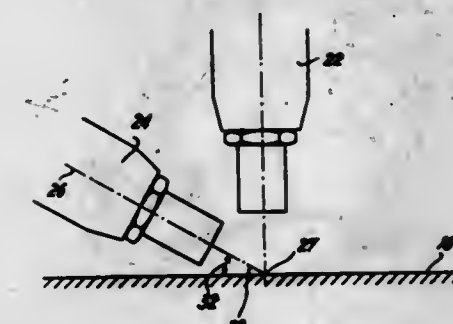
3,515,189

METHOD OF STARTING A SCARFING PASS

Michel Douz, Nancy, France, assignor to L'Air Liquide Société Anonyme, pour l'Étude et l'Exploitation des Procédés Georges Claude
Filed Jan. 8, 1968, Ser. No. 696,439
Int. Cl. B23k 7/00

U.S. Cl. 148—9.5

11 Claims



In order to effect a faultless starting for a scarfing pass, the scarfing torch, initially having its nozzle substantially vertical and its heating flame burning, is rotated about the axis of its nozzle, approaches the workpiece, the oxygen flow being opened, then the torch is inclined, the oxygen flow being brought to its scarfing value.

3,515,190

SLICER

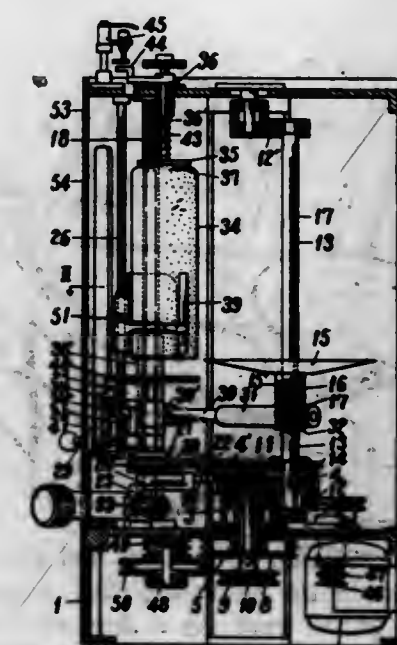
Sadanobu Morikuchi, Nara Prefecture, Japan, assignor to Nantsumo Tekko Kabushiki Kaisha (Nantsumo Iron Works, Ltd.), Osaka, Japan

Filed Jan. 4, 1968, Ser. No. 695,765
Claims priority, application Japan, June 23, 1967, 42/40,221

Int. Cl. B26d 4/40

U.S. Cl. 146—101

5 Claims



A slicer having a rotary blade adapted to automatically slice a material held in an immovable condition one by one in a predetermined thickness while making an eccentric revolution, a mechanism to adjust the thickness of sliced pieces as desired and a device to weigh automatically the sliced pieces as they are sliced and piled on a slice-receiving plate.

3,515,191

FOOD-SLICING MACHINES

Jozef Longin Anecki, Slough, and Richard Nowak, Edgeware, England, assignors to Lan-Elec Limited, Slough, England, a British company

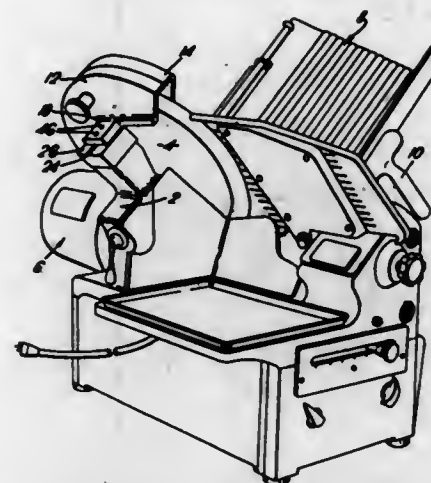
Filed Feb. 20, 1968, Ser. No. 706,854

Claims priority, application Great Britain, Feb. 28, 1967, 9,549/67

Int. Cl. A22c 17/00; B26d 1/28

U.S. Cl. 146—102

4 Claims



A food slicing machine of the type having a rotating circular cutting wheel which is rendered safer by enclosing the sharpening stones within the blade guard so that it is no longer necessary to run the machine while the blade is exposed, even when the blade is being re-sharpened.

3,515,192

MEAT CUTTING MACHINES

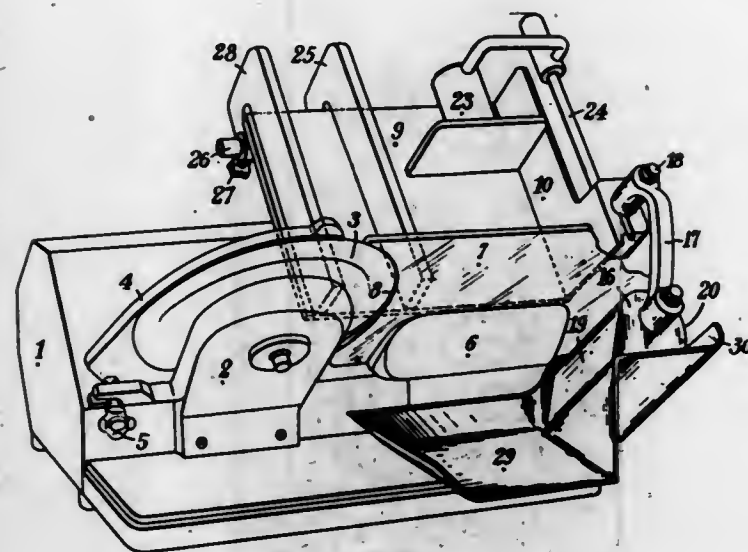
Pierre Ducourneau, 14 Rue Albert Mallet, Paris 12^e, France

Filed Apr. 18, 1968, Ser. No. 722,350

Int. Cl. A22c 17/00

U.S. Cl. 146—102

5 Claims



A meat cutting machine of the type comprising a circular rotary cutter, a fixed plate parallel to the plane containing said cutter and of which the level can be adjusted in relation thereto, and a carriage movable in a plane parallel to a horizontal line of the plane containing said fixed plate, the carriage of this meat cutting machine comprising a platform movable at right angles to its fixed plate, has a pair of relatively small transverse partitions adjustably mounted and extending at right

angles to its movable platform and just above said fixed plate, the relative positions of said small transverse partitions being adjustable in order to hold between them and at right angles to said fixed plate a sausage, a Bologna sausage, a salami or any other piece of meat or pig-meat which can thus be cut into slices without having to remove the main piece of meat from the machine.

3,515,193

ONION ORIENTER AND CUTTER

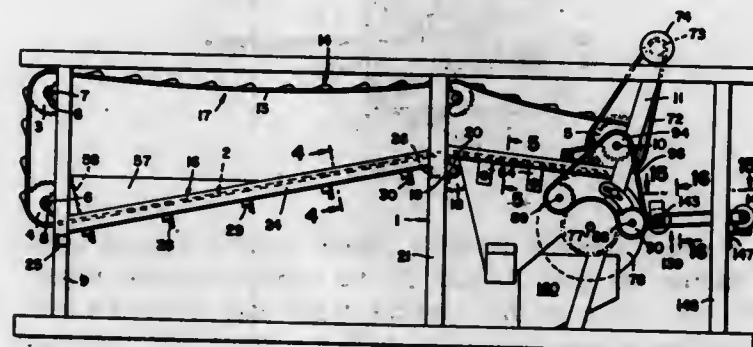
Henry Aguilar, San Francisco, Calif., assignor to Basic Vegetable Products, Inc., San Francisco, Calif., a corporation of California

Filed Oct. 9, 1967, Ser. No. 673,584

Int. Cl. A23n 15/04

U.S. Cl. 146—224

12 Claims



Apparatus for orienting onions and products of similar characteristics, of different sizes relative to their root-stem axes, and to conduct said onions to a cutting station for severing the root-bases and stem portions from the intermediate body portions at uniform depths within the latter. Means is provided to automatically separate unoriented onions and others prior to said severance. The long tops and root tendrils have normally been removed prior to orientation, leaving the stub stems and root-bases, the former projecting from the body.

3,515,194

THREADED STAPLE

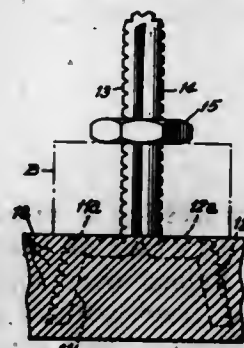
Donald Hirst, Laconia, and John L. Carhart, Franklin, N.H., assignors to Acme Staple Company, Inc., Franklin, N.H., a corporation of New Hampshire

Filed Mar. 17, 1969, Ser. No. 807,542

Int. Cl. F16b 15/00, 15/06, 35/02, 35/06

U.S. Cl. 151—41.72

8 Claims



A staple fastener with an elongated body portion suitably serrated or threaded along its axial length whereby to receive a conventional nut member or other suitable fastener. The points of this staple are angularly faced so as to cause controlled leg divergence as this staple is driven into a supporting medium.

3,515,195

METHOD OF IMPROVING THE DURABILITY OF TIRES

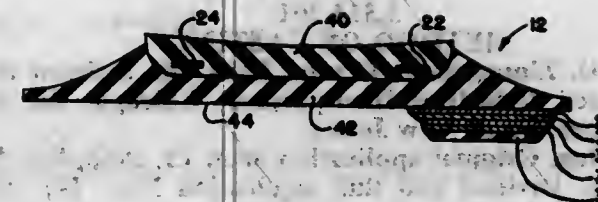
Lawrence R. Sperberg, 6740 Fleeta Drive, El Paso, Tex. 79912

Continuation-in-part of application Ser. No. 602,123, Dec. 16, 1966. This application Feb. 27, 1967, Ser. No. 618,724

Int. Cl. B60c 19/06

U.S. Cl. 152—153

8 Claims



A heat transferring mechanism associated with an elastomeric chamber, and includes an agent which may be directly added to the gas containing chamber of an elastomeric device, such as a pneumatic tire. The heat transferring agent may be any liquid or finely divided solid which is compatible with the liner of the tire. The mechanism also includes a metallic ribbon or wire having high heat conduction and is embedded inside the elastomeric material of the tire. The liquid may include an oxygen scavenger and a suitable anti-freeze, such as a hydrazine/water/ethylene glycol mixture. The solid may include an oxygen scavenger such as powdered zinc, along with a suitable slipping agent.

3,515,196

TIRE AND WHEEL FOR PASSENGER AUTOMOBILES

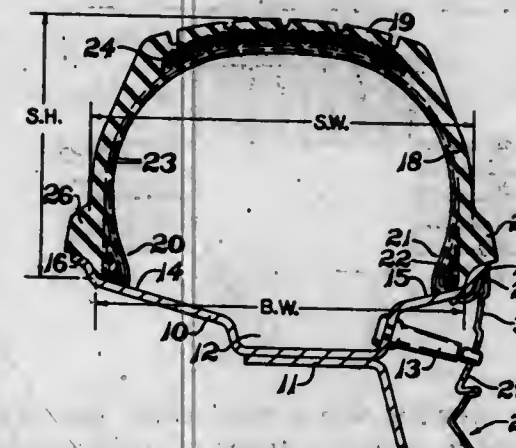
James David Floria, Westport, Conn., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Nov. 21, 1967, Ser. No. 684,787

Int. Cl. B60c 3/00; B60b 7/00

U.S. Cl. 152—352

7 Claims



A tire and the combination thereof with a wheel for passenger automobiles permitting greater wheel diameter for a given tire peripheral-diameter and the use of the wheel cover to simulate the appearance of the lower sidewall portion of the tire as the result of the tire being of the radial type having a width at the beads not less than 90% of the tire section width, a tire section height not greater than 77.5% of the tire section width, and a laterally projecting sidewall rib contacting the wheel flange.

3,515,197

PNEUMATIC TIRES

Jacques Bollean, Clermont-Ferrand, France, assignor to Compagnie Generale des Etablissements Michelin, raison sociale Michelin & Co, Clermont-Ferrand, Puy-de-Dome, France

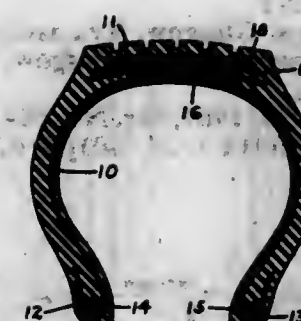
Filed Nov. 30, 1966, Ser. No. 598,028

Claims priority, application France, Dec. 1, 1965, 40,540

Int. Cl. B60c 9/20

U.S. Cl. 152—361

3 Claims



A plurality of pneumatic tires in which certain tires, designed for use on the rear axle, have a higher deviation coefficient than those tires designed for use on the front axle. The difference in deviation coefficient is a result of changing certain variables in the tire structure, as for example, cord angle, elasticity and tread groove angularity.

3,515,198

INFLATABLE TUBELESS TIRE SEATING DEVICE

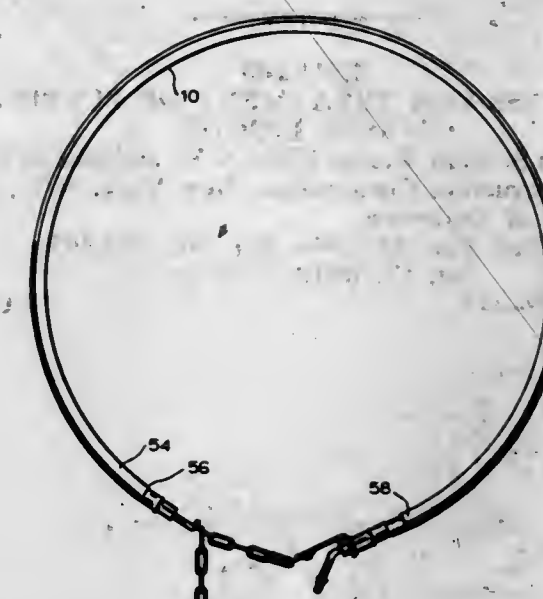
Meyer Iglewitz, 178 Sherman Ave., Newark, N.J. 07114

Filed Mar. 5, 1968, Ser. No. 710,494

Int. Cl. B60c 25/12

U.S. Cl. 157—1.21

2 Claims



A seating belt for seating tubeless tires on a wheel rim. The seating belt comprises an elongated flexible tube, sealed at one end, a gas feed fitting at the other end of the tubing including a threaded central section and a fitting inlet for receiving a compressed gas. A cylindrical sheath is placed around the tubing. This sheath has a wire mesh, the individual wires of the mesh intersect at a small angle. The sheath has outwardly turned collars at both ends. The fitting inlet projects through one of the collars. A hook passes through the collar from the end opposite the inlet fitting. Crimped shield means are disposed over the collar to hold the hook and inlet fitting in place. Attached

to the fitting are chain holding means with a chain extending from the chain holding means and which can engage the hook so that the seating belt can be placed around the tire to be mounted, the hook engaging the chain, and, the tubing can be filled with compressed air through the inlet fitting.

3,515,199

METHOD AND APPARATUS FOR RECOVERING SOLIDS DISSOLVED OR SUSPENDED IN A LIQUID SOLVENT

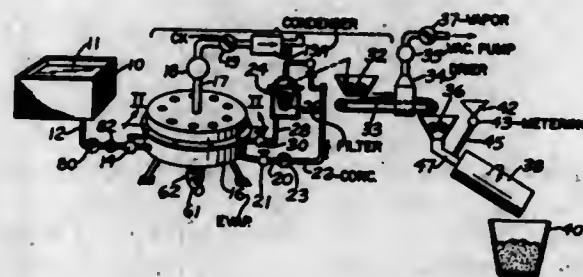
Otto Murray Summers, Glasgow, Ky., assignor to Lincoln Valley Minerals Incorporated, Glasgow, Ky., a corporation of Kentucky

Filed Nov. 20, 1967, Ser. No. 684,231

Int. Cl. B01d 1/24; B01j 9/02

U.S. Cl. 159—23

7 Claims



Method and apparatus for concentrating solutions and suspensions and product thus made, in which the solution, or suspension, is delivered to an evaporator vessel and is heated and subjected to suction to drive off liquid therefrom while the concentrate resulting therefrom is continuously delivered to a filter to form a cake or billet which can be stored indefinitely without deterioration and thereafter crushed, or the cake can be taken directly from the filter and crushed, while the liquid filtrate removed from the concentrate in the filter is returned to the evaporator vessel.

3,515,200

PROCESS FOR TREATMENT OF PULPING WASTE LIQUOR

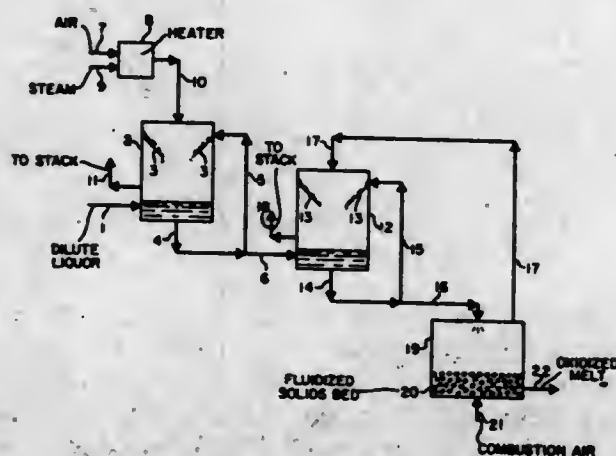
Indravadan S. Shah, Forest Hills, N.Y., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 23, 1968, Ser. No. 723,397

Int. Cl. B01d 1/14, 1/18

U.S. Cl. 159—47

11 Claims



Dilute waste liquor derived from a wood pulp process is concentrated in two stages to produce a desired concentration liquor which is burned in a reactor to produce a solid product and hot flue gas. This efficient and more economical process converts the liquid waste effluent from the pulping process to water vapor and carbon dioxide,

together with a solid product, and thus eliminates both water and air pollution. The initial stage of dilute liquor concentration is by direct contact with a hot gaseous stream, which may consist of preheated air, a mixture of preheated air and steam or reheated flue gas. The final stage of liquor concentration is by direct contact with the hot flue gas stream generated by the reactor, and the dust or entrained solid particles in the flue gas is simultaneously recovered by scrubbing.

3,515,201

METHOD OF CASTING

Philip D. Zimmerman, Crystal Lake, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey

No Drawing. Original application Sept. 15, 1965, Ser. No. 487,575. Divided and this application Nov. 14, 1967, Ser. No. 682,969

Int. Cl. B22d 23/00; B22c 3/00

U.S. Cl. 164—66

8 Claims

When casting in permanent molds, such as graphite, it is necessary to coat the casting surfaces in order to prevent the formation of surface defects on the cast product. The present disclosure contemplates coating the casting surfaces with a coating including refractory oxides while the mold is at a temperature in the range of about 250° to 400° F. and then maintaining the mold above 212° F. until the melt is poured therein.

3,515,202

METHOD FOR CONTINUOUS CASTING OF METAL INGOTS

Klaus Bick, Paderborn, Wolfgang Weimreich, Wilhelmshöhe, and Lothar Harmsen, Paderborn, Germany, assignors to Paderwerk Gebr. Beuteler, Schloss Neuhaus, Kreis Paderborn, Germany

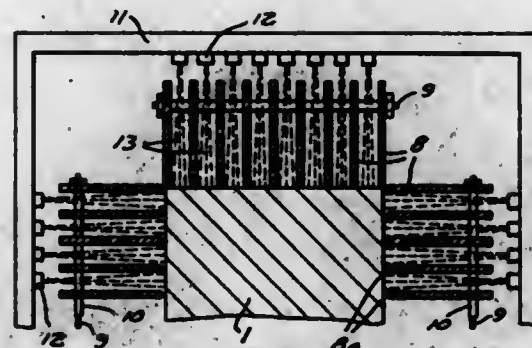
Filed Aug. 16, 1967, Ser. No. 661,503

Claims priority, application Germany, Aug. 20, 1966, P 40,221

Int. Cl. B22d 11/12

U.S. Cl. 164—89

7 Claims



A mold is provided with a mold cavity having an inlet end adapted to receive a stream of molten metal, and an outlet end downstream from the inlet end. Cooling channels for circulation of cooling fluid are provided in the walls of the mold for indirectly cooling the molten metal and causing at least partial solidification thereof so that it will issue from the outlet end as a continuous ingot. A cooling system is arranged downstream of the outlet end and comprises a structure which defines a plurality of elongated slots extending in longitudinal direction away from the outlet end. Each of the slots exposes a longitudinally extending strip-shaped surface portion of the ingot. Means is provided for projecting into each slot against the respective surface portion which is exposed therein at least one jet of cool-

ant fluid which impinges directly onto the surface portion over substantially the entire length of the associated slot.

3,515,203

MULTIPLE PLUNGER INJECTION CYLINDER FOR DIE CASTING

Conrad A. Parlanti, Berkeley, Calif., and George H. Fashfellow, St. Charles, and Dort Fauntleroy, Geneva, Ill., assignors to Moline Malleable Iron Company, St. Charles, Ill., a corporation of Illinois

Filed Apr. 29, 1968, Ser. No. 724,926

Int. Cl. B22d 17/10

U.S. Cl. 164—312

6 Claims



In the die casting of molten metal, for example ferrous or high-temperature metals having temperatures in the range of 2600° F. to 3500° F., the molten metal is introduced into an injection cylinder and the metal is normally moved by a reciprocating plunger from the injection cylinder into the die cavity. The extreme heat from the metal within the injection cylinder chamber can damage the plunger. This is overcome by having a plurality of plungers so arranged so that the plungers are sequentially positioned to be used in the injection cylinder chamber, thus minimizing distortion and permitting each plunger to cool before it is again utilized to move molten metal.

3,515,204

MEANS AND APPARATUS FOR CASTING INTERCELL CONNECTIONS FOR BATTERIES

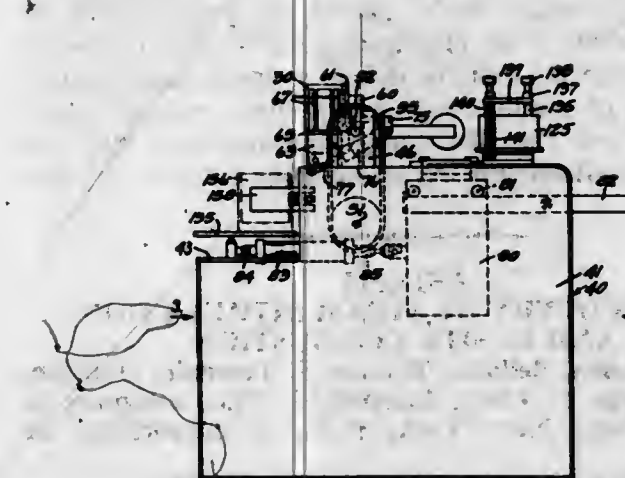
Charles H. McAlpine, Coloma, and Kenneth G. McGowan, Lawrence, Mich., assignors to MAC Engineering and Equipment Company, Benton Harbor, Mich., a corporation of Michigan

Original application May 2, 1966, Ser. No. 546,717, now Patent No. 3,444,920, dated May 20, 1969. Divided and this application Sept. 10, 1968, Ser. No. 798,211

Int. Cl. B22d 17/24, 19/00

U.S. Cl. 164—334

10 Claims



An apparatus for simultaneous casting of battery posts, lug straps, and intercell connectors onto the lugs of a plurality of battery plates to form a complete battery unit.

3,515,205

MOLD CONSTRUCTION FORMING SINGLE CRYSTAL PIECES

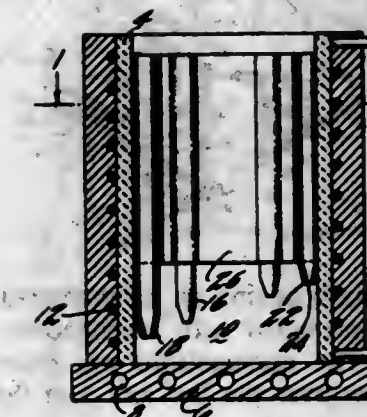
Carl M. Wickstrand, Jr., Wallingford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 20, 1968, Ser. No. 714,589

Int. Cl. B22c 9/02; B22d 25/06

U.S. Cl. 164—353

7 Claims



A mold construction for use in the formation of single crystal pieces of relatively long lengths or of complex shapes and wherein the mold geometry provides a means for increasing the rate of solidification within a plurality of individual molds by providing an efficient method of heat extraction from the mold.

3,515,206

COOLING SYSTEMS

Edward J. Ward and Peter R. Hall, Haywards Heath, Sussex, England, assignors to The Gas Council, London, England, a corporation of Great Britain

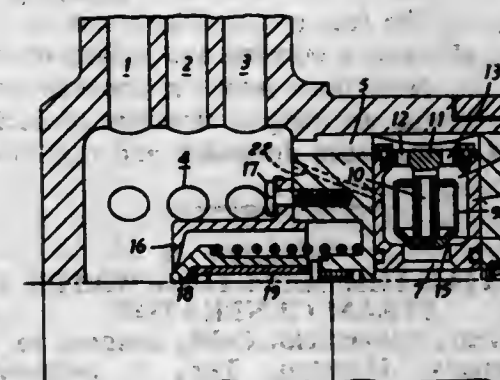
Filed Sept. 6, 1968, Ser. No. 758,051

Claims priority, application Great Britain, Sept. 8, 1967, 41,123/67

Int. Cl. G05d 23/00

U.S. Cl. 165—32

7 Claims



Certain liquid-cooled rotating machines rely on the maintenance of an annular ring of coolant, the internal radius of which is below a predetermined value. The invention provides a valve for maintaining this predetermined value, said valve including a buoyant member which is urged in the direction necessary to close the valve by the head of coolant in the annulus. The system is designed so that the various forces acting on the buoyant member serve to open the valve when the coolant internal radius exceeds a predetermined value and to close the valve when it is below said predetermined value.

3,515,207

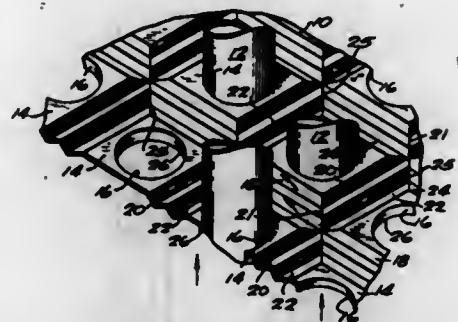
FIN CONFIGURATION FOR FIN AND TUBE HEAT EXCHANGER

James W. B. Lu, Greendale, Wis., assignor to Perfex Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed July 17, 1968, Ser. No. 745,549
Int. Cl. F28d 1/04

U.S. Cl. 165—151

12 Claims



In a heat exchanger having an arrangement of fins and tubes the fins are provided with corrugations which surround the tubes. The corrugations are diamond-shaped with respect to flow over the fins and past the tubes.

3,515,208

HEAT EXCHANGER CONSTRUCTION

John Karmazin, 3776 11th St., Wyandotte, Mich. 48192

Filed June 23, 1967, Ser. No. 648,314
Int. Cl. F28f 1/00

U.S. Cl. 165—178

7 Claims



A heat exchanger and method for making a heat exchanger consisting of a rectangular framework, within which a plurality of spaced parallel sheets of material are disposed having spaced-apart integral tapered tubular projections positioned in aligned nested relationship defining a plurality of conduits extending and clamping between opposed sides of the framework. The assembly is brazed in a furnace, effecting a bonding and sealing of the joints formed by the projections and the connections of the framework forming an integral structure of accurate dimension and of increased durability and ruggedness.

3,515,209

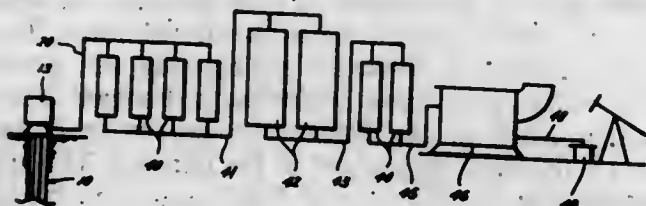
APPARATUS FOR SUPPLYING WATER TO A STEAM GENERATOR

Forest D. Gray, Bakersfield, Calif., assignor to Tenneco Oil Company, Houston, Tex., a corporation of Delaware

Filed Aug. 21, 1968, Ser. No. 754,347
Int. Cl. E21b 43/24

U.S. Cl. 166—62

5 Claims



In an apparatus for supplying water from a well to a steam generator. The pump is arranged to continuously

pump water from the well through a closed water-treating system to the steam generator thereby eliminating the need for a raw water storage tank, a soft water storage tank and additional pumps which are usually required, as well as operating controls therefor.

3,515,210

Lee E. Perkins, Houston, La., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed June 20, 1968, Ser. No. 738,459
Int. Cl. E21b 43/08; E03b 3/18

U.S. Cl. 166—205

5 Claims



A well tool including a central passage surrounded by an annular passage. A filter is interposed generally radially between the central passage and the annular passage. A flow diverting means is operable to channel flow from the central passage into the annular passage and then back into the central passage through the filter.

3,515,211

CONTROL OF GYPSUM DEPOSITS FROM BLENDED WATER RICH IN GYPSUM

Paul R. Scott, Houston, Tex., and Richard E. Christensen, Midland, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 19, 1968, Ser. No. 754,755
Int. Cl. C02b 5/02; E21b 43/00

U.S. Cl. 166—244

4 Claims

A method of preventing and removing gypsum deposits from conduit walls caused by precipitation of gypsum resulting from mixing or commingling or blending water gathering systems rich in gypsum thereby causing plugging of conduits such as flow lines, pipelines, tubing strings and the like comprising injecting into the conduit a small amount of an aqueous sodium chloride solution.

3,515,212

OIL RECOVERY BY STEAM STIMULATION AND IN SITU COMBUSTION

Joseph C. Allen, Bellaire, Thomas S. Teasdale, Houston, and George C. Cady, Bakersfield, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 20, 1968, Ser. No. 786,789
(Filed under Rule 47(b) and 35 U.S.C. 118)

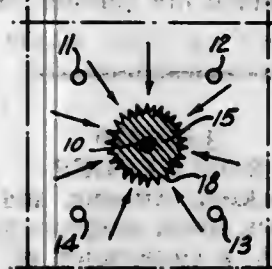
U.S. Cl. 166—245

10 Claims

Improved recovery of hydrocarbons from subterranean hydrocarbon-bearing formations is effected by reverse in situ combustion which is initiated spontaneously after the

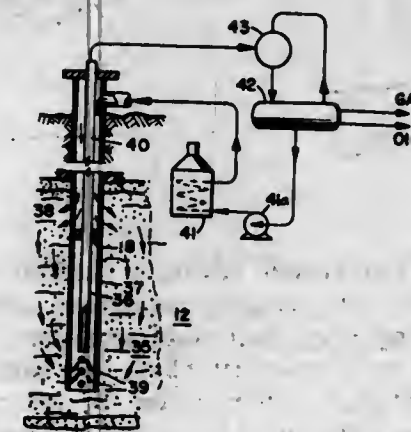
injection of steam sufficient to raise the temperature of the formation to a level at which spontaneous ignition of the hydrocarbons occurs upon injection of a com-

aqueous liquid containing as an essential additive a partial complex of an anionic surfactant and a moderate molecular weight amino-nitrogen-containing compound.

**SHALE OIL RECOVERY PROCESS USING HEATED OIL-MISCIBLE FLUIDS**Michael Pratz, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1967, Ser. No. 632,006
Int. Cl. E21b 43/22, 43/24

U.S. Cl. 166—252

5 Claims



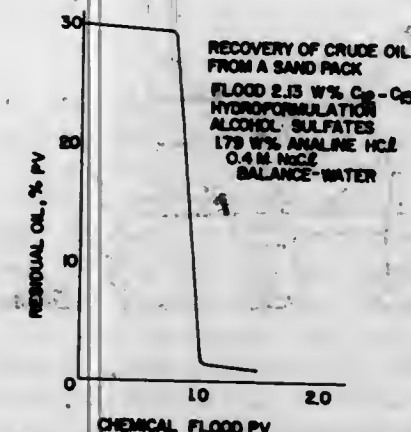
Shale oil is recovered from a subterranean oil shale formation by circulating a fluid heated at a moderate temperature from one point within the formation to another for a relatively long period of time until a significant proportion of the organic components contained in the oil shale formation is converted to oil-shale-derived fluidizable materials.

3,515,214

CHEMICAL WATERFLOODING TECHNIQUES USING COMPLEX SURFACTANTSHarry D. Flach, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 17, 1968, Ser. No. 722,049
Int. Cl. E21b

U.S. Cl. 166—272

15 Claims



An improved method for recovering oil from underground formations by treating said formations with an

3,515,215

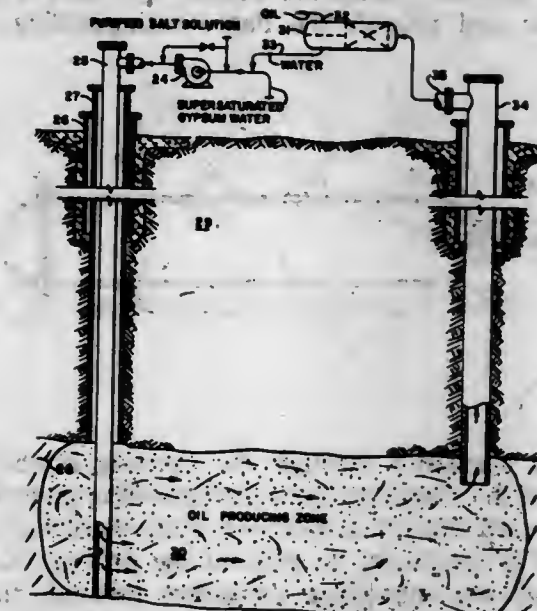
FLUID RECOVERY FROM UNDERGROUND FORMATIONS USING SUPERSATURATED GYPSUM SOLUTIONS

Paul R. Scott, Houston, Tex., and Richard E. Christensen, Midland, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 19, 1968, Ser. No. 753,483
Int. Cl. E21b 43/20

U.S. Cl. 166—274

4 Claims



A method for recovering fluids from underground formations using as a drive fluid supersaturated aqueous gypsum solution rendered unplugging to contacting surfaces by addition thereto of a small amount of a dilute sodium chloride aqueous solution which can optionally contain a wetting agent.

3,515,216

CONSOLIDATING EARTH FORMATIONS WITH SATURATED SILICA SOLUTIONRobert M. Gies, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 20, 1968, Ser. No. 714,435
Int. Cl. E21b 33/138

U.S. Cl. 166—288

6 Claims

A process for consolidating sand formations wherein silica is deposited from a solution on the silica sand grains at the points of contact between adjacent grains. The formation is first heated to a high temperature, preferably above 200° C., using high quality steam. The formation is then contacted with a saturated aqueous solution of silica while maintaining a constant flow of the solution through the formation. The excess solution is removed from the formation by inducing the aqueous solution to flow back to the well.

3,515,217

METHOD AND APPARATUS FOR ARRESTING AN EXPLOSION IN A MINE

Will B. Jamison, Wyckoff, N.J., assignor to National Mine Service Company, Pittsburgh, Pa., a corporation of West Virginia

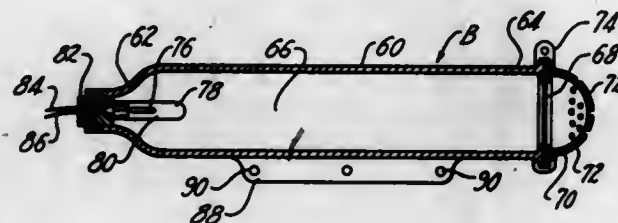
Continuation-in-part of application Ser. No. 554,212, May 27, 1966, which is a continuation of application Ser. No. 427,227, Jan. 22, 1965. This application Oct. 23, 1967, Ser. No. 677,218
Int. Cl. A62c 3/00

U.S. Cl. 169—2

8 Claims

Apparatus for arresting an explosion at the mine face and preventing the explosion from propagating throughout the mine. A plurality of rigid containers are positioned

within a mine passageway with the container outlets directed generally toward the mine face. Each of the containers is provided with a quantity of pulverulent flame extinguishing material and has a frangible disc closing the container outlet. An explosive charge is positioned within each container in an envelope which also contains a suitable detonating mechanism. Flame sensing means are provided and are electrically connected to the detonating mechanisms in each of the containers. The rigid containers and flame sensing means may be mounted on the mining machine. When the sensing device is activated by a flame at the mine face, the detonating mechanism explodes the charge in each of the containers. The pressure created by the explosion within the container, ruptures the frangible disc and propels the flame extinguishing material



from the container through the opening established by rupture of the disc. The flame extinguishing material is diffused toward the mine face and quickly extinguishes the flame at its incipency to prevent the propagation of the flame and accompanying explosion through the mine.

The method of this invention contemplates providing a rigid extinguisher discharge container having an explosion detonator and charge, a quantity of extinguishing material and a frangible closure. The method comprises sensing for the presence of a flame within the mine passageway, automatically detonating the explosive charge responsive to the sensing of the presence of flame to rupture the frangible closure and discharge the extinguisher material through the opening established by the closure rupture.

3,515,218

FIRE SAFETY SYSTEM

Newell J. Gardner, 6505 Wilshire Blvd., Los Angeles, Calif. 90048, and William R. Lastinger, Austin, Tex. (P.O. Box 75366, Los Angeles, Calif. 90005)

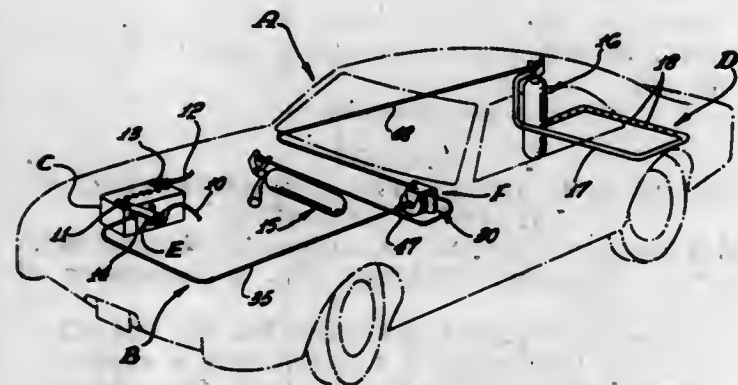
Filed Mar. 11, 1968, Ser. No. 714,166

(Filed under Rule 47(a) and 35 U.S.C. 116)

Int. Cl. A62c 3/00

U.S. Cl. 169-2

7 Claims



A system for preventing or extinguishing automotive vehicle fires, a single-actuator being located on the automobile dash and being selectively operable to open the main automobile battery circuit, operate an extinguisher

under the automobile hood to flood the engine compartment with a fluent fire fighting medium, or to operate an extinguisher in the region of the fuel tank to cover such region with a fluent fire fighting medium.

3,515,219

ROD WEEDER

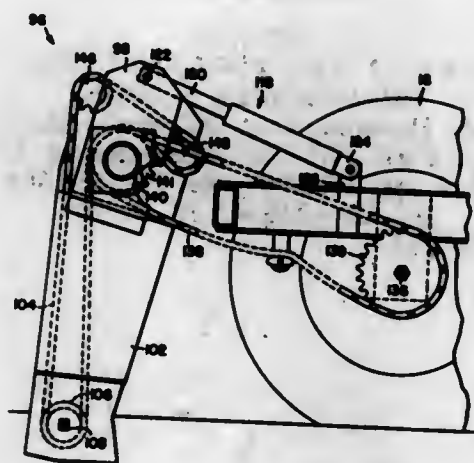
William Wayne Jackson, Altoona, and Duane Arnold Essex, Des Moines, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Feb. 26, 1968, Ser. No. 708,096

Int. Cl. A01b 39/19

U.S. Cl. 172-44

8 Claims



A flexible rod weeder having a plurality of subframes interconnected for swinging movement about longitudinally extending axes, each subframe carrying a weeder rod mounted on a rockshaft which is in turn mounted for yieldable rotational movement on the subframe. The rod weeder can be transported in an endwise position by folding the implement hitch and positioning rear gauge wheels and forward transport wheels in their transport position. The gauge wheels are carried by structure rotatably mounted about the rockshaft and can be raised and lowered by a hydraulic cylinder mounted between the frame and the upper end of the structure.

3,515,220

LAWN ROLLER

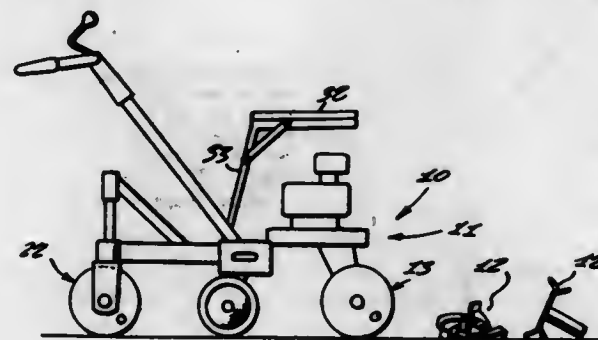
Algie A. Reece, Rte. 3, Waynesville, N.C. 28786

Filed Nov. 1, 1967, Ser. No. 679,844

Int. Cl. A01b 29/06

U.S. Cl. 172-245

2 Claims



A gardening machine that is readily convertible from a tiller to a lawn roller, and which includes the replacement of the blades from a rotor tiller with a pair of pulling rollers and a separate front roller assembly.

3,515,221

SCRAPER BLADE ATTACHMENT FOR TRACTORS

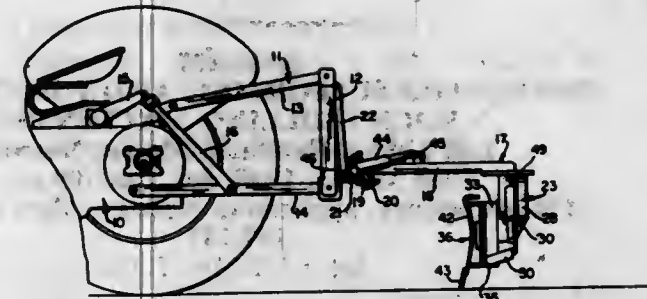
Byron Leo Fowler, Corpus Christi, Tex., assignor to E. L. Caldwell & Sons, Inc., Corpus Christi, Tex., a corporation of Texas

Filed May 9, 1967, Ser. No. 637,266

Int. Cl. A01b 59/06

U.S. Cl. 172-447

9 Claims



A scraper blade assembly mountable upon a standard three-point tractor hitch and having power means operable from the seat of the tractor to adjust the scraper blade to a number of different working positions either offset laterally of the tractor or directly therebehind.

3,515,222

CABLE PLOW MOUNTING

Alvin W. Kant, Oakland, Calif., assignor to American Tractor Equipment Corporation, a corporation of California

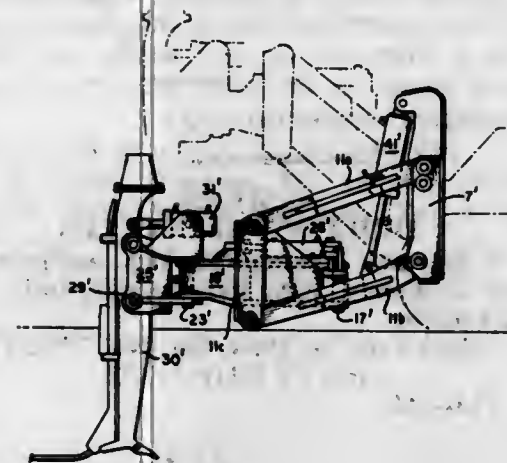
Continuation-in-part of application Ser. No. 579,358,

Sept. 14, 1966. This application June 19, 1968, Ser. No. 738,351

Int. Cl. A01b 63/00, 65/00

U.S. Cl. 172-484

5 Claims



A cable plow mounting for supporting a plow from a ground engaging vehicle, comprising a first support that may be raised and lowered relative to said vehicle, a second support pivotally mounted from the first and movable between positions to the left and right of a center position, actuating means for pivoting said first support, a bracket mounted from said second support for relatively free pivotal movement upon a vertical axis, and a plow shank pivotally mounted upon a horizontal axis from said bracket; whereby said plow shank may be selectively offset to the right or left of center while maintaining positions of parallel alignment and/or selectively positioned to adjust the fleet angle of the plow or its vertical relationship to the ground.

3,515,223

HITCH CONSTRUCTION FOR TWO TANDEM DISK HARROWS

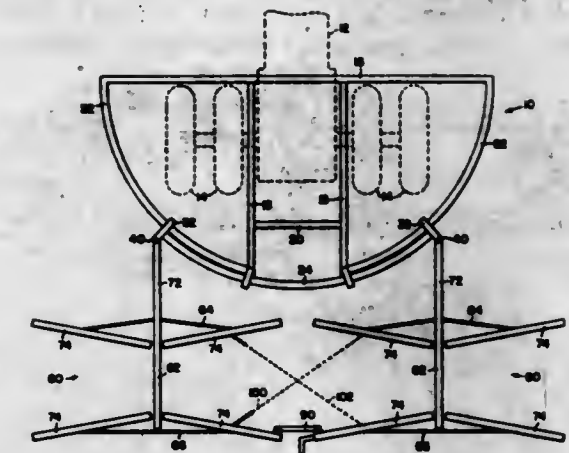
Charles Harold Youngberg and Dennis Laverne Larson, Moline, and Barton Lee Swales, Silvis, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Apr. 8, 1968, Ser. No. 719,563

Int. Cl. A01b 23/04, 39/28

U.S. Cl. 172-658

6 Claims



Two tandem disk harrows are secured to spaced apart points on a hitch device which is in turn mounted to a tractor. The inner ends of the rear gangs are connected to each other by a rigid link to prevent interference between gangs. Crossed chains interconnect the harrows to maintain proper spacing of the forward gangs. A rear ground-working device works the ground between the two harrows.

3,515,224

HYDRAULIC CYLINDER CONTROL FOR BULLDOZER

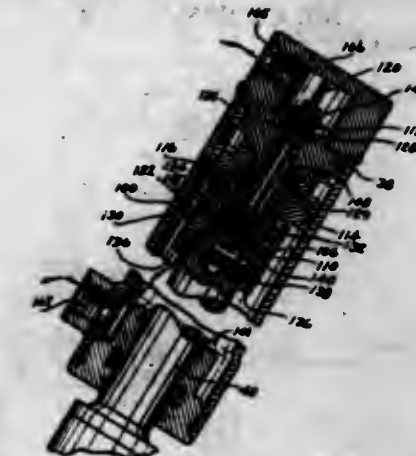
David H. Seaberg, Burlington, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Filed Oct. 5, 1967, Ser. No. 673,191

Int. Cl. E02f 3/76

U.S. Cl. 172-809

2 Claims



A hydraulic control for a vehicle having a blade, a tilt cylinder, lift cylinders for positioning the blade in relation to the ground, and valves in the lift cylinders for relief of fluid pressure and for allowing by-pass of the fluid. The valves in each lift cylinder are connected by a pin and the relief and by-pass action is actuated by reason of one or the other extremity of the valve mechanism striking a portion of the cylinder.

3,515,225 **ROTARY IMPACT TOOL HAVING TORQUE RESPONSIVE DISENGAGEMENT AND POWER CONTROL**

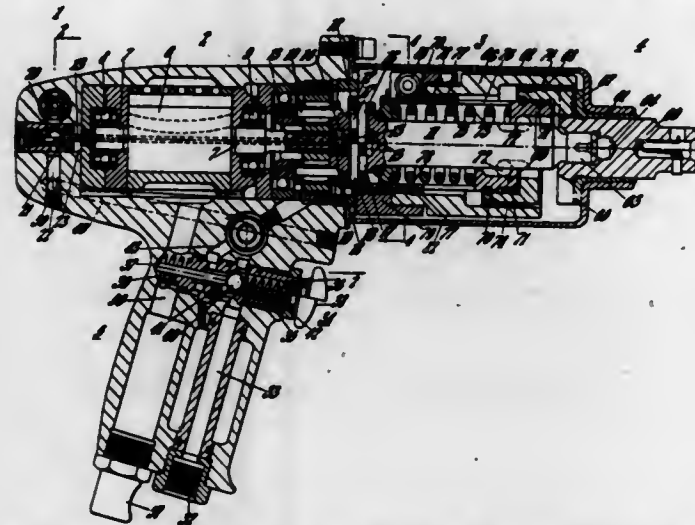
Ronald Frederick States, Hendon, London, England, assignor to Desoutter Brothers Limited, London, England, a British company

Filed July 8, 1968, Ser. No. 743,100
 Claims priority, application Great Britain, July 21, 1967, 33,648/67

Int. Cl. B25b 23/14

U.S. Cl. 173—12

4 Claims



A power-operated impact wrench, screwdriver or like rotary tool of the kind comprising relatively movable hammer and anvil members with means for automatically causing them to become engaged and disengaged cyclically in which there is provided a rotary mass coupled to the hammer member by spring means in such manner that at values of torque below a predetermined value the rotary mass is constrained by the spring from moving relative to the hammer means, while at a predetermined value of torque the rotary mass moves relative to the hammer means and thereby acts upon the said automatic means to increase the amount of disengagement movement of the members, and operate control means to interrupt the supply of power to the tool.

3,515,226 **TORQUE RESPONSIVE CONTROL SYSTEM FOR MULTIPLE HEAD SCREW DRIVING MACHINES**

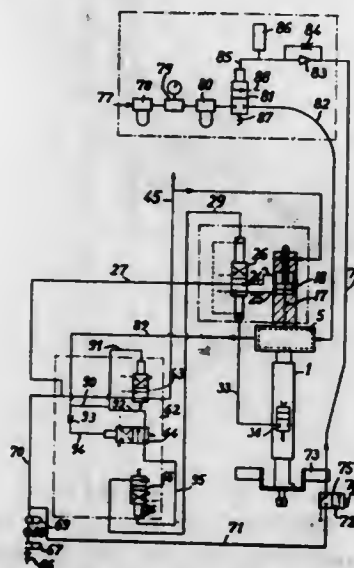
André Cauvin, Port Marly, France, assignor to Societe des Automobiles SIMCA

Filed Aug. 15, 1967, Ser. No. 660,715

Int. Cl. B25b 23/14

U.S. Cl. 173—12

4 Claims



A control system for a number of screw driving heads each of which is fixed to a common chamber which provides pressurized fluid to drive separate motors contained in each head. Each screw driving head is fitted with a detachable distributor to control the action of a

piston, which piston in turn operates a closing device to control the admission of the pressurized fluid from the common chamber to each head. Each of these detachable distributors is connected to a torque measuring instrument, a general distributor common to each head and to an automatically operated alarm which indicates if the desired torque on each head has been obtained or not. The general distributor is in turn connected to the common chamber and to an operating source of compressed air.

3,515,227 **DEVICE FOR SUPPORTING AND POSITIONING ROCK DRILLING MACHINES**

Leif Lokka, Haerland, Mysen, Norway

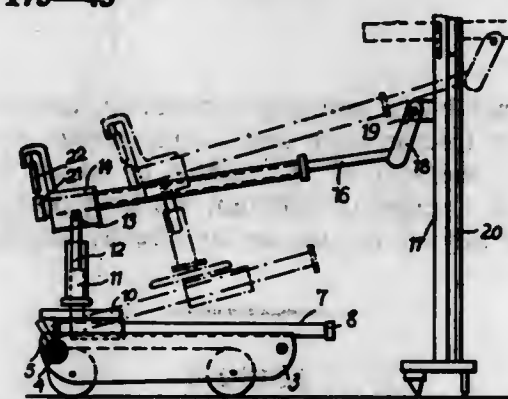
Filed Mar. 1, 1968, Ser. No. 709,639

Claims priority, application Norway, Mar. 6, 1967, 167,147

Int. Cl. E21c 11/02

U.S. Cl. 173—43

3 Claims



Device for supporting and positioning rock drilling machines comprising a mobile frame on which a base for each drilling machine may be swung in the vertical plane about an axis in the cross-wise direction of the frame, which base carries a jib which may be swung in the vertical plane on which the drilling machine may be moved lengthwise, wherein the base consists of a sleeve which may be moved in the longitudinal direction of the frame on which sleeve is supported a post which may be rotated about a vertical axis, at the upper end of which post there is supported an arm which may be swung in the vertical plane, at the outer free end of which arm there is swingably supported a jib.

3,515,228 **DRILLING APPARATUS**

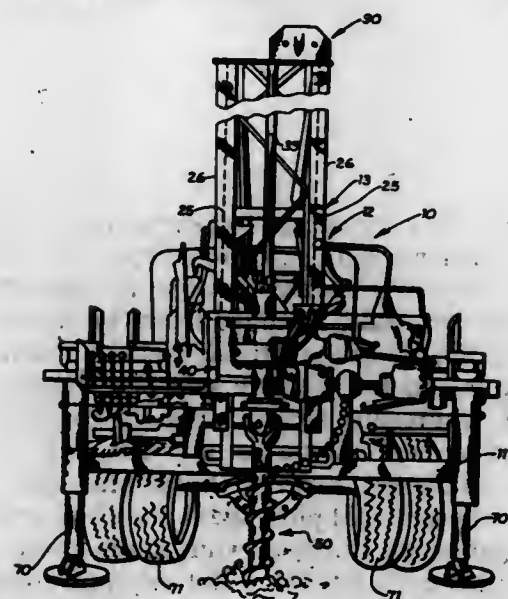
William P. Henson, Indianapolis, Ind., assignor to Mobile Drilling Company, Inc., Indianapolis, Ind., a corporation of Indiana

Filed Feb. 14, 1969, Ser. No. 799,273

Int. Cl. E21c 11/02

U.S. Cl. 173—43

5 Claims



A truck mounted drilling arrangement including a tower mounted on the bed of the truck and a vertically

movable first carriage mounted on the tower. The drill barrel at the top thereof with a stabilizer plug retained therebetween and with a threadably attached hollow shoe on the bottom thereof which may be provided with a ring or flap valve between the shoe and the barrel.

3,515,229 **HYDRAULIC BUCKET DRILL**

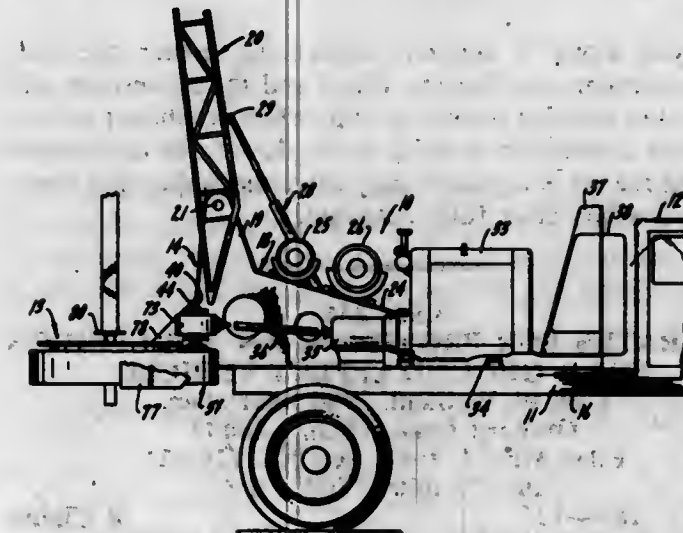
George F. Casey, Sr., Montebello, Calif., assignor to George F. Casey Co., Los Angeles, Calif., a corporation of California

Filed May 22, 1968, Ser. No. 731,062

Int. Cl. B23q 5/00

U.S. Cl. 173—151

8 Claims



A modular earth drilling rig in which different sized ring gear assemblies to match variable job requirements may be interchangeably mounted to a single basic frame assembly, which in turn may be mounted on a truck, tracks, turntable or other support structure. Hydraulic hoists power in and out of the hole and automatically brake in the event of operator injury or death.

3,515,230 **HEAVY DUTY SOIL SAMPLER**

Thomas A. Tomaine, Scranton, Pa., assignor to Sprague & Henwood, Incorporated, Scranton, Pa., a corporation of Pennsylvania

Filed July 9, 1968, Ser. No. 743,364

Int. Cl. E21b 9/16, 25/00, 27/00

U.S. Cl. 175—242

7 Claims



A heavy duty soil sampler which is composed of a driving head threadably attached directly to a hollow split

barrel at the top thereof with a stabilizer plug retained therebetween and with a threadably attached hollow shoe on the bottom thereof which may be provided with a ring or flap valve between the shoe and the barrel.

3,515,231 **PRICE-INDICATING WEIGHING SCALE**

Ernst Kuhle and Josef Schwarz, Balingen, Wurttemberg, Germany, assignors to Bismarck-Werke Wilhelm Kraut KG, Balingen-Wurttemberg, Germany, a firm

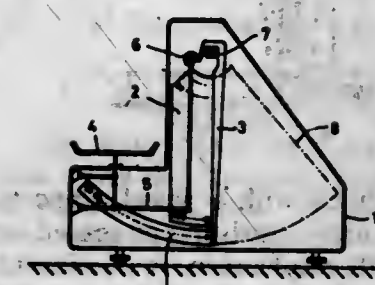
Filed Dec. 7, 1967, Ser. No. 688,933

Claims priority, application Germany, Dec. 7, 1966, B 90,184

Int. Cl. G01g 23/22

U.S. Cl. 177—34

7 Claims



A weighing scale for indicating the price of a load carried and weighed thereby. The scale is capable of weighing a load through a given range up to a predetermined maximum weight, and a price indicator is provided for indicating the price of loads of relatively low price per unit of weight throughout the entire range of weights which can be weighed by the scale. However, for loads which have a relatively high price per unit of weight, the price indicator indicates only a fraction of the possible total weight range at the region of the lower part of this weight range, so that the price indicator does not carry indications for relatively large weights of loads which have a high price per unit of weight. In this way the price indicator can be of reduced size enabling not only the simplification of the price indicator itself, but also enabling the housing of the scale to be made of a reduced size.

3,515,232 **ROCKET DRIVEN VEHICLE TRANSMISSION**

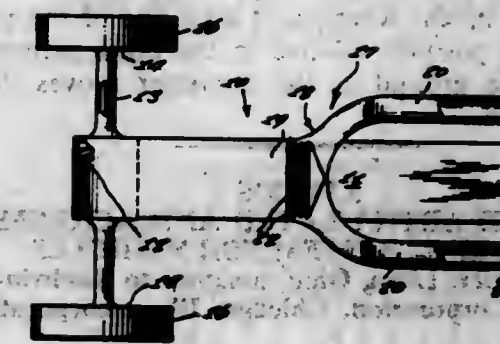
Samuel L. Edwards, 177 Hillside Ave., Newark, N.J. 07108

Filed May 5, 1967, Ser. No. 636,492

Int. Cl. B62b 57/04

U.S. Cl. 180—7

1 Claim



A transmission for automotive vehicles incorporating the components, systematic operational procedure and arrangements used in rocketry for producing a driving force for the automotive vehicle.

3,515,233

ARTICULATED INDUSTRIAL TRUCK

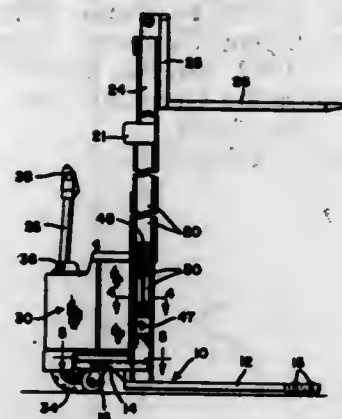
Harold A. Stammen, New Bremen, Ohio, assignor to Crown Controls Corporation, New Bremen, Ohio, a corporation of Ohio

Filed May 8, 1968, Ser. No. 727,450

Int. Cl. B60d 7/00

U.S. Cl. 180—13

6 Claims



An industrial truck with a wheel supported frame, includes a vertical mast consisting of spaced vertical beams for mounting a lift mechanism. A traction unit consisting of a traction wheel, control and power components and steering mechanism, is connected to the frame in a manner to accomplish a vertical sliding movement with respect to the frame through flanges, engaging the beams. Springs connected between the frame and traction unit transfer a part of the weight of the traction unit to the frame.

3,515,234

TOBACCO HARVESTER

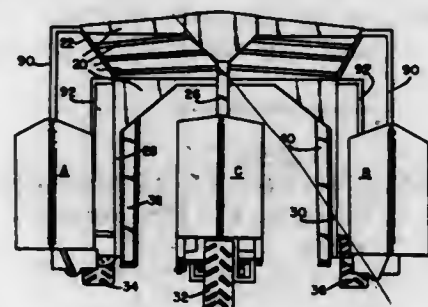
Tiras J. Danford, Leesburg, Ga., and Phillip E. Abbott, Henderson, and John D. Mitchell, Lewiston, N.C., assignors to Harrington Manufacturing Company, Lewiston, N.C., an organization of North Carolina

Filed Jan. 27, 1969, Ser. No. 794,312

Int. Cl. A01d 67/04

U.S. Cl. 180—27

5 Claims



This invention pertains to a novel tobacco harvester adapted to carry two or more primers and which incorporates novel means whereby at least one of the primers may vary his position relative to the other primers and relative to the ground as the harvester moves through a tobacco field.

3,515,235

COMBINED ARTICULATED AND ACKERMAN STEERING SYSTEM FOR VEHICLES

Haim J. Kammer, Lima, Ohio, assignor to Baldwin-Lima-Hamilton Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 26, 1967, Ser. No. 678,223

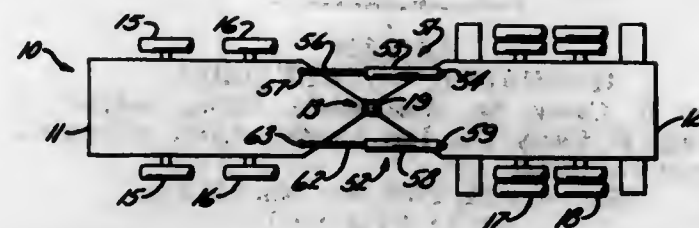
Int. Cl. B62d 5/00

U.S. Cl. 180—79.2

14 Claims

A steering system for vehicles having pivotally interconnected frames and at least one set of steerable wheels. The steering system includes Ackerman steering means connected to steer the steerable wheels and artic-

ulated steering means connected to pivot the frames. Both the Ackerman and articulated steering means are connected to be actuated through the operation of a single steering wheel, but provision is made to enable the operator to prevent actuation of either of these so that either Ackerman or articulated steering may be



employed alone if desired. Sequencing means are connected between the steering wheel and the Ackerman and articulated steering means so that, when combined Ackerman and articulated steering is employed, the articulated steering means is actuated only after the Ackerman steering means has been fully actuated.

3,515,236

APPARATUS FOR PROVIDING AN AIR CUSHION FOR A GROUND EFFECT VEHICLE

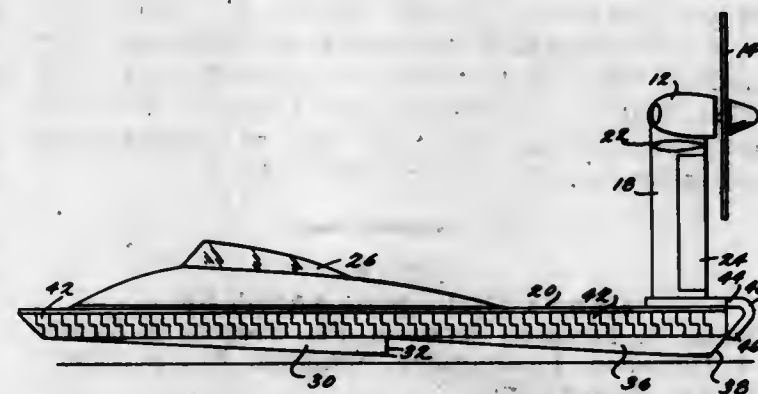
Carl W. Welland, 2980 Interlaken, Orchard Lake, Mich. 48033

Filed Mar. 4, 1968, Ser. No. 710,021

Int. Cl. B60v 1/02, 1/08

U.S. Cl. 180—117

8 Claims



An air cushion for a ground effect vehicle is dynamically induced and provided, without supplementary power, by utilizing the forward movement of the vehicle to scoop up relatively-moving ambient air and directing the moving air to form a downwardly and inwardly directed curtain extending along at least a portion of the periphery of the vehicle. Preferably a plurality of scoops, curtain-forming nozzles and unobstructed ducts connecting each scoop with a nozzle are arranged about the periphery of the vehicle.

3,515,237

METHOD FOR OBTAINING ACOUSTICAL HOLOGRAM OF THE INTERIOR WALL OF A TUBULAR MEMBER

Noyes D. Smith, Jr., Bellaire, and Charles B. Vogel, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 28, 1967, Ser. No. 663,790

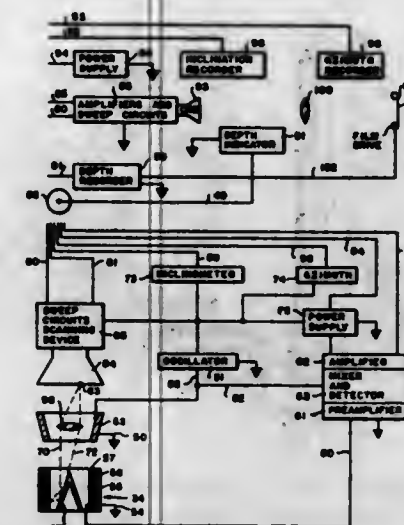
Int. Cl. G01v 1/00

U.S. Cl. 181—5

5 Claims

A method for forming an acoustic hologram of the wall of a tubular member wherein the wall is irradiated with coherent acoustic waves, and waves that are scat-

tered from the wall are converted to electrical waves and mixed with electrical waves corresponding to the coherent acoustic waves. A visible pattern that is related to the mixed waves and the locations from which acoustic



waves are scattered is displayed on an oscilloscope. The face of the oscilloscope is photographed to provide a film transparency that can be illuminated with coherent light to provide a real image of the wall of the borehole.

3,515,238

RETRACTABLE CUSHION CELLS FOR FLUID CUSHION VEHICLES

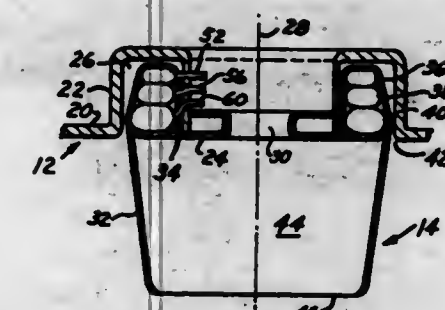
William H. Knuth, Sacramento, and William F. Shiftet, Rancho Cordova, Calif., assignors to Aerojet-General Corporation, El Monte, Calif., a corporation of Ohio

Filed Apr. 30, 1968, Ser. No. 725,371

Int. Cl. B60v 1/16

U.S. Cl. 180—121

11 Claims



This disclosure relates to retractable cushion cells for fluid cushion vehicles.

According to the present disclosure, a cushion cell is provided which depends from the vehicle and forms a cell, such as an air cell. The cushion cell is connected to retraction means for selectively extending and retracting the cell.

ERRATUM

For Class 181—5 see:
Patent No. 3,515,237

3,515,239

STETHOSCOPE HEAD CONSTRUCTION

Gustav F. Machup and David Littmann, Belmont, Mass., assignors to Minnesota Mining and Manufacturing Company, Maplewood, Minn., a corporation of Delaware

Filed July 16, 1968, Ser. No. 745,170

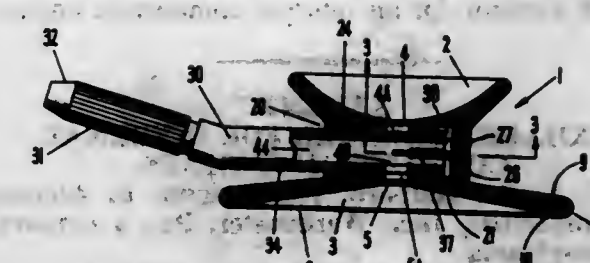
Int. Cl. A61b 7/02

U.S. Cl. 181—24

6 Claims

An inexpensive, multi-sound chamber, stethoscope chestpiece formed of a body of plastic having a metal bushing in a cavity with a metal stem rotatably secured

within the bushing. The bushing is provided with slots adapted to receive a spring engaged by the stem for selective, rotational positioning of a hole in the stem with respect to the sound chambers of the chestpiece. A dia-



phragm is secured to one sound chamber of the chestpiece body by a snap-on rim that engages an offset shoulder about the periphery of the sound chamber.

3,515,240

MICROPHONE DEVICE

Akira Sugiyama, Nara-shi, Tadami Tanaka and Rinspey Matsumoto, Hirakata-shi, and Yasuhiro Riko, Yokohama, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Kadoma-shi, Osaka, Japan, a corporation of Japan

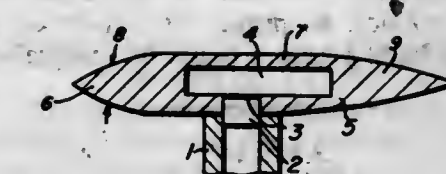
Filed Sept. 23, 1968, Ser. No. 761,766

Claims priority, application Japan, Sept. 28, 1967, 42/62,937, 42/62,938, 42/62,939, 42/62,940, 42/62,941, 42/62,942

Int. Cl. G10k 13/00; H04r 1/02

U.S. Cl. 181—31

5 Claims



A microphone device having a microphone cover of such an external shape that it is elongated in the direction of an air stream and its diameter varies continuously along the direction of the airflow. The cover is provided with an internal cavity in which the diaphragm of the microphone is exposed so that a pressure variation in the audible frequency range due to a variation in the wind velocity can sufficiently be attenuated to permit measurement of sound pressure in the air stream.

3,515,241

COILED WIRE ELEMENT

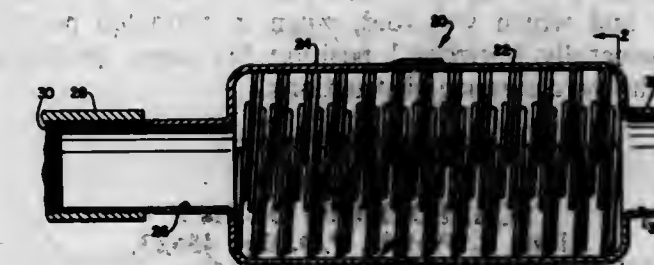
William R. Jones, Logansport, Ind., assignor to North American Rockwell Corporation, Pittsburgh, Pa., a corporation of Delaware

Filed Apr. 1, 1969, Ser. No. 812,162

Int. Cl. F01n 1/12

U.S. Cl. 181—56

2 Claims



A continuous wire element of helical configuration the helix being formed by a plurality of essentially circular interconnected loops, each loop contacting the two adja-

cent loops and the centers of each loop being offset in opposite directions with respect to the centers of the next adjacent loops. In a typical application the element housed in a suitable casing constitutes a silencer for a pump, compressor or other air handling apparatus or a muffler and spark arrestor for an internal combustion engine.

3,515,242

EXHAUST SILENCER FOR INTERNAL COMBUSTION ENGINES

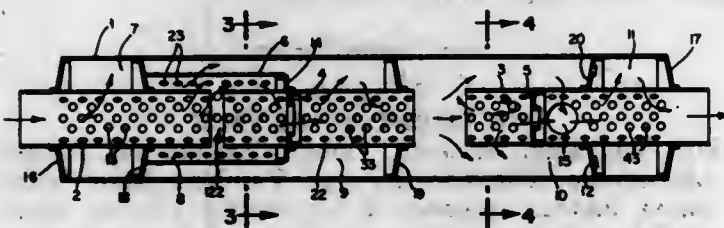
Josiah C. Lytle, Hatboro, Pa., assignor to Alexander-Tagg Industries, Inc., Warminster, Pa., a corporation of Pennsylvania

Filed Sept. 5, 1969, Ser. No. 855,714

Int. Cl. F01n 1/08

U.S. Cl. 181—56

10 Claims



An exhaust silencer for internal combustion engines is disclosed having a system of expansion/resonator chambers tuned to specific frequencies and so arranged structurally as to avoid adding to the structural length of the silencer. A restriction in the outlet tube causes a reversal of flow into an expansion chamber. Oversized openings or ports are provided in the outlet tube just beyond the restriction to purge the expansion chamber and to keep the back pressure down to acceptable values.

3,515,243

LIFT DEVICE

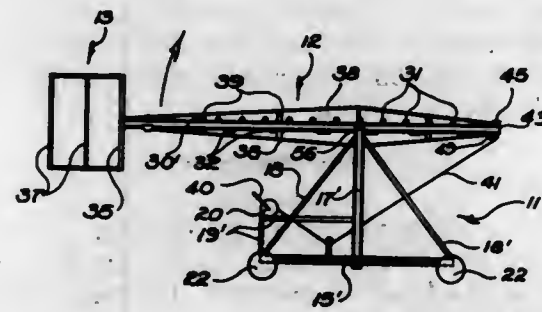
Joseph R. Ellen, Jr., 4720 Rembert Drive, Raleigh, N.C. 27609

Filed May 6, 1969, Ser. No. 822,154

Int. Cl. E06c 5/04

U.S. Cl. 182—68

8 Claims



In abstract, a preferred embodiment of this invention is a frame supported platform which is extensible, when in an upright position, a distance almost double its original height and which will fold, when in retracted position, to a generally horizontal position for easier portability beneath low clearance obstructions.

3,515,244

SCAFFOLDING DEVICE

John E. Weible, P.O. Box 45623, Tulsa, Okla. 74135

Filed Aug. 26, 1968, Ser. No. 755,366

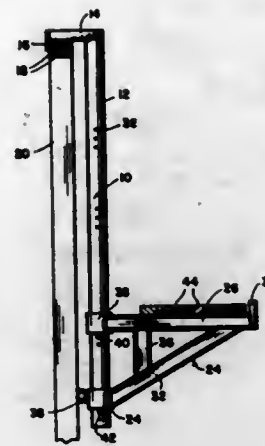
Int. Cl. E04g 3/08

U.S. Cl. 182—150

1 Claim

A scaffolding device comprising an upright member having a hook portion for engaging the upper end of a stud or the like of a wall in the building or construction

of a dwelling, building, or the like. A bracket member is movably secured to the upright member for receiving one end of the usual plank or scaffolding board whereby a



pair or plurality of the scaffolding device may be spaced along the construction wall or the like for supporting the scaffolding boards therebetween.

3,515,245

LUBRICANT REVERSE METERING VALVE SYSTEM

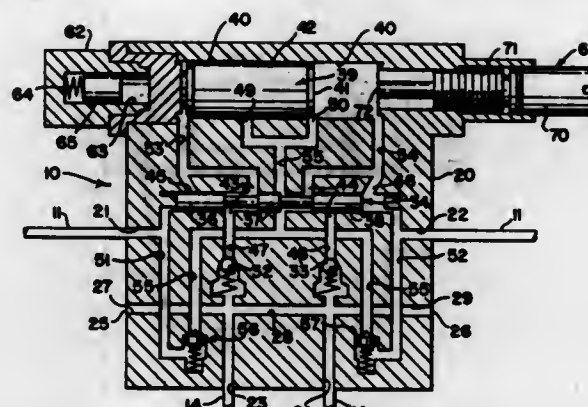
Ronald F. Obergefell and Robert A. Shivak, Cleveland, Ohio, assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Delaware

Filed Nov. 30, 1967, Ser. No. 687,057

Int. Cl. F16n 25/02

U.S. Cl. 184—7

4 Claims



A single line reversing feeder which includes a valving arrangement for delivering a metered amount of a lubricant directly to bearings or to intermediate lubricant distributors and, thereafter, passing lubricant through the feeder to other like feeders in the single line. The feeder includes a positive cycling feature which prevents flow along the line to the next downstream feeder prior to the discharge of its metered amount of lubricant. The feeder may include a cycle indicator.

3,515,246

FINAL DRIVE LUBRICATING DEVICE

Robert Eugene Haight, Waterloo, and Thomas Milo Sullivan, Cedar Falls, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Sept. 25, 1968, Ser. No. 762,475

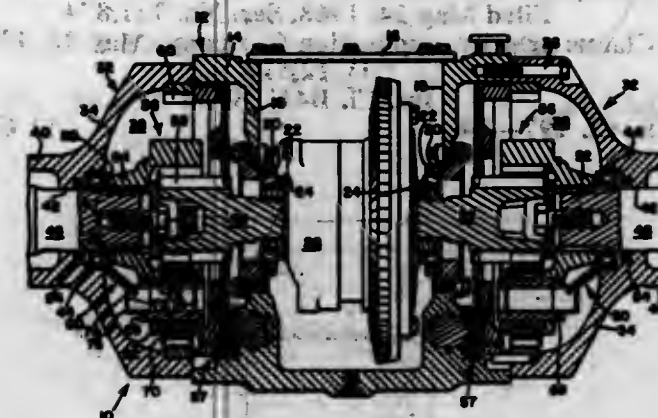
Int. Cl. F01m 9/06

U.S. Cl. 184—11

6 Claims

A drive axle assembly includes a pair of axle housings projecting from opposite sides of a central differential housing, and a pair of drive axles have their inner ends journaled in bearings mounted in the axle housings.

The axles are driven through planetary final drives, having oil reservoirs in the planetary pinion shafts, which are filled with oil as they dip below the oil level in the



housing. A trough conducts the oil from each reservoir to the respective axle bearings when the reservoir moves above the oil level and the axis of the drive axles.

3,515,247

SAFETY DEVICE FOR A WINCH

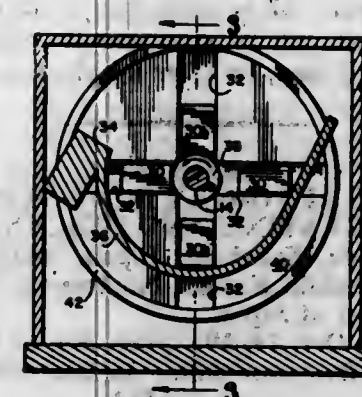
James R. Smith, Martinsville, Ind., assignor to Baker-Roos, Inc., Indianapolis, Ind., a corporation of Indiana

Filed July 5, 1968, Ser. No. 742,707

Int. Cl. F16d 63/00

U.S. Cl. 188—82.1

4 Claims



A safety device for preventing rotation of a winch drum when said rotation becomes excessively fast in one direction. One end of the drum is provided with radially extending slots in which a plurality of slides are carried. The slides are held axially within the slots by a support plate having a stop and a guide mounted thereon. The slides, which move radially outwardly to within the radial extent of the stop when the drum is rotated too fast in one direction, engage said stop and prevent further rotation of the drum. When the drum is rotated in said one direction at a normal rate of speed said slides, under the influence of gravity, clear the stop, and when the drum is rotated in an opposite direction, the guide causes the slides to clear said stop.

3,515,248

RAILWAY CAR WHEEL TREAD BRAKE APPARATUS

Allen W. Kyllonen, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Mar. 28, 1968, Ser. No. 716,831

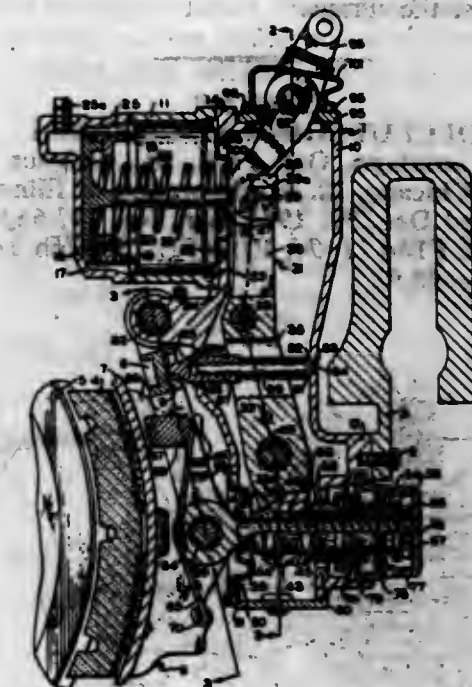
Int. Cl. F16d 65/66

U.S. Cl. 188—202

9 Claims

A tread brake unit for a railway car wheel of the type having a power-operated brake shoe actuating lever between which lever and the brake shoe is interposed an

automatically operative double-acting clutch-type slack adjuster embodying a pair of springs effective in response to rocking of the lever through a chosen angle incidental



to effecting a brake application to either increase or take-up slack accordingly as the brake shoe has or has not moved into contact with the tread surface of the corresponding wheel.

3,515,249

TORQUE SENSITIVE RELEASING MEANS FOR SPRAG CLUTCHES

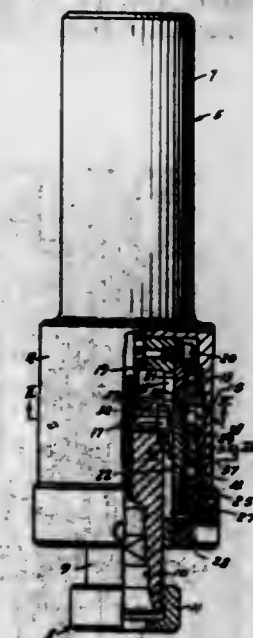
John L. Kling, Jr., Frankenmuth, Mich., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Delaware

Continuation-in-part of application Ser. No. 715,855, Mar. 25, 1968. This application June 5, 1969, Ser. No. 830,654

Int. Cl. F16a 41/07, 43/20; B25b 21/00

U.S. Cl. 192—45.1

16 Claims



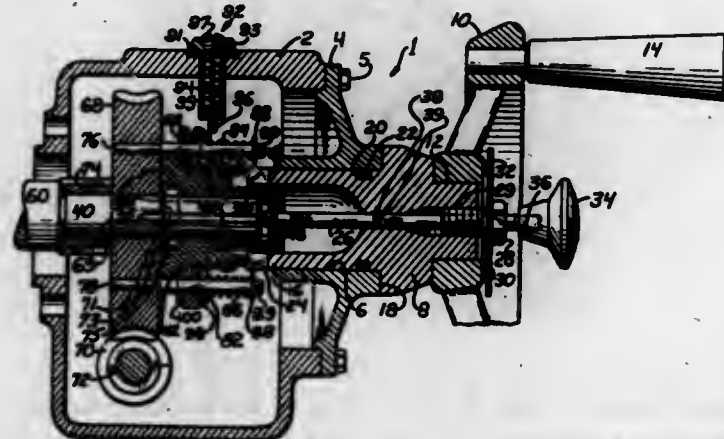
Apparatus such as a tool driver liable to excessive torque in operation comprises first and second portions in concentric relatively rotatable assembly having respective annular oppositely radially facing spaced areas or races with circumferentially spaced one-way clutch sprags normally biased to effect corotation of the portions in response to rotary movement of one of the portions, and

torque-sensitive means including a torque-releasable clutch connecting one of said areas to its portion of the apparatus and sprag-releasing lugs on the same portion of the apparatus operative when the clutch releases said one area to release the sprags.

3,515,250

DECLUTCHING MECHANISM

Francis J. Cantalupo, Oak Park, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 30, 1968, Ser. No. 787,663
Int. Cl. F16d 11/04; F16k 31/53; F16h 3/36
U.S. Cl. 192—48.91 9 Claims

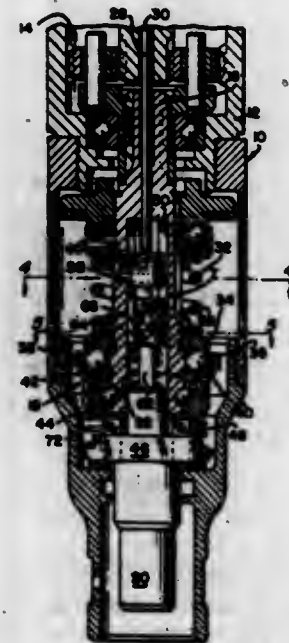


The invention is directed to mechanism having associated relation with a valve operator for selectively actuating a valve either manually, by means of a handwheel, or by power means such as an electric motor, and wherein actuation of the power means will automatically disengage the driving engagement of the valve with the handwheel.

3,515,251

TORQUE RELEASE AND SHUTOFF DEVICE FOR ROTARY TOOLS

John M. Clapp, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Continuation of application Ser. No. 664,158, Aug. 29, 1967. This application Apr. 14, 1969, Ser. No. 824,720
Int. Cl. F16d 7/00
U.S. Cl. 192—150 20 Claims

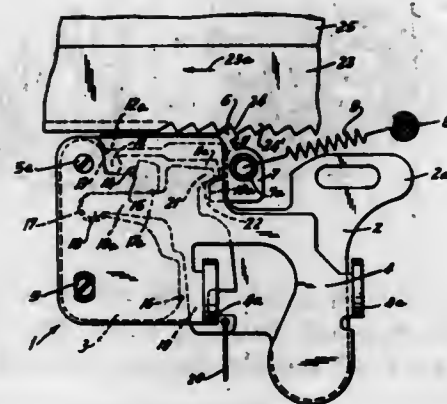


In a power tool a torque-responsive clutch having camming means to turn off the motor; applicable to reversible type tools as well as uni-directional types.

3,515,252

HALF SPACING ESCAPEMENT MECHANISM

Albert Rix, Siegfried Reimers, Helmut Ressel, and Manfred Voigt, Wilhelmshaven, Germany, assignors to Olympia Werke AG, Wilhelmshaven, Germany
Filed May 24, 1968, Ser. No. 731,874
Claims priority, application Germany, May 26, 1967, O 12,517
Int. Cl. B41j 19/58 11 Claims



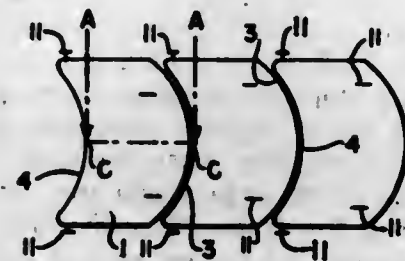
An escapement pawl and a control member by which the escapement pawl is operated are mounted in two recesses of a spacing member for angular movement and are retained by two cover plates separated by the spacing member and slidably guiding the escapement pawl and the control member. By operation of the control member by means of a space bar or universal bar, the escapement pawl can be operated to stop a paper carriage after a full step, or after a half step.

3,515,253

CONTINUOUS AUTO-WAY FOR USE IN STRAIGHT, CURVED, ELEVATING AND DESCENDING PATHS

Saburo Yamada, Sakai-shi, Japan, assignor to Senyo Kogyo Kabushiki Kaisha, Naniwa-ku, Osaka, Japan, a corporation of Japan
Filed Oct. 23, 1967, Ser. No. 677,152
Claims priority, application Japan, Nov. 16, 1966, 41/75,412
Int. Cl. B66b 9/12 2 Claims

U.S. Cl. 198—17



The disclosure relates to an auto-way or conveyor, such as for the continuous transportation of people, comprising a plurality of running boards interconnected by links through ball joints each having vertically and horizontally extending cross-like pins; the front and rear side edges of each board are arcuately formed and the front and rear ends have bowl-like surfaces; the side edges and end surfaces have the same curvatures respectively, whereby two adjacent boards make line-contact with each other and said boards can follow one another in their continuous path smoothly without creaking whether the path is straight, curved, elevating or descending, by means of wheels carried by the board so as to ride on rails suitably laid according to said paths.

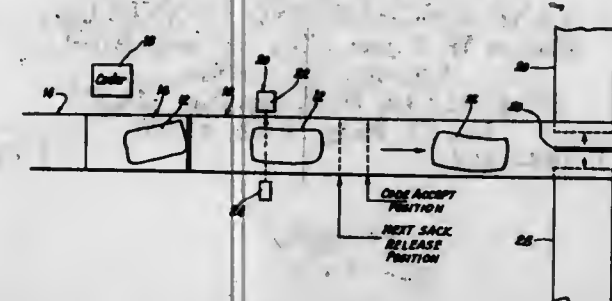
3,515,254

CONVEYOR SYSTEM HAVING COMPUTER FOR FINDING THE CENTERS OF OBJECTS BEING CONVEYED

Leo A. Gary 5135 Lockwood Ave., Chicago, Ill. 60638
Filed Aug. 27, 1968, Ser. No. 755,684
Int. Cl. B65g 47/42 21 Claims

U.S. Cl. 198—21

21 Claims



The disclosed conveyor system comprises a conveyor for carrying a series of irregular objects such as mail sacks. The objects are deposited on the conveyor by an induction device. The passage of the leading and trailing edges of each object are detected by a sensor. In response to the passage of the leading edge the sensor causes an electronic up-down counter to start counting up in response to normal frequency pulses from a pulse source. The sensor stops the up-down counter in response to the passage of the trailing edge. When the object reaches a predetermined position along the conveyor, the counter is caused to start counting down in response to double frequency pulses. When the counter has counted down to a count of 0, a control function is initiated. In this way, the control function is timed to correspond with a predetermined position of the center of each successive object. Such control function may comprise the operation of a paddle for pushing the object laterally from the conveyor, either immediately or after a predetermined delay.

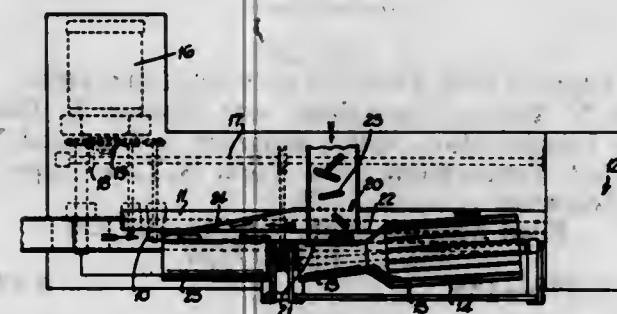
3,515,255

ARTICLE SORTING MACHINE

George Arthur Lee, Malvern Link, England, assignor to Autopack Limited, Malvern Link, England
Filed Apr. 16, 1968, Ser. No. 721,855
Claims priority, application Great Britain, Apr. 28, 1967, 19,737/67
Int. Cl. B65g 47/24 4 Claims

U.S. Cl. 198—33

4 Claims



An article sorting machine comprising a first conveyor and a second conveyor disposed side by side and arranged to run in counter-relation, a first roller rotatable about a horizontal axis and disposed at an input station above the first conveyor so that a gap is presented between a vertical plane containing that edge of the first conveyor adjacent to the second conveyor and a parallel vertical plane which intersects one side of the first roller when viewed in plan, a second roller disposed forwardly of the first roller and rotatable about a horizontal axis, said second roller being arranged so that it forms a baffle which

prevents any article resting wholly or partially on top of another article from passing along the first conveyor towards a packing or delivery station and which displaces such article on to the second conveyor for return towards and beyond the input station, the second conveyor having beyond the input station deflector means arranged to deflect any articles thus returned on to the first conveyor again.

3,515,256

CANE HEAPER

Harry M. Martin, Paulina, La. 70763, and Paul J. Poche, Rte. 1, Box 65, Convent, La. 70723
Filed Nov. 4, 1968, Ser. No. 773,254
Int. Cl. B65g 47/24 7 Claims

U.S. Cl. 198—33

7 Claims



A tractor-mounted cane heaper comprising an endless tilted pronged chain for lifting the cane, a tripper for restraining one end of the cane while it is being flipped, and a guide for directing the cane during flipping. The tractor has a special wheel arrangement to avoid crushing the cane.

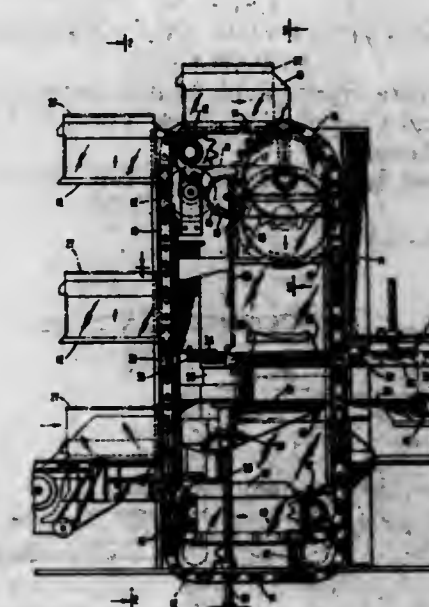
3,515,257

APPARATUS AND METHOD FOR HANDLING BOOKS AND THE LIKE

Edwin K. Smith, Haworth, and Clinton F. Brundage, Mahwah, N.J., assignors to Michle-Goss-Dexter Incorporated, Chicago, Ill., a corporation of Delaware
Filed Aug. 21, 1967, Ser. No. 661,904
Int. Cl. B65g 15/00, 37/00 24 Claims

U.S. Cl. 198—102

24 Claims



Book making apparatus wherein book blocks are picked up by an endless continuously operating saddle conveyor with a plurality of saddle blades, and carried upwardly through paste and cover applying stations, then laterally, and then downwardly in a vertical plane, all

without change of orientation, to a delivery station where the encased books are stripped from the downwardly travelling saddle conveyor blades and moved horizontally on edge by a continuously operating pusher-type conveyor out of the path of following blades.

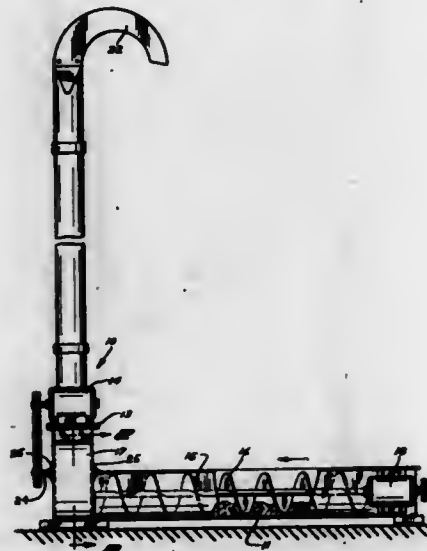
3,515,258

PAWL FOR CENTRIFUGAL THROWER

Walter W. Wolfe, Mound, Herbert A. Holten, Minneapolis, Jack D. Messner, Maple Plain, and Ivan E. Olson, Wayzata, Minn., assignors to Van Dusen & Co., Inc., Wayzata, Minn., a corporation of Minnesota
Filed Mar. 6, 1968, Ser. No. 710,956
Int. Cl. B65g 31/04

U.S. Cl. 198—128

8 Claims



A pawl or paddle used in connection with a centrifugal thrower for throwing material. The pawl is pivoted to the outer end of an arm on a spider and freely swings. The pawl is made up of two plate like members formed into a V-shape with a narrow web (the plates are substantially wider than the web) holding the plates together. The pivot for the pawl is at the closed end of the V. The pawl thus has a symmetrical configuration when the pawl is rotating. It has a leading face which slopes forwardly at an angle from a radial plane passing through the axis of the spider and the pivot axis of the pawl. This gives greater capacity for the same horsepower.

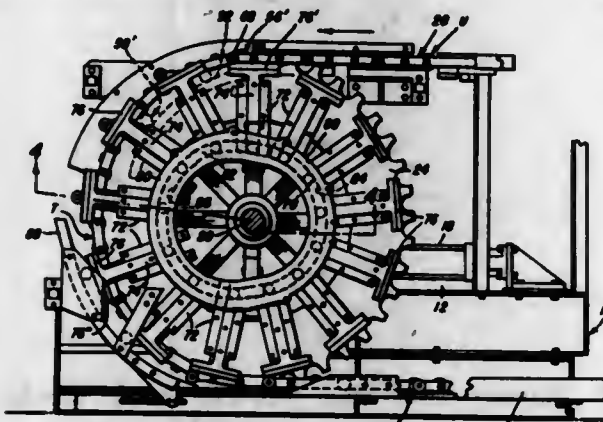
3,515,259

ENDLESS-CONVEYOR, TRAY-STABILIZING APPARATUS

Robert N. Before, Springfield, Mass., assignor to Diamond International Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 23, 1968, Ser. No. 761,680
Int. Cl. B65g 17/06

U.S. Cl. 198—137

6 Claims



An endless conveyor having support trays journaled between and spaced along opposed parallel conveyors

chain runs which define an upper, transitional and lower path of travel for the trays, and cam-controlled abutment and guide means whereby the trays are maintained substantially horizontal during movement along the transitional path of travel between the upper and lower runs of the conveyor chains.

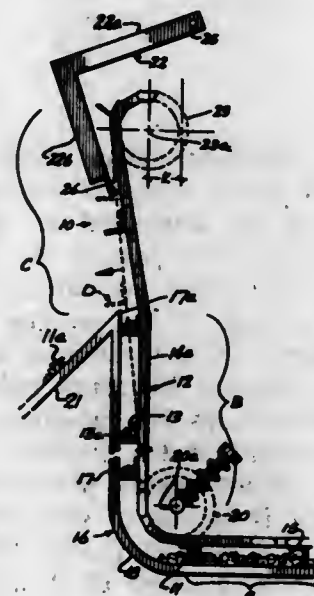
3,515,260

TANK DISCHARGING CONVEYOR

Robert W. Clyne, 5701 Sheridan Road, Chicago, Ill. 60626
Filed May 10, 1968, Ser. No. 728,275
Int. Cl. B65g 19/06, 45/00

U.S. Cl. 198—154

3 Claims



An apparatus is provided for the mechanical handling of industrial waste or the like subsequent to the latter being deposited in a settling tank, sump, or reservoir. The apparatus comprises an endless chain having mounted thereon a plurality of spaced flights which during a first segment of travel contact the waste accumulated along the bottom of the tank, during a second segment of travel move vertically and carry therewith portions of the waste, and during a third segment of travel discharge the carried waste portions outside the tank. Upon moving from the second to the third segment of travel, each flight springs outwardly a predetermined distance causing the carried waste portion to be dislodged from the flight in question. The apparatus in question is an improvement of an apparatus of the type disclosed in my Pat. No. 3,303,920.

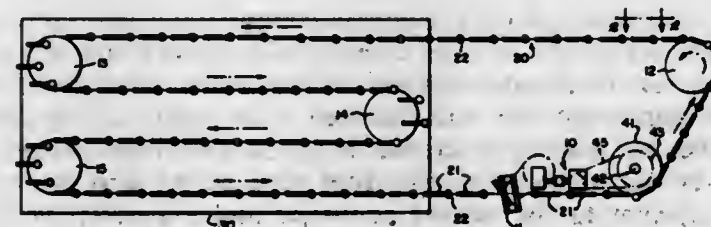
3,515,261

CONVEYOR DISCHARGE MECHANISM

Robert N. Before, Springfield, and Donald T. Daniele, East Longmeadow, Mass., assignors to Diamond International Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1968, Ser. No. 722,730
Int. Cl. B65g 17/00

U.S. Cl. 198—155

6 Claims



A mechanism operated in timed relationship with a conveyor having a keyway therein to receive a guide roller on a pivot arm attached to trays on the conveyor

so as to turn each tray upside down as it passes the mechanism which rotates 180° during the passing of each tray. This mechanism is used in conjunction with a multiple pass dryer which positions the trays and their guide rollers for correct engagement with the discharge mechanism.

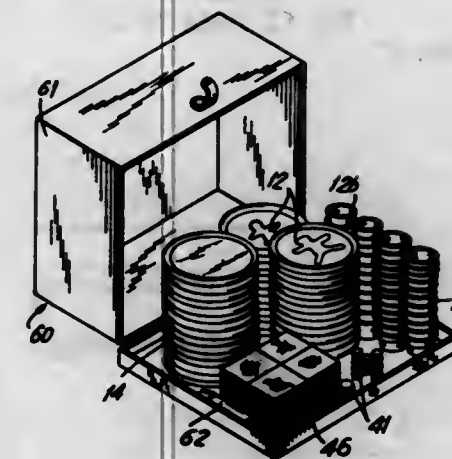
3,515,262

RECEPTACLE UNIT AND KIT

Judy Ornstein and Leonard Ornstein, both of 1409 Albermarle Road, Brooklyn, N.Y. 11226
Filed Dec. 13, 1968, Ser. No. 783,688
Int. Cl. A45c 11/00; B65d 3/22

U.S. Cl. 206—1

6 Claims



The invention provides for a receptacle unit including an inner shell that is preferably disposable and an outer shell for receiving the inner shell in nested relation thereto and contains indicia means associated therewith that is viewable through one of the shells which is transparent. Means for releasably connecting the shells and supporting them when assembled is provided.

3,515,263

FISHING ROD CONTAINER

Joel A. Carlson, 4527 E. Grant, Fresno, Calif. 93702

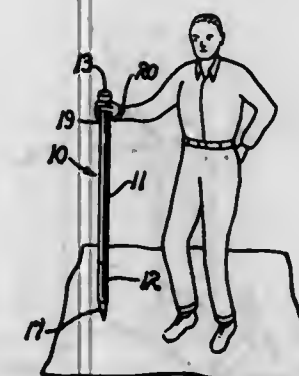
Substitute for abandoned application Ser. No. 622,800, Mar. 13, 1967. This application Feb. 24, 1969, Ser. No. 831,795

Claims priority, application Canada, July 12, 1968, 25,063

Int. Cl. A01k 97/08, 97/10; B65d 85/54

U.S. Cl. 206—16

6 Claims



This invention discloses a fishing rod container which serves also as a walking aid and a fishing rod support. The container has a pointed lower end and a hand grip at the upper end. It divides into two sections to permit

875 O.G.—5

3,515,264

MATCH BOOKS

Calvin B. Pittman, 516 Dewey St., Sandusky, Ohio 44870

Continuation-in-part of application Ser. No. 662,535, Aug. 22, 1967. This application Mar. 13, 1969, Ser. No. 806,847

Int. Cl. A24c 27/00

U.S. Cl. 206—29

2 Claims



The match book comprises a pad of matches and a cover. The cover has two sides each of which has its lower portion secured against the lower portion of one side of the pad, has its upper edge extending slightly beyond the upper ends of the matches, and has a flange extending inward from its upper edge closely above the upper ends of the matches. The flanges have beveled ends, and the two sides of the cover and the flanges are so constructed that the two sides of the cover resiliently hold the edges of the two flanges in abutting relationship to form a V-notch at each end of the flanges.

3,515,265

UNIT DISPENSER WITH VISUAL INVENTORY CONTROL

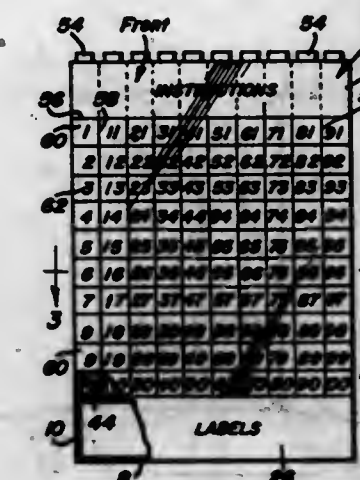
Richard W. Bartlett, West Frankfort, Ill.

(3720 S. Franklin St., Michigan City, Ind. 46360)
Filed May 28, 1968, Ser. No. 732,651

Int. Cl. B65d 83/04

U.S. Cl. 206—42

7 Claims



A factory filled package-type unit for systematized positive inventoried visual control and authorized handling and dispensing of pills, capsules, ampules, vials and the like. A rectangular box-like plastic shell is transformed by partitions into a compartmented case. The battery of compartments serve to protectively enclose a plurality of progressively usable withdrawable transparent tray-like containers. These containers have partitioned pockets for individual pills and the like. The front and back walls of the case are systematically lined and

plotted to provide columnized reference numbers, the latter being arranged in numerical order (1 to 100 on the front and 100 to 1 on the rear) to provide quick reference charts through the medium of which a nurse or authorized person can keep tab on the items already used and remaining items for subsequent and controlled use.

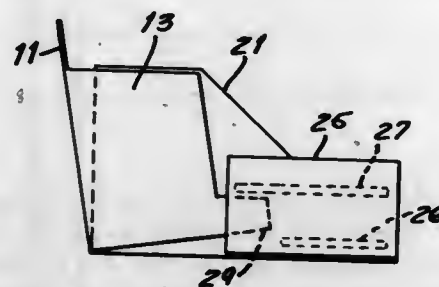
3,515,266

DISPLAY CARTON

Martin E. Leszczynski, Jersey City, N.J., assignor to Scandia Packaging Machinery Company, North Arlington, N.J., a corporation of New Jersey
Filed July 19, 1968, Ser. No. 746,106
Int. Cl. B65d 5/20, 5/22

U.S. Cl. 206-44

8 Claims



A display carton formed from a one-piece blank having a back hinged to the bottom of the blank; the tilting movement of the blank is limited by adhesive strips.

3,515,267

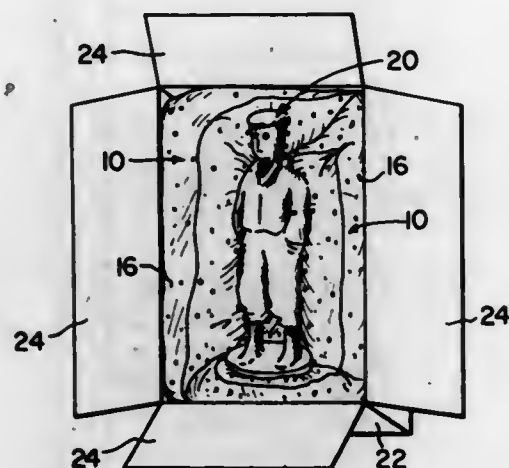
PACKAGE COMPRISING SPACE STUFFER MEANS COMPRISING FREE FLOWING BODIES IN FLEXIBLE BAG MEANS

Clement LaRocca, Flushing, and Bernard Schwartz, Bethpage, N.Y., assignors to Parke Davis & Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 5, 1968, Ser. No. 702,923

Int. Cl. B65d 81/12

U.S. Cl. 206-46

4 Claims



The invention relates to space stuffing means comprising free flowing bodies such as polystyrene beads, or other materials, enclosed within flexible bags made of plastic, or other materials, in which the stuffer means such as the described bags are stuffed between article means to be packaged and the package casing, with the surface of the stuffing bag conforming substantially to the surface area of the article means to be packaged, with the article means spaced within the package by means of the stuffing bag, or bags being placed between the article means and the

casing of the package. If more than one article is packaged, stuffer means may also be placed between the articles. The space stuffer means of the invention may also be used in combination with floating objects such as ships, as a flotation system.

3,515,268

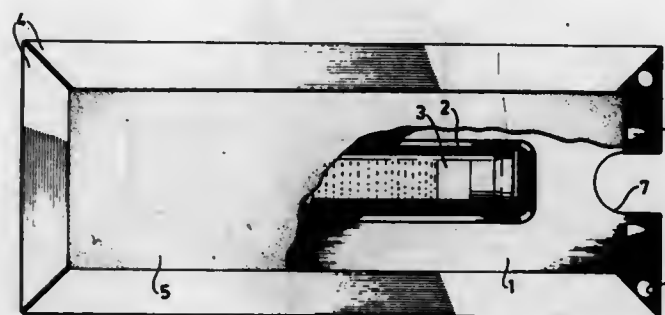
DEVICE FOR PACKAGING ONE OR MORE CONTAINERS, FOR INSTANCE FOR CLINICAL SAMPLES, AND AT LEAST ONE APPURTENANT INFORMATION CARD OR THE LIKE

Björn Edvin Lindberg, Backvindeln 74 S-126 57, Hagersten, Sweden, and Lars Ture Vilhelm Nordberg, Nykroppsgatan 32 S-123 46, Farsta, Sweden
Filed June 11, 1968, Ser. No. 736,061
Claims priority, application Sweden, June 22, 1967, 8,936/67

Int. Cl. B85d 79/00

U.S. Cl. 206-47

9 Claims



A device for packaging one or more containers, for instance for clinical samples, and at least one appurtenant information card or the like, characterized in that it comprises a preferably plate-like lower portion with at least one recess for receiving said container, or containers, respectively, and an upper portion rigidly connected to the lower portion and exposing the opening of said recess, the two portions being arranged to receive between them said information card in a position to cover the recess, said upper portion consisting of three lugs each extending along one edge of the mainly rectangular lower portion.

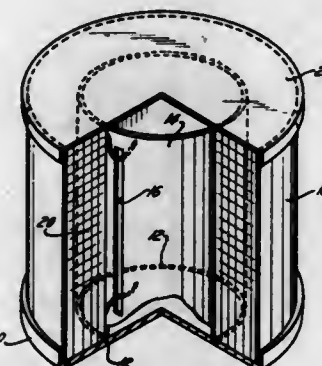
3,515,269

CONTAINER FOR COILED WIRE

Edward Furtado, Rahway, N.J., assignor to Wilbur B. Driver, a corporation of Delaware
Filed Dec. 26, 1968, Ser. No. 786,964
Int. Cl. B65d 85/04

U.S. Cl. 206-52

5 Claims



A container comprising two hollow cylinders open at both ends and disposed concentrically one within the other to define an annular region therebetween. The cylinders are sealed by oppositely disposed removable end caps.

The inner cylinder is provided with an opening in the cylinder wall disposed in a zone between the two end caps. Wire can be coiled in the annular region with both ends of the coil extending through the opening into the interior of the inner cylinder.

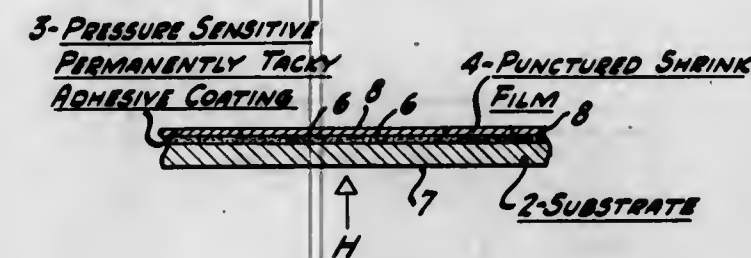
3,515,270

PRESSURE SENSITIVE ADHESIVE COATED SEALABLE SUBSTRATE, RESEALABLE PACKAGE EMBODYING SAME, AND METHOD OF MANUFACTURE AND PACKAGING

Edward G. Tonn, Oakland, and Christen H. C. Yang, Castro Valley, Calif., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Oct. 4, 1965, Ser. No. 492,766
Int. Cl. B65b 25/16; B65d 83/08; C09j 7/04

U.S. Cl. 206-56

7 Claims



A substrate, desirably a sheet of flexible material, coated with a permanently tacky pressure sensitive adhesive coating, is rendered non-blocking by a protecting film of plastic material heat shrinkable in at least one direction. Spaced apart slits in the film extending transversely of said direction allow the film to shrink away therefrom upon application of heat, to thus expose discrete areas of the adhesive for bonding to a surface.

3,515,271

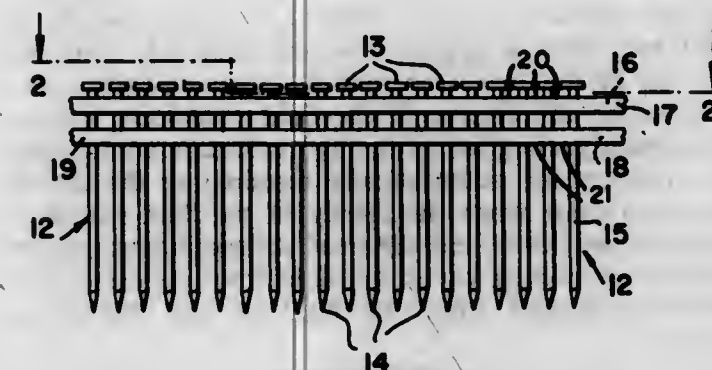
ROUND HEADED NAIL ASSEMBLY

Izaak Walton Bader, Brooklyn, N.Y., assignor to Swingline Inc., Long Island City, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 616,746, Jan. 23, 1967. This application May 14, 1968, Ser. No. 729,113

Int. Cl. B65d 31/12

U.S. Cl. 206-56

3 Claims



A round headed nail assembly is shown which includes a plurality of laterally aligned round headed nails each having a head portion, a point portion, and an intervening median portion. Two pairs of spaced joining strips are adhesively disposed across the nails and the members of each pair are adhesively secured to opposite sides of the nails and to one another between the nails. One pair of joining members lies adjacent the head portions of the nails and the other pair of joining members

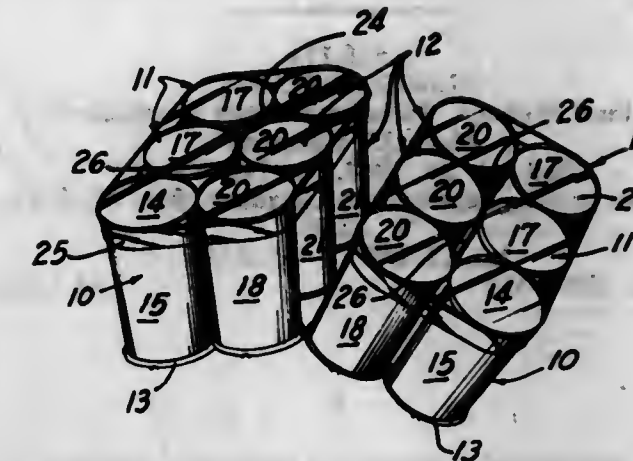
3,515,272

CONTAINER CLUSTER

John C. von Gal, P.O. Box 1241, Montgomery, Ala. 36102
Filed Mar. 27, 1968, Ser. No. 716,671
Int. Cl. B65d 71/00

U.S. Cl. 206-65

4 Claims



A cluster of juxtaposed equal size containers arranged in longitudinal and transverse rows, the abutting portions of the ends of the cans, in one plane, being secured together by severable bridging members and the end portions of the containers, remote from the bridging members, being held together by an encircling strap. The containers are further sub-divided into conventional six-pack or eight-pack units by having, along the ends of the containers opposite the bridging members, shrink film plastic caps surrounding the end portions of appropriate groups of containers. These caps are suitably apertured for carrying.

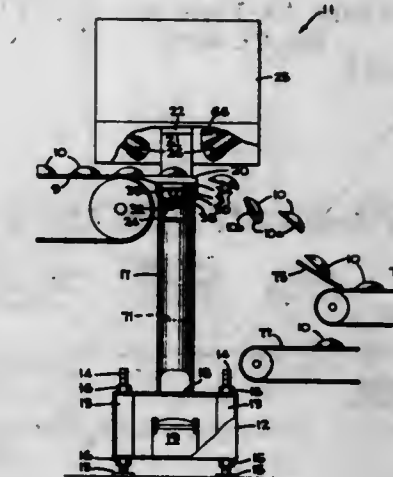
3,515,273

METHOD FOR DETECTING OBJECT IN TRANSLUCENT SUBSTANCE AND DEVICE THEREFOR

Paul E. Seaborn, Los Gatos, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Aug. 11, 1967, Ser. No. 659,906
Int. Cl. B07c 5/342; G01n 21/02

U.S. Cl. 209-111.7

24 Claims



A device for detecting pit fragments in peaches is positioned at the end of a delivery conveyor. The device has a window over which peaches travel, and a light source beneath the window directs approximately parallel rays of light toward the window. A light sensitive element in a

tube is positioned with respect to the light source and the window to prevent the overlying portion of the peach from receiving the incident light rays and reflections directly. The tube is directed toward the window, and the element in the tube senses the level of diffused light in the overlying peach portion. With no pit present, the level of diffused light in the peach is above a predetermined level and no reject signal is produced. If light which diffuses through the peach is intercepted by a pit fragment, the sensor produces a signal which actuates an air blast to divert the peach with the fragment therein.

3,515,274

FLOOR SCREENS

Albert Wehner, Wiesbaden Post Schwellhof,
Hans 35, Germany

Filed July 26, 1967, Ser. No. 656,095

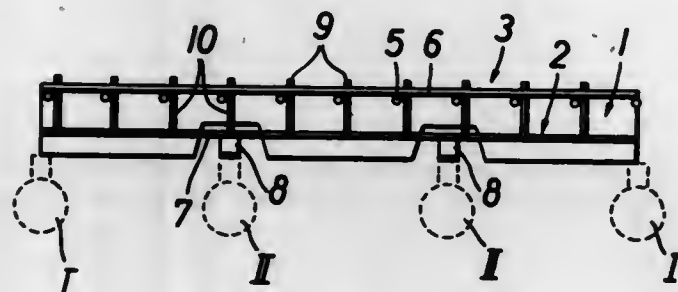
Claims priority, application Germany, July 27, 1966,

W 42,897

Int. Cl. B07b 1/16, 1/52

U.S. Cl. 209-322

15 Claims



A screening device has two frames, one above the other, which oscillate relative to each other, the upper frame carrying a screen mesh with elongated and parallel slots, whereas the lower frame supports mutually spaced cleaning fingers protruding upwardly toward respective slots. The oscillatory motion is substantially circular in up-right planes parallel to the longitudinal direction of the slots. The fingers brush past the ends of the slots and during part of the cycle extend upwardly through the slots to above the screen mesh.

3,515,275

HEMODIALYSIS METHOD AND EQUIPMENT

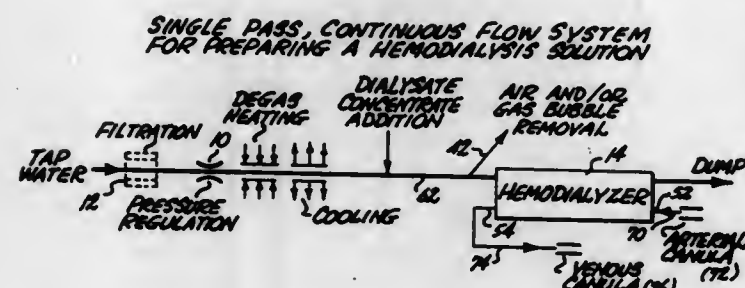
Donald B. Bowman, 1617 Garfield,
Corvallis, Oreg. 97330

Filed Mar. 13, 1968, Ser. No. 712,704

Int. Cl. B01d 13/00

U.S. Cl. 210-22

17 Claims



Flowing tap water powers a rotary proportioner which delivers a metered amount of such water to a flow-through heater in which the water is heated to a temperature at which air and gas in it is bubbled out. The heated water is passed in heat exchange with water incoming to the heater to lower its temperature and preheat the

new water. A metered amount of dialysate concentrate from the proportioner is admixed to the heated water. The air and/or gas bubbles are withdrawn and the solution is delivered to a dialyzer. The dialysis equipment is for home use housed within bedroom furniture having a conventional exterior appearance.

3,515,276

METHOD AND APPARATUS FOR DECONTAMINATING FLUID

Alva Gene Comer, Robert E. Reed, and Ernest C. Fitch, Jr., Stillwater, Okla., assignors to Cyclonics Corporation, Dallas, Tex., a corporation of Texas

Continuation-in-part of application Ser. No. 682,766,

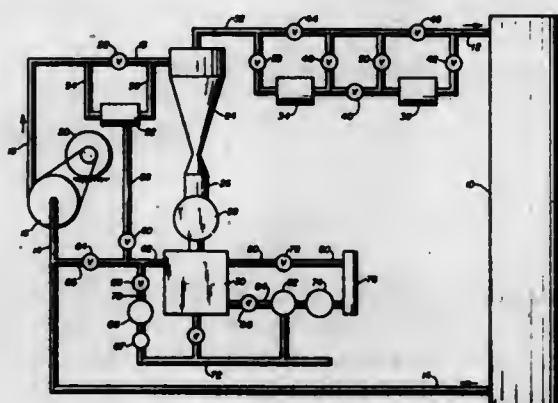
Nov. 14, 1967. This application Mar. 11, 1968, Ser.

No. 719,819

Int. Cl. B01d 5/00, 50/00

U.S. Cl. 210-26

23 Claims



A method and apparatus for decontaminating dry-cleaning fluid in a closed, recycled system including the injection of the fluid having contaminants therein into a hydroclone separator wherein the fluid is subjected to centrifugal forces and wherein solid contaminants are ejected from the solution by such centrifugal forces, the ejected contaminants passing out of the hydroclone and into a receiving chamber, and the fluid having solid contaminants removed therefrom passing out of the hydroclone through a fluid exit. A portion of the hydroclone-cleaned fluid is passed through a chemical bed of activated charcoal cartridges wherein dissolved contaminants are removed, and a portion of the fluid is passed through a barrier filter unit of paper filter cartridges wherein remaining solid contaminants and any sloughed chemicals from the chemical bed are removed, this fluid then being mixed back into a bypass flow and recycled. One embodiment of the invention includes photoelectric means for detecting the clarity of the fluid containing ejected contaminant passing out of the hydroclone in conjunction with circuitry for automatically terminating the decontamination cycle when the clarity of the fluid reaches a predetermined level, and different arrangements are disclosed for extracting vapor and fluid from collected solid particles separated from the fluid by the hydroclone separator.

3,515,277

COUNTER-CURRENT ION EXCHANGE WITH DOWNFLOW CONTACTOR

Albert W. Kingsbury, Moorestown, N.J., Durando Miller, Mount Kisco, N.Y., and Gerald Alexander, Fairview, N.J., assignors to Sybron Corporation, Rochester, N.Y., a corporation of New York

Filed Mar. 4, 1969, Ser. No. 884,195

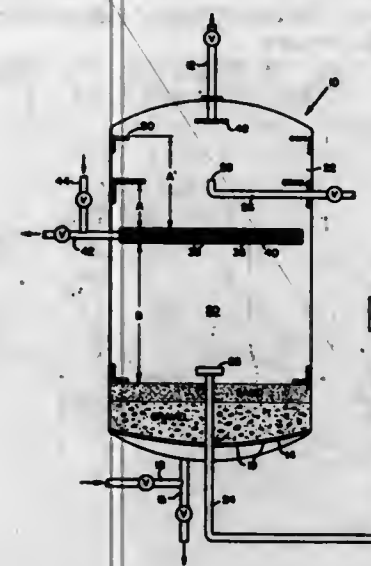
Int. Cl. B01d 15/06

U.S. Cl. 210-33

13 Claims

A method and apparatus for operating counter-current ion exchange apparatus wherein a service vessel which

is adapted for downflow operation is only partly filled with a bed of ion exchange resin. The introduction of fresh resin into the service vessel is accomplished by injecting water into the vessel beneath the bed to lift the bed. Injected water is removed from the vessel at a point below the upper surface of the resin bed and recirculated to the point of injection. Since water passes upwardly through only a portion of the bed, the volume



of resin located above the water outlet remains compact and exerts a pressure to suppress the expansion and fluidization of the bed portion located below the water outlet so that the entire bed lifts as a unit. A portion of the recirculating water can be used to force fresh resin from a storage vessel and into the service vessel beneath the lifted bed. After the introduction of fresh resin, a portion of the bed above the water outlet is fluidized and removed from the vessel restoring the bed to its original volume.

3,515,278

SEWAGE TREATMENT APPARATUS

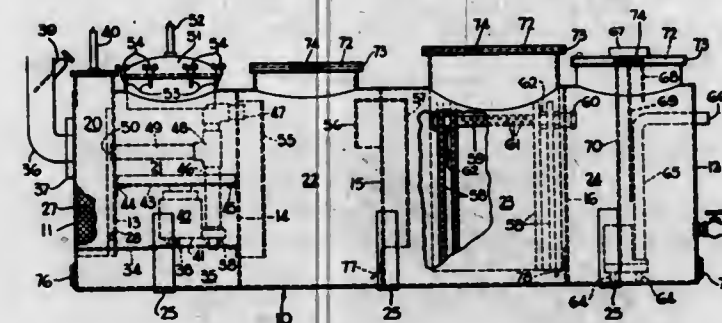
Frederick E. Wilson, deceased, late of Buffalo, N.Y., by Ruth L. Wilson, executrix, Buffalo, N.Y., assignor to Wilson Water Purification Corporation, Buffalo, N.Y.

Filed June 10, 1969, Ser. No. 831,843

Int. Cl. B01d 21/24, 23/20, 33/38

U.S. Cl. 210-109

10 Claims



A sewage treatment apparatus comprising a tank having partition walls defining a straining and chlorinating chamber, a filter chamber, and a discharge chamber. Raw sewage is admitted into the tank and circulated successively through these chambers to yield a sterilized effluent. A liquid is flushed through the bottom of the various chambers from the rear to the front end of the tank to effect a backflow for cleaning the sludge and debris accumulated on the bottom of the series of chambers.

3,515,279

APPARATUS FOR RECOVERING A FAT-FREE PROTEIN FROM ANIMAL BY-PRODUCTS

William Kuster, 1211 Avenida Road,

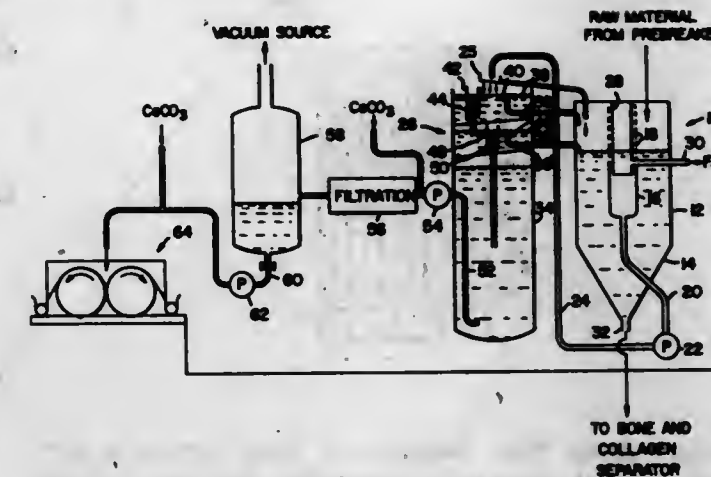
Hillsborough, Calif. 94010

Filed Apr. 3, 1968, Ser. No. 718,460

Int. Cl. B01d 21/10

U.S. Cl. 210-195

14 Claims



Apparatus for separating liquified fat from protein hydrolyzate including a series of settling chambers operated so that overflow therefrom is rich in liquified fat. The settling chambers are formed with a large cross-section to depth ratio so that ascension of the fat particles to the top of the hydrolyzate is rapid.

3,515,280

STACKED ELEMENT FILTER APPARATUS

Watson H. Parker, 1833 Benwick Road, E.,

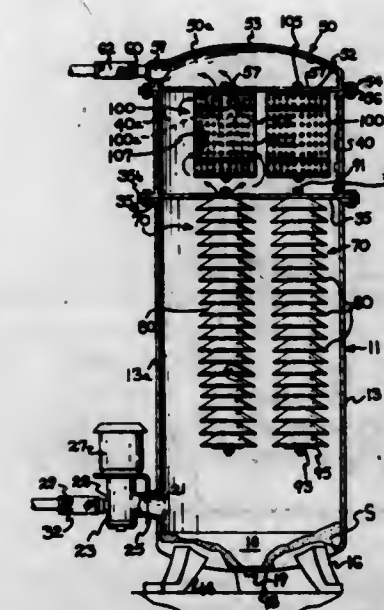
Toledo, Ohio 43613

Filed Dec. 3, 1968, Ser. No. 780,677

Int. Cl. B01d 25/26

U.S. Cl. 210-314

7 Claims



A self-contained filter apparatus features a plural chambered tank, a side mounted pump and motor, adapted to deliver fluid to the lower chamber and thence to the upper discharge chamber; the lower chamber having therein a plurality of vertically stacked plate filters providing, in aggregate, a large surface area of filtration through which liquid must pass to reach said upper chamber; said apparatus including means for easy dismantling and replacement of any given plate filter.

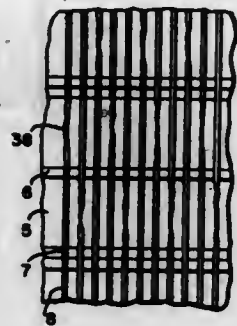
3,515,281

BACKING WIRE FOR ROTARY DRUM FILTERS
Herbert G. Vore and Donald E. Bardley, Nashua, N.H., assignors to Improved Machinery Inc., Nashua, N.H., a corporation of Delaware

Filed May 9, 1968, Ser. No. 727,921
Int. Cl. B01d 39/10

U.S. Cl. 210-402

7 Claims



A rotary drum filter including a drum having a plurality of parallel, outwardly extending ribs each having a plurality of notches therein. A filter screen supporting wire is helically wound around the drum within the notches. The supporting wire is formed to cooperate with the notches to thereby limit the movement of the wire of the drum due to stresses developed in the wire by variations in temperature. This may be accomplished by forming a V in the wire or by twisting the wire. Apparatus is provided for forming the wire.

3,515,282

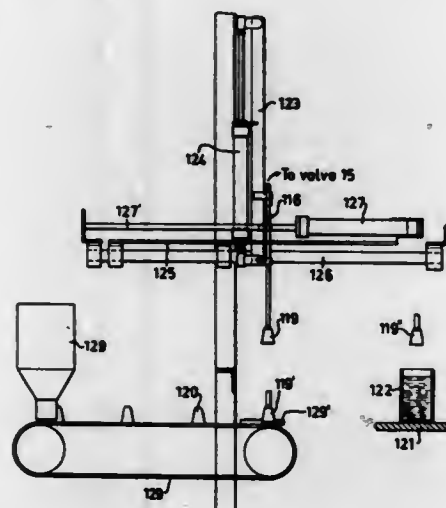
FILTERING APPARATUS FOR LABORATORY FILTERING OF LIQUIDS, METHOD OF MAKING ANCILLARY FILTER CARTRIDGES, AND MOLD FOR CARRYING OUT THE METHOD

Lawe Herbert Westerman, Arlov, Sweden, assignor to Ingenjorsfirman Nils Weibull A.B., Malmo, Sweden

Filed Feb. 28, 1968, Ser. No. 708,889
Int. Cl. B01d 35/12

U.S. Cl. 210-411

2 Claims



A laboratory filtering apparatus for rapid filtering of liquids to permit performing routine analyses in connection with continuous production, has a compressed cellulose filter cartridge inserted in a suction nozzle for respectively sucking liquid through the filter cartridge and blowing the filter cartridge after single use thereof out of the nozzle. The manufacture of the filter cartridge comprises compressing cellulose in moist condition to a cartridge in a mold while sucking water therefrom, ejecting the cartridge from the mold, and drying the cartridge.

A mold for making a filter cartridge of cellulose has a mold cavity which is surrounded at one end by a recess for water to moisten the cellulose in the mold cavity, a plunger to be inserted through said mold end, a chamber communicating with the other mold end having an outlet and means for controlling the pressure in the chamber.

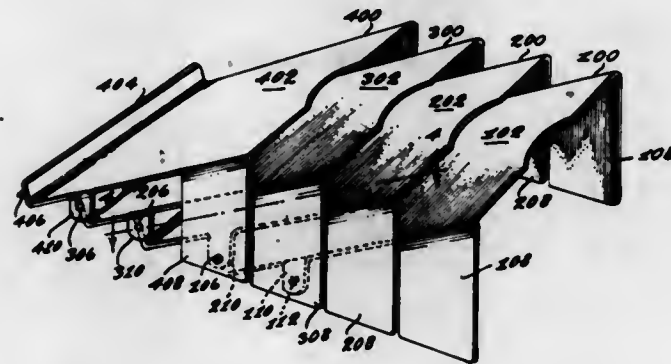
3,515,283

MULTIPLE STORAGE TRAY STRUCTURE
George A. Potest, Greensboro, N.C., assignor to Engineered Plastics, Incorporated, Gibsonville, N.C., a corporation of Delaware

Filed Aug. 13, 1968, Ser. No. 752,361
Int. Cl. A47k 7/00

U.S. Cl. 211-55

15 Claims



A multiple storage tray structure comprising a plurality of nesting tray elements having flat platform portions for storage of material, such as stationery, thereon. The tray elements are selectively connectable to and disconnectable from each other for assembly and disassembly and for varying the number of tray elements in the structure by integral pivot pin connections that permit relative pivoting of connected tray elements for increased access to the space between platform portions. The platform portions are supported at an inclination to a common support surface and in spaced, parallel relation to each other by the pivot pin connections and by integral abutment flanges that depend from each platform portion to the common support surface.

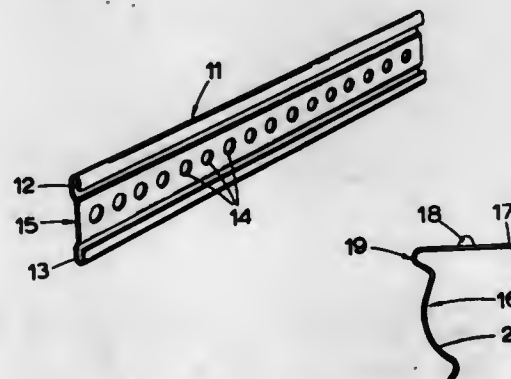
3,515,284

SPRING CLIP ASSEMBLIES
Cyril Taylor, 67 Bittell Road, Barnet Green, Worcestershire, England

Filed Aug. 13, 1968, Ser. No. 752,255
Claims priority, application Great Britain, Aug. 18, 1967, 38,157/67; Jan. 18, 1968, 2,661/68
Int. Cl. A47k 7/00

U.S. Cl. 211-60

7 Claims



In an adjustable support assembly comprising a runner bar and at least a pair of support components adapted to slide along the runner bar the improvement comprising a portion of each support component being formed of a resilient strip of V-form, one limb of the V-form portion

engaging a surface of the runner bar to resiliently urge the other limb thereof into frictional engagement with another surface of the runner bar to resist sliding movement along the runner bar, each support component being slidable along the runner bar by substantial frictional disengagement of the said other limb thereof from the said other surface of the runner bar, a pair of support components cooperating with the runner bar to form a complete support assembly, the width of the complete support assembly so formed being adjustable by sliding movement of each support component along the runner bar.

3,515,285

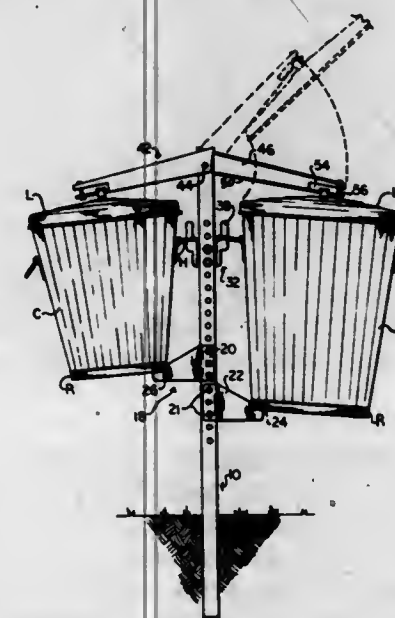
TRASH CAN HOLDER

Thomas H. Wilkes, Lubbock, Tex., assignor to Trash Valet, Inc., Lubbock, Tex., a corporation of Texas

Filed Sept. 27, 1968, Ser. No. 763,179
Int. Cl. A65f 1/14

U.S. Cl. 211-71

9 Claims



A trash can holder is fabricated of sheet metal and bolts. A central post has a series of bolt holes to adjust parts for different sized cans. Near the bottom of the post is bolted two pair of feet having notches to receive the bottom rim of the trash can and having a cam surface to guide the rim into the notches. The can is further supported by its handle in one of two fingers bolted to the post. The tops of the cans are held by pivoted arms having slots so the tops can slide back and forth to be centered on the cans regardless of the diameter of the cans.

3,515,286

RAILWAY CAR BUFF AND DRAFT FORCE CUSHIONING DEVICE

Richard Gordon Powell, Houston, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

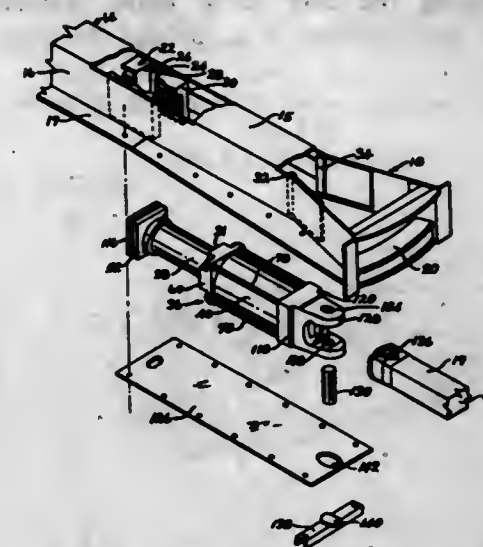
Filed July 9, 1968, Ser. No. 743,524
Int. Cl. B61g 9/02, 9/06, 9/12

U.S. Cl. 213-8

13 Claims

A cushioned railway car structure including an underframe having a longitudinal center sill. A self contained pneumatic spring type end-of-car cushioning unit is disposed within the center sill and comprises an inner cylinder disposed in relatively immovable relation with the car structure and telescopically received by an outer cylinder. The outer cylinder is directly connected to the coupler structure of the railway car and is disposed in movable relation to the car structure. The cushioning unit structure and the car structure are so interrelated that

buff forces on the car coupler below a predetermined force magnitude are transmitted in a positively aligned manner through the outer cylinder and the inner cylinder to the car structure and buff forces above a predetermined force magnitude are transmitted directly through the outer cylinder to the railway car structure. The interrelated



structure between the cushioning and the center sill of the railway car also effectively allows the application of cushioned draft forces to the center sill during slack run out in addition to transmitting draft forces directly into the center sill in the normal or fully extended condition of the cushioning unit.

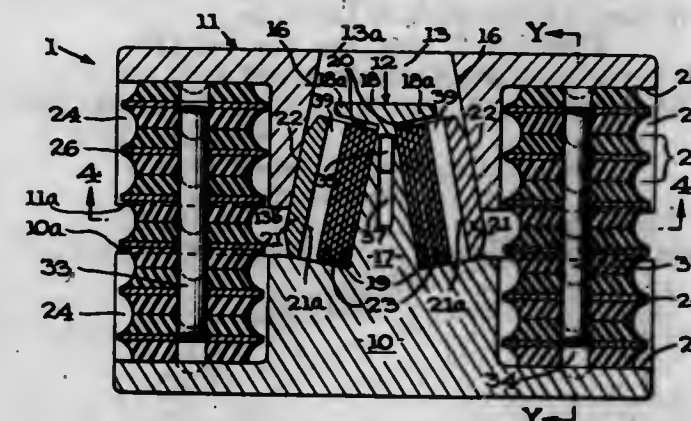
3,515,287

MODULAR CUSHIONING MECHANISM
Preston O. Robards, Roselle, Ill., assignor to Portec, Inc., Chicago, Ill., a corporation of Delaware

Filed Jan. 5, 1968, Ser. No. 695,926
Int. Cl. B61g 9/04, 9/06, 9/10

U.S. Cl. 213-37

9 Claims



A modular cushioning device having mating male and female housings and including both friction and spring cushioning means normally urging the housings into a spaced apart position. The application of compressive force upon the two housings is resisted by the resultant displacement of the two cushioning means.

3,515,288

DRAFT APPARATUS WITH TENSION-BREAKABLE EMERGENCY RELEASE MEANS

Richard K. Frill, Pittsburgh, and John R. Reiss, North Versailles, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Apr. 18, 1968, Ser. No. 722,362
Int. Cl. B61g 9/04, 9/12

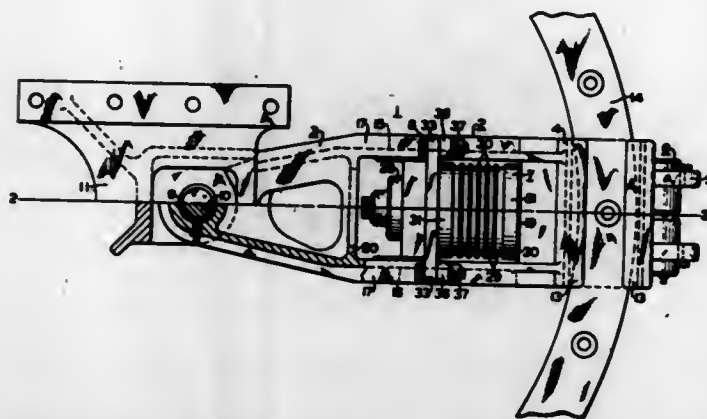
U.S. Cl. 213-64

4 Claims

Draft apparatus with tension-breakable emergency release means, in which, a pair of telescopically movable members compress therebetween a cushion member for

transmitting buff or draft forces between the members, the cushion member being normally caged between a pair of axially spaced thrust members on one of the members for normal operation of the draft apparatus, one thrust member opposing the draft force and the other thrust member opposing the buff force, the thrust member opposing the buff force being releasably attached to the one member in a normal position by ex-

ternally mounted tension-breakable bolts subject to breakage upon application of a buff force on the one thrust member exceeding a predetermined value, thereby releasing the cushion member and the other member for telescopic movement beyond the normal buffing limit, thereby permitting engagement of the anti-climbing plates on the vehicles attached to opposite ends of the draft apparatus.



ternally mounted tension-breakable bolts subject to breakage upon application of a buff force on the one thrust member exceeding a predetermined value, thereby releasing the cushion member and the other member for telescopic movement beyond the normal buffing limit, thereby permitting engagement of the anti-climbing plates on the vehicles attached to opposite ends of the draft apparatus.

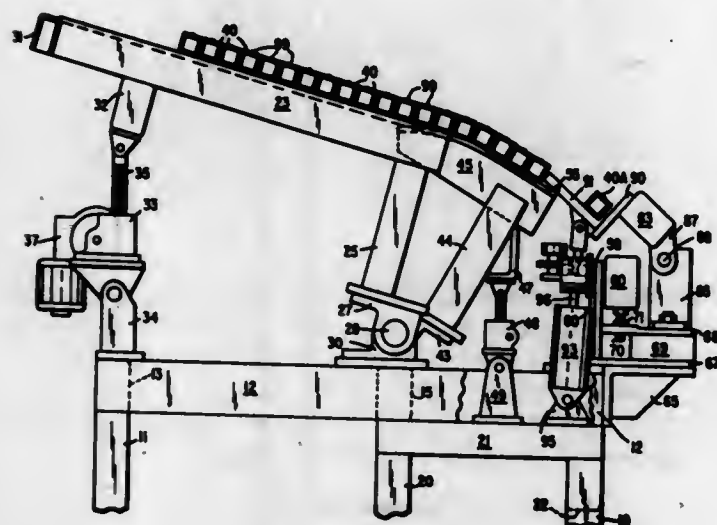
3,515,289

BAR FEEDING APPARATUS

Robert L. Schaller, Camillus, and Donald L. Towne, North Syracuse, N.Y., assignors to Sundstrand-Engelberg, Inc., a corporation of Delaware
Filed Oct. 7, 1968, Ser. No. 765,592
Int. Cl. B65g 47/04

U.S. Cl. 214-1

8 Claims

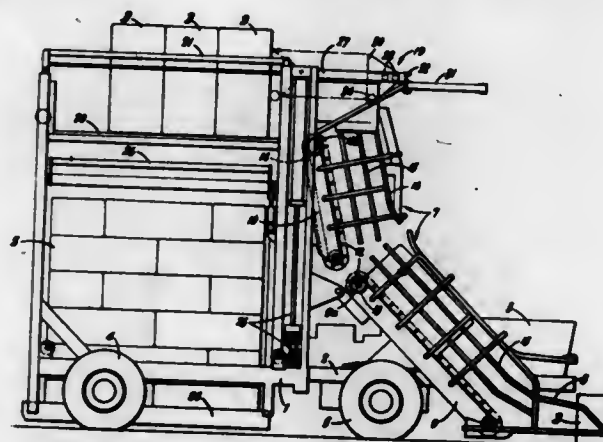


The bars are transferred from an inclined supply rack to a linear series of guide rolls located below and in laterally spaced relation to the lower edge of the rack. There are a series of extension members along the lower edge of the rack, the lower ends of the members being provided with bar stop means located in spaced relation to the guide rolls. The rack is mounted for pivotal movement about an axis located below the lower edge of the rack, whereby the inclination thereof may be changed and the extension members are also movable toward and from

3,515,290
BALE TRANSFER MECHANISM
Fredrick L. Hill, Rio Vista, and Loyd Curtis Stadel, Lafayette, Calif., assignors to Blackwelder Manufacturing Company, Rio Vista, Calif., a corporation of California
Filed May 13, 1968, Ser. No. 728,522
Int. Cl. B65g 57/32

U.S. Cl. 214-6

2 Claims



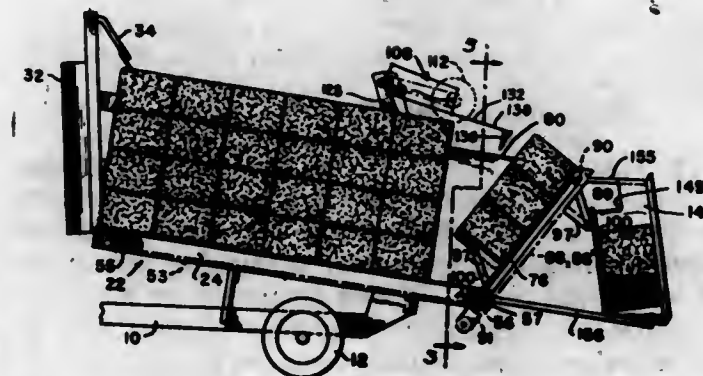
A mobile, agricultural machine for picking up hay bales from the field and forming such bales into a stack for later deposit on the ground; the machine including a bale pick-up elevator which delivers the bales individually to a bale-receiving platform from which said individual bales are then moved—by a bale transfer mechanism—into row array on a bale support disposed above an initially raised, but step-by-step lowerable bed and onto which the rows of bales are delivered from said bale support whereby to form on said bed a stack comprised of layered bales.

3,515,291
BALE WAGON HAVING SINGLE BALE UNLOADING MEANS

Donald M. Grey, Selma, Lee D. Butler, Kingsburg, and Jerry W. Welker, Selma, Calif., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 16, 1968, Ser. No. 729,686
Int. Cl. B66g 59/08

U.S. Cl. 214-6

17 Claims

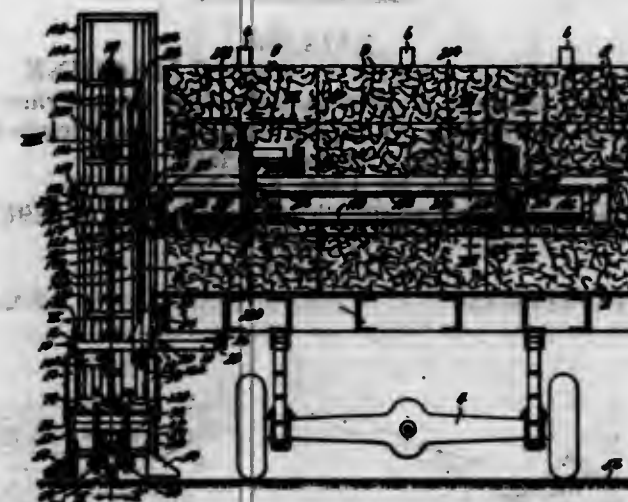


A farm vehicle for carrying stacks of baled hay or the like and including apparatus for unloading the bale stacks one bale at a time.

3,515,292
BALE LOADING DEVICE
James M. Oboory, Box 52, Durham, Kans. 67438
Filed July 30, 1968, Ser. No. 748,763
Int. Cl. B65g 57/32

U.S. Cl. 214-6

6 Claims

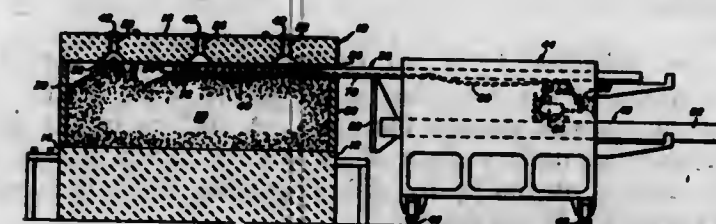


A bale loading device comprising a frame adapted to be mounted on a truck bed for forward and rearward movements along one of the side edges thereof, a pick-up device carried by said frame at ground level to pick up bales one at a time from the ground as said truck is driven forwardly, an elevator device carried by said frame to receive bales from said pick-up device and to convey them upwardly, a horizontal trough member carried by said elevator for vertical movement thereon and extending transversely across said truck bed, said trough including front and rear vertical walls and a horizontal bottom wall, means for ejecting bales from said elevator into said trough, means for conveying said bales along said trough to distribute them across the entire width of said truck bed, and means for withdrawing one of said vertical trough walls upwardly and withdrawing said bottom wall horizontally beneath the other of said vertical walls, whereby to deposit said bales on said truck bed, all of said operations being performed by power means operable from a remote station.

3,515,293
METHOD AND APPARATUS FOR CHARGING A COKE OVEN
George Robert Cain, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Jan. 13, 1969, Ser. No. 790,580
Int. Cl. C10b 35/00

U.S. Cl. 214-23

4 Claims



A horizontal coke oven is charged with coal through spaced charging holes in the coke oven roof to provide peaked piles of coal within the coke oven. A leveling bar is inserted through an opening in the side wall on the pusher side of the coke oven and is moved reciprocally across the peaked coal piles to level the piles. The leveling bar has a vibrator secured thereto adjacent the front end that imparts a controlled vibration to the leveling bar. The vibrating leveling bar compacts the coal at the coal line and provides a coal charge having an increased bulk density adjacent the top surface. Suitable means are provided to vary the frequency of the vibrator and control the degree of compaction of the coal.

3,515,294
APPARATUS FOR USE IN ENABLING IMMOBILE PERSONS AND INVALIDS TO BE PLACED IN OR REMOVED FROM A VEHICLE

Leonard B. Southward, Port Road, Lower Hutt, North Island, New Zealand, and Maurice H. Ferguson, Lower Hutt, North Island, New Zealand (64 Epsomside, Parangahau, North Island, New Zealand)
Filed Mar. 19, 1968, Ser. No. 714,270
Claims priority, application New Zealand, Mar. 23, 1967, 148,248

U.S. Cl. 214-75

Int. Cl. B60p 1/46

10 Claims



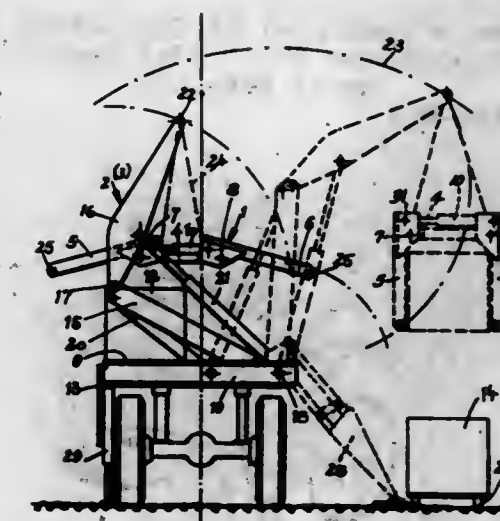
An apparatus for enabling immobile persons and invalids to be placed in or removed from a vehicle in which a seat is arranged to be raised and lowered relative to the vehicle and swung out from or into the vehicle while supporting a person with the person remaining in the seat while being transported in the vehicle.

3,515,295
DEVICE FOR CARGO TRUCKS FOR TRANSPORTING AND LATERAL LOADING AND UNLOADING

Kasper Klaus, 46 Schlachthofstrasse, 894 Memmingen, Germany
Filed May 21, 1968, Ser. No. 730,728
Claims priority, application Germany, May 26, 1967, K 62,390
Int. Cl. B60p 1/48

U.S. Cl. 214-77

5 Claims



A means on a cargo vehicle for the transportation and the lateral loading and unloading of the loading surface of the vehicle and particularly stacked building stones in

which a first lifting device is arranged in front of the loading surface and a second lifting device behind the loading surface and a pair of gripping tongues is operably related to each lifting device. The gripping tongues extend essentially over the full space between the lifting devices and include a central part and two laterally arranged gripping plates, with the gripping plates being pivoted about points parallel to the longitudinal axis of the vehicle so that the width of the central part corresponds approximately to half the width of the loading surface. Means are operably related to the gripping plates so that the plates can be tilted upwardly about the pivot points in an approximately horizontal position in which the tongues are laterally movable over a stack load on the loading surface.

3,515,296

IRRIGATION PIPE LOADER

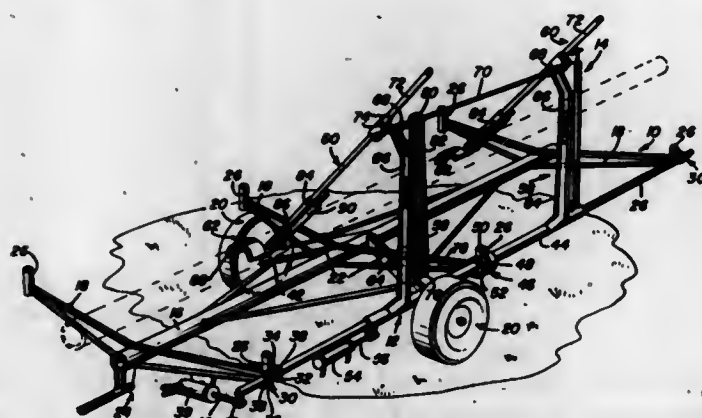
Erwin E. Priefert, R.F.D. 1, Belvidere, Nebr. 68315

Filed Sept. 9, 1968, Ser. No. 758,470

Int. Cl. B60p 1/48

U.S. Cl. 214-77

6 Claims



A device for loading irrigation pipes onto and off of a pipe cart that eliminates handling of the pipe and allows it to be picked off the ground and deposited on the cart, and conversely, to be taken off the cart and deposited on the ground in the proper position for use. The device has a pair of arms pivoted above the bed of the pipe cart and pivoted along a longitudinal axis thereof to grasp the pipes and rotate about said axis to move the pipes between the ground and the pipe cart bed.

3,515,297

LOGGING VEHICLE

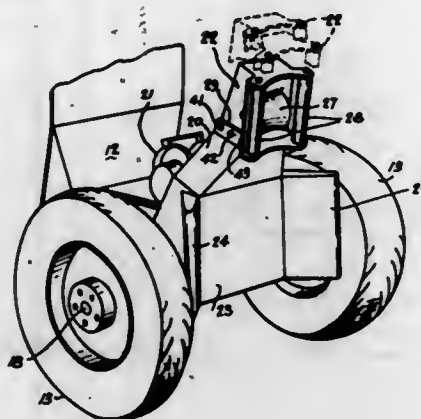
Robert C. Symons, Woodstock, Ontario, Canada, assignor to Timberjack Machines Limited, Woodstock, Ontario, Canada

Continuation of application Ser. No. 489,966, Sept. 24, 1965. This application May 2, 1968, Ser. No. 742,991

Int. Cl. B60p 3/00

U.S. Cl. 214-85.5

9 Claims



An elevated fairlead is mounted at the rear of the vehicle, a winch pulling in a cable passing over a roller

of the fairlead for hauling a timber load up against a butt pan. The vertical location of the fairlead is adjustable between a number of different positions to suit various load conditions. The butt pan may have a central projection to help stabilize a load.

3,515,298

TURRET EARTHWORKING MACHINE

Gabriel L. Guinet, Le Plessis-Belleville, Oise, France, assignor to Societe Anonyme Poclain, Le Plessis-Belleville, Oise, France, a French society

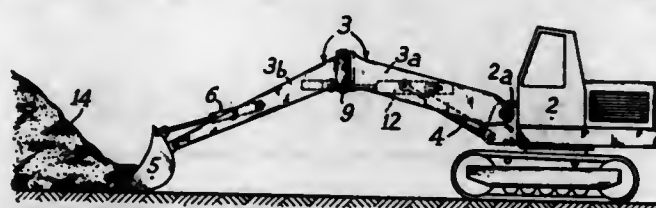
Filed June 20, 1968, Ser. No. 738,691

Claims priority, application France, June 21, 1967, 111,338

Int. Cl. E02f 3/30

U.S. Cl. 214-138

5 Claims



A turret earthworking machine in which a boom is mounted on the turret for upward and downward swinging movement and having at its free end a bucket controlled by a hydraulic cylinder assembly, the boom consisting of a pair of boom sections pivoted together about an axis perpendicular to the axis of the swinging movement. A hydraulic cylinder assembly is connected to each boom section, and the bucket is of the loader type with its leading edge directed away from the turret, the axis of articulation between the two boom sections being substantially vertical when the bucket is in the vicinity of the ground.

3,515,299

INDUSTRIAL TRUCK WITH SELF ACTUATED LOAD LIFTING ATTACHMENT

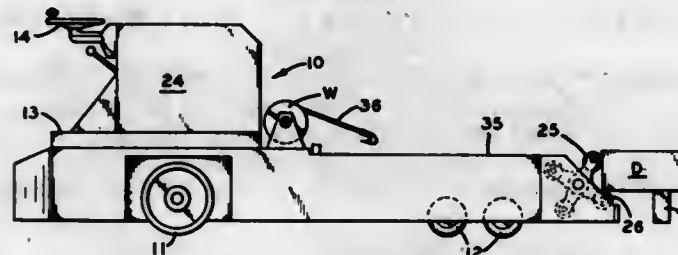
Ernst S. Esser, Levittown, Pa., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed July 22, 1968, Ser. No. 746,563

Int. Cl. B60p 1/52

U.S. Cl. 214-350

9 Claims



An industrial truck for transporting dies or the like, equipped with a cam that is moved by a die as the die moves endwise toward the truck. A surface of the cam contacts an undersurface of the die for lifting the die as the cam is moved by the die. Therefore, the cam is self-actuated for lifting the die.

3,515,300

FORK LIFT TRUCK WITH A MAST PIVOTAL ABOUT A VERTICAL AXIS

Edwin A. Hollenbach, Paoli, Pa., assignor, by mesne assignments, to The Philadelphia National Bank, Philadelphia, Pa., a national banking association

Original application Aug. 6, 1965, Ser. No. 477,904.

Divided and this application July 15, 1968, Ser. No. 760,374

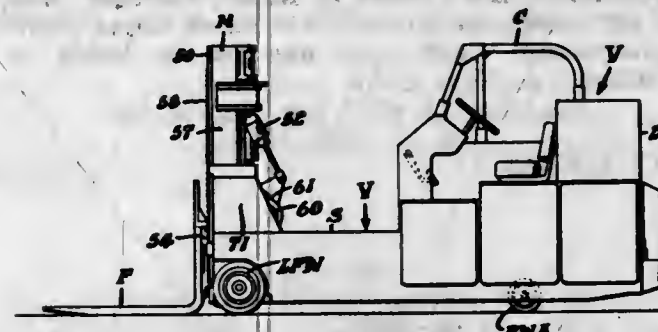
Int. Cl. B65g 47/00

U.S. Cl. 214-671

1 Claim

A fork lift vehicle is disclosed having two spaced-apart front drive wheels and a steerable rear wheel assembly.

A rotatable pivot post is vertically mounted in one front corner portion of the chassis over the center of one of the front wheels. The fork lift mast is cantilever supported across the front of the vehicle, to one side only of the



rotatable pivot post. The vehicle is pivotally swung about the axis of the pivot post to "tuck" the load at the side of the vehicle, the fork lift mast and its load being maintained stationary relative to ground as the vehicle is swung under the fork-supported load.

3,515,301

LIFT TRUCK WITH A PIVOTAL, SHIFTABLE AND TILTABLE MAST

Cornells A. Emke, Diemen, Netherlands, assignor, by mesne assignments, to Cascade Corporation, Portland, Oreg., a corporation of Oregon

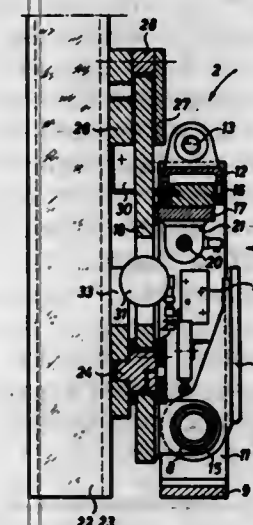
Filed Mar. 11, 1968, Ser. No. 712,052

Claims priority, application Germany, May 27, 1967, J 33,777

Int. Cl. B65g 47/00

U.S. Cl. 214-674

3 Claims



A lift truck including a frame, with apparatus mounting an upright extensible mast assembly for movement on the forward end of the frame. The mounting apparatus provided accommodates rocking of the mast assembly about a substantially horizontal axis extending transversely of the longitudinal axis of the frame, side-tilting of the mast assembly about another axis extending forwardly away from the forward end of the frame, and side-shifting of the mast assembly toward laterally opposite sides of the frame.

3,515,302

PACKAGE FOR SOLID DIFFUSING MATERIAL

Frank J. Curran, Downers Grove, Ill., assignor to Frank J. Curran Co., a corporation of Illinois

Filed Mar. 14, 1968, Ser. No. 713,087

Int. Cl. B65d 11/14, 43/10

U.S. Cl. 220-4

3 Claims

A vaporizable solid mass to be used as a deodorant, insecticide, fumigant or insect repellent is packaged in a container resembling a gazebo. The container is formed of a body portion made of a plurality of vertically and horizontally disposed intersecting ribs providing spaces

between the intersecting ribs through which the solid mass can vaporize. A base is friction fitted to the bottom of the body portion and a top is friction fitted to the top of the body. Both the base and the top have an annular recess immediately adjacent the surface which friction fits against the body so that when the base and top are mounted on the body the bottom and top edges of the body will slip into the recesses and assist in holding the container together. The surface of the bottom and the top which friction fits against the container may be slotted in the same direction as the ribs so as to enable the top and bottom to be mounted on the body without distorting the ribs. The top and bottom ends of the body portion surfaces may also be formed with a lip or with



protuberances or beads preferably located between the ribs, if the base and top are slotted, and assist in holding the top and base fast to the body portion. The container may be made of plastic material or may be made of cardboard or metallic wire. A wrapper such as cellophane or other clear plastic may be used to enclose the solid body before it is inserted in the container; or a wrapper may be placed over the body portion with the edges wedged between the body portion and the top and bottom base respectively; or both may be used. Instead of or in addition to either or both of the foregoing, the entire package, including the container, may be enclosed in a suitable bag or wrapper which prevents any substantial vaporization before the package is opened.

3,515,303

LIGHT REFRIGERATOR CONTAINER

James Strang Terrace Robertson, Wirral, and William James Hannah, Liverpool, England, assignors to A.I.R. (Air Conditioning and Refrigeration) Limited, Glasgow, Scotland, a corporation of Great Britain

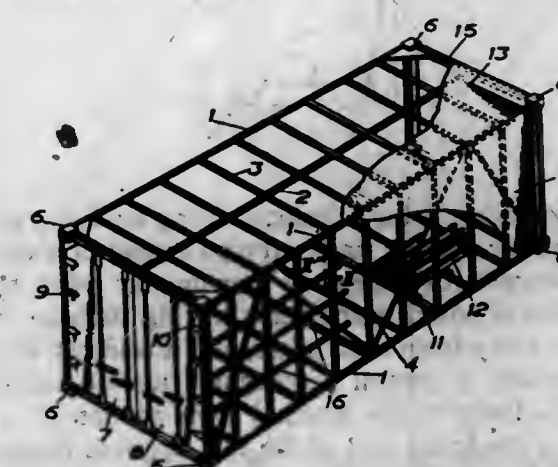
Filed May 22, 1968, Ser. No. 731,198

Claims priority, application Great Britain, May 26, 1967, 24,586/67

Int. Cl. B65d 25/18

U.S. Cl. 220-9

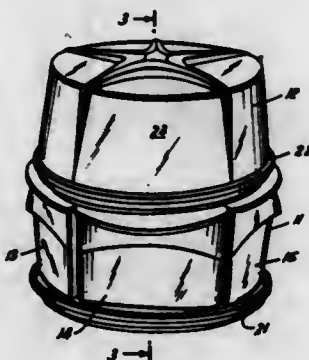
2 Claims



A refrigerator goods container consisting of a hollow rectangular steel beam framework covered by protective

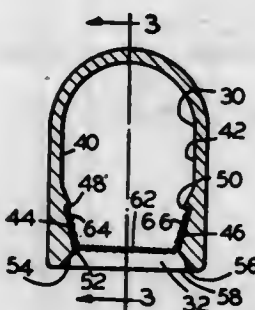
sheeting of fiberglass on the outside. The spaces between the beams are filled with sheets of polyurethane foam heat insulation and on the inside of the steel framework, hollow rectangular sections of fiberglass are riveted. The spaces between these sections, and the sections themselves, are also filled with foamed polyurethane sheet so that no direct heat conducting path exists from outside to inside of the container, and the inside is also covered with fiberglass sheets. Double insulated doors are provided at one end, and the other end, also thermally insulated, defines inlet and outlet parts for refrigerant air. The outer fiberglass sheets are overlapped and bonded together by adhesive to provide weather proofing.

3,515,304
CAKE HOLDER AND CANISTER SET ASSEMBLY
Beatrice Blas, Los Angeles, Calif.
(13007 S. Western Ave., Gardena, Calif. 90249)
Filed July 10, 1968, Ser. No. 743,825
Int. Cl. A47g 19/30, 23/08
U.S. Cl. 220-23.86 8 Claims



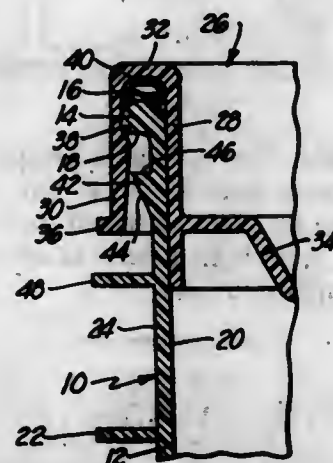
A coupling mounts a cake holder on a canister set in a manner whereby the rotatable tray of the canister set supports the cake holder.

3,515,305
GAS VENT
Carl W. Weber, Grove St., Moravia, N.Y. 13118, and Raymond McCarthy, 410 Churchill Lane, Fayetteville, N.Y. 13066
Filed Aug. 23, 1968, Ser. No. 754,839
Int. Cl. B65d 51/16
U.S. Cl. 220-44 4 Claims



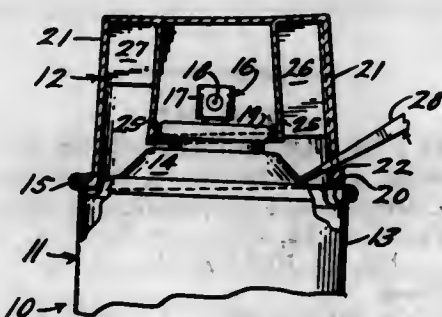
Gas vent comprising a hollow casing having a threaded opening to receive the standard pipe thread of a vent pipe, and a downwardly directed rectangular vent opening, having two opposed inside walls having surfaces inclined upwardly away from each other, and a resilient wire mesh screen having a central rectangular section corresponding substantially to the internal cross section of the vent opening at the lower end of the two opposed inclined surfaces and having integral end sections formed at an angle to the central section and of an area approximately corresponding to said inclined surfaces, and resiliently and frictionally seated against said inclined surfaces.

3,515,306
CONTAINER WITH COVER AND HIDDEN COVER RELEASE
William H. Roper, Los Angeles, Robert E. Roper, Rossmore, and Charles R. Roper, Sherman Oaks, Calif., assignors of one-fifth to Frank Roper, North Hollywood, Calif., and one-fifth to Ralph A. Miller, Van Nuys, Calif.
Filed Jan. 23, 1969, Ser. No. 793,329
Int. Cl. B65d 43/10
U.S. Cl. 220-60 10 Claims



An outwardly projecting annular bead is formed at the upper termination of a plastic container side wall downwardly engaged by an inverted U-shaped edge portion of a cover, an outer flange of the cover edge portion having an inward projection engaging beneath the container bead. An annular deflection rib preferably projects outwardly from the container side wall underlying and projecting outwardly beyond the cover edge portion flange protecting said flange against inadvertent engagement. An annular engagement rib also projects outwardly from the container side wall spaced between the container bead and deflection rib, said engagement rib preferably being formed outwardly-upwardly angled with a substantially flat upper surface, and normally being covered by the cover edge portion flange. The cover edge portion flange is flexible and may be deformed outwardly by a tool inserted upwardly and inwardly of the cover flange to engage over the container engagement rib so as to flex the cover flange outwardly from engagement with the container bead and displace the cover upwardly from engagement with the container.

3,515,307
REPLACEABLE CAP
Peter P. Gach, Evansville, Ind., assignor to Sunbeam Plastics Corporation, Evansville, Ind., a corporation of Indiana
Filed Jan. 8, 1969, Ser. No. 789,734
Int. Cl. B65d 43/10
U.S. Cl. 220-60 5 Claims



A one piece tamperproof replaceable cap for aerosol spray cans and the like, preferably constructed of semi-flexible plastic material. The cap consists of a tubular outer skirt having an access opening therein, a circular

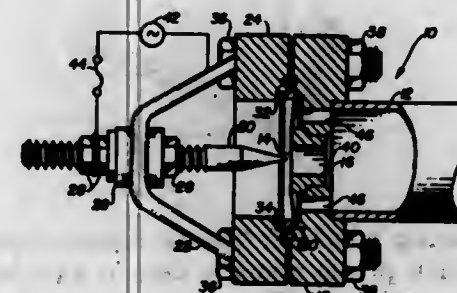
top integrally mounted on the upper end of the outer skirt, a tubular inner skirt concentrically positioned within the outer skirt and depending from the top, and reinforcing ribs connecting the outer and inner skirts. The inner skirt has an interrupted locking lip adjacent its lower edge. The access opening in the outer skirt is so positioned that a tool inserted within the hole can be used as a lever to exert an upward force on the cap to free the locking lip from the collar of the container on which it has been placed.

3,515,308
SAFETY-VALVE FOR A PRESSURE VESSEL
John A. Hayes, Philadelphia, Pa., and Edward S. Prosser, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 24, 1967, Ser. No. 686,185
Int. Cl. B65d 25/00
U.S. Cl. 220-89 2 Claims



The invention provides a pressure vessel (e.g., an aerosol dispenser) equipped with a safety-valve which opens when the pressure in the vessel reaches a certain excessive level below that which would burst the vessel; the safety-valve has an outer plug portion fitted in an orifice of a wall of the vessel, an inner washer-like portion to which is attached a rupturable wall member, and a duct providing communication between the rupturable wall and an exit port in said plug portion. Thus, when the rupturable wall ruptures, the interior of the vessel is in communication with said exit port. Also provided is a safety-valve which is useful in pressure vessels and vacuum vessels.

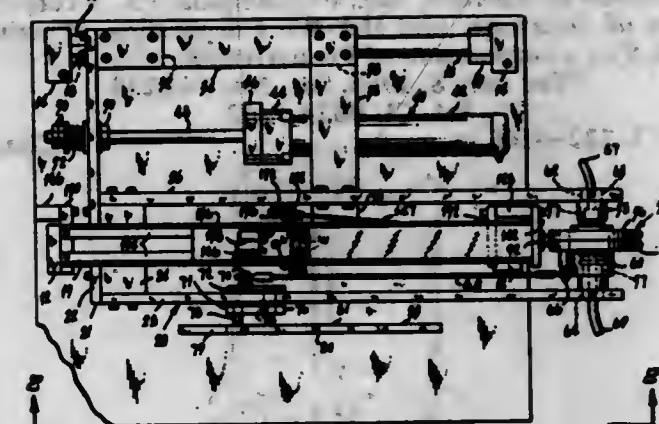
3,515,309
SENSITIVE BURST DIAPHRAGM FOR RELIEF OF OVERPRESSURES
Kimo M. Welch, Palo Alto, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 18, 1968, Ser. No. 768,629
Int. Cl. F16k 13/04; B65d 25/00
U.S. Cl. 220-89 9 Claims



Overpressure relief apparatus having a fused electric power source connected across a burst diaphragm and a puncture needle. The needle is spaced a predetermined distance from the diaphragm under normal pressure. Under a differential overpressure the diaphragm is moved into electrical contact with the needle, causing an electric current limited by the capacity of the fuse to positively rupture the diaphragm. The apparatus is made responsive to predetermined overpressures by needle spacing,

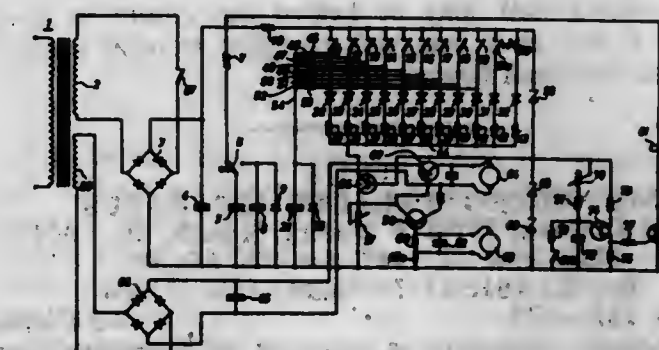
diaphragm thickness, and wrinkle-free stretching of the diaphragm over a support bushing with a gasket forced against the periphery of the diaphragm and opposing flange ridges, thereby also forming a vacuum seal.

3,515,310
WORKLOADER OF THE MAGAZINE TYPE
Ronald F. Pastuszak, Allentown, Pa., assignor to Precision Systems Company, Inc., Somerville, N.J., a corporation of New Jersey
Filed Mar. 20, 1968, Ser. No. 714,604
Int. Cl. B65g 59/04
U.S. Cl. 221-211 6 Claims



A carriage carrying an oscillatory wheel reciprocates on a base adjacent a stationary, horizontal magazine within which workpieces are under controlled, intermittent pressure tending to move the same toward an open end of the magazine. In each oscillation cycle of the wheel, a nose thereon picks up a workpiece from the magazine and delivers it to a surface onto which the pieces are to be loaded in following order. During each such cycle, the wheel is bodily moved forwardly with the carriage, and is given its oscillatory motion by a mechanical motion-translating linkage connected between the wheel and base.

3,515,311
CONTROL ARRANGEMENT FOR A REGENERATOR UNIT IN A CONTINUOUS DEVELOPER
Hans-Dieter Erick and Walter Knapp, Munich, and Victor Osegowitsch, Unterhaching, Germany, assignor to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany
Filed July 9, 1968, Ser. No. 743,512
Claims priority, application Germany, July 11, 1967, A 56,241
Int. Cl. B65h 1/08
U.S. Cl. 222-57 25 Claims



A plurality of switches connected in parallel and placed along the width of film being transported in a lengthwise direction control the current in a coil of a motor which determines the speed of the motor, in accordance with width of the film to be developed. The

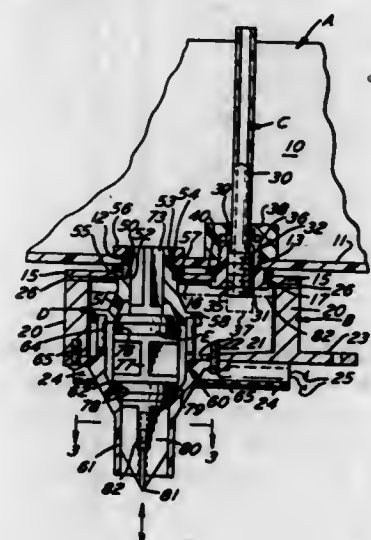
motor drives a diaphragm pump for a length of time depending on the duration of a timing signal which depends upon the length of film which has been processed. The timing circuit which generates the timing signal may be controlled either by a cam connected to the film transport means and a switch which starts the timing cycle when activated by the cam, or it may be started by a signal generated when a predetermined length of film has been processed.

3,515,312 LIQUID DISPENSER

William Heier, Warminster, Pa., assignor, by direct and mesne assignments, of fifty percent each to Automatic Retailers of America, Inc., Philadelphia, Pa., a corporation of Delaware, and Har-Wil Corporation, Warrington, Pa., a corporation of Pennsylvania
Filed July 8, 1968, Ser. No. 743,230
Int. Cl. B67d 5/62

U.S. Cl. 222-146

9 Claims



A liquid dispenser is disclosed which operates in conjunction with a large reservoir. Liquid flows by gravity into a closed metering tank with which there is operatively associated a valve housing containing a reciprocating valve body. In a first and normal position of the valve body, liquid flows from the reservoir into the measuring tank with the air displaced thereby being vented to atmosphere. The effective capacity of the measuring tank is varied by adjustment of the vent inlet within the measuring tank. The measuring tank thus contains a predetermined unit volume of liquid ready for dispensing. Movement of the valve body to a second position stops flow from reservoir into tank and causes the measuring tank to discharge. Removal of actuating forces allows normal bias to restore the valve body to its first position so that the tank again fills and the cycle may be repeated. The metering tank may be heated throughout its mass so that it acts as a heat sink ready to transfer sensible heat into the liquid flowing into it.

3,515,313

MOTORIZED SPREADER APPARATUS

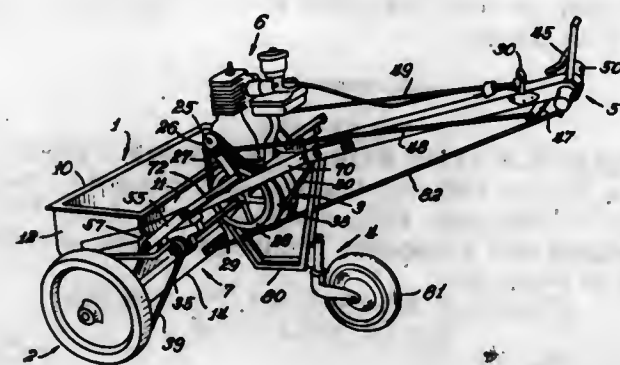
Edward J. Stema, 23W215 Walnut, Roselle, Ill. 60172
Filed June 22, 1967, Ser. No. 654,302
Int. Cl. A01c 15/16; B62d 11/08, 51/04

U.S. Cl. 222-177

2 Claims

A spreader apparatus is provided with motor-driven wheels which support a hopper for containing the material to be spread. A two-part agitator spans the breadth of the hopper along its bottom discharge opening. A motor is connected to the frame of the spreader apparatus, and the output shaft of the motor is connected through a drive train to simultaneously drive the wheels and the

agitator. This drive train includes the output shaft of the motor which is connected through a primary pulley and belt system to a drive shaft. The drive shaft is connected through a secondary pulley and belt or chain and sprocket system to each of the wheels and simultaneously to the two-part agitator. Controls are provided to permit idling



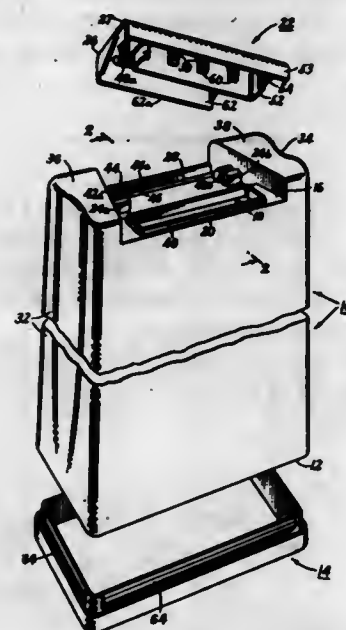
of the motor and spreader apparatus; to produce movement of both wheels simultaneously; or to drive one wheel independently of the other and thereby only the agitator segment to which it is connected. These controls include a clutch system which is manually operable and permits the selective rotation of the spreader wheels.

3,515,314 DISPENSING CONTAINER WITH PIVOTING COVER

Neil S. Waterman, Stamford, Conn., assignor to Atlantic Design & Development Corporation, Stamford, Conn.
Filed June 10, 1968, Ser. No. 735,779
Int. Cl. B67d 5/58

U.S. Cl. 222-189

6 Claims



A dispensing container has an opening provided with a cover which pivots about a central axis between open and closed positions. The cover may be snapped into either its open or closed positions by slight pressure from an index finger of one hand in which the container is held. Manipulation of the cover is effected upon the rear flap, whereby the hand need never touch the container opening through which the contents are dispensed. A grooved skirt may depend from the cover which tightly engages an upstanding rim about the opening to effect a sift-free sealed closure for particulate materials, while the resilient rear flap thereon releasably locks the cover in closed position. Pivotal movement of the cover is limited

in extent on opening by manual movement of a depending leg on the resilient flap of the cover into a recess in the container top. A plurality of tooth-like projections extend from the cover into the opening and are only partially withdrawn when the cover is opened to present a sieve-like passage for particulate materials, for evenly dispensing the container contents. The container top and cover may be made separately for attachment to a container body.

3,515,315 COMBINED SEED AND FERTILIZER DRILLS FOR AGRICULTURAL USE

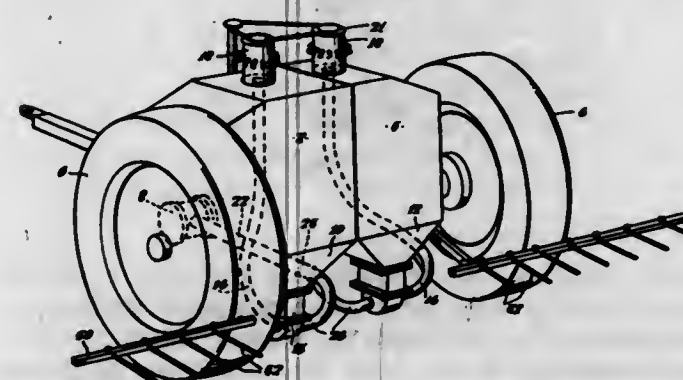
Archibald Watson Kidd, Seend, Melksham, England, assignor to Archie Kidd (Designs) Limited, Seend, Melksham, England

Filed Jan. 23, 1967, Ser. No. 610,999
Claims priority, application Great Britain, Jan. 24, 1966, 3,083/66; Dec. 12, 1966, 55,441/66; Dec. 22, 1966, 57,329/66

Int. Cl. B65g 53/08

U.S. Cl. 222-193

3 Claims



Combined seed and fertilizer drill for agricultural use having independent systems for feeding the seed and fertilizer to the coulters wherein each system comprises a hopper having a controllable outlet, means for pneumatically conveying the contents of the hopper from said outlet to a distributor and from thence to the coulters, the said distributor having a rotatable cowl for feeding the pipes leading from the distributor to the coulters.

3,515,316 ACTUATOR FOR AEROSOL VALVES

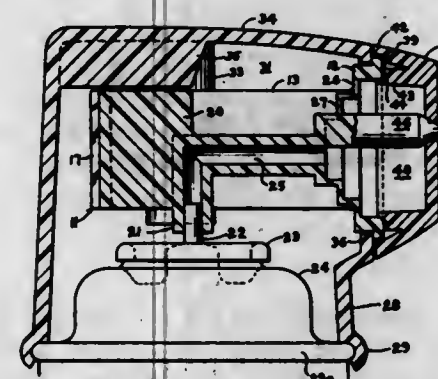
Derek Bernard Green, Manchester, N.H., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Feb. 21, 1968, Ser. No. 707,244

Int. Cl. B65d 83/14

U.S. Cl. 222-207

11 Claims



An aerosol actuator molded in one piece has a continuous perimetrical semi-rigid resilient structure mounted on the valve stem with one section fixed to the container. When it is squeezed together by lateral pressure the structure elongates along an axis normal to the applied pressure so that a portion of the structure will move in a

linear path away from such fixed section. Carried by the movable portion is a conduit fitting tightly on the valve stem and leading to a discharge passage. An overcap has flexible sides or openings through which pressure is applied to the actuator. The overcap may have an orifice in communication with the discharge passage, and a plug valve on the actuator moves automatically away from the orifice when squeeze pressure is applied to the semi-rigid resilient structure to move the valve stem for opening the valve by either a tilt action or a vertical action.

3,515,317 APPARATUS FOR MAKING ORNAMENTAL BOWS

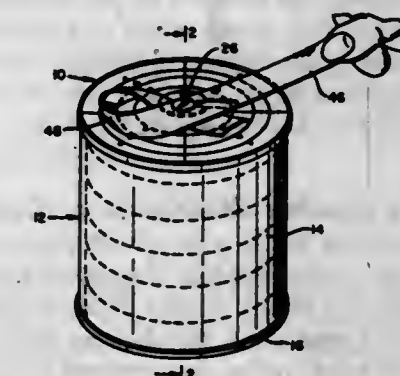
Clarence T. Bickner, 957 Manor Road, El Sobrante, Calif. 94803

Filed Aug. 5, 1968, Ser. No. 750,048

Int. Cl. A41h 43/00

U.S. Cl. 223-46

6 Claims



A bow making device is provided which utilizes a can to which a plastic cover is removably attached, the lid of the can being provided with one or more guide circles for use in making a bow, the plastic cover being formed with means to hold a bow pin.

3,515,318 COLLAPSIBLE WIG STAND FORMING ITS OWN CARRYING CASE

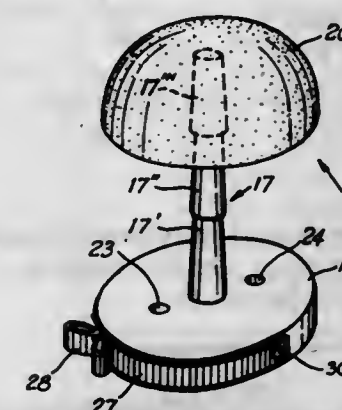
Harry Preble, Schoolhouse Road, Cross River, N.Y. 10518

Filed Aug. 11, 1969, Ser. No. 848,941

Int. Cl. D06c 15/00

U.S. Cl. 223-66

10 Claims



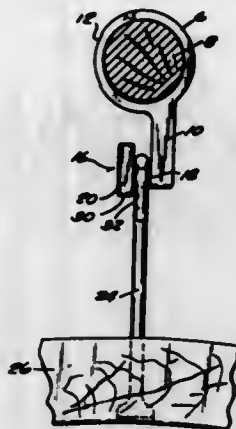
An inverted shell to support a wig, is releasably carried on a come-apart post extending upwardly from a base on whose periphery is a stressed, flat elastic bail pivoted on pins extending from the ends of a center line of the base. In collapsed condition, the shell set on the base, constitutes with it, a closed case into which the post sections are placed; said sections releasably engaging the case for proper assembly which is maintained by the bail shifted to straddle the crest of the shell. The base and shell mouth are preferably elliptical. A bow in the bail to serve as a handle, and a dent or flat at the shell's crest to hold the bail, are optional.

3,515,319 COMBINATION COAT HANGER AND HANGER SUPPORT

Ronald T. Furtak, Chicago, and Robert W. Schier, Glenview, Ill., assignors to Krueger Metal Products, Inc., Green Bay, Wis., a corporation of Wisconsin
Filed Feb. 10, 1969, Ser. No. 797,755
Int. Cl. A41j 51/08

U.S. Cl. 223-95

4 Claims



A supporting member slidable on a clothes pole has a laterally projecting hook with which the eye at the end of a hanger rod is engageable, the hook having a head portion to which the shank of the hook is attached at an intermediate level requiring the hanger rod to be tilted in the course of application or removal to minimize the possibility of accidental dislodgment.

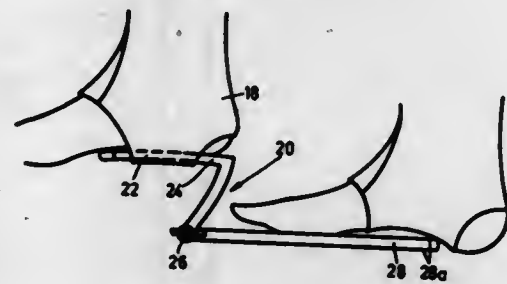
3,515,320 DEVICE FOR FACILITATING THE REMOVAL OF TROUSERS

Lutz Wintersberger, Munchner Strasse 39/41, Munich-Deisenhofen, Germany
Filed Dec. 18, 1968, Ser. No. 784,614
Claims priority, application Germany, Dec. 21, 1967, 1,679,137

Int. Cl. A47j 51/06

U.S. Cl. 223-111

1 Claim



A supported projection is introduced between the sole of the foot and the strap for the purpose of removing trousers provided with the straps.

3,515,321 AMMUNITION CARRYING CASE

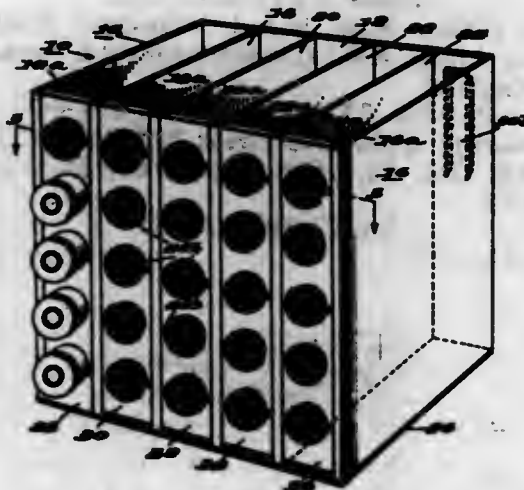
Clifford L. Webster, 506 Haverford Ave., Norberth, Pa. 19072
Filed Mar. 5, 1968, Ser. No. 712,334
Int. Cl. F42b 39/00

U.S. Cl. 224-21

9 Claims

A live and spent ammunition carrying case designed particularly for use in trap and skeet shooting but suitable also for use by hunters and others engaging in sport shooting. The case provides a plurality of open top compartments, the front walls of each consisting of a so-called tension strip having pre-sized ammunition receiving holes of a diameter slightly less than that of the ammunition to be held, the holes being enlargeable in diameter

upon insertion of a piece of ammunition, i.e. a shotgun shell therein, through the provision of slits in the strips extending alternately from opposite sides of the holes to and through the side edges of the strip. Such arrangement of holes and slits results in the strips growing in length when the holes therein are successively filled with shells. To insure that the strips elongate only in downward direction, they are secured only at their upper ends and their length is shorter than the height of the case as measured from its bottom wall by an amount sub-



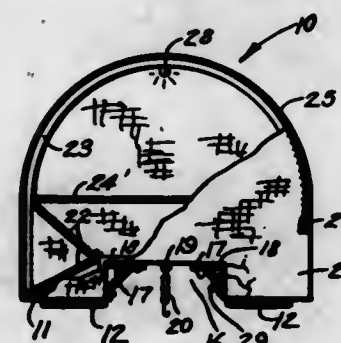
stantially equal to the amount that the strip elongates when its holes receive their complement of shells; and to insure return of the strips to normal length for subsequent reloading of the case, the strips are fashioned from a memory plastic. The number of compartments in the case and the number of holes in each of the tension strips are preferably related to the number of firing positions and the number of shots which are fired at each firing position, respectively, according to the rules of trap and skeet shooting.

3,515,322 CARRIER FOR MOTORCYCLES

John L. Schneider, 110 W. Jefferson Road, Cheyenne, Wyo. 82001
Filed Aug. 19, 1968, Ser. No. 753,498
Int. Cl. B62j 9/00

U.S. Cl. 224-32

4 Claims



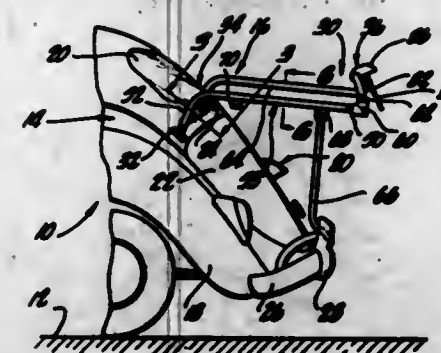
A device for placement over the rear fender of a motorcycle in which may be stored or carried various items which will be protected from the weather. This device is constructed so as to have a recess in which the fender may be received and a rib-like structure supports the duck canvas which covers the device and prevents rain from wetting the contents within the carrier and the device has a light which may be turned on in order to view inside the carrier when opening the zipper at the rear of the device.

3,515,323 AUTOMOBILE LUGGAGE RACK

Dale H. Gilbert, 20505 Pioneer Blvd., Lakewood, Calif. 90712
Filed Feb. 15, 1968, Ser. No. 705,760
Int. Cl. B60r 9/00

U.S. Cl. 224-42.08

2 Claims



A normally inclined automobile luggage rack is secured at its upper end by mounting brackets mounted on the body of the automobile. The other end of the luggage rack is carried by a bumper of the automobile. The rack is pivotal from an inclined position to a substantially horizontal position to provide access to the part of the automobile normally covered by the rack when its rack is in the inclined position.

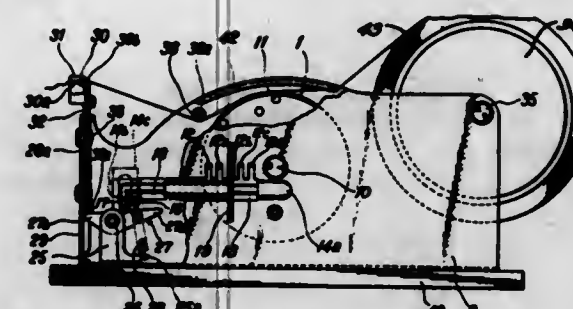
3,515,324 TAPE CUTTER FOR CUTTING AN ADHESIVE TAPE IN A DEFINITE LENGTH SUCCESSIVELY

Gilchi Ogawa, 49, Kunitachi, Kunitachi-shi, Tokyo, Japan
Filed Aug. 14, 1968, Ser. No. 752,676
Claims priority, application Japan, Oct. 31, 1967, 42/55,981

Int. Cl. B26f 3/02

U.S. Cl. 225-11

3 Claims



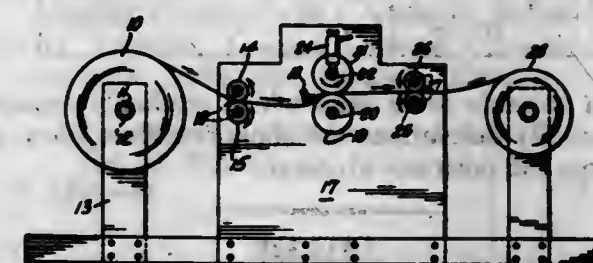
A tape cutter having a tape drum from which an adhesive tape is pulled out, a feed drum to be rotated by adhering of an advancing adhesive tape to the upper surface thereof, a regulating disc which is provided with several series of regulating holes in several concentric circles at equal intervals in the respective series and connected with the feed drum elastically, an action shaft whereon a sleeve with a pawl usually pressing on the face of the regulating disc is turnably mounted so as to turn therewith and to slide thereon, and a sliding plate whereon a cutting edge and a blunt edge are fixed at the upper end thereof. When an adhesive tape is pulled out from the tape drum, the tape is fed by rotation of the feed drum and cut in the length corresponding to the interval of the selected series of the regulating holes by depression of the cutting edge with the tape while the feed drum is prevented from rotating by engagement of the pawl with a regulating hole. A fall of the sliding plate accompanying with the depression of the cutting edge disengages the pawl from the regulating hole through a lever and the action shaft urged by a spring and returns the pawl to the usual position relative to the regulating holes.

3,515,325 APPARATUS FOR FIBRILLATING A TRANSVERSELY ORIENTED PLASTIC MATERIAL

Frank Kalwitzer, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Mar. 5, 1968, Ser. No. 710,611
Int. Cl. B26f 3/02

U.S. Cl. 225-93

7 Claims



Method and apparatus for fibrillating transversely oriented plastic material by moving the material in the direction of its length at a given speed and instantaneously and simultaneously applying compressive forces and longitudinal forces to the material while maintaining the speed at which it is moving to split the material into a web of interconnected fibers.

3,515,326 APPARATUS FOR CUTTING OF STEEL BARS

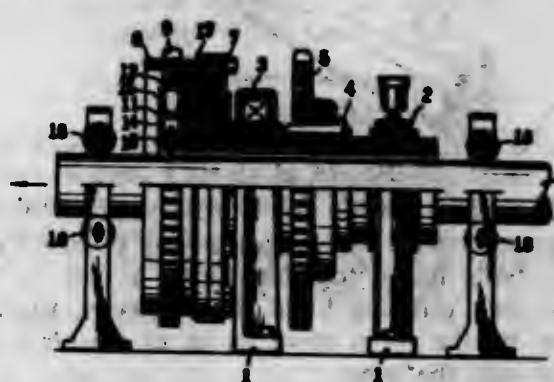
Tadashi Saito, Masaya Saito, and Masaru Saito, Takarazuka, Japan, assignors of one-twelfth to Hachiro Saito, Takarazuka, Japan

Filed May 17, 1968, Ser. No. 730,132

Int. Cl. B26f 3/00

U.S. Cl. 225-96.5

8 Claims



By the method and apparatus for cutting off a steel bar, a V-shaped groove is first formed in the circumferential surface of the bar. Supported by two supporting members on the both sides of the groove, the steel bar is then pressed by a pressing member having a sharp V-shaped cutting edge which wedges into the groove, whereby due to the combination of the tearing action created by the driven pressing member and tensile and tearing actions effected in the opposite side by the bending of the bar, the steel bar is cut off at the grooved portion.

3,515,327 APPARATUS FOR STORING A VARIABLE LENGTH OF STRIP

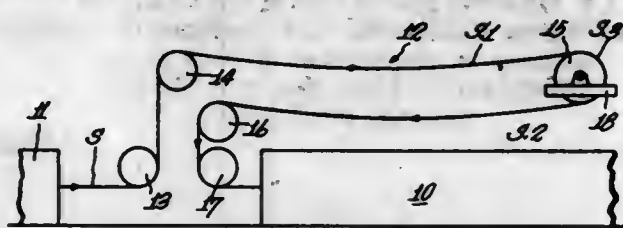
Howard J. Bortman, McDonald, Ohio, assignor to Woon Industries Inc., Warren, Ohio
Filed June 19, 1968, Ser. No. 738,283
Int. Cl. B65h 17/42

U.S. Cl. 226-113

9 Claims

Apparatus providing support rollers for underlying and supporting a generally horizontally extending portion of strip which may vary in length and such rollers being movable about respective pivot axes away from strip underlying positions during a decrease in length of the strip portion and movable to strip underlying positions during an increase in length of the strip portion. To minimize shock in initiating and terminating support

roller movement toward and away from strip-supporting positions, such movement is effectuated by drive means



having a variable drive ratio which gradually accelerates and gradually decelerates the support rollers toward and away from the positions aforesaid.

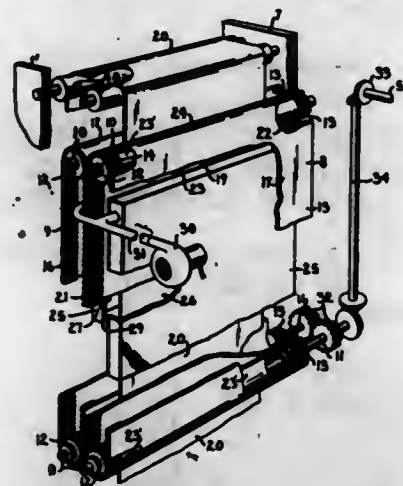
3,515,328 CONTROLLED WEB LENGTH IN-FEED FOR ROTARY PRINTING PRESS

Roy R. Smith, Jr., Leawood, Kans., assignor to Smith R.P.M. Corporation, Kansas City, Mo., a corporation of Missouri

Filed Jan. 29, 1968, Ser. No. 701,422
Int. Cl. B65h 17/24

U.S. Cl. 226-172

6 Claims



A web in-feeding device for a rotary printing press includes a pair of drive assemblies having opposed adjacent endless belts urged together along a run to form an extensive web gripping bight therebetween, the belts being driven by the press drive so as to maintain synchronization with the press.

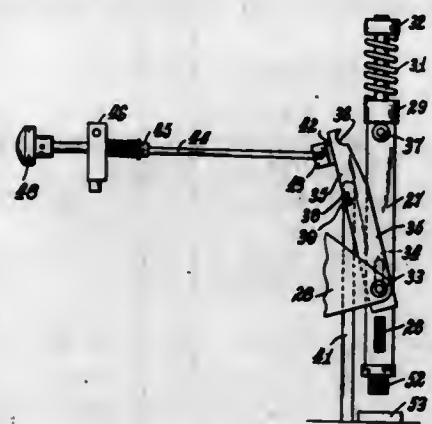
3,515,329 CONTROL FOR FASTENER ATTACHING MACHINE

Augustine Cillone, North Providence, R.I., assignor to U.S. Industries, Inc. (doing business as Ram Fastener), Providence, R.I., a corporation of Delaware

Filed Nov. 14, 1967, Ser. No. 682,869
Int. Cl. B27f 7/22

U.S. Cl. 227-78

10 Claims



A snap fastener component attaching machine having dual fastener attaching heads and selective means operable to control operation of either one or both of said attaching heads.

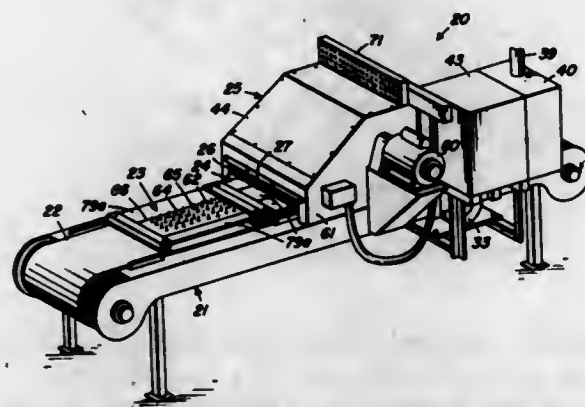
3,515,330 CONTINUOUS FLOW MASS PIN-TO-BOARD HOT AIR SOLDERING DEVICE

Howard J. Bronson and Frederick W. Johnson, Cedar Rapids, and Marvin D. Weltha, Marion, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Jan. 30, 1968, Ser. No. 701,720
Int. Cl. B23k 1/00

U.S. Cl. 228-8

14 Claims



A soldering machine for conveyor carried continuous through flow mass soldering of pins to circuit boards in one pass through a hot air soldering oven. Close control is provided in hot air circulation, temperature distribution including automatic thermostatic zone control, hot air velocity and delivered impingement directed angle to the joints being processed, and in controlled hot air bleeding and input drawing of make-up air. Operator conveyor speed control is also provided.

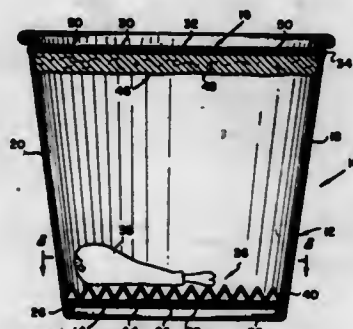
3,515,331 CARTON CONSTRUCTION

Clifton W. Guthrie, Sr., 1219 Wilmer Ave., Richmond, Va. 23227

Filed Sept. 9, 1968, Ser. No. 758,464
Int. Cl. B65d 5/56

U.S. Cl. 229-14

8 Claims



A carton for maintaining a food product hot having means to absorb grease and means to absorb and retain moisture as well as heat insulation means to keep the product hot. The grease-absorbing means is supported by the bottom member of the carton and the means for absorbing moisture is suspended from the top member of the carton.

3,515,332 CONTAINERS WITH DECORATIVE TOP CLOSURES

Irving Smith, Flushing, N.Y. (% Arrow Art Finishers, Inc., 1201 Evergreen Ave., Bronx, N.Y. 10472)

Filed May 2, 1968, Ser. No. 726,093
Int. Cl. B65d 5/00, 5/10

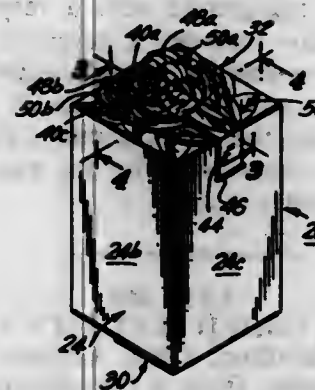
U.S. Cl. 229-38

14 Claims

Containers for articles. The container has an endless side wall composed of a ring of paperboard rectangular panels interconnected by fold lines and having top and bottom ends. The container also has top and bottom clo-

tures for the top and bottom ends of the endless sidewall, respectively. The top closure includes at least a pair of paperboard flaps which overlap each other and which re-

A tear strip is provided in the flange inwardly of the seal to provide an opening feature. In one embodiment, a reclosing feature is also illustrated and described.



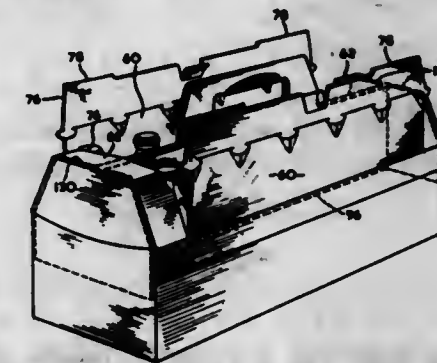
3,515,335 FOLDED BLANK CARTON WITH HANDLE BODILY SHIFTABLE VERTICALLY

William G. Atkinson, London, Ontario, Canada, assignor to Somerville Industries Limited, London, Ontario, Canada

Filed May 27, 1968, Ser. No. 732,117
Int. Cl. B65d 5/46, 75/00, 25/128

U.S. Cl. 229-52

7 Claims



spectively have a pair of means coacting with each other for providing at least a three-dimensional representation of a given subject.

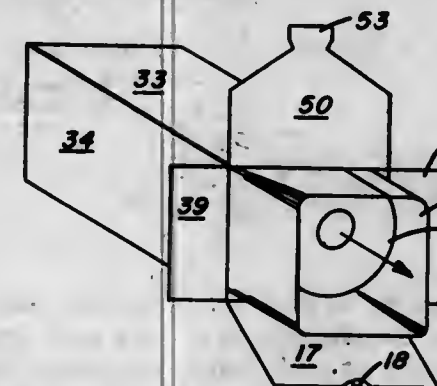
3,515,333 COMBINATION WRAP-BASE ROLL BOX

Hetti Kothas and James R. Johnston, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Feb. 13, 1969, Ser. No. 798,947
Int. Cl. B65d 5/54, 85/20

U.S. Cl. 229-40

4 Claims



A light-tight, moisture-proof box for a roll of product comprising an inner wrap formed up and around the roll and enclosed by a cover telescoped down over, and fixed to, the inner wrap. Access to the product is through the end wall of the cover which is provided with a reclosable tear-away section.

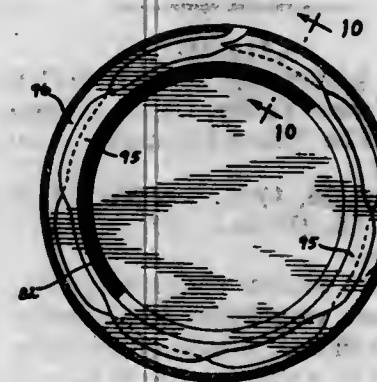
3,515,334 PACKAGE WITH TEAR STRIP

William P. Jacobson, Rockford, Ill., assignor to Anderson Bros. Mfg. Co., Rockford, Ill., a corporation of Illinois

Filed Apr. 24, 1968, Ser. No. 723,733
Int. Cl. B65d 5/54, 17/20

U.S. Cl. 229-51

8 Claims



A plastic container is provided with an outwardly extending peripheral flange at its open end. A cover member is sealed to the outer extremity of the peripheral flange.

The invention relates to a bag or like container having a tear strip thereon to facilitate opening thereof, the tear strip comprising a solidified liquid composition directly and adhesively fixed to the container surface.

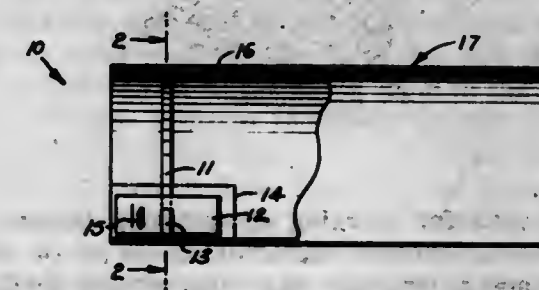
3,515,337 MAIL CLIP

Melford B. Borius, R.R. 5, Montevideo, Minn. 56265

Filed June 24, 1968, Ser. No. 739,461
Int. Cl. A47g 29/12

U.S. Cl. 232-33

1 Claim

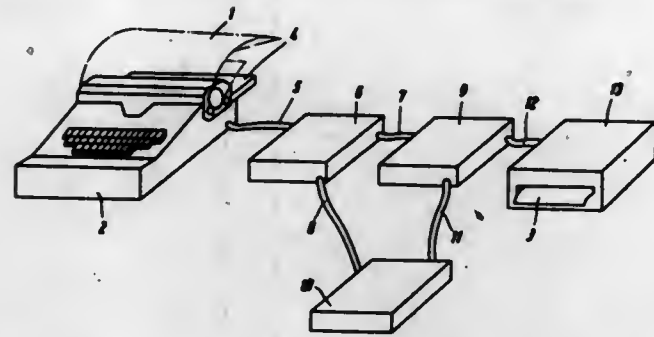


A spring steel device for rural-type mailboxes having a plate which is indented in order to have the mail received within the device and will extend outwards so that it may be readily grasped and taken from the device.

3,515,338 TYPEWRITER CONTROLLED RECORDING APPARATUS

Gerhard Ritterfeld, Scherler Allee 14,
Berlin 33, Dablen, Germany
Filed Jan. 3, 1968, Ser. No. 695,445
Claims priority, application Germany, Jan. 6, 1967,
R 44,999
Int. Cl. G06k 1/22, 19/06
U.S. Cl. 234-18

16 Claims



Typewriter keys and a program means on the typewriter, control a plurality of setting magnets by which coupling bars, located between a reciprocating drive bar and a series of punches, are moved between inoperative and coupling positions so that recording areas of a line on a record carrier are punched in accordance with a code in fields of each recording area.

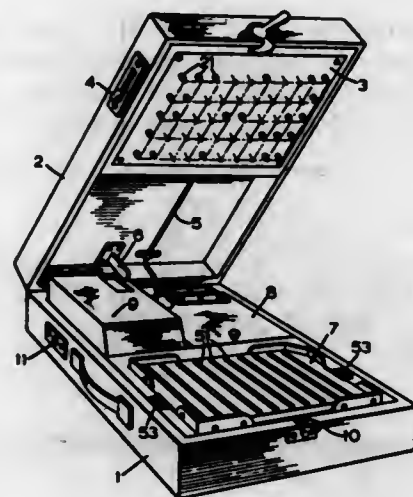
ERRATUM

For Class 235-60 sec:
Patent No. 3,515,857

3,515,339
PUNCHCARD READING APPARATUS
Thomas Joseph McEwan, Apt. 14, 2125 Avenue Road,
Toronto 12, Ontario, Canada
Filed Nov. 10, 1966, Ser. No. 593,579
Claims priority, application Great Britain, Nov. 12, 1965,
48,259/65

Int. Cl. G06k 7/04, 5/04; G09b 7/00
U.S. Cl. 235-61.7

7 Claims



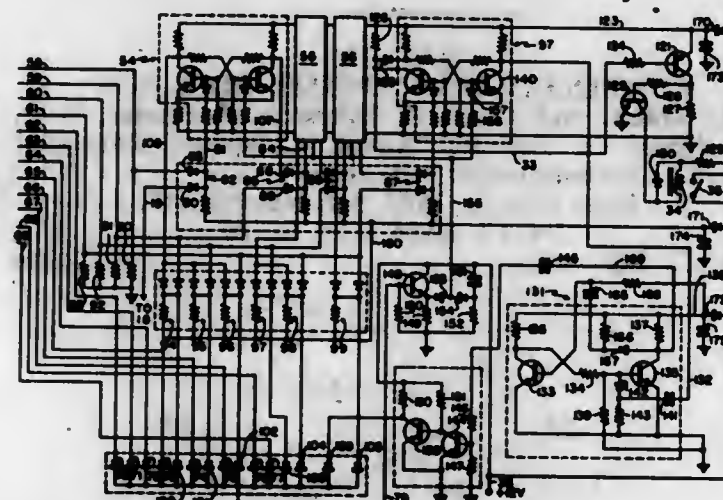
An apparatus for marking examination papers comprises a selector module including an array of sensing conductors and a terminal plate, the sensing conductors being arranged in groups and being selectively engageable with the terminal plate in accordance with a master record. A second module is adapted to co-operate with the selector module, the second module including a second

terminal plate with which the sensing conductors are engageable through the record perforations. At least one of the terminal plates comprises a number of terminal strips insulated from one another, each group of sensing conductors being engageable with a respective terminal strip. The apparatus includes a potential source, and a stepping switch operable to connect sequentially the terminal strips of the one terminal plate in circuit with the potential source and the other terminal plate whereby to derive a separate electrical pulse for each item of data recorded on the master record.

3,515,340
DIGITAL CODED SECURITY SYSTEM
John L. Mika, Hamilton, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Nov. 25, 1966, Ser. No. 596,946
Int. Cl. G05b 1/00; H01h 47/00

U.S. Cl. 235-61.7

1 Claim



This is a security system for permitting access to secured premises. Satisfaction of a code card provides energy for a plurality of push button switchable lines. Input lines and output lines on a patch board provide for selection of a switch code involving energizing of a selected few of the output lines in sequence. The selected lines are individually applied to the stages of a register of cascaded binary devices. In response to successive energization of the selected lines, in accordance with the switch code, the binary devices are successively set and the final binary device activates a qualifying device permitting access for a limited time. The disclosure includes an OR gate which so gates false signals on the non-selected output lines of the patch board as to cause reset. The disclosure features AND circuit means for causing resetting upon sensing coincidence between a reset state of any binary device, and an out-of-sequence signal applied over one of the selected lines to any of the succeeding binary devices.

3,515,341
PULSE RESPONSIVE COUNTERS
David F. Frick, Castro Valley, Calif., assignor, by mesne assignments, to The Singer Company, a corporation of New Jersey

Filed Sept. 26, 1966, Ser. No. 581,924
Int. Cl. H03k 21/02, 21/10

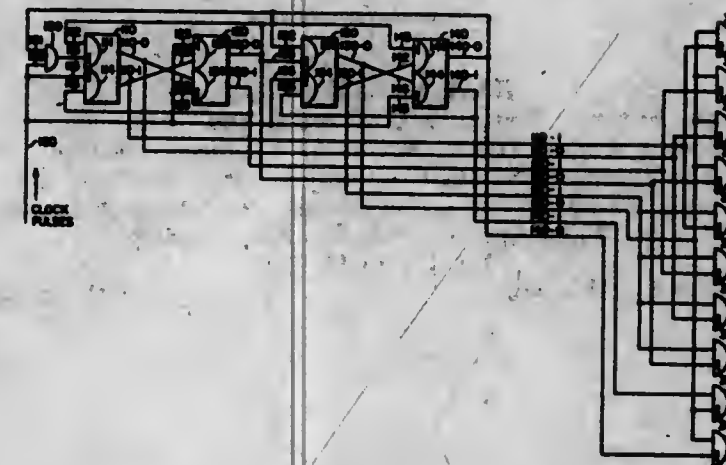
U.S. Cl. 235-92

7 Claims

A pulse responsive counter comprising two pairs of flip-flops with each pair responding individually to selected pulses so that each pair of flip-flops counts in accordance with the principles of a Gray code. In accordance with a preferred embodiment, the second pair of flip-flops advances in response to each completion of the first two complete Gray code cycles of the first pair of flip-flops and then in response to the individual pulses succeeding those

that drove the first pair. The first pair of flip-flops is not advanced after the two complete Gray code cycles. Output signals from each of said flip-flops are coupled to a

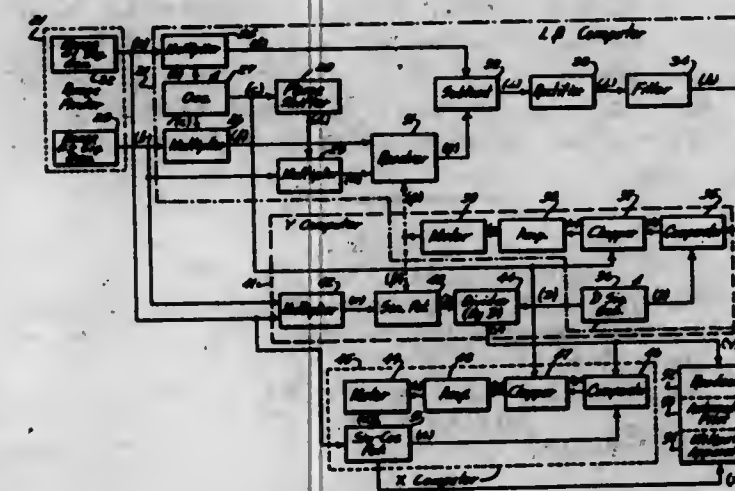
as measured at that time the sample is taken and comparing that stored value with the accurate sample measure-



plurality of gates which taken together provide an indication of the instantaneous setting of the plurality of flip-flops.

3,515,342
NAVIGATION COMPUTER
David H. Brunk, Panama City, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 10, 1968, Ser. No. 735,755
Int. Cl. G06g 7/12; G01c 21/20
U.S. Cl. 235-150.27

9 Claims



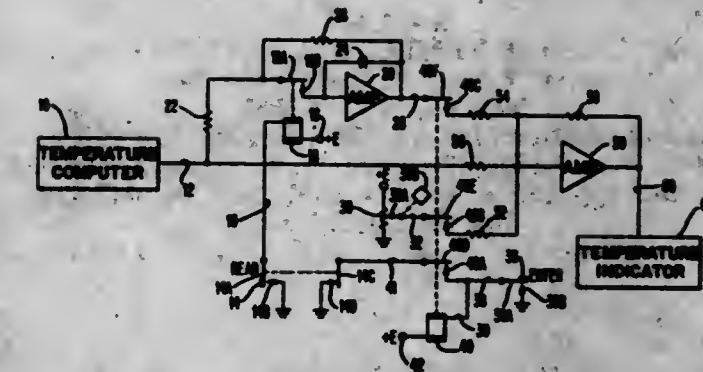
A navigation system for continuously computing and indicating the position of a vehicle with respect to a pair of known reference markers, as it is being steered along a predetermined course within a narrow channel; said system containing a range finder, a triangle coordinates analog computer, and a readout.

3,515,343
CORRECTION ENTRY CIRCUIT
John W. Schwartzberg, Maple Glen, Pa., and Bernard Blum, Kenners, N.Y., assignors to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 14, 1966, Ser. No. 534,042
Int. Cl. G05b 1/00; G05d 23/00
U.S. Cl. 235-151.3

8 Claims

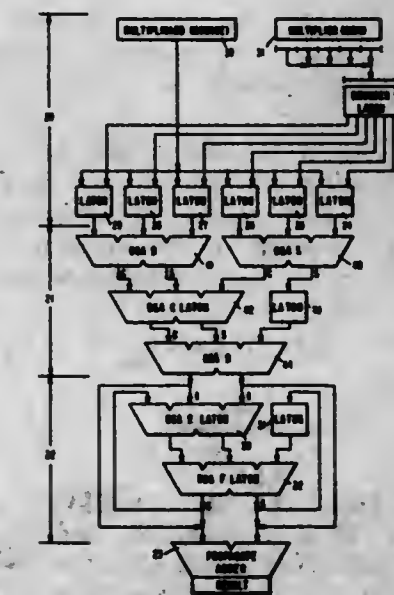
Correcting a continuous measurement of a process variable in accordance with a more accurate sample measurement made by another independent test procedure is accomplished by storing the value of the process variable



ment to obtain a correction value. The correction value is added to the continuous measurement to reduce its error.

3,515,344
APPARATUS FOR ACCUMULATING THE SUM OF A PLURALITY OF OPERANDS
Robert E. Goldschmidt and Robert J. Litwiler, Wappingers Falls, and Don M. Powers, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Aug. 31, 1966, Ser. No. 576,401
Int. Cl. G06f 7/385
U.S. Cl. 235-175

9 Claims

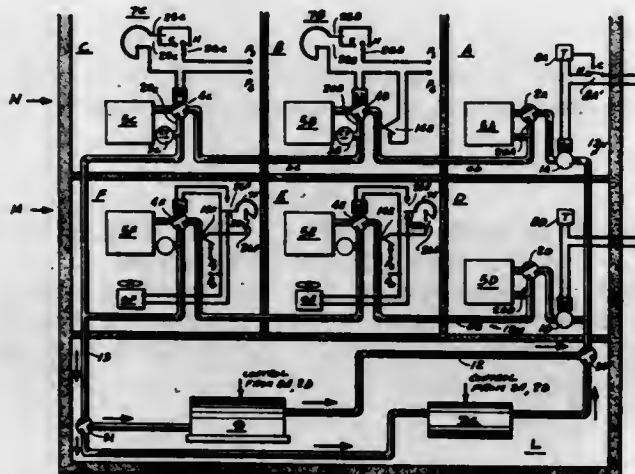


A plurality of carry save adder stages, each comprised of one or more carry save adder units are arranged in a configuration which permits the summation of a plurality of plural-binary bit operands. A first plurality of carry save adder stages is arranged to reduce six operands to a first output signal representing the sum and a second output signal representing carries. A second plurality of carry save adder stages are arranged in loop fashion such that the carry and sum output of the second plurality of stages are combined with the carry and sum outputs from the first plurality of stages at the input to the second plurality of stages. Certain of the carry save adder stages are comprised of latching means to retain the data for a specified period of time. Signal delays through the second plurality of stages and the time between timing pulse inputs to the other latch stages are equal such that the outputs from the second plurality of stages representing the sum of the first plurality of operands will combine with the outputs of the first plurality of stages representing the sum of a second plurality of operands. The timing pulses, circuit delays, and latched stages permit the

application of operands to the input of the adder arrangement at a rate equal to that of the delay through only the second plurality of carry save adder stages.

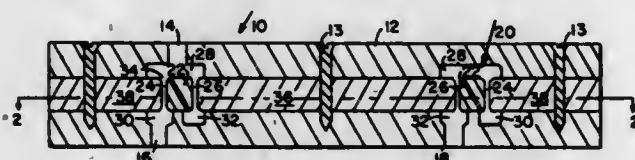
3,515,345 MULTI-ZONE TEMPERATURE CONTROL

John W. Barnd, 32 Hollybrook Road, Paramus, N.J. 07652
Original application Mar. 10, 1964, Ser. No. 350,791, now Patent No. 3,351,128, dated Nov. 7, 1967. Divided and this application Apr. 24, 1967, Ser. No. 647,578
Int. Cl. G05 23/30
U.S. Cl. 236—1 21 Claims



A multi-zone temperature control system wherein individual heat exchangers are selectively decoupled from a central temperature distribution system which functions both in a heating mode and a cooling mode and utilizes a single thermostat within both modes. By utilizing a pair of heating resistors in association with the thermostat, one of the resistors functioning during the heating mode while both of the resistors are utilized during the cooling mode, one temperature level is capable of being maintained in one mode while a separate and distinct temperature level is capable of being maintained in the other mode.

3,515,346
FLUID TEMPERATURE SENSITIVE VALVE
Paul F. Hayner, Lexington, Mass., and David George Eldridge, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed May 8, 1968, Ser. No. 727,420
Int. Cl. F01p 7/16
U.S. Cl. 236—34.5 9 Claims

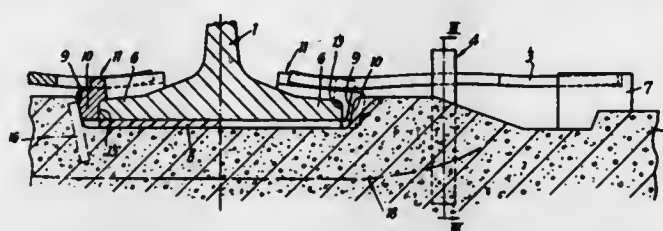


The present invention pertains to a fluid thermostat and more particularly to a fluid thermostat for use in conjunction with hydraulic systems characterized by the generation of heat. The fluid thermostat is disposed in external feedback path from the hydraulic system to the sump wherein the fluid is fed to the system. The fluid thermostat is operative to pass fluid below a predetermined temperature directly to the sump and fluid above a pre-

determined temperature to a heat exchanger and then to the sump so as to provide a proportional fluid temperature device which maintains the fluid in the sump, and thus, the fluid fed to the hydraulic system, at a substantially constant temperature.

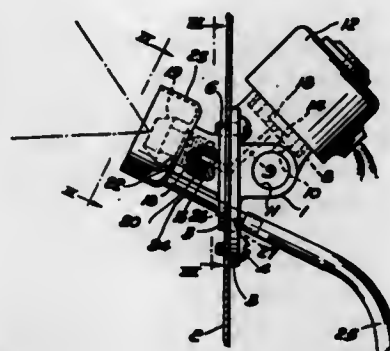
3,515,347 RAIL FASTENINGS

John Murray Waters and John Lucas, Allestree, and Gwyn Tudor Davis, Sheffield, England, assignors to The Tempered Spring Company Limited, Sheffield, England, a company of Great Britain and Northern Ireland
Filed Apr. 3, 1968, Ser. No. 718,389
Int. Cl. E01b 9/48
U.S. Cl. 238—310 16 Claims



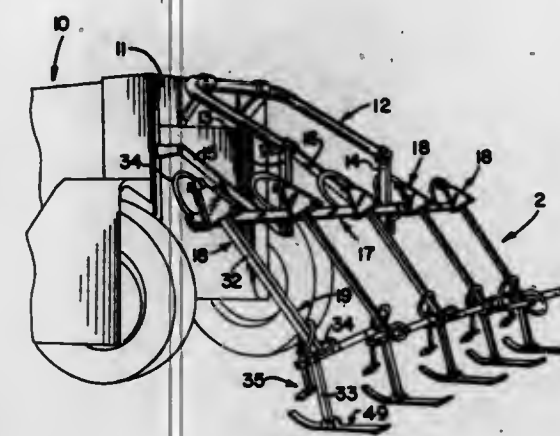
The invention is concerned with a rail fastening. This comprises, in combination with a tie (in this specification called a sleeper) or other rail foundation, a clip bearing on the rail flange, a shoulder on the rail foundation constituting an abutment for the flange, and a spacer disposed between the flange and the shoulder so that the flange abuts against the shoulder through the intermediary of the spacer. The shoulder and the spacer are of such shape that at least part of the contact area between them, as seen in horizontal section, describes an arc of a circle. This enables misalignment of the rail foundation with respect to the rail to be accommodated without any need for large clearances. Moreover, wedging action of the spacer on the rail resists creep or longitudinal rail movement.

3,515,348
MIST-PRODUCING DEVICE
William H. Coffman, Jr., Mount Pleasant, Pa., assignor to Lewbill Industries Inc., Scottsdale, Pa., a corporation of Pennsylvania
Filed July 22, 1968, Ser. No. 746,383
Int. Cl. B05b 1/28
U.S. Cl. 239—103 5 Claims



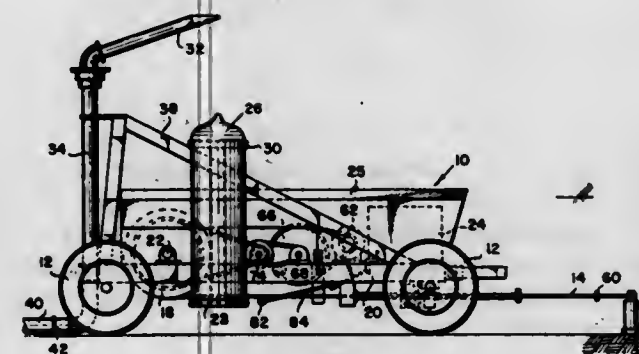
A spray nozzle has a stem screwed into the outlet of a valve body flow passage, and a head that overlaps the adjacent end of the body. The nozzle stem extends through the rear wall of a drip cup that has a second wall extending forward beside the nozzle head. A portion of the rear wall is confined between the head and valve body. A drain tube extends away from the lowest part of the cup.

3,515,349
BOOM ASSEMBLY FOR SPRAYERS
Charles D. Mecklin, James M. Franch, and George H. Hale, Memphis, Tenn., assignors to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 20, 1968, Ser. No. 714,699
Int. Cl. B05b 1/20
U.S. Cl. 239—169 5 Claims



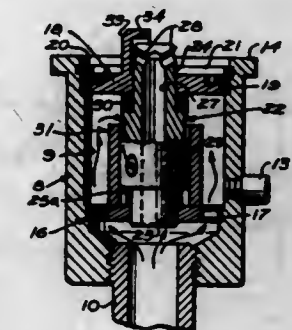
A crop spraying apparatus including a boom assembly mounted on a mobile carrier for directing fluid spray adjacent to parallel crop rows. A plurality of arms are pivotally coupled to a transverse boom so as to extend therefrom in trailing relation for pivoting movement in respective vertical planes disposed at right angles to the boom. A spray device is carried on each arm. Guide means are mounted on the boom for each arm to prevent the arm from wobbling or swinging out of its respective vertical plane such that precise control of the position of each spray device relative to the crop rows is accomplished.

3,515,350
WATER IRRIGATION SYSTEM
Frederick V. Kruse, Kilbourne, and Deane O. Behrends, Havana, Ill., assignors to AG-Rain Incorporated, Havana, Ill., a corporation of Delaware
Filed Mar. 11, 1968, Ser. No. 712,241
Int. Cl. B05b 3/00
U.S. Cl. 239—189 16 Claims



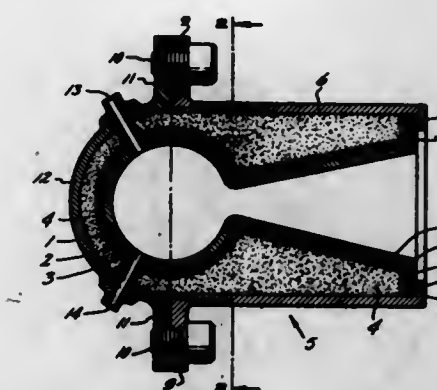
A mobile sprinkler unit carries its own motor drive and take-up winch for a cable on which the unit tracks. A sensor device detects the build-up in cable on the core of the winch and institutes automatic compensation therefor in order to secure substantially constant linear velocity. Automatic clutch engagement means starts the sprinkler when water from a pumping station reaches the unit. Automatic shut-off for the motor drive is provided when the sprinkler unit approaches the end of its run.

3,515,351
IMPACT MOTOR DRIVEN POP-UP SPRINKLER
Robert B. Costa, Covina, Calif., assignor to Rain Bird Sprinkler Mfg. Corp., Glendora, Calif., a corporation of California
Filed Sept. 11, 1968, Ser. No. 758,961
Int. Cl. B05b 3/00
U.S. Cl. 239—206 6 Claims



A pop-up sprinkler utilizing an impact type of drive encased in a motor case of fixed dimensions and capable of limited axial movement to raise the spray nozzle when in operation.

3,515,352
ROCKET NOZZLE
Edmund A. Guzewicz, Wallingford, Conn., assignor to Chandler Evans Inc., West Hartford, Conn., a corporation of Delaware
Application Nov. 26, 1965, Ser. No. 513,651, now Patent No. 3,427,698, dated Feb. 18, 1969, which is a continuation-in-part of application Ser. No. 183,537, Mar. 29, 1962, Divided and this application Feb. 27, 1968, Ser. No. 729,844
Int. Cl. B64d 33/04
U.S. Cl. 239—265.15 2 Claims

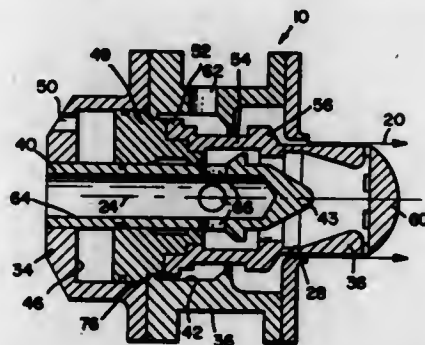


A rocket nozzle of monolithic construction comprising a plurality of layers of a mixture of the refractory metal tungsten and the refractory insulating material zirconia, in which the innermost layer is 100% metal and the outermost layer is 100% refractory material. The plurality of layers of brittle refractory materials comprising the monolithic rocket nozzle are locked in place by an encapsulating steel shell.

3,515,353
COMBINATION VALVE AND INJECTOR DEVICE FOR CONTROLLING, METERING, AND MIXING TWO FLUIDS
Leparis D. Young, Inglewood, and Antone Potocnik, Redondo Beach, Calif., assignors to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
Filed Jan. 18, 1968, Ser. No. 704,210
Int. Cl. F23d 13/38
U.S. Cl. 239—414 7 Claims

A combination valve and injector device for controlling, metering, and mixing two fluids, the device having inner and outer telescoping valve members defining an intervening annular exit orifice means bounded by a cylindrical

surface on one member and a confronting annular lip on the other member, and a radial exit orifice means disposed circumferentially about and opening laterally through the cylindrical orifice boundary surface forwardly of the annular orifice means, the valve members being relatively axially movable between valve closed positions wherein the device is sealed against fluid flow to the ori-



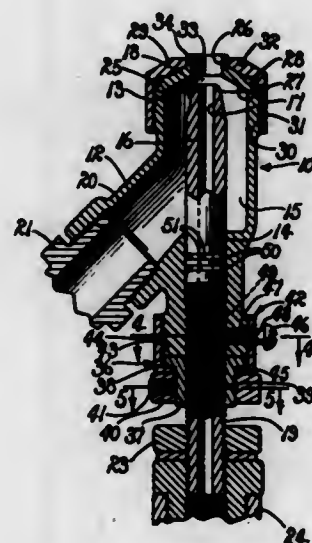
fice means and a range of valve open positions wherein fluid is jetted from the radial orifice means into the path of the annular fluid jet emerging through the annular orifice means, and the orifice boundary lip is located intermediate the ends of the cylindrical orifice boundary surface, whereby the valve members may assume any open position within the range without altering the effective areas of the orifice means.

3,515,354 SPRAY NOZZLE

Donald R. Presson, 4856 E. Harvard Ave.,
Fresno, Calif. 93703
Filed Aug. 21, 1967, Ser. No. 661,856
Int. Cl. B05b 7/12

U.S. Cl. 239-416.5

4 Claims



Essentially, this invention is an improved spray nozzle for applying wall texturing materials to wall structures. The wall texturing material is supplied to the nozzle in a slurry through a supply port and is brought into proximity with compressed air delivered to the nozzle through a bored stem adjacent the nozzle exit. The outlet of the stem is disposed in spaced relationship with the output orifice of the nozzle and the pattern delivered by the nozzle can be varied by changing this spacing. In this improved nozzle, the stem to orifice spacing is manually variable while the nozzle is in operation, thus providing for pattern adjustment without shutting off the spray. Also, the output orifice of the nozzle can itself be changed to allow an even wider range of pattern plus greater adaptability to different types of wall texturing material and slurries of differing consistencies; however, this later change cannot be made during operation of the nozzle.

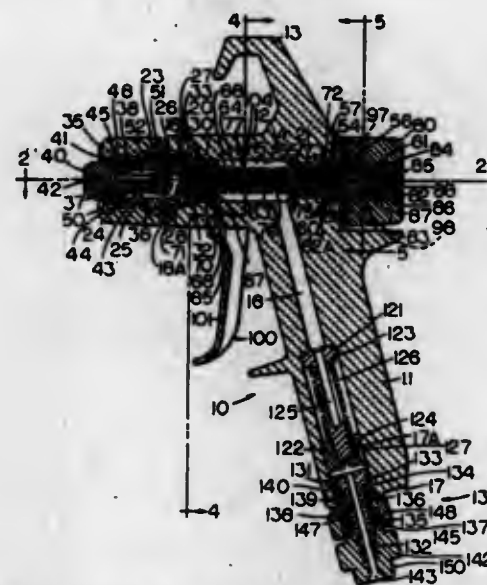
3,515,355

AIRLESS SPRAY GUN

Josef Wagner, 7991 Friedrichshafen-Fleischbach, Germany
Filed Apr. 12, 1968, Ser. No. 720,830
Int. Cl. B05b 7/02

U.S. Cl. 239-526

4 Claims



This invention relates to spray guns and more particularly to the type of spray gun wherein air pressure is forced into the top of a tank containing a liquid, such as paint, whereby the liquid is forced out of the tank into a conduit leading to a fitting in the housing of a spray gun provided with a control valve for the distribution of the fluid. The air does not mix with the fluid.

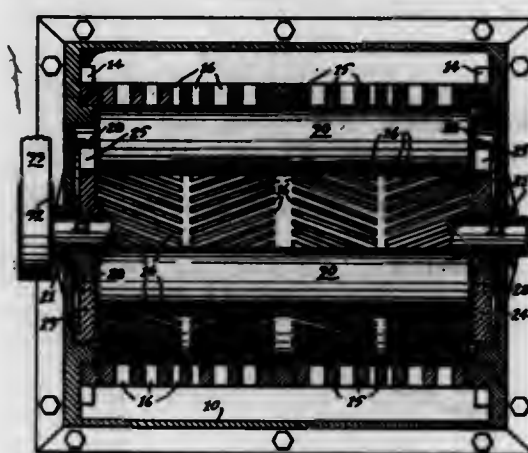
3,515,356

CENTRIFUGAL ROLLER MILL

Nelson H. Bogle, Gilbertsville, Ky. 42044
Filed June 16, 1967, Ser. No. 646,660
Int. Cl. B02c 15/08, 4/26

U.S. Cl. 241-90

3 Claims



A mill including a cylindrical grate having a plurality of elongated slots arranged at acute angles to any radial plane of the grate, a rotatable roller carrier within the grate supporting at least one planetary crusher roller for rotary and radial movement so that the centrifugal force of the rotary carrier urges the roller toward engagement with the grate.

3,515,357

COMBINATION CAN OPENER AND ICE CRUSHER
Kenneth R. Clark, deceased, late of Milwaukee, Wis., by
Marilyn J. Clark, executrix, Milwaukee, Wis., assignor
to John Oster Manufacturing Co., Milwaukee, Wis., a
corporation of Wisconsin

Filed May 31, 1967, Ser. No. 643,323

Int. Cl. B02c 13/14, 18/12; B67b 7/38

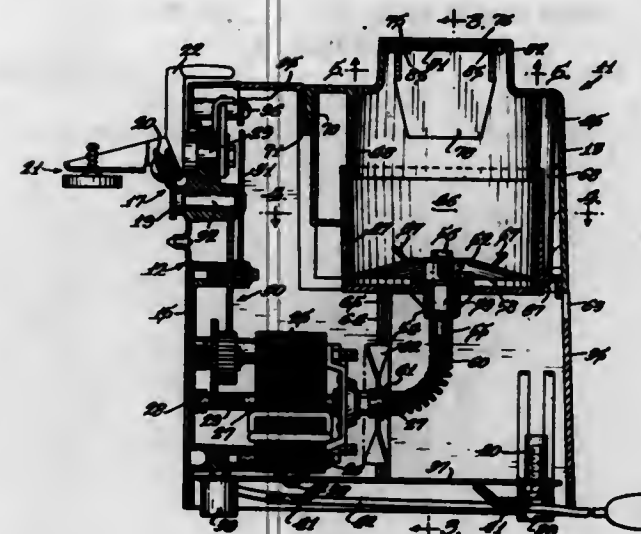
U.S. Cl. 241-101

17 Claims

An appliance having can opening mechanism driven through reduction gearing and an ice crushing mechanism driven directly by the single motor. An ice crush-

ing chamber is formed on the can opener housing by a cover member which, together with the can opener hous-

vent loops of yarn sloughing off the package from becoming entangled around the spindle. Each yarn package carrier also being provided with a yarn unwind tension controller having a cord passing around a part of the



ing, forms an enclosure for a rotary driven ice chipping disc.

3,515,358

LEATHER DISINTEGRATING APPARATUS

Hideo Sato, 54-6 Nishigakura 4-chome, Kita-ku,
Tokyo, Japan

Filed June 27, 1968, Ser. No. 740,644

Claims priority, application Japan, July 1, 1967,
42/56,662

Int. Cl. B02c 18/22, 18/28

U.S. Cl. 241-280

1 Claim



An apparatus for disintegrating leather comprising a scratch roll, and steel bands disposed on the scratch roll and having a plurality of spike shaped projections thereon. The band portions between the projections are wound full width with steel wire to fasten the band to the scratch roll. A pair of feed rolls is positioned adjacent the scratch roll and urged toward each other and a highly elastic push plate is disposed immediately beneath the feed rolls and in opposite relationship to the scratch roll.

ERRATUM

For Class 242-66 see:
Patent No. 3,515,183

3,515,359

CREEL

John Norton, Darwen, England, assignor to Leesona
Limited, a corporation of Great Britain

Filed Dec. 6, 1967, Ser. No. 688,590

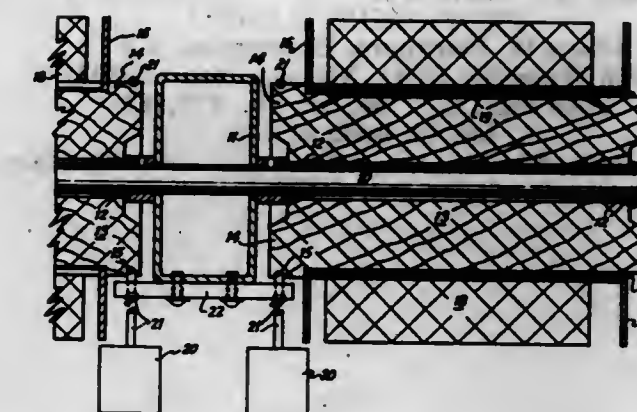
Claims priority, application Great Britain, Dec. 9, 1966,
55,141/66

Int. Cl. B65h 49/00, 59/38

U.S. Cl. 242-129.8

2 Claims

A creel having yarn package carriers rotatably mounted on stationary fixed spindles, each yarn package carrier having a pair of discs, one near to each end, to pre-



yarn package carrier and a weight suspended on the cord so as to restrain the rate of rotation of the yarn package carrier and thus keep yarn tension constant during unwinding.

3,515,360

PIVOT SYSTEM FOR FOLDING CONTROL SURFACES

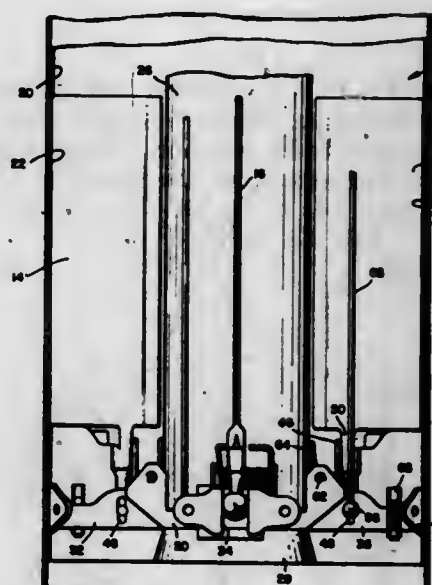
William F. Alexander, Inglewood, Calif., assignor to
Hughes Aircraft Company, Culver City, Calif., a
corporation of Delaware

Filed May 23, 1968, Ser. No. 731,661

Int. Cl. F42b 13/32

U.S. Cl. 244-3.28

7 Claims



Some missiles have movable control surfaces for missile guidance in flight, but the storage and in some cases firing of such missile requires that the control surfaces be out of the way. The control surfaces of the present invention are each mounted on a main ball with the main ball mounted in a ball socket interiorly of the missile skin. This ball mounting permits the control surfaces to lie within the confines of the missile skin and subsequently swing out for control of missile direction. Additionally, since the control surfaces are ball mounted, they can swing about their longitudinal axis for control motion. This is accomplished by a crank arm mounted through the ball, which crank arm is connected to the control motor. The crank arm passes through a slot in the ball socket, which slot restrains the control surfaces when

chamber has communication with a vacuum output at one level and with a vacuum outlet at a different level. The vacuum output and outlet lead along opposite sides of the valve chamber and terminate into vertical nipples.

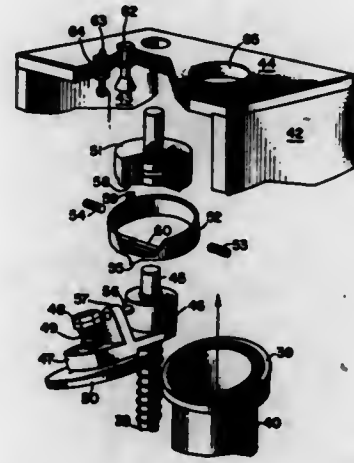
3,515,369

FAST ACTING VALVE

Igonis Abers, Exeter, N.H., assignor to Ion Physics Corporation, Burlington, Mass., a corporation of Delaware
Filed Nov. 24, 1967, Ser. No. 685,521
Int. Cl. F16k 31/44

U.S. Cl. 251—75

5 Claims



The described apparatus is an automatic fast acting valve, for use in Flash X-ray Systems and particle accelerators, whose gate will, in following an accurate path, trigger an energetic beam pulse and then, within milliseconds after passage of the beam, seal the beam passageway so that the beam generation portion of the machine is closed off from the beam target. High closing speeds are necessary to prevent debris and gases, created by the beam impinging on the target, from entering the beam generation region.

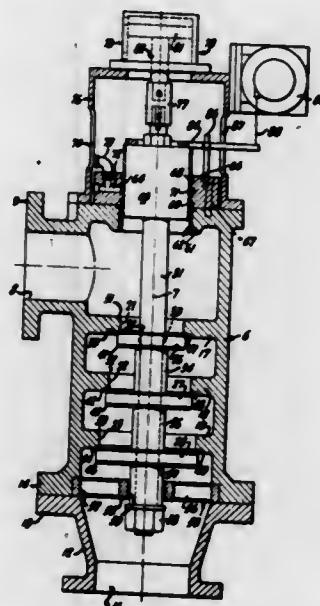
3,515,370

MULTISTAGE THROTTLE VALVE

Thomas C. Jester, Williamsport, and Ira Morgan White, Wallingford, Pa., and Harry L. Ung, South San Francisco, Calif., assignors to Baldwin-Lima-Hamilton Corporation, a corporation of Delaware
Filed May 1, 1967, Ser. No. 635,191
Int. Cl. F16k 5/10, 47/02

U.S. Cl. 251—120

2 Claims



A multistage throttling valve especially for hydraulic flow has a generally cylindrical housing with an inlet adjacent one end and an outlet at the other end. The interior

of the housing is spanned by several valve plates having coaxial apertures therethrough of progressively larger sizes toward the outlet. An operating rod passes through said apertures and carries valve discs thereon adapted to be moved toward and away from said valve plates by an actuator on said housing and engaging said rod. A balancing piston on said rod is reciprocable in said housing adjacent said inlet.

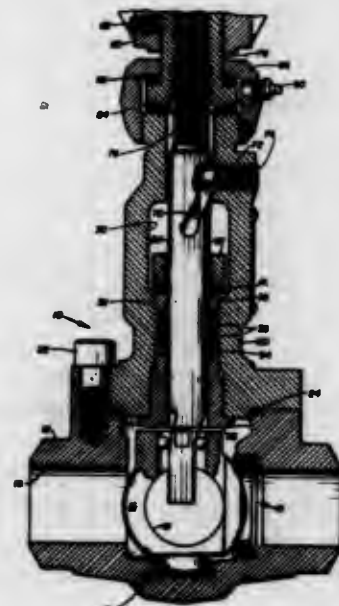
3,515,371

VALVE AND VALVE SEAT

Rudy W. King and Will Jones, Jr., Little Rock, Ark., assignors, by mesne assignments, to Orbit Valve Company, a corporation of Arkansas
Filed June 6, 1966, Ser. No. 555,451
Int. Cl. F16k 41/00

U.S. Cl. 251—214

7 Claims



A valve for controlling flow of fluid under extreme conditions of high temperature, pressure, or chemically active material, is provided with a metallic valve seat which utilizes a groove within which is a metallic, e.g. stainless steel tubing insert machined to follow the normal contour of the seat.

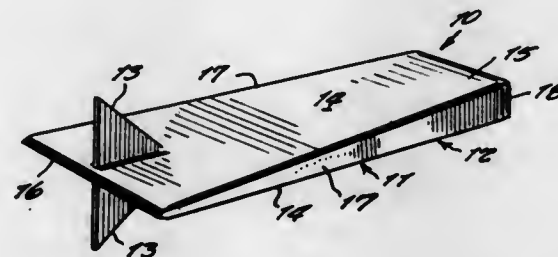
3,515,372

WINGED LOGGING WEDGE

Rudolph S. Courville, P.O. Box 54, Nepelem, Wash. 99155
Filed May 9, 1968, Ser. No. 823,386
Int. Cl. B27g 19/08

U.S. Cl. 254—104

1 Claim



A wedge for use in cutting up trees, the wedge comprising a conventional configured wedge member which furthermore includes a fin or wing on each opposite flat side of the wedge, each wing being relatively close to the wedge narrow end and each wing extending perpendicularly to the flat side of the wedge to which it is affixed.

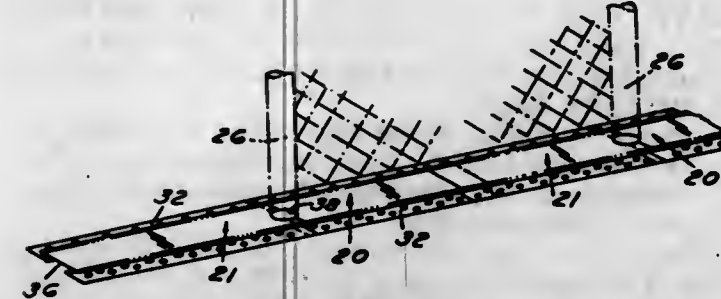
3,515,373

FENCE TRIM GUARD

Delores M. Abbe, 3620 State Road, Port Huron, Mich. 48060
Filed Feb. 19, 1969, Ser. No. 800,543
Int. Cl. E04h 17/14

U.S. Cl. 256—32

9 Claims



A fence trim guard including a pair of axially aligned telescopically interlocking guard members adapted to overlie the ground beneath the fence, between the fence posts. Each guard member includes an imperforate longitudinal channel portion which overlies the ground and prevents the growth of vegetation therebeneath, and opposed outwardly extending perforated lateral flange portions which are received beneath the ground to anchor the channel portion in position.

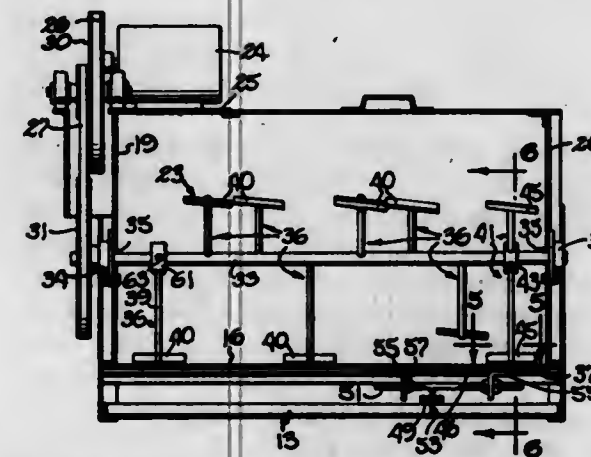
3,515,374

COMBINED MATERIAL MIXER AND DISTRIBUTOR

Delbert V. Curley, Box 208, Fulton, Ill. 61252
Filed Aug. 6, 1968, Ser. No. 750,566
Int. Cl. B01f 7/04

U.S. Cl. 259—46

4 Claims



A rotatable auger is located in a trough to mix and stir materials while advancing the materials toward a discharge opening located near one end of the trough. Mounted on and rotatable with the auger is a series of clearing paddles positioned to sweep directly across the discharge opening to prevent the latter from becoming clogged with the material and to force the material through the opening at a relatively uniform rate. A gate valve slidable on the bottom of the trough beneath the opening may be adjusted to uncover different selected areas of the opening thereby to enable changing of the rate of material flow through the opening.

3,515,375

AERATION APPARATUS

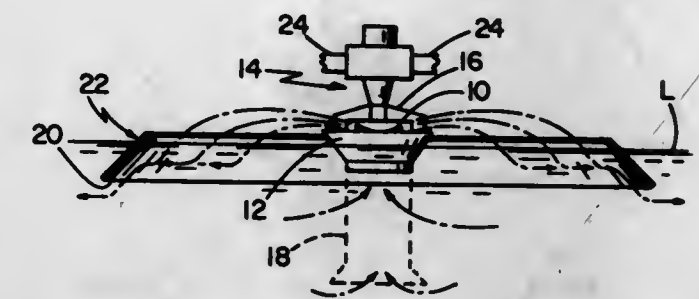
John Treymann Roos, Westwood, Mass., assignor to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts
Filed May 22, 1968, Ser. No. 731,071
Int. Cl. B01f 3/04, 5/10

U.S. Cl. 259—95

13 Claims

The effectiveness of mechanical surface aerators is increased by providing baffle means presenting to at least

a major part of the outward flow of the air bubble-liquid mixture produced by the aerator a flow redirecting surface extending downwardly into the body of liquid and generally inclined outwardly in spaced relation to the bottom of such body. Such surface is located at a distance from the aerator, preferably beyond the limit of its throw,



where the flow velocity of the mixture is sufficient to cause it to flow downwardly along and outwardly beyond the surface, such flow velocity being preferably at least about 1 foot per second so that the majority of the air bubbles are retained.

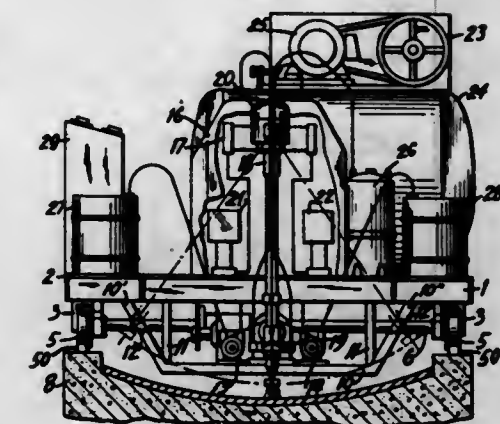
3,515,376

MACHINE FOR COATING PLATE OR SHELL-SHAPED BUILDING ELEMENTS

Joachim Rahman, Isernhagen, Germany, assignor to Kunststoff-Verfahrenstechnik Isernhagen HB GmbH & Co. KG, Isernhagen HB, Germany
Filed Sept. 26, 1968, Ser. No. 762,740
Claims priority, application Germany, Sept. 30, 1967, 1,652,352
Int. Cl. B28c 5/00

U.S. Cl. 259—153

8 Claims



A machine for coating plate or shell-shaped building elements with a material such as cement mortar or foamed plastics comprises a platform which is suspended on four wheels, preferably for movement over a trackway and which includes a suspended partial platform which carries the driving motor for driving the wheels. The apparatus includes a housing carried on the platform from which a swing arm is suspended. The swing arm is provided with a mixing head which is arranged to discharge the material to be applied downwardly as the vehicle is moved along the surface to be coated. The platform also carries pressure transmitter pumps for controlling the movement of the swing arm and a compressor for directing the materials such as plastic foaming materials outwardly through the mixing head.

3,515,377

SEWAGE DISPOSAL SYSTEM

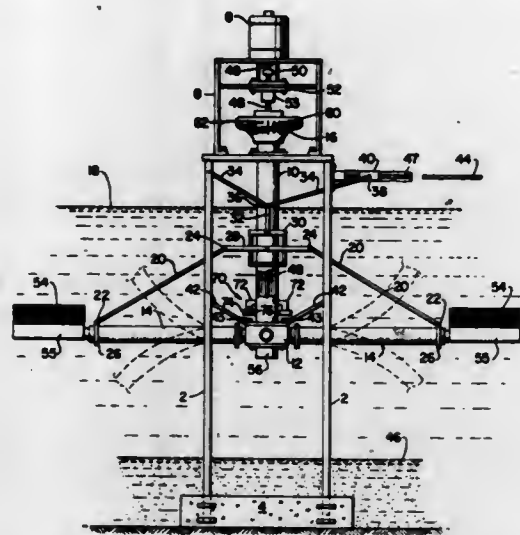
Bartow Ray, McLean, Va., assignor to Future Products Development Corporation, McLean, Va., a corporation of Virginia

Filed Dec. 18, 1968, Ser. No. 784,710

Int. Cl. C02b 1/34

U.S. Cl. 261—36

7 Claims



A combined aeration and evaporation unit comprising a vertical pipe having at its upper end a rotatable head containing slinger vanes and outlets and a series of flexible intake legs and a pump impeller at its lower end. The pipe is supported by a frame secured to the bottom of a reservoir and a motor is supplied to drive the upper head and lower impeller by means of a common shaft extending through said pipe, thereby drawing water into the pipe through the flexible intake legs, up through the pipe, into the rotatable head and out of said head through a series of aligned outlets.

3,515,378

GRAVITY-IMPACT SYSTEM FOR WATER DISTRIBUTION IN HUMIDIFIERS

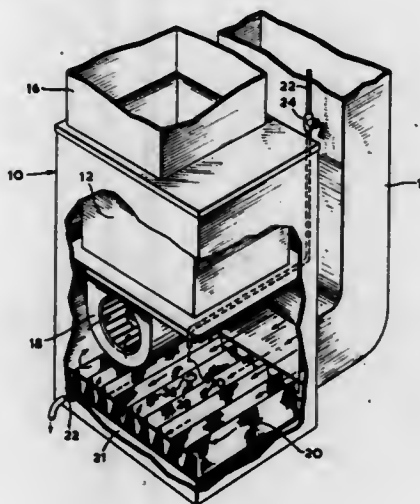
Harold Gordon Hill, 530 Lacroix St., Chatham, Ontario, Canada

Continuation-in-part of application Ser. No. 443,413, Mar. 29, 1965. This application Feb. 26, 1968, Ser. No. 708,116

Int. Cl. F24f 3/14

U.S. Cl. 261—106

5 Claims



The application discloses a humidifier for attachment to a warm air furnace in which water from a supply is formed into drops which strike an underlying target device and are thereby dispersed over a water absorbing pad. The pad is located in the air path of air that is to be conditioned with moisture and it is adapted to give up moisture to the air which passes through it. An orificed

plate is used to form the water into large drops prior to being directed on to the drop dispersing target. The pad then is moistened by the dispersed water drops and it in turn gives up its moisture to air that is directed there-through.

3,515,379

VALVE AND VALVE CONTROL FOR PREVENTING PASSAGE OF PROCESSED MATERIAL TO BLOWER FOR PYROMETER SIGHT PASSAGE ON A ROTARY KILN

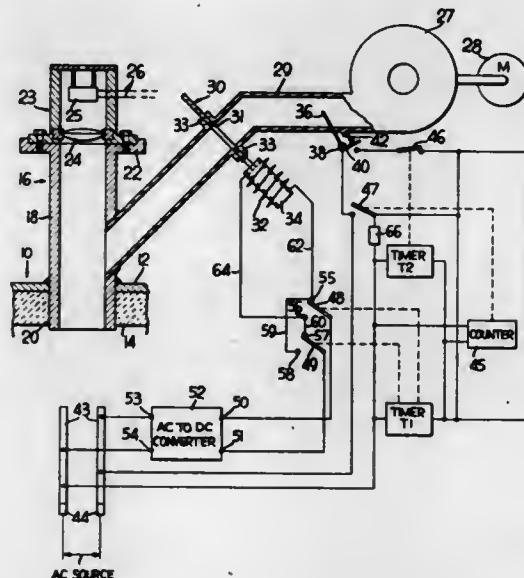
Anthony V. Baron, South Milwaukee, and Hugh S. Drewry and John N. Lees, Jr., Wauwatosa, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Continuation of application Ser. No. 700,410, Jan. 25, 1968. This application June 11, 1969, Ser. No. 845,594

Int. Cl. F27b 7/00

U.S. Cl. 263—33

16 Claims



A combined pyrometer and sight passage or tube for a rotary kiln or the like including a blower for supplying forced air to the sight tube and a valve member, which may be in the form of a sliding vane or the like actuated by an electromechanical operator, interposed in the duct connecting the blower to the sight tube, or in the sight tube. The valve member is moved to closed position in response to detection of a predetermined diminished air flow from the blower. Suitable timing devices are provided to open the valve a predetermined interval of time after the closing of the valve to determine whether the blockage in the air path has been removed. A counting device is provided to count the number of closures of the valve in response to the diminished air flow condition and after a predetermined count has been reached, to actuate the valve to a closed position until the condition has been corrected and the counter has been reset.

3,515,380

RADIANT-TUBE FURNACE

Lazaros J. Lazaridis, Lincoln, Mass., assignor to Thermo Electron Corporation, Waltham, Mass., a corporation of Delaware

Filed Aug. 1, 1968, Ser. No. 749,379

Int. Cl. F27b 5/14

U.S. Cl. 263—42

7 Claims

A radiant-tube industrial furnace for heat-processing work or materials at high temperatures. Work-pieces, for example, steel billets to be forged, may be conveyed through the furnace in which aligned pairs of radiant tubes or aligned radiant tube arches are arranged in longitudinal sequence. The tubes are preferably made of silicon carbide and heated to radiance by burners of a fuel-mix such as gas and air. The workpieces move along the

3,515,382

COMPRESSION SPRING

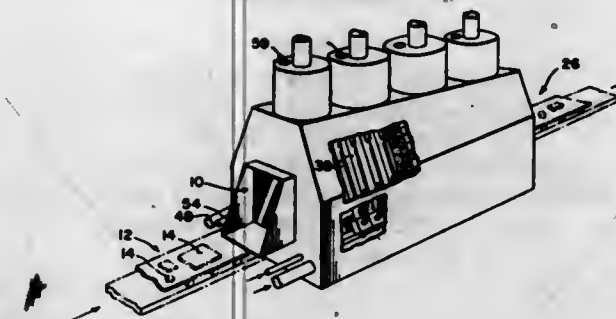
Richard J. Gallagher, 2030 Lehigh Ave., Glenview, Ill. 60025

Filed Aug. 30, 1968, Ser. No. 756,448

Int. Cl. F16f 1/40

U.S. Cl. 267—1

10 Claims



the flue gases from the work being processed permitting the use, where desired, of a protective atmosphere about the work. The pairs of tubes may be connected to a recuperator to preheat all or part of the incoming combustion air for the fuel-mix for the burners. Similarly, the radiant tube arches may be connected in series with recuperation preheating for each arch from the output of the preceding arch.

3,515,381

METHOD OF HEAT TREATMENT OF SLUDGES

Pierre Foch, Forbach, Moselle, France, assignor to Charbonnages de France, Paris, France, a public institution of France

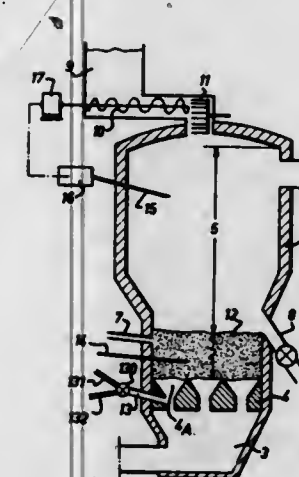
Filed June 14, 1966, Ser. No. 557,414

Claims priority, application France, June 16, 1965, 21,089

Int. Cl. C04b 1/00

U.S. Cl. 263—53

4 Claims



A method and apparatus are provided for burning sludge by introducing the sludge in dispersed form from the top of the combustion chamber into a fluidized layer of inert particles traversed by a constant quantity of oxidizing fluidizing agent. The temperature of the fluidized layer of inert particles is maintained at constant value to insure the combustion of the product to be treated and the temperature of the zone above the fluidized layer is maintained at a constant value less than the sintering temperature of the ash formed by regulating the speed of introduction of the dispersed sludge. A temperature controlling fluid is injected into the system over the whole section of the chamber immediately under the fluidized layer.



A compression spring of one or more solid, elastomeric toroids having a hardness of about 88-97 on the Shore A scale. The elastomeric toroid has a substantially circular cross section so that favorable shape factors may be obtained, and such toroids are preferably cast of urethane.

3,515,383

DOCUMENT FEEDING APPARATUS

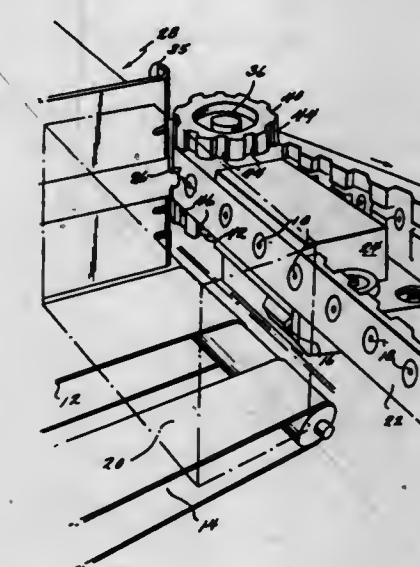
Robert M. Tyburski, Fairfax County, and Robert F. Springer, Prince William County, Va., assignors to Farrington Electronics, Inc., Springfield, Va., a corporation of Massachusetts

Filed Dec. 29, 1967, Ser. No. 694,683

Int. Cl. B65h 3/08, 5/08

U.S. Cl. 271—26

21 Claims



The document feeding apparatus includes a drive belt to which suction is applied to thereby attract at least one document from an input hopper. The belt is moved and the documents held to the belt are fed to a gap which permits the passage of the leading edges of typically three of the documents. To prevent a double feed of the documents, two retarding belts are positioned one after the other beyond the blade to accomplish a document separating function. The first document is fed from the drive belt into a high speed pickup device and thence into an appropriate output stack. Assuming that the edge of the

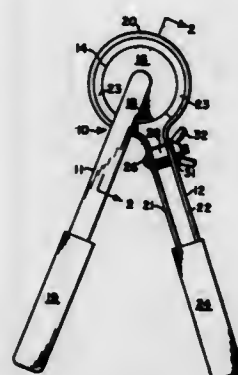
three documents which pass the gap are in alignment the outermost of the three documents or the third document encounters the first of the retarding belts, the direction of rotation of which is opposite from the direction of the main belt. Thus, this first retarding belt by friction prevents the third document from being passed through the system and maintains it in the document processing station. The second document encounters the second of the retarding belts, which is disposed slightly after the first retarding belt, the second belt also rotating in a direction opposite from the direction of rotation of the drive belt. Thus, this second belt prevents the middle of the three documents or the second document from passing through the system and also maintains it in the document processing station.

3,515,384 HAND OPERATED FRICTION TYPE EXERCISING DEVICE

David D. Alexander, 214 E. Hermosa Drive,
San Antonio, Tex. 78212
Filed July 23, 1968, Ser. No. 746,832
Int. Cl. A63b 21/22

U.S. Cl. 272-79

3 Claims

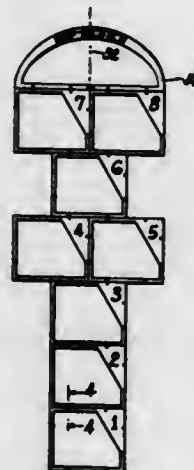


An exercising device having a pair of arms pivoted about the same axis wherein one of the arms has an adjustable friction ring which is used to vary the force necessary to move the arms with respect to each other by clamping the ring against the end surface of the other arm.

3,515,385
MODULAR HOPSCOTCH COURT
Arnold J. Gunderson, 3347 N. Avers Ave.,
Chicago, Ill. 60618
Filed Aug. 29, 1966, Ser. No. 575,670
Int. Cl. A63b 67/00; A63b 33/10

U.S. Cl. 273-1

4 Claims



An arrangement of modular elements, for example, of rectangular outline, each having a narrow border defining an open space, adapted to be assembled in co-planar, adjoining relation to provide a variety of playing fields for

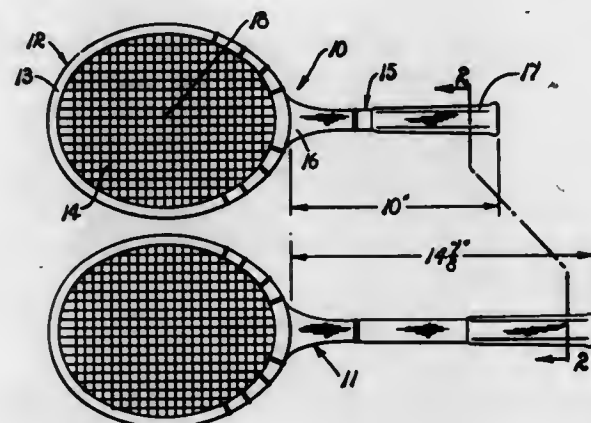
games in the nature of hopscotch. The elements are maintained in the selected array by clips engaged in or over adjacent sides of the elements. The borders of the element have openings spaced in such a way that the elements may be offset from each other and still be connected by clips. The relationship between openings is such that the first opening is set from the edge of the element a distance equal to one half the distance between a pair of openings.

3,515,386 TRAINING TENNIS RACKET

Ruth Elaine Mason, 535 E. Barstow Ave.,
Fresno, Calif. 93706
Filed Mar. 26, 1965, Ser. No. 443,136
The portion of the term of the patent subsequent to
Oct. 2, 1985, has been disclaimed
Int. Cl. A63b 49/00, 69/38

U.S. Cl. 273-73

5 Claims

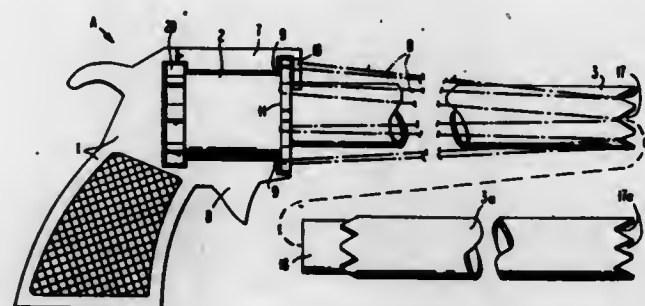


This invention discloses a tennis racket with a head portion similar to the head on rackets used in regulation play and with a handle portion similar to the handle portion on rackets used in regulation play except that the handle is substantially shorter and the hand grip is smaller in diameter.

3,515,387
TOY GUN FOR DISCHARGING ELASTIC BANDS
Lloyd D. House, R.D. 3, Montrose, Pa. 18801
Filed July 26, 1968, Ser. No. 747,962
Int. Cl. F63b 65/00

U.S. Cl. 273-101

5 Claims

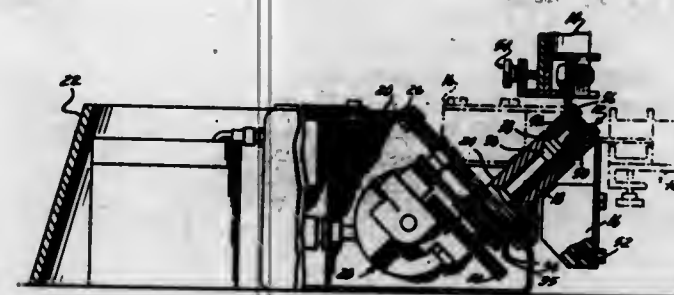


A toy revolver including a cylinder and barrel member rotatably carried by a pistol type grip. Elastic bands are stretched between circumferentially spaced projections on the cylinder and barrel sections. As the cylinder and barrel member is rotated, a projection on the pistol grip engages succeeding elastic bands, forcing them from the cylinder projections to cause them to be propelled forwardly from the barrel.

3,515,388
TARGET RAISING MECHANISM
August A. Zachmiller, Joppat, Md., assignor, by mesne
assignments, to the United States of America
Filed May 8, 1968, Ser. No. 727,539
Int. Cl. F137j 7/00

U.S. Cl. 273-105.6

6 Claims

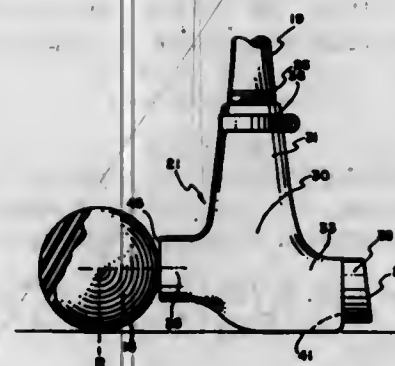


This invention is directed to an improved target raising mechanism for small arms targets, the mechanism being arranged to rotate the target and its counterweight simultaneously about a drive axis mounted 45° in relation to ground level and about the centroidal axes of the counterweight and target which are positioned 45° to the drive axis. In this arrangement for 180° rotation of the drive axis the target is continuously moved in omni-planal fashion from a horizontal lowered position to a vertical raised position.

3,515,389
GAME CLUB AND BALL OF BUTYL RUBBER
Norman B. Wolfe, Meade, Kans. 67864
Filed June 19, 1967, Ser. No. 647,130
Int. Cl. A63b 53/02, 53/06, 69/36

U.S. Cl. 273-193

3 Claims



A golf club head and ball, both of high energy absorbing butyl rubber, for playing miniature golf. The club head is connected to the club shaft by an integral stem which permits the head to flex relative to the stem section upon ball impact and thereby add to the energy absorbing characteristics of the butyl rubber. The club head includes a plurality of differently lofted striking faces, one of which is detachable.

3,515,390
DEVICE FOR REPRODUCING RECORDED
SOUNDS IN TOYS

John W. Ryan, Los Angeles, and Richard Shih-Teng Chang, Gardena, Calif., assignors to Mattel, Inc., Hawthorne, Calif., a corporation of California
Original application Nov. 17, 1966, Ser. No. 595,132.
Divided and this application May 21, 1968, Ser. No. 730,890

Int. Cl. G11b 25/06

U.S. Cl. 274-1

3 Claims

A constant tension spring motor arranged to advance, from one drum to another, a tape having a plurality of groove sound tracks, a needle and speaker reproduces the sound from one of the tracks when the tape advances in one direction but is free of the tape when it is returned

in the other direction. A drawstring is used to wind the motor and return the tape in the other direction and tension in the drawstring also acts to retract the tape from contact with the needle.



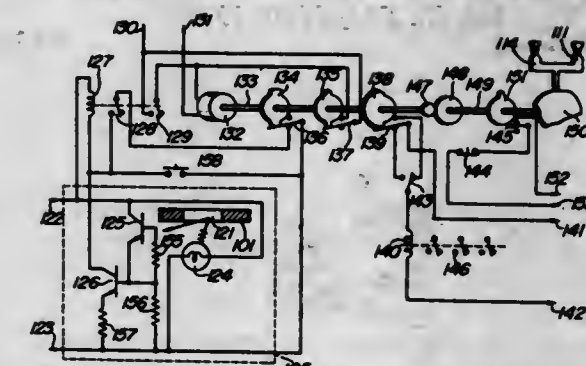
3,515,391
AUTOMATICALLY REVERSING MAGNETIC RE-
CORDING AND REPRODUCING SYSTEM
Takahiro Nakamura, Hirakawa-shi, Yoshio Yabuno, Toyonaka-shi, Akioyoshi Kameda, Moriguchi-shi, and Shozo Aratani, Suita-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Kadoma-shi, Osaka, Japan, a corporation of Japan

Filed Nov. 15, 1965, Ser. No. 507,895
Claims priority, application Japan, Nov. 19, 1964
(utility model), 39/90,480; Nov. 28, 1964 (utility
model), 39/90,496

Int. Cl. G11b 5/02

U.S. Cl. 274-4

7 Claims



A magnetic recording and reproducing system including a plurality of record tracks on a magnetic tape in the direction of its travel, which comprises detecting a signal preliminarily provided on the tape, exciting a relay by said detected signal, driving a motor by the operation of the relay, and changing the positional relation between said magnetic tape and a magnetic head by cam means arranged to be driven by said motor and control means adapted to interlock with said cam means to thereby effect the change of record tracks and the change of the directions of travel of the tape.

3,515,392
ADAPTER FOR EP RECORDS OF AN
AUTOMATIC CHANGER
Katsumasa Kitahara, Nara-ken, Japan, assignor to Matsushita Electric Industrial Co., Ltd., Kadoma-shi, Osaka, Japan, a corporation of Japan

Filed May 28, 1968, Ser. No. 732,605
Claims priority, application Japan, June 2, 1967,
42/47,403

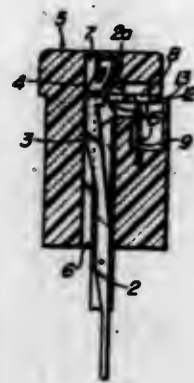
Int. Cl. G11b 17/04

U.S. Cl. 274-10

4 Claims

Here is disclosed an adapter for EP or 45 r.p.m. records to be applied to a spindle of an automatic changer

for LP records comprising a body shaped like a piece of a flat plate having an offset portion defining a shoulder for EP or 45 r.p.m. records, said body being provided with a central bore by which the adapter is mounted onto said spindle and including an actuator member which



is movable in a transverse direction so that it drives an EP or 45 r.p.m. record out of said shoulder when a trigger arm for driving LP records of said spindle is actuated and is retreated to its inoperative position by a resilient means when the trigger arm is not actuated.

3,515,393 FACE SEALS

Kenneth Metcalfe, Nelson, England, assignor to Pioneer Oilsealing & Moulding Company Limited, Yorkshire, England, a British company

Filed Oct. 10, 1967, Ser. No. 674,254
Claims priority, application Great Britain, Oct. 11, 1966, 45,281/66; June 23, 1967, 28,967/67
Int. Cl. F16j 9/00, 15/40

U.S. Cl. 277-42

3 Claims



The invention concerns a safe seal assembly for maintaining a sealed rotary boundary between contiguous compartments containing different fluids. The assembly has an annular seal for seating in a recess of a housing containing the fluid compartments, a carrier member extending axially from the annular seal and a face seal supported by the carrier member and engageable with a rotary component of the housing, and the invention is particularly directed to the provision in the face seal, of opposed axial faces which in use are simultaneously exposed to the same fluid pressure in one of said compartments in order to impart a pressure-balanced characteristic to the assembly.

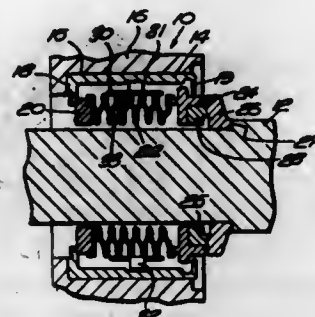
3,515,394 VIBRATION DAMPING MEANS FOR RESILIENT CONVOLUTED MEMBERS

Justus Bickford Stevens, East Providence, R.I., assignor to Sealol, Inc., Warwick, R.I., a corporation of Delaware

Filed June 5, 1964, Ser. No. 373,028
Int. Cl. F16j 15/30, 15/54

U.S. Cl. 277-88

4 Claims



1. A vibration damping means for a resilient convoluted member used with a fluid seal, said fluid seal comprising a shaft, a hub member, provided with a sealing face, fastened to said shaft, an annular retainer provided with a sealing ring, a housing provided with a flange and a plurality of circumferentially spaced grooves, said resilient convoluted member interposed between said flange and said annular retainer to urge said sealing ring into engagement with said sealing face to form a fluid tight seal, and a vibration damping means comprising a plurality of body members one for each of said plurality of grooves, each body member having a prong engaging said resilient convoluted member to damp vibration occurring in said resilient convoluted member by transferring vibrations from the bellows to the housing while permitting free axial movement of said resilient convoluted member.

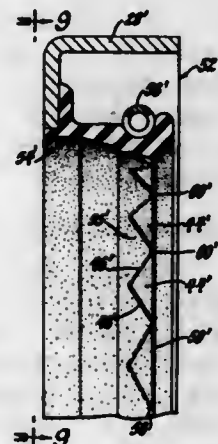
3,515,395 UNIDIRECTIONAL PUMPING SEAL

Louis H. Weinand, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 6, 1966, Ser. No. 577,236
Int. Cl. F16j 15/32, 15/54

U.S. Cl. 277-134

8 Claims



A seal incorporates hydrodynamic grooves which are effective to seal a shaft independently of the direction of shaft rotation to thereby prevent the leakage of fluid from a fluid reservoir. The grooves are defined by inclined walled surfaces converging away from the fluid reservoir. The walled surfaces function as miniature hydrodynamic

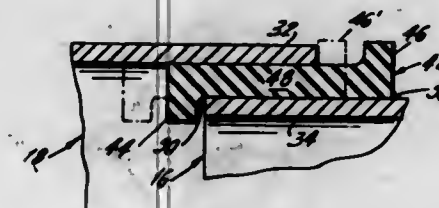
pumps to return the fluid to the fluid reservoir. One walled surface of the groove is effective as a pump for one direction of shaft rotation while the other walled surface is effective as a pump for shaft rotation in the opposite direction.

3,515,396 GASKET FOR INTERFITTING CONDUIT SECTIONS OF AN ISOLATED PHASE BUS SYSTEM

Wayne H. MacVaugh, Haddonfield, N.J., assignor, by means assignments, to I-T-E Imperial Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Aug. 17, 1967, Ser. No. 661,320
Int. Cl. F16j 15/02

U.S. Cl. 277-177

4 Claims



A gasket for sealing the annular space defined between interfitting conduit sections of an isolated phase busbar system, which gasket includes a pair of oppositely directed shoulder portions each in blocking relationship with respect to one end of each of the interfitting conduit sections such that the gasket is prevented from becoming unseated.

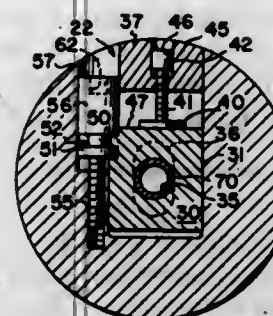
3,515,397 ECCENTRIC CHUCK

Kenneth Richard Tucker, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed May 22, 1968, Ser. No. 731,079
Int. Cl. B23b 5/22, 31/36

U.S. Cl. 279-6

2 Claims



An eccentric chuck having a slotted chuck body with a movable block for holding workpieces of any length, the block disposed in the slot and operable to move in the slot but designed to remain confined within and in contact with the slot at all times. An adjustable locking block firmly bears upon the movable block to prevent it from moving and a micrometer adjusting screw operates upon the movable block to impart movement to the block in order to change the eccentricity setting of the chuck.

3,515,398 GAUGE HOLDER

Elliott P. Thompson, Whittier, Calif.
(P.O. Box 204, Mammoth Lakes, Calif. 93546)

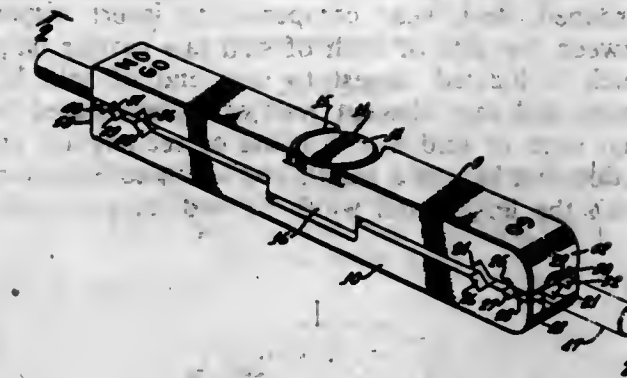
Filed Feb. 7, 1968, Ser. No. 703,684
Int. Cl. B25b 3/00, 5/10

U.S. Cl. 279-14

5 Claims

A gauge holder that includes a duality of opposed elongated members having longitudinal recesses at their

outer ends providing jaws, and transversely extending recesses inwardly of their outer ends providing additional



jaws, and an adjustable fastener for holding the members together for gripping gauges.

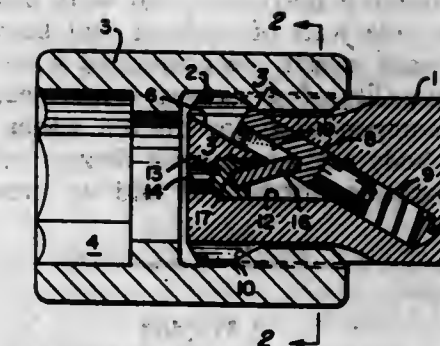
3,515,399 TOOL SOCKET RETAINER

Albert G. Wordsworth, Sayre, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Sept. 5, 1968, Ser. No. 757,661
Int. Cl. B25g 3/12

U.S. Cl. 279-93

3 Claims



A retainer mechanism for a tool spindle including a forwardly inclined sliding lock pin adapted to be depressed rearwardly by a lock releasing member sliding in an axial bore intersecting the inclined lock pin bore. The lock releasing elements are assembled in the axial bore by being first inserted through the inclined lock pin bore.

3,515,400 WEAR COMPENSATED LATHE CHUCK

Edward J. Jendry, Newington, Conn.
(Quiet Entry Farm, Keene, Va. 22946)

Filed Aug. 25, 1966, Ser. No. 575,029
Int. Cl. B23b 31/16

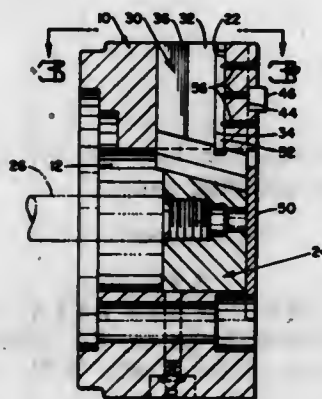
U.S. Cl. 279-121

2 Claims

1. A chuck comprising:
chuck body means having a center bore and a plurality of apertures extending radially outward from said center bore, each of said apertures being of substantially rectangular cross-sectional shape and communicating at one end with an end of said body means, each of said apertures having a pair of oppositely disposed keyways extending laterally of the opposite sides thereof;
a plurality of wedge operated jaw carriers, each of said carriers having a pair of flanges extending from opposite sides thereof, said jaw carriers having a cross-sectional shape commensurate with the shape of said body means radial apertures, said jaw carriers being disposed in respective apertures in said body means with said flanges disposed in said keyways;

operating means disposed in said center bore in said body means, said operating means engaging the inner end of said jaw carriers and imparting radial movement to said carriers;

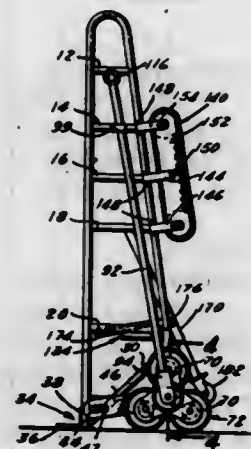
a hardened steel wear compensating insert disposed between the side of each of said jaw carrier flanges which is located closest to said end of said body means and the adjacent wall of its associated keyway, each of said inserts being of rectangular cross section and having a length and width commensurate with the length and width of said flanges; and



3,515,401
STAIR CLIMBING DOLLY
Eshcol S. Gross, 1110 N. Tyler,
El Monte, Calif. 91733
Filed Nov. 6, 1968, Ser. No. 773,921
Int. Cl. B62b 5/02

U.S. Cl. 280-5.26

9 Claims



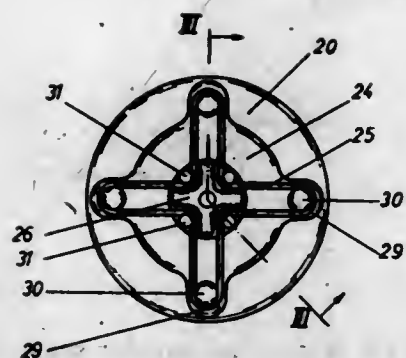
An apparatus for manually moving heavy objects up stairways. A group of wheels at each side are arranged about a common axis and are manually moved about said axis by levers successively from step to step of the stairway and one way clutch bearings permit forward rotation of the groups of wheels about said axis but prevent reverse rotation of said wheels. A tilting mechanism

facilitates loading of a piece of equipment on the apparatus.

3,515,402
SAFETY SKI BINDING
Stegfried Weiss, Farchant, Germany, assignor to Hannes Marker, Garmisch-Partenkirchen, Germany
Filed Mar. 11, 1968, Ser. No. 712,128
Claims priority, application Germany, Apr. 5, 1967, M 73,487
Int. Cl. A63c 9/081

U.S. Cl. 280-11.35

8 Claims

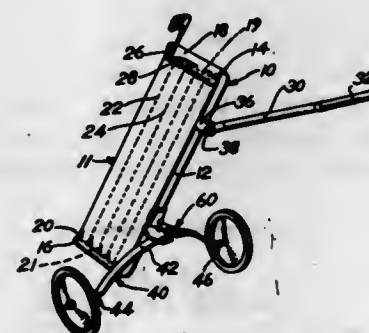


A safety ski binding comprises a toe holder and a heel holder for engaging the boot. One of said boot end holders is movable to a release position in response to an excessive twisting force which is transverse to the longitudinal direction of the ski. The binding comprises also a sole-bearing plate which extends parallel to the surface of the ski and is disposed close to that boot end holder which is responsive to twisting forces. The sole-bearing plate is movably held to the surface of the ski. The sole-bearing plate is held by at least one resilient retaining means with freedom of movement in its main plane, extending parallel to the surface of the ski. Said freedom of movement is sufficient to permit said sole-bearing plate to follow a movement of the sole of the boot relative to the ski until the boot is released by the respective boot end holder. The sole-bearing plate is provided on its side facing the surface of the ski with a recess for receiving the resilient retaining means and the latter are secured to the ski at a central point.

3,515,403
GOLF CART
Frederick W. Kinderman, Glen Ellyn, Ill.
(10753 Saratoga Circle, San City, Ariz. 85351)
Filed Mar. 22, 1968, Ser. No. 715,209
Int. Cl. A63b 55/08

U.S. Cl. 280-47.19

3 Claims

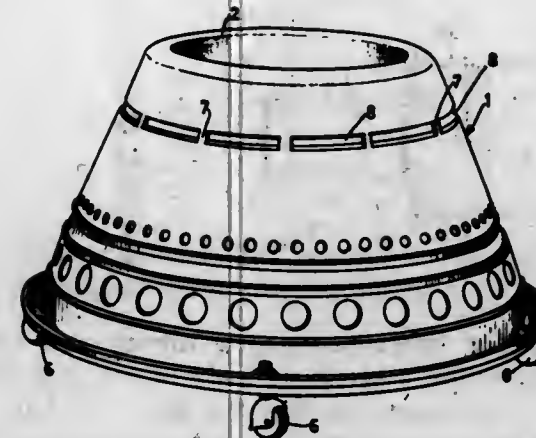


The golf cart comprises a U-shaped frame for carrying golf clubs mounted on a downwardly concave, elastic axle, the two being assembled to each other by a single removable bolt.

3,515,404
GOCART FOR CHILDREN
Giuseppe Perago, Arcore, Milan, Italy
7,797/67
Claims priority, application Italy, Feb. 4, 1967, Int. Cl. B62b 7/00

U.S. Cl. 280-87.2

2 Claims

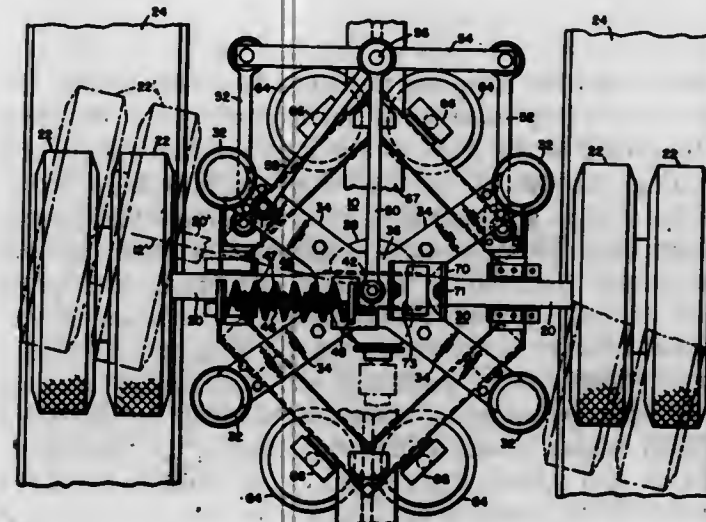


Gocart for children essentially made up from a plastic single piece hollow laminar body, the upper edge of which is folded back towards the inside and downwardly terminating in a seat and mounted on freely turnable and orientable wheels.

3,515,405
AXLE SUSPENSION SYSTEM FOR TRANSIT VEHICLES
William R. Segar, Monroeville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 2, 1968, Ser. No. 702,632
Int. Cl. B60g 9/02

U.S. Cl. 280-113

7 Claims



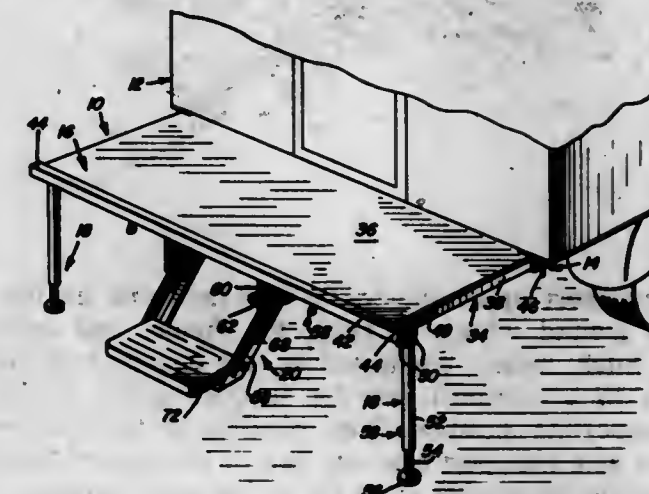
The invention comprises a suspension system for a transit vehicle having an underframe and a structure for housing an axle and a differential mechanism. Upper and lower arms of a spring support bracket are rotationally fastened to the top and bottom portions respectively of the differential housing. Spring means are vertically disposed between the vehicle underframe and the support bracket, and horizontally disposed spring means are supported between a center portion of the support bracket and a portion of the vehicle underframe laterally removed from the center portion. Radius arms are employed to mechanically connect and transmit tractive forces from

the axle housing structure to the vehicle in a manner allowing relative movement of the axle with the support bracket about a vertical axis extending through the differential mechanism.

3,515,406
SLIDING RETRACTABLE PORCH FOR CAMPER BODIES
William L. Endley, Jr., 1309 Planz Road,
Bakersfield, Calif. 93304
Filed Oct. 7, 1968, Ser. No. 765,355
Int. Cl. B60r 3/02

U.S. Cl. 280-166

1 Claim

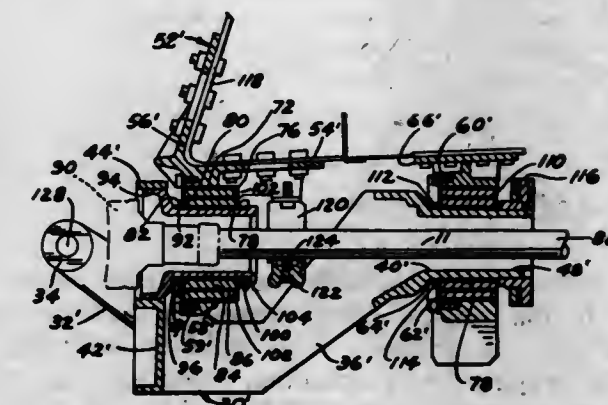


A porch device for use with camper bodies of the type normally mounted on pick-up trucks. The planar surface of the porch is mounted for sliding engagement under the rear portion of the camper body to slide thereunder in a position of non-use.

3,515,407
TORSILASTIC MOUNTED ARTICULATION JOINT
Robert E. Zimmerman, Berkley, Mich., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 9, 1967, Ser. No. 683,432
Int. Cl. G06d 1/08

U.S. Cl. 280-400

7 Claims



A bearing assembly which has concentric sleeves between which a flexible bushing means is secured. The radially innermost sleeve is secured to a coupling which connects forward and rear vehicle bodies. The coupling has a yoke member which is rotatably mounted on the forward vehicle body. The radially outermost sleeve is connected to and supports the rear vehicle body, either directly or indirectly through support mounts. The bearing assembly permits limited rotation of the rear body about its longitudinal axis relative to rotation of the forward body without any rubbing surfaces being subject to wear.

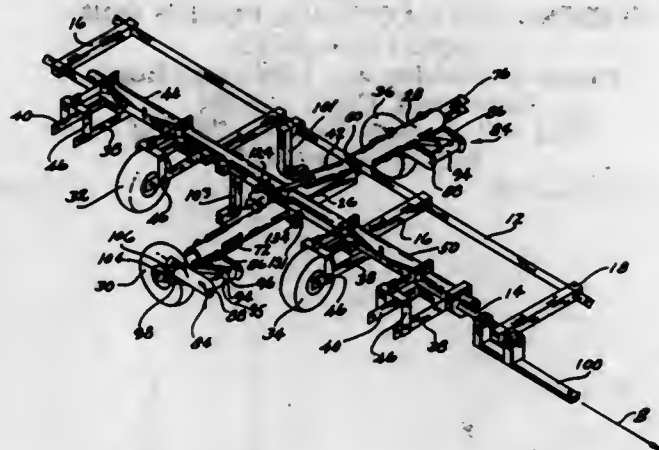
3,515,408

TRANSPORT AXLE ASSEMBLY

Wesley J. Cagle, Huntsville, Ala., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Apr. 1, 1968, Ser. No. 717,820
Int. Cl. B62d 53/00

U.S. Cl. 280-415

8 Claims



A transport apparatus for a wide machine having a frame, ground wheels carrying the frame, and operational hitch means connected to the frame and convertible to a transport axle for supporting the machine in transporting position. The hitch is slidably moved to serve as a transport axle and two of the ground wheels are quickly detachable from the frame and connected to the axle. Lifting means are connected between the transport wheels and the frame for elevating the latter.

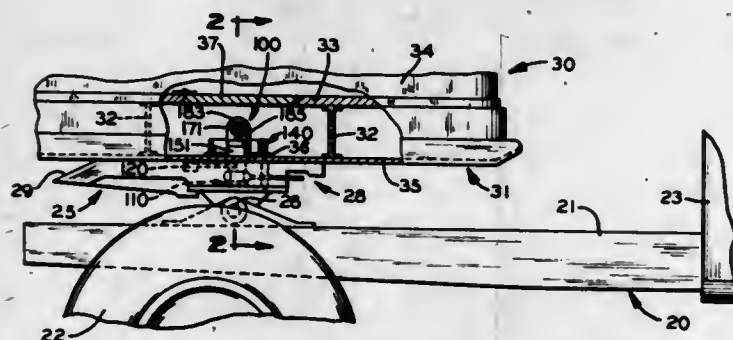
3,515,409

STABILIZING DEVICE FOR ARTICULATED VEHICLES

Eugene W. Hines, Saline, Mich., and Norman F. Lapine, Sr., Toledo, Ohio, assignors to The Mather Company, Sylvania, Ohio, a corporation of Ohio
Filed Oct. 2, 1967, Ser. No. 672,271
Int. Cl. B62d 53/08

U.S. Cl. 280-432

23 Claims



An automatically variable fluid damping device connected to the vertical pivot connection between articulated vehicles to improve road stability including suppressing swaying and jackknifing, comprising an arm on the pivot connected to one of the vehicles to rotate the pivot with that vehicle as the vehicles articulate, and a crank or cam means also attached to the pivot which variably reciprocates a piston in an annular chamber fixed to the other vehicle, which chamber is filled with a damping fluid for variably restricting the rotation of the pivot with respect to the other vehicle. Between opposite sides of the piston head in the chamber is a passageway or duct means with a rigidly adjustably restricting continuously open orifice for controlling the rate of flow of fluid from one side of the piston head to the other. This adjustably restricted duct means may be connected to a signalling means and/or to a hydraulically operated brake means for further restricting the relative articulated motion between the vehicles.

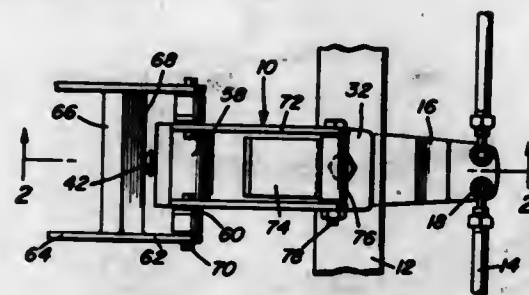
3,515,410

TOW BAR WITH SHEAR MOUNT

James Leon Conner, Silver Spring, Md., assignor to Gichner Mobile Systems, Inc., a corporation of Maryland
Filed Apr. 16, 1968, Ser. No. 721,815
Int. Cl. B62d 13/04

U.S. Cl. 280-445

8 Claims



A tow bar for interconnecting a towing and towed vehicle incorporating a block or body of resilient material disposed in a manner so that the shear resistance of such a block serves to transmit the forces between the vehicles.

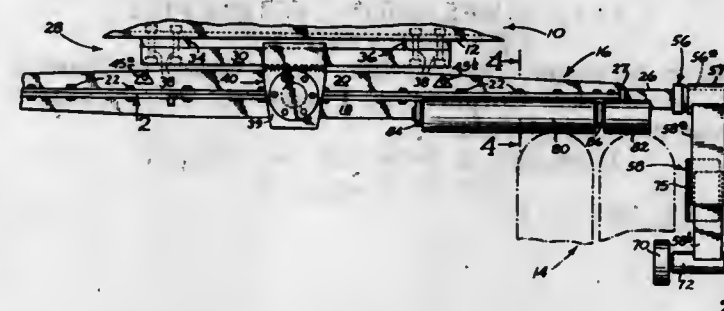
3,515,411

MECHANISM FOR COUPLING A VEHICLE TO A UNIT LEADING THE VEHICLE

Jack D. Layton, 4725 Turner Road, Salem, Oreg. 97302
Filed Dec. 21, 1967, Ser. No. 692,551
Int. Cl. B60d 3/00

U.S. Cl. 280-460

9 Claims



Mechanism for coupling a vehicle to a unit leading the vehicle including elongated, horizontal guide structure fixedly joined to the front of the frame of the vehicle and extending transversely of the vehicle, a movable bracket mounted on the guide structure for movement therealong, an elongated beam assembly disposed in front of and substantially paralleling the guide structure, and pivot means pivotally joining a midregion of the beam assembly and bracket accommodating pivoting of the beam assembly relative to the bracket about an upright axis. A pair of opposed coupling arms are mounted on the beam assembly which attach to the unit leading the vehicle by engaging rear wheels in such unit. The coupling arms are contractible by remotely-controlled power-operated means located in such arms to bring the vehicle and the unit leading the vehicle snugly together.

3,515,412

THREE-POINT HITCH

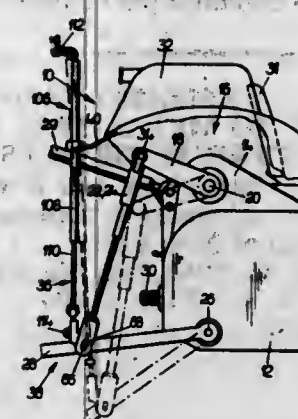
Ludwig Muncke, Morlenbach, and Josef Buchmüller and Otto Hartleb, Mannheim, Germany, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 5, 1968, Ser. No. 710,483
Claims priority, application Germany, Mar. 9, 1967, D 52,485
Int. Cl. B60d 1/00

U.S. Cl. 280-461

9 Claims

A variable length lift link for a three-point hitch and adjusting means therefor which can be manipulated from

the operator's station even though a portion of the tractor structure, for example, the fuel tank, is located behind



the operator's station in a position overlying the lift arms and lift links of the three-point hitch.

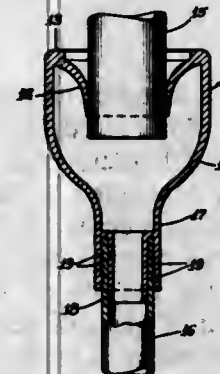
3,515,413

HOSE ATTACHMENT

Glenn L. Beall, Gurnee, Ill., assignor to The Faucet-Queens Inc., Chicago, Ill., a corporation of Delaware
Filed Nov. 20, 1968, Ser. No. 777,350
Int. Cl. F16l 21/08

U.S. Cl. 285-8

1 Claim



Attachment adapted to be removably mounted on an end of a hose comprising a hollow body of plastic with a tubular neck having inner annular ribs spaced from each other longitudinally of the neck and a resilient inner annular flange secured thereto at inner end, extending beyond neck and spaced inwardly from neck to define therewith an annular space for readily removably receiving an end of the hose, whereby fluid in or passing through the mounted attachment will exert radially outward pressure against interior of annular flange to clampingly engage hose to resist separation of hose and attachment.

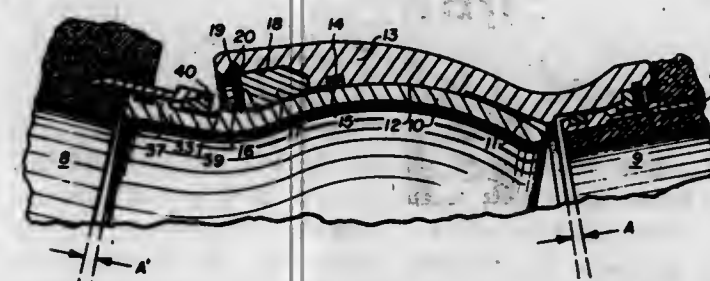
3,515,414

FLEXIBLE SECTIONAL PIPE LINES

Casimir K. Kowalewski, Lincoln Park, N.J., assignor to Interspace Corporation, Parsippany, N.J., a corporation of Delaware
Filed Dec. 16, 1968, Ser. No. 784,142
Int. Cl. F16l 27/12

U.S. Cl. 285-165

2 Claims



A hollow universal joint unit having a telescopic pipe coupling integral with the socket of the unit coupled to a complementary telescopic pipe coupling of a large

diameter pipe section, and a telescopic pipe coupling integral with the ball of the unit coupled to a complementary telescopic pipe coupling of another large diameter pipe section, each of said coupled pipe couplings allowing limited axial movements and deflections supplementing the greater deflection obtainable by the universal joint unit.

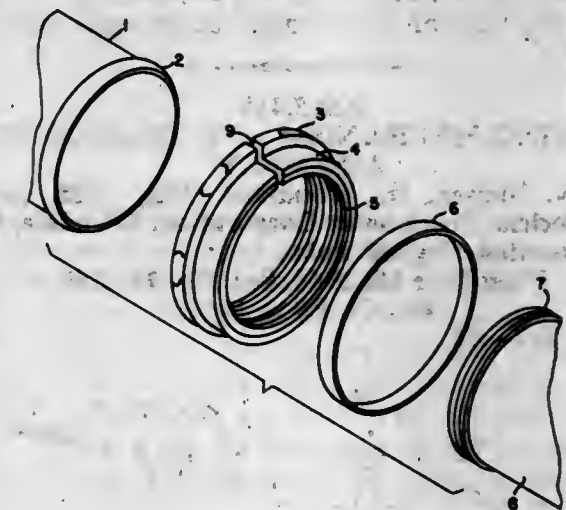
3,515,415

INTERSECTED JAMB NUT WITH COLLAR RETAINER

Clarence C. Clark, 1474 Coolidge St., San Diego, Calif. 92111, and George F. Hetzel, 13525 Scotts Way, Poway, Calif. 92064
Filed Sept. 12, 1968, Ser. No. 759,368
Int. Cl. F16l 17/00

U.S. Cl. 285-354

1 Claim



A resilient nut with an inner circumferential flange; a resilient ring portion integral therewith, all of which are disjoined, and a collar snugly circumscribing the ring portion which retains the disjoined portions as if they were joined.

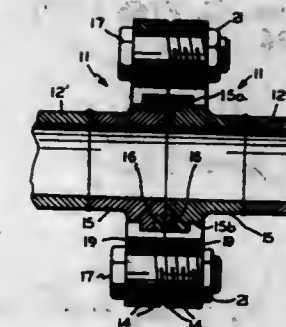
3,515,416

FLANGE TYPE SWIVEL FITTING

Lynn I. Pickert, Watertown, N.Y., assignor to General Signal Corporation, a corporation of New York
Filed Oct. 3, 1968, Ser. No. 764,752
Int. Cl. F16l 23/00

U.S. Cl. 285-413

2 Claims



A flange type swivel fitting characterized by a flange member composed of identical mating halves which are secured together by the assembly bolts used to attach the fitting to a mating fitting or to a body pad. The two halves define one boundary of the gasket-receiving space of the fitting, and the volume of this space is kept within tolerable limits by interfitting lugs and recesses which maintain the two halves in proper alignment.

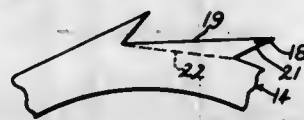
3,515,417

SELF-CENTERING BUSHING

John H. Bowman, Leeds, Ala., assignor to U.S. Industries, Inc., a corporation of Delaware
Filed Mar. 27, 1969, Ser. No. 811,170
Int. Cl. F16d 1/06

U.S. Cl. 287—52.04

1 Claim



A bushing preferably made of plastic material such as nylon which has an accurately dimensioned inner bore and which carries on its outer peripheral surface a plurality of deformable splines or the like. Due to the deformable nature of the splines a bushing so equipped may be inserted in a bore which is not accurately machined, thereby to receive an accurately machined spindle, rod or the like, thus eliminating the necessity of having to machine the bore of such rough hub or outer port.

3,515,418

LOCKING MECHANISM AND TELESCOPING ASSEMBLY

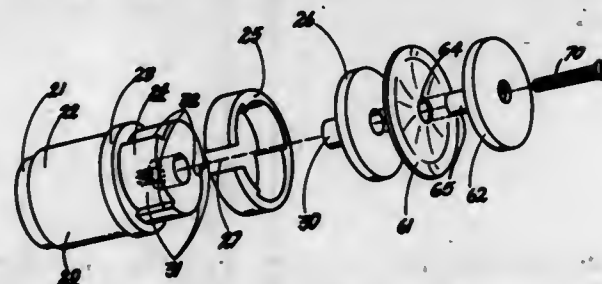
Robert N. Nielsen, Jr., Woodland Hills, Calif., assignor to American Nucleonics Corporation, Glendale, Calif., a corporation of California

Filed June 18, 1968, Ser. No. 737,949

Int. Cl. E04g 25/08

U.S. Cl. 287—58

4 Claims



An improved locking mechanism for telescoping tubular members is disclosed constituting in its completed form two parts, a body and a locking ring, which cooperate with the wall surfaces of the telescoping members to selectively lock and release the members by twisting in clockwise or counterclockwise directions.

3,515,419

CONTAINER FASTENER

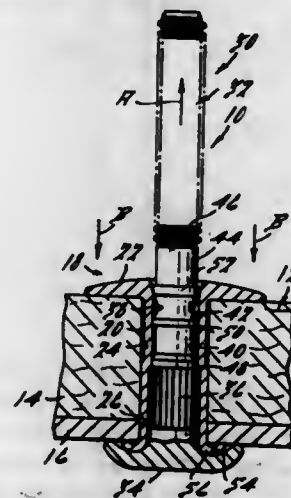
Charles W. Baugh, St. Clair Shores, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan

Filed July 1, 1968, Ser. No. 741,688

Int. Cl. F16b 19/08

U.S. Cl. 287—189.36

11 Claims



A two-piece fastener, including a pin and a sleeve, with the sleeve being set by engagement with the head of the

pin and with the pin being retained in the sleeve with a friction lock and further with the pin having a shallow breakneck groove to minimize pin bounce.

3,515,420

QUARTZ TO METAL SEAL FOR ELECTRICAL DEVICES

Gene I. Thomasson, Chesterland, and Edward V. Parillo, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York

Filed Sept. 26, 1968, Ser. No. 762,743

Int. Cl. F16b 11/00

U.S. Cl. 287—189.365

6 Claims



In a seal comprising a member of fused silica or quartz having a lead-in conductor sealed therein and including a thin foil portion of molybdenum and a refractory metal outer lead wire portion connected to the foil portion and extending through the silica member to the exterior thereof with a small longitudinal passage alongside and between the silica member and the portion of the outer lead wire enclosed thereby, a bead of glass of relatively low expansion and softening temperature is sealed around said outer lead wire portion and is completely embedded in the silica member to form a barrier which effectively prevents penetration of air through said passage to said foil which would otherwise result in oxidation of the foil at elevated temperatures.

3,515,421

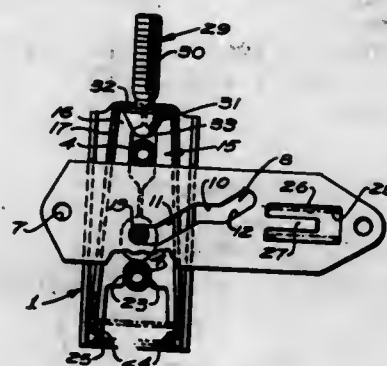
OPPOSED JAW LATCH

Lloyd Richard Poe, Beverly Hills, and James E. Brockway, Venice, Calif., assignors to Hartwell Corporation, Los Angeles, Calif., a corporation of California
Continuation-in-part of application Ser. No. 673,034, Oct. 5, 1967. This application Sept. 16, 1968, Ser. No. 762,306

Int. Cl. E05c 3/06

U.S. Cl. 292—49

12 Claims



A latch having opposed pivotally connected keeper jaws which are moved longitudinally in a housing between an extended open position to receive and release a latch pin; an intermediate position yieldable to pressure exerted by

the latch pin to receive and retain the latch pin, and a retracted position securing the latch pin; the keeper jaws being manipulated by a transversely extending operating member which may be joined to another operating member whereby two or more latches may be operated simultaneously to engage corresponding latch pins.

enclosure body. Hence, the enclosure is locked closed until the shaft is removed and the post then rotated to disconnect the cover from the body.

3,515,422

ARRANGEMENT IN OR RELATING TO VACUUM LIFTER

Einar Sjødin, Bergen, Norway, assignor to Munch International A/S, a corporation of Norway

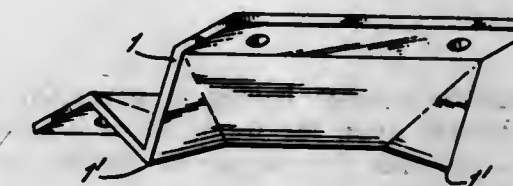
Filed Nov. 2, 1967, Ser. No. 680,871

Claims priority, application Norway, Apr. 18, 1967, 167,780

Int. Cl. B66c 1/02

U.S. Cl. 294—64

2 Claims



A vacuum lifting device wherein a suction cup rim sealingly engages a wrapped article to be lifted. An opening from the interior of the cup leads through a hose to a vacuum source. At the entrance to the hose is a cutting element which is hollow and has opposed V-shaped ends which cut into the article being lifted so that the wrapped article is pulled by the vacuum toward the opening where-as the points pierce the wrapping of the article to form channels from the interior of the article to the hose.

3,515,425

LINE DRAG

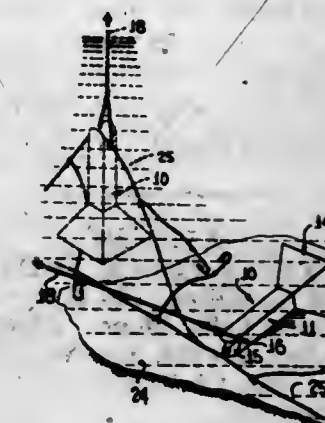
Carl B. Swilling, Etna, 2, Box 120, Madison, Ohio 43046

Filed Dec. 26, 1967, Ser. No. 693,385

Int. Cl. B66c 1/00

U.S. Cl. 294—66

5 Claims



This disclosure has to do with a line drag which is particularly constructed so as to suddenly pick up lines which lie on or close to the bottom of a body of water and at the same time will not become entangled in brush and other undesirable foreign matter which may be lying on the bottom. The line drag is constructed whereby the leading end thereof, which is provided with article engaging means, will always ride along the bottom. On the other hand, the line drag is of a construction wherein once the leading end thereof becomes engaged with an immovable object, such as brush, it will pivot end for end upon itself and become automatically disengaged from such foreign matter.

3,515,422

DOUBLE LEVER FLUSH LATCH

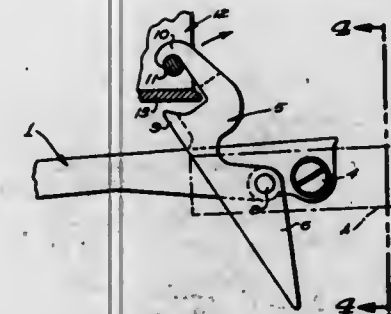
Lloyd Richard Poe, Los Angeles, Calif., assignor to Hartwell Corporation, Los Angeles, Calif., a corporation of California

Filed Mar. 26, 1968, Ser. No. 716,211

Int. Cl. E05c 19/14

U.S. Cl. 292—113

9 Claims



A latch particularly intended for cowl doors of high speed aircraft which, when latched, is disposed flush with the surrounding surface. The latch includes two tandem disposed and pivotally connected levers, one lever having a hook for engagement with a keeper and the other lever, which forms a handle, being provided at its extremity with an externally accessible secondary or trigger latch for securing the levers in a flush condition.

3,515,423

LOCKING DEVICE FOR ENCLOSURE FOR SWITCHES AND THE LIKE

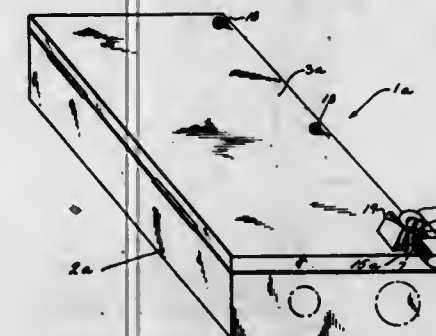
Woodrow A. De Smidt, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed May 9, 1968, Ser. No. 727,804

Int. Cl. B65d 45/30

U.S. Cl. 292—256.71

4 Claims



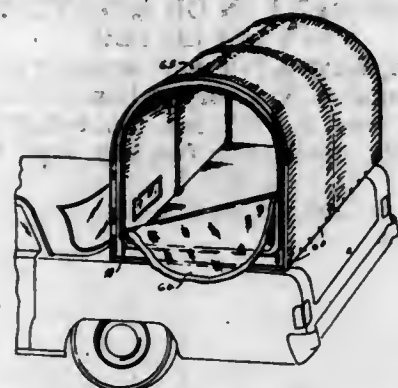
A locking device for enclosures for switches and the like. There is an enclosure body and a removable cover that fits over the body to enclose the interior, and a locking post is provided that has an exposed apertured head which is positioned alongside a surface of the cover. The post connects the cover with the body, so that the cover cannot be removed, and when a shaft, such as the shank of a padlock, is inserted in the apertured head of the post and shaft, so that the cover cannot be removed from the

3,515,426 CAMPER

Curtis E. Gerber, 4015 Bayshore Blvd.,
Tampa, Fla. 33611
Filed Feb. 2, 1968, Ser. No. 702,731
Int. Cl. B60p 3/34

U.S. Cl. 296-23

14 Claims



A collapsible camper having a structure which is mounted entirely upon the trunk lid of an automobile in such manner that the lid can be opened at all time for easy access to the trunk.

3,515,427 AUTOMOBILE GLARE SHIELD

John Van Sickle, Elma, N.Y.
(Billington Road, East Aurora, N.Y. 14052)
Filed Aug. 1, 1967, Ser. No. 657,550
Int. Cl. B60j 3/00

U.S. Cl. 296-97

16 Claims



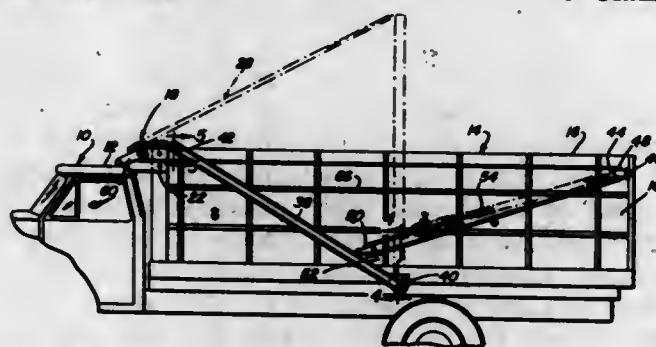
A clip device for attaching an automobile glare shield against an automobile sun visor, such clip device being so constructed that distraction from the images of the clip device as seen by each eye of the operator of the motor vehicle will be minimized. Also, a construction of the clip device to bring into view overhead traffic lights obscured by the sun visor. In addition, an improved construction of the edges of the body of the shield below the bottom edge of the sun visor eliminates distraction from the image of such edges.

3,515,428 RETRACTABLE TRUCK BODY COVER

Donald C. Killon, 100 Riverview C.,
Great Falls, Mont. 59401
Filed Apr. 6, 1966, Ser. No. 540,599
Int. Cl. B60p 7/04

U.S. Cl. 296-100

8 Claims



A generally horizontal load bed construction with an elongated flexible cover supported adjacent one end of the load bed for extension and retraction of one end of

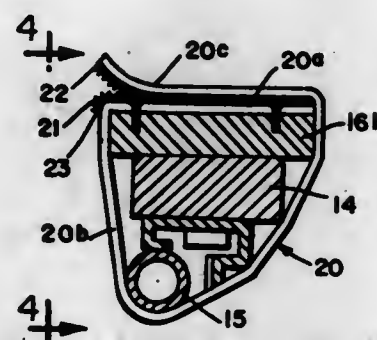
the cover toward and away from the other end of the load bed, the cover including drivable means operative to support and extend one end of the cover toward the other end of the load bed while maintaining the cover in a lengthwise tensioned condition and to elevate the extendible end of the cover relative to the load bed during its initial extension and to subsequently lower the extendible end of cover relative to the load bed during movement of the cover toward its fully extended position.

3,515,429 WHEELCHAIR TRAY ATTACHMENT

Howard N. Bollinger, Cincinnati, Ohio, assignor to
American Hospital Supply Corporation, Evanston,
Ill., a corporation of Illinois
Filed Oct. 9, 1968, Ser. No. 766,165
Int. Cl. A47b 39/00

U.S. Cl. 297-153

5 Claims



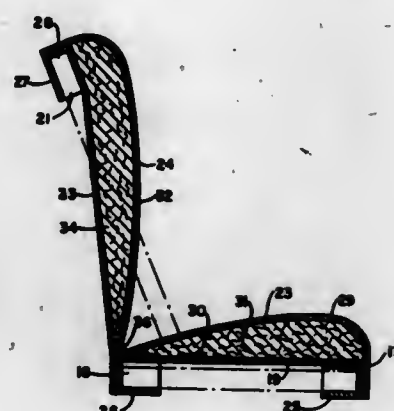
A tray attachment for invalid chairs. The tray may be easily and quickly attached to and detached from any of a wide variety of conventional invalid chairs or wheelchairs despite dimensional and configurational differences in such chairs.

3,515,430 CUSHIONED SLIPCOVER FOR CHAIRS

Charles F. Sporman, Peoria, Ill.
Filed Jan. 9, 1968, Ser. No. 696,533
Int. Cl. A47c 31/10

U.S. Cl. 297-218

8 Claims



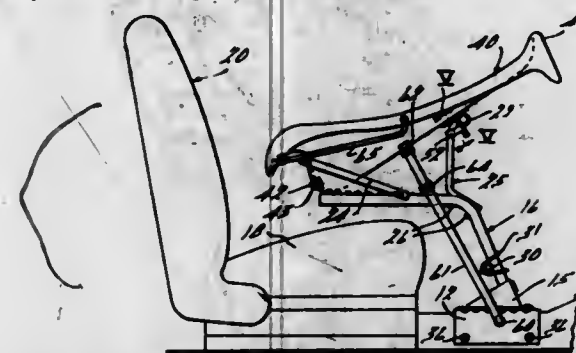
A cushioned slipcover for chairs having a back, seat, and seat support comprising a seat portion and a connected back portion. The seat portion is provided with front and rear pockets for engaging over the front and rear edges respectively of a chair seat and the back portion is provided with a top pocket for engaging over the top edge of a chair back. The seat and back portions enclose cushion material to cushion the seat and back of a normally uncushioned chair.

3,515,431 VEHICLE SEAT FOR CHILDREN

Maurice J. Grady, 1829 Sycamore,
Royal Oak, Mich. 48073
Filed Apr. 29, 1968, Ser. No. 724,739
Int. Cl. B60n 1/12

U.S. Cl. 297-250

7 Claims



A seat construction for children and which designed to be installed in automotive vehicles is carried by a socketed anchor installed on the floor in front of a regular seat of the vehicle and has a removable tubular support which extends upwardly in front of and then rearwardly over the cushion of the main seat and where it carries a dished saddle-type seat for use by children old enough to sit erect. A rigid handlebar is carried by the support in front of the seat, the saddle and the handlebar being positioned and constructed to receive and support supplemental carriers for smaller children. Releasable holding means are provided coacting with portions of the saddle and handlebar structure for supplemental seat structures by which smaller children who have not attained the age for sitting erect without supplemental support will be confined, protected and supported. Safety straps are provided for anchoring the seating means and children occupying the same.

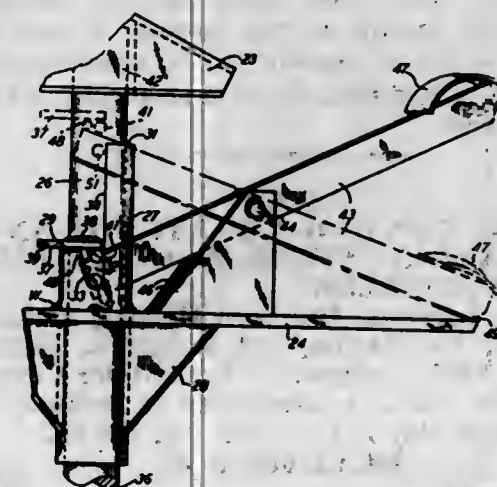
The purpose of this abstract is to enable the Patent Office and the public generally and especially the scientist, engineer or practitioner in the art who is not familiar with patent or legal terms or phraseology to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which of course is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

3,515,432 VERTICALLY AND ROTATIONALLY ADJUSTABLE SEAT STRUCTURE

Charles F. Sporman, Peoria, Ill.
Filed May 14, 1968, Ser. No. 732,467
(Filed under Rule (47)b and 35 U.S.C. 118)
Int. Cl. B60n 1/02

U.S. Cl. 297-347

5 Claims



A vertically and rotationally adjustable seat structure including a pedestal and a seat assembly movable with re-

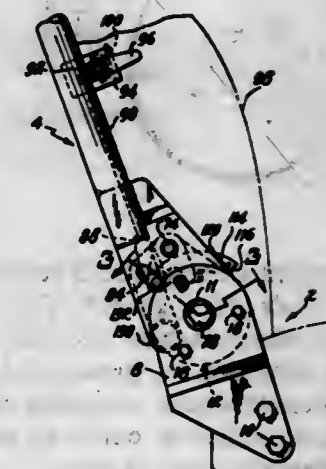
spect to the pedestal so that the seat can be both raised and rotated. Lift means are provided for raising the seat structure, and securing or locking means are engageable between the seat assembly and the pedestal for retaining the seat assembly in either an upper or a lower position, and also in the rotated positions, facing both forward and backward.

3,515,433 ROTARY SEAT BACK ADJUSTER

Paul C. Tabor, Clawson, Mich., assignor to Motor
Research Limited, a partnership composed of Wally
H. Kozlowski and Paul C. Tabor, Roseville, Mich.
Filed Dec. 12, 1968, Ser. No. 783,305
Int. Cl. B60n 1/04

U.S. Cl. 297-374

9 Claims



A rotary multiple friction plate mechanism with relatively rotatable parts secured to a seat and tiltable seat back, respectively, is normally locked by a spring urged ball-and-cam arrangement to exert axial pressure on the friction plates. A manual control releases the axial pressure to permit seat adjustment, the ball-and-cam arrangement being self energizing against forceable rearward tilting of the seat back. A positive lock prevents forward tilt of the seat back from a normal position and holds the manual control in release position when released and the seat back is swung forwardly from normal position.

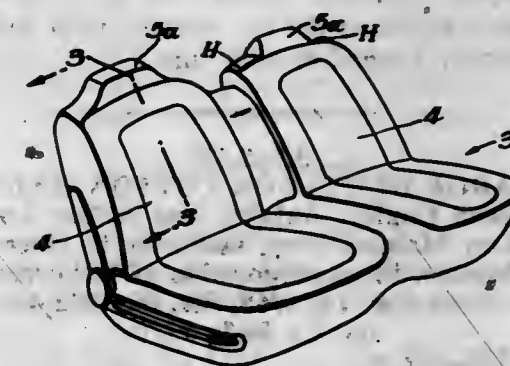
3,515,434 SEAT ARRANGEMENT

Koichi Sugura, Seizho Ohta, and Kiyokazu Seo, Toyota,
Japan, assignors to Toyota Jidosha Kogyo Kabushiki
Kaisha, Toyota, Aichi Prefecture, Japan, a corporation
of Japan

Filed Sept. 6, 1968, Ser. No. 757,837
Claims priority, application Japan, Sept. 12, 1967,
42/78,051
Int. Cl. A47c 7/36

U.S. Cl. 297-396

1 Claim

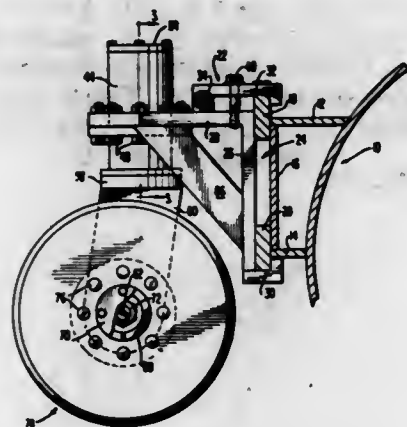


Seat arrangement has head pillow support at top of seat backrest that prevents neck, brain or other injury to person utilizing seat arrangement.

3,515,435
PAVEMENT CUTTER
 Virgil M. Milligan, P.O. Box 9,
 Central Valley, Calif. 95619
 Filed Oct. 11, 1968, Ser. No. 766,731
 Int. Cl. E01c 23/09; A01b 15/18

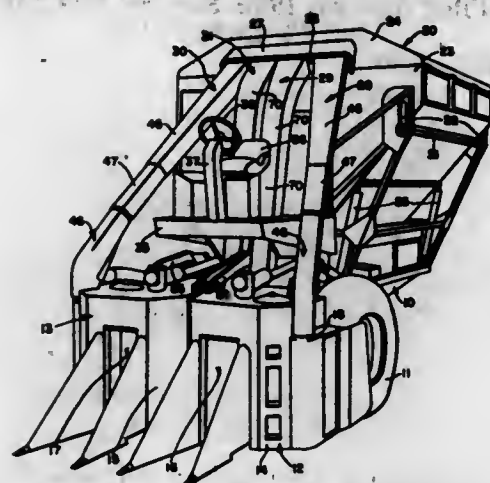
U.S. Cl. 299—40

3 Claims



An asphalt pavement cutting disc is removably attached to the scarifying blade of a grader. The cutting disc is mounted in caster wheel fashion so that it aligns automatically with the direction of grader movement, allowing the cutting action to occur smoothly along a straight line as well as on a radius or curve as required by the steering action imparted to the grader.

into the lower portion by a blower duct that terminates relatively closely to the intermediate portion at a relatively high pressure and high velocity. The intermediate portion

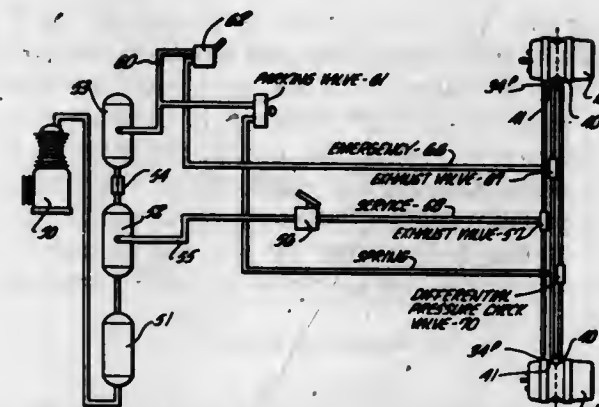


tion is relatively short so that the air issuing from the outlet may expand as it moves through the upper portion of the duct structure.

3,515,438
MOTOR VEHICLE BRAKING APPARATUS
 Billy E. Stevenson, Huntington Beach, and Thomas R. Rumsey, Inglewood, Calif., assignors, by mesne assignments, to Royal Industries, Inc., Pasadena, Calif., a corporation of Delaware
 Original application Nov. 14, 1966, Ser. No. 593,818.
 Divided and this application Sept. 18, 1968, Ser. No. 760,574

U.S. Cl. 303—9 Int. Cl. B60t 13/38

2 Claims



A vehicle braking system for operating a combined service/emergency and booster unit. The system includes an emergency valve for controlling the amount of fluid pressure applied to the emergency brake for operation independent of the service brake and independent of the booster brake. The booster brake may be controlled by a conventional control system through a quick release valve or through the combination of a differential pressure check valve and parking valve arrangement for additional protection.

3,515,439
AUTOMATIC CONTROL CIRCUIT FOR AN ANTI-SKID BRAKING SYSTEM IN AN AUTOMOTIVE VEHICLE DRIVELINE
 George E. Lemieux, Dearborn Heights, Richard L. Leonard, Farmington, and Robert L. Reynolds, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed May 1, 1968, Ser. No. 725,687
 Int. Cl. B60t 8/08

U.S. Cl. 303—21

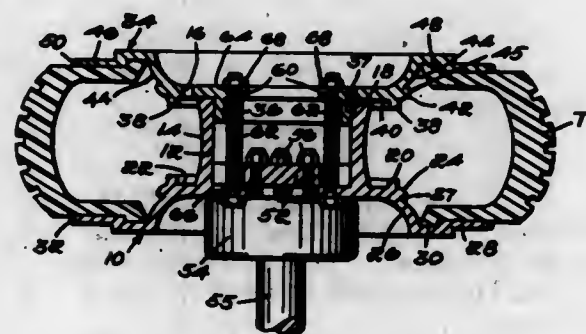
21 Claims

An anti-skid control for the wheel brakes of an automotive vehicle comprising a wheel brake servo pressure control that senses deceleration of the vehicle and wheel

3,515,436
VEHICLE TIRE MOUNT
 Charles J. Glacobb, 414 Ashmont St., Dorchester, Boston, Mass. 02124
 Filed Mar. 27, 1968, Ser. No. 716,518
 Int. Cl. B60b 3/08

U.S. Cl. 301—38

1 Claim



A tire mount for a vehicle wheel has inner and outer wheel discs telescopically assembled each having an emergency wheel rim normally circumferentially inward of an inflated tire mounted thereon; but which serve as traction wheel rims when the tire shrinks upon deflation and is peripherally inward of said rims.

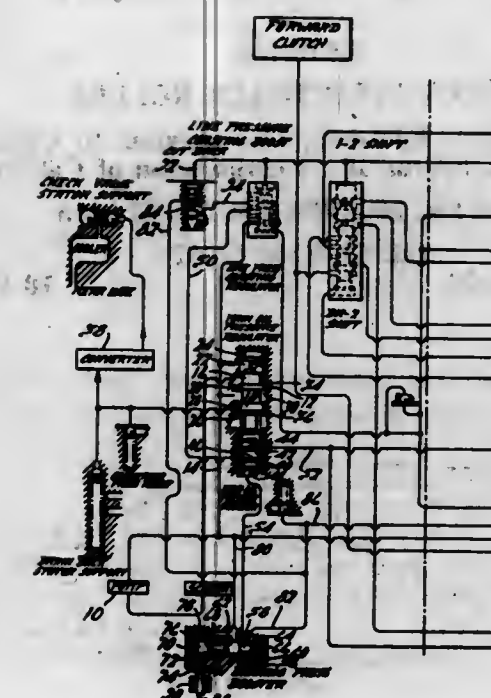
3,515,437
DISCHARGE DUCTS FOR COTTON HARVESTER
 Russell Dean Copley, Ankeny, and Arthur Lowell Hubbard, Des Moines, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
 Filed Apr. 18, 1968, Ser. No. 722,405
 Int. Cl. B65g 53/04

U.S. Cl. 302—59

15 Claims

A discharge duct structure for a cotton harvester that includes upper, lower and intermediate portions with the upper and lower portions expanding to relatively large upper and lower ends respectively. Air is introduced

speed, both of these variables inducing a comparator restricted rate to be transmitted to the brakes after the valve to develop a correcting signal for the brake servo skid condition is relieved.

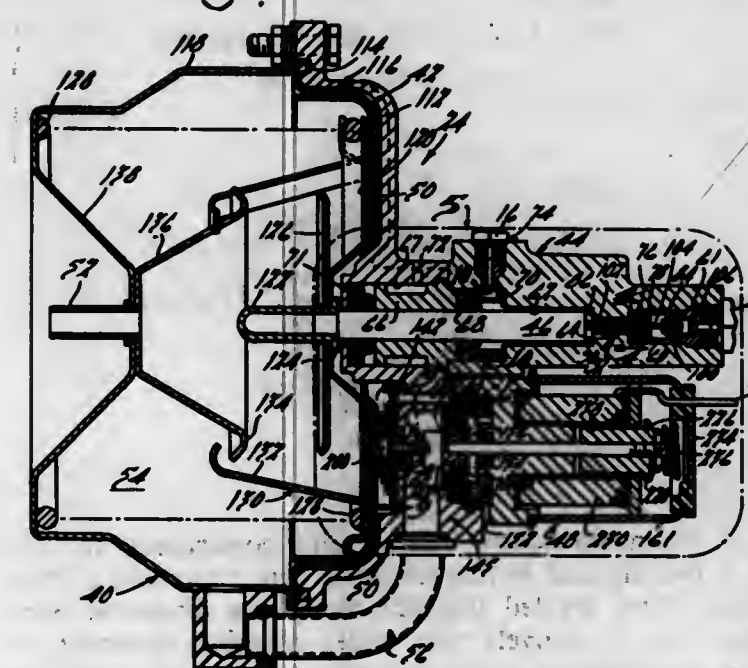


pressure control whereby optimum braking action for the vehicle wheels is maintained.

3,515,440
SKID CONTROL SYSTEM INCLUDING HYDRAULIC MODULATING VALVE
 Peter Every, Livonia, and William Stelzer, Bloomfield Hills, Mich., assignors to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
 Continuation of application Ser. No. 642,861, June 1, 1967. This application July 10, 1969, Ser. No. 842,825
 Int. Cl. B60t 8/06

U.S. Cl. 303—21

19 Claims

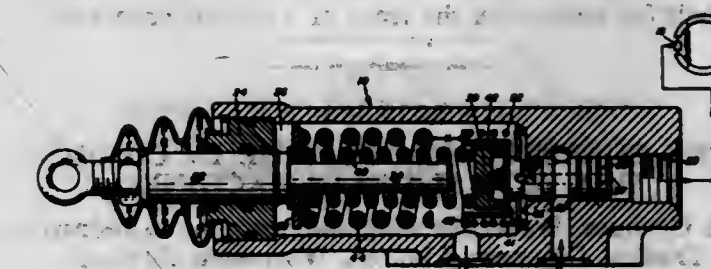


A skid control system for fluid actuated brakes of a wheeled vehicle including a modulating valve actuable by a skid control signal for modulating the fluid pressure to the fluid actuated brakes. The modulating valve includes a bleed valve to permit additional fluid at a substantially

3,515,441
POWER CONTROL DEVICE
 Gary Stein, Brookfield, Wis., assignor to Applied Power Industries, Inc., Milwaukee, Wis., a corporation of Wisconsin
 Continuation of application Ser. No. 754,915, Aug. 23, 1968. This application Sept. 22, 1969, Ser. No. 866,179
 Int. Cl. B60t 15/12, 17/04

U.S. Cl. 303—54

4 Claims



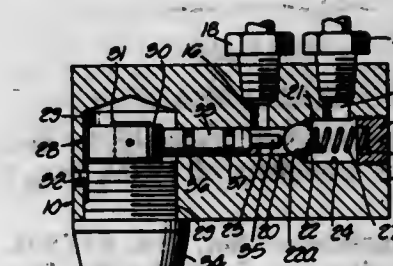
A valve particularly suitable for use as a control for a hydraulic braking mechanism, having excellent control at initial pressure ranges, wherein a series of sequentially engageable back-pressure springs working in combination with a feed-back pressure and a controlled bleeding arrangement transmits a "braking feel" to an operator and wherein a double metering arrangement provides an anti-hunt characteristic.

3,515,442
LOCK FOR HYDRAULIC BRAKES OF VEHICLES
 Lawrence C. Whittemore, 19641 Waterbury Lane, Huntington Beach, Calif. 92646
 Continuation-in-part of application Ser. No. 742,863, July 5, 1968. This application Jan. 21, 1969, Ser. No. 792,621

U.S. Cl. 303—89

Int. Cl. B60t 17/16

3 Claims



A lock mechanism for vehicles having a hydraulic brake system includes a cam actuated valve which, when closed, retains fluid under pressure in the individual brake cylinders to prevent movement of the vehicle.

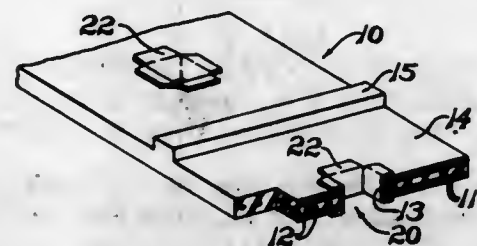
3,515,443
TRACTION BELT
 Allan D. Hallaman, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
 Filed June 13, 1968, Ser. No. 736,834
 Int. Cl. B62d 55/24

U.S. Cl. 305—38

6 Claims

An elastomeric traction belt having spaced traction lugs disposed on the traction surface and a central layer of tension resistant cords with a layer of transverse metal

cords disposed on both sides of the tension cords. The belt has spaced apertures lined with metal reinforcing



clips extending through the apertures to either side of the belt for contacting the teeth of a driving sprocket.

3,515,444

WIPER CONSTRUCTION FOR USE IN CONJUNCTION WITH SLIDES IN MACHINES

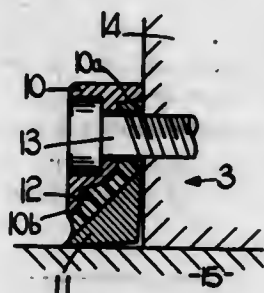
Ruth Grabner, Worcester, England, assignor to Industrial Trading Company Limited, Worcester, England

Filed June 14, 1968, Ser. No. 737,216

Int. Cl. F16c 17/00, 21/00, 29/00

U.S. Cl. 308-3.5

8 Claims



A machine guideway wiper construction for mounting on a slide incorporates a rigid mounting strip, a rigid wiper strip and a body of resilient deformable material bonded to the strips and forming a yielding connection between the strips. The resilient deformable material is substantially enclosed by the strips when in position on the slide to prevent damage thereto by swarf, coolant and other foreign matter.

3,515,445

CONVEYOR BEARING

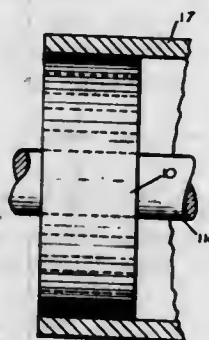
Alan J. Stone, Honeoye, N.Y., assignor, by mesne assignments, to Murray Company of Texas, Inc., a corporation of Delaware

Continuation of application Ser. No. 610,908, Jan. 23, 1967. This application Oct. 28, 1968, Ser. No. 771,702

Int. Cl. F16c 13/00, 27/02

U.S. Cl. 308-20

1 Claim



A plastic bearing for conveyor rollers having a hub portion, an outer rim portion and support elements inter-

connecting said hub and rim formed and arranged to absorb forces of pressure applied to the outer rim as it is pressed into said roller, thereby preventing distortion of the hub.

3,515,446

LUBRICATED TRACK ROLLER

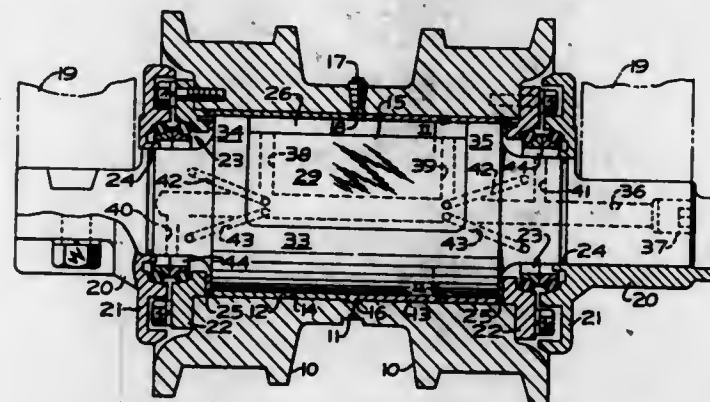
Roy L. Maguire, Edelstein, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Jan. 30, 1969, Ser. No. 795,235

Int. Cl. F16c 13/02

U.S. Cl. 308-20

10 Claims



A track roller comprises a shaft having a rim assembly rotatably mounted thereon. Lubricating means for the track roller comprises a chamber formed in part by the shaft and passage means for communicating lubricating oil from the chamber to bearings and seals employed in the track roller.

3,515,447

DESIGN OF A LAMINATED BALL OR ROLLER FOR APPLICATION IN A BEARING

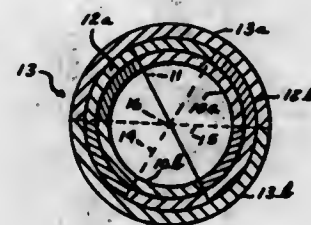
Wallace C. Buzzard, 5625 Leibold Drive 45424, and Joseph E. Kryslak, 510 Wilmington Ave. 45420, both of Dayton, Ohio

Filed July 2, 1968, Ser. No. 742,092

Int. Cl. F16c 33/00

U.S. Cl. 308-188

5 Claims



A laminated hollow ball or roller construction for use in a bearing and having an inner core composed of two hemispheres welded together along one diametral joint line, and a relatively thin, outer covering consisting of two hemispherical shells abutting against and welded to the inner core along a different diametral joint line to thereby improve the ball or roller resistance to fracture. In a second form, the inner core may be solid or composed of two hemispheres of relatively hard material covered by a pair of relatively thin material hemispherical shells welded thereto to thereby ensure brinelling of the rolling elements first before ruining the bearing races.

3,515,448

WHEEL BEARING ASSEMBLY CONSTRUCTION

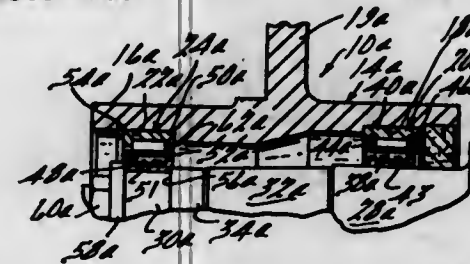
Charles W. Williams and Elmer C. Jensen, Birmingham, Mich., assignors to Federal-Mogul Corporation, Southfield, Mich., a corporation of Michigan

Filed Dec. 9, 1968, Ser. No. 782,112

Int. Cl. F16c 19/22

U.S. Cl. 308-208

11 Claims



A new wheel bearing assembly utilizing cylindrical roller bearings which are adapted to take thrust.

3,515,449

SOFT RUBBER SQUEEZE FILM BEARING

Alfred B. Harbage, Jr., Severna Park, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Sept. 10, 1968, Ser. No. 758,868

Int. Cl. F16c 27/00

U.S. Cl. 308-238

7 Claims



A soft rubber bearing particularly for propeller shafts and applications wherein the bearings will be lubricated by the environmental fluid and wherein the bearing surface comprises pockets formed in the soft rubber which are completely filled with water when the pocket is non-bearing. When the bearing and thereby some of the filled pockets are rotated to a bearing position, the non-compressibility of the water supports the shaft and squeezes past the wall of the pocket to thereby lubricate the rubber lands or ends which would otherwise be in contact with the shaft.

3,515,450

SPACE SAVER CABINET

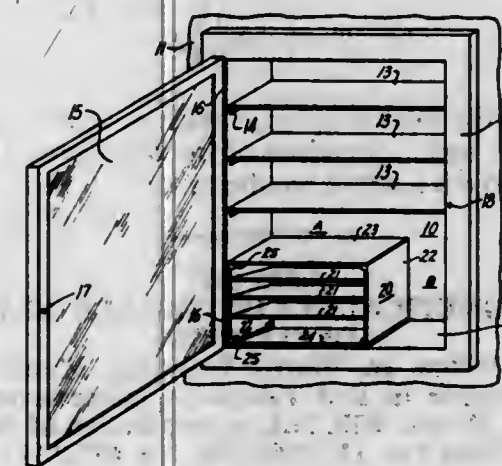
William A. Jaecke, 124 York Drive, Pittsburgh, Pa. 15214

Filed May 29, 1968, Ser. No. 732,991

Int. Cl. A47b 67/02; A47b 5/08

U.S. Cl. 312-245

5 Claims



A miniature cabinet is provided for mounting in a conventional cabinet or cupboard, such as used for housing

medicines and toilet articles. The cabinet is constructed of pieces that may be packaged as a compact unit for storage and shipping purposes, and easily and quickly assembled into a unitary structure for mounting in a conventional cupboard or cabinet. The assembled unit is constructed to provide a practical, useful and space-saving shelf arrangement for horizontally-lying articles, such as tubes of tooth paste, creams, etc. A bottom shelf of the unit has a self-adhesive type of surface for securely-positioning it in a conventional cupboard or cabinet. The unit has shelves that are sloped backwardly to aid in retaining articles thereon; the parts of the construction are inter-fitting to provide a unit that will retain an assembled relation when supported on a shelf or bottom member.

3,515,451

MODULAR KNOCK-DOWN CABINET

John F. Hickey, 1104 Beechwood Drive,

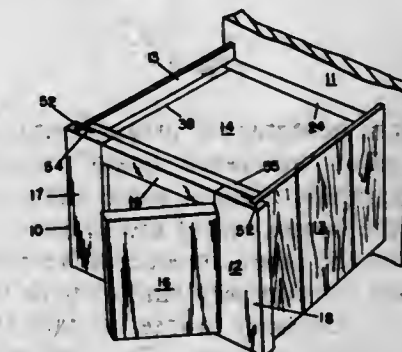
Hagerstown, Md. 21740

Filed June 11, 1968, Ser. No. 736,059

Int. Cl. A47b 47/00

U.S. Cl. 312-263

9 Claims



A knocked-down cabinet or the like for kitchens and bathrooms adapted to be readily assembled or built-up and attached to a wall by an inexperienced or unskilled individual. The front and end panels may be readily replaced without major disassembly of the cabinet, and the interior is free of corner posts or other protrusions when the cabinet is assembled.

3,515,452

FORMING A HOLOGRAM OF A SUBJECT RECORDED ON AN INTEGRAL PHOTOGRAPH WITH INCOHERENT LIGHT

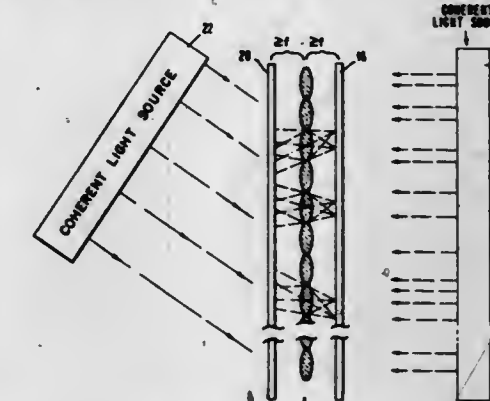
Robert V. Pole, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 20, 1966, Ser. No. 558,871

Int. Cl. G02b 27/22

U.S. Cl. 350-3.5

4 Claims



A hologram of a subject is formed by first recording the wavefronts reflected from a subject illuminated by incoherent light on a Lippmann or integral photograph. This is done by exposing a photographic emulsion sheet located in the image plane of a fly's eye lens array. The

photographic sheet is developed and in combination with the fly's eye lens array is used as the object to produce a hologram. The resultant hologram reconstructs a three-dimensional image of the original subject.

3,515,453 ARRANGEMENT OF BEAM MATCHING HOLOGRAPHY

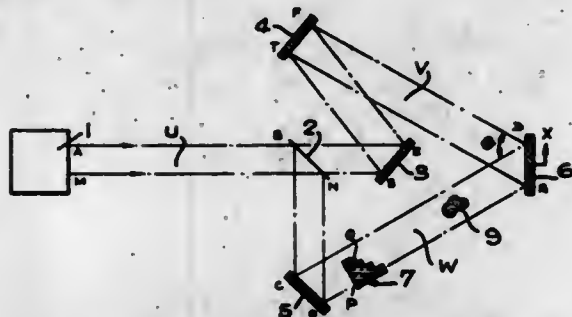
Lee O. Heffinger, Torrance, Robert E. Brooks, Redondo Beach, and Ralph F. Wuerker, Palos Verdes Estates, Calif., assignors to TRW Inc., Redondo Beach, Calif., a corporation of Ohio

Filed Apr. 18, 1967, Ser. No. 631,666

Int. Cl. G02b

U.S. Cl. 350-3.5

3 Claims



With a two-beam holographic arrangement in which a "scene beam" and a "reference beam" simultaneously fall upon a photographic plate at some angle, the optical path length that the beams travel are longer on one side of the beam than on the other. In order to keep the path of the reference beam substantially similar with the path of the scene beam, it is necessary to insert a path length compensator into the reference beam. The compensator used consists of an optically transparent unit having discrete indexes of refraction across at least a pair of its surfaces so as to provide an incremental velocity change for optical rays passing therethrough.

3,515,454 SYSTEM FOR ARTIFICIALLY SEEING IN THREE DIMENSIONS WITHOUT USING GLASSES OR OTHER INTERPRETING MEANS

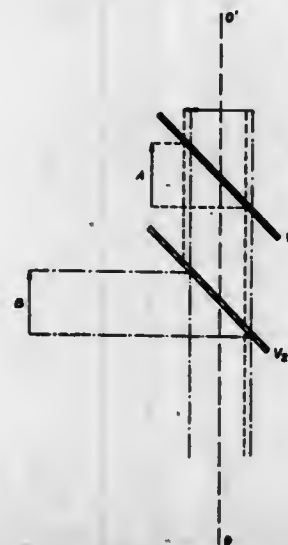
Claudio Paganelli, Via di Vigna Murata 1, Rome, Italy

Filed Oct. 21, 1966, Ser. No. 588,566

Int. Cl. G02b 27/24

U.S. Cl. 350-137

1 Claim



The three dimensional observation system set forth in the present disclosure permits three dimensional vision without intervening interpreting means by superimposition and merging of the reflection of two equal stereoscopic images by means of parallel obliquely positioned reflecting mirrors, one of which may be partly transparent.

3,515,455 DIGITAL LIGHT DEFLECTING SYSTEMS

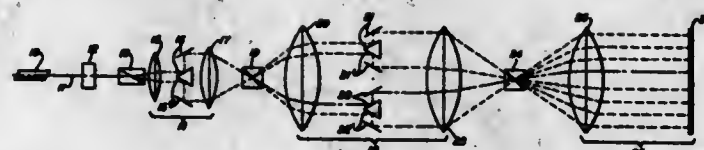
Rudolf Kompfner, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Aug. 4, 1967, Ser. No. 658,418

Int. Cl. G02f 3/00

U.S. Cl. 350-150

4 Claims



Radiation deflecting systems utilize arrangements of isotropic elements, such as mirrors and lenses, to achieve efficient digital deflection of electromagnetic radiation. In particular, these arrangements are placed between adjacent electrooptic deflectors and are contrived to alter the beam displacement and to redirect and focus the displaced beam on the next succeeding deflector. Since the beam redirectors alter the displacement of the beam, less power is consumed in the electrooptic deflectors, and since the beam is redirected and focused upon each deflector, deflectors having smaller cross sections can be used. Embodiments using a combination of lenses and parallel pairs of mirrors are described in detail.

3,515,456 OPTICAL READOUT IMPLEMENTATION

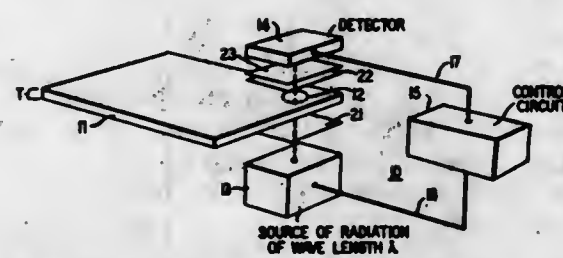
William J. Tabor, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Aug. 31, 1967, Ser. No. 664,780

Int. Cl. G02f 1/22

U.S. Cl. 350-151

5 Claims



The presence and absence of a single wall domain in a magnetic sheet can be detected by Faraday rotation. The contrast between the light transmitted through the sheet when a domain is present as compared to that transmitted when a domain is absent is maximized, in accordance with this invention, when the thickness T of the sheet of material is selected such that

$$T = \left(n + \frac{1}{2}\right) \delta$$

where δ is the thickness for providing 2π retardation between the a and b directions of the polarization vector of the light and n is a whole number.

3,515,457 MAGNETICALLY-CONTROLLED BEAM DEFLECTOR

Joseph F. Dillon, Jr., Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Jan. 12, 1968, Ser. No. 697,440

Int. Cl. G02f 1/22

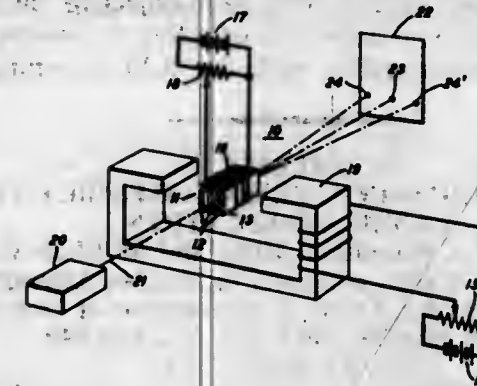
U.S. Cl. 350-151

4 Claims

A high-speed, magnetically-controlled optical beam deflection system comprising a plurality of stacked plates

of yttrium or rare earth iron garnets in which alternate plates are identical and adjacent plates exhibit antiparallel net magnetic moments. Electromagnetic wave energy

ences in plane, and the like, whereby the gratings are enhanced in appearance and utility and the inlays are enhanced in visibility.



3,515,460 OPTICAL BEAM SEPARATOR FOR COLOUR TELEVISION

Jean-Michel Babut, Livry-Gargan, and Christian Rodier, Cretell, France, assignors to Societe d'Optique Precision, Electronique, et Mecanique, Paris, France, a corporation of France

Filed July 14, 1967, Ser. No. 653,572

Claims priority, application France, Aug. 5, 1966, 72,274

Int. Cl. G02b 27/14; G03b 33/62

U.S. Cl. 350-173

1 Claim

propagating parallel to the plane of the plates experiences lateral beam deflection in the presence of a longitudinal component of magnetization.

3,515,458 RADIATION SCANNING SYSTEM

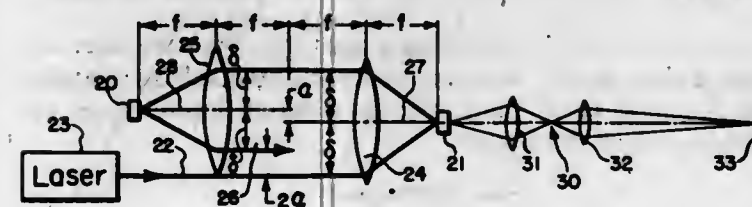
Adrianus Korpel, Prospect Heights, and Robert L. Whitman, Oak Park, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware

Filed Jan. 13, 1967, Ser. No. 609,125

Int. Cl. G02f 1/34, 1/38

U.S. Cl. 350-160

10 Claims



A beam of coherent radiation, such as light, is caused to enter an optical cavity in which it is multiply reflected. An offset between different reflections causes the beam at the end of each round trip through the cavity to be laterally spaced from the beam in the previous round trip so as to create in the cavity a plurality of beams having individually different relative phase. The configuration of the cavity or additional lens elements included therein cause these plurality of beams to be imaged and superimposed upon one partially reflective surface in the cavity. By changing the optical path length through the cavity, the manner of phase addition of the plurality of beams is altered which in turn changes the point of maximum intensity of the superimposed beams on the one reflector. As a result, the beam emerging from the cavity is displaced.

An optical beam separator particularly for three-colour television, characterised in that it has an entry prism from which the beam will be divided into three component beams by means of three paths defined by prisms, prismatic elements, a roof prism and semi-reflective surfaces, the three images which will be obtained being in a single plane and having the same orientation, and the three beams traversing the same thickness of glass.

3,515,461 CATADIOPTRIC OBJECTIVE OF THE CASSEGRAIN TYPE

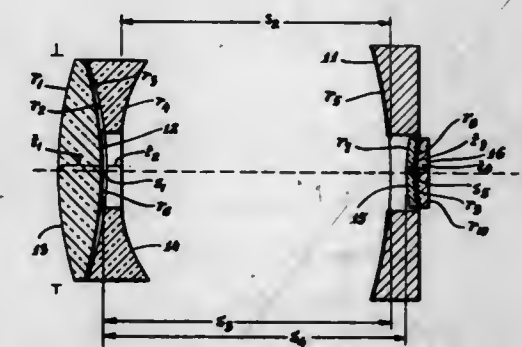
Raul E. Casar, Danbury, Conn., and Juan L. Rayces, Santa Ana, Calif., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Jan. 30, 1967, Ser. No. 612,433

Int. Cl. G02b 17/08

U.S. Cl. 350-199

4 Claims



An optical system for forming an image in which light from a primary mirror is reflected by a secondary mirror back through a hole in the center of the primary mirror. Two lens type correctors are positioned in the system to eliminate image defects.

3,515,459 INLAY DIFFRACTION GRATINGS

Ramsen V. Wood, Riderwood, Md. 21139

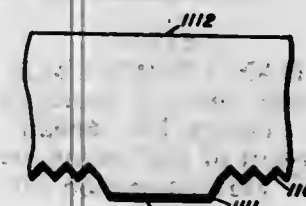
Continuation-in-part of application Ser. No. 467,312, June 28, 1965, which is a continuation-in-part of application Ser. No. 797,324, Jan. 9, 1969. This application

Jan. 3, 1967, Ser. No. 646,988

Int. Cl. G02b 5/18

U.S. Cl. 350-162

1 Claim



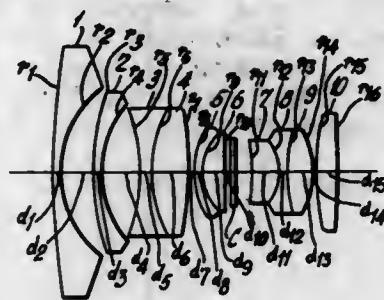
Spiral diffraction gratings having integral inlays defined by differences in ruling, differences in reflectivity, differ-

3,515,462

FISHEYE TYPE OBJECTIVE LENS SYSTEM
Tomokazu Kazamaki and Yasuo Takahashi, Tokyo-to, Japan, assignors to Asahi Kogaku Kogyo Kabushiki Kaisha, Tokyo-to, Japan, a corporation of Japan
Filed Aug. 9, 1967, Ser. No. 659,449
Claims priority, application Japan, Aug. 25, 1966, 41/56,040

Int. Cl. G02b 3/00, 5/22, 9/00
U.S. Cl. 350—214

2 Claims



A bright, highly corrected fish-eye lens system comprises ten lenses, the first, second and fifth lenses being negative meniscus lenses, the third and eighth lenses being negative and the fourth, sixth, seventh, ninth and tenth lenses being positive. The third and fourth lenses are a cemented unit, the fifth and sixth lenses are a cemented unit, and the seventh, eighth and ninth lenses are a cemented unit. The lens system satisfies the following conditions:

$$\begin{aligned} |r_7| > F, r_7 < 0 \\ -F/0.15 \leq F_{1,2} \leq -F/1.5 \\ 4F > r_{13} > F \\ n_8 - n_9 > 0.1 \\ n_8 > n_9, n_8 > n_7, n_8 > n_9 \\ r_4 < r_3 \end{aligned}$$

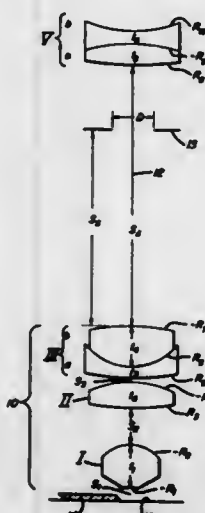
wherein r_7 and r_{13} are the radii of curvature of the rear face of the fourth lens and the front face of the ninth lens respectively; F is the resultant focal length of the entire lens system; $F_{1,2}$ is the resultant focal length of the first two lenses, the index of refraction of the i th lens is n_i , and the Abbe value of the i th lens is v_i .

3,515,463

45X MAGNIFICATION SEMI-OBJECTIVE WITH FIELD FLATTENING LENS
Harold E. Rosenberger, Brighton, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed July 3, 1967, Ser. No. 650,771
Int. Cl. G02b 1/00, 9/34
U.S. Cl. 350—224

5 Claims



A microscope semi-objective having substantially 9.0X magnification per se which is designed for use with an

associated negative field flattening lens having substantially 5.0X magnification so as to produce cooperatively a total magnification of substantially 45X and a numerical aperture of .55, said semi-objective being one of a set of such semi-objectives of different powers which are used interchangeably with the field flattening lens.

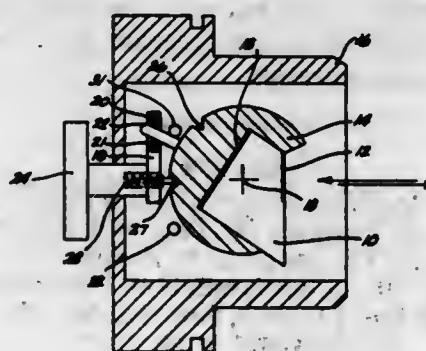
3,515,464

MONOCHROMATIC PRISM ASSEMBLY FOR LASER APPLICATION

Albert G. Peifer, Woodland Hills, and Matthew C. Starr, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 20, 1967, Ser. No. 654,899

Int. Cl. G02b 7/18
U.S. Cl. 350—286

2 Claims



A prism assembly including means for obtaining alternatively either single wavelength or multiwavelength emission from a laser light source without interchange or realignment of the optics.

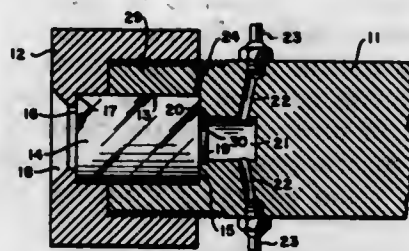
3,515,465

HIGH PRESSURE SIGHTING LENS WITH RELIEF PORT

Richard J. Jones, Annapolis, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed June 28, 1967, Ser. No. 650,161
Int. Cl. G02b 5/00, 7/00
U.S. Cl. 350—319

7 Claims



An apparatus adapted to view highly pressurized fluids. The apparatus provides a high pressure chamber, a transparent lens for viewing the pressure chamber and a locking ring for retaining the lens. An annular sealing means and a fluid relief port are cooperatively associated to provide additional safety to the viewing personnel.

3,515,466

HAND PERIMETER

Carl Apple, 5801 N. Sheridan Road, Chicago, Ill. 60626

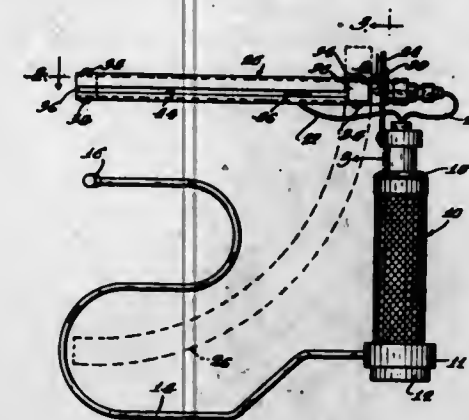
Continuation-in-part of application Ser. No. 478,919, Aug. 11, 1965. This application July 15, 1969, Ser. No. 856,512

Int. Cl. A61b 3/02
U.S. Cl. 351—23

1 Claim

A hand perimeter in which light beams from light bulbs provide the central stationary or frontal and the movable

peripheral targets. The movable peripheral light has movable aperture masks and color filters which are housed with the light within an arcuate arm which provides a light shield. The arm, which is restricted to a quadrant,



is pivoted at the upper end of a battery case which forms the handle and to which a face stop is also connected by a curved support which clears the arcuate arm when the arm is rotated into the plane of the battery case.

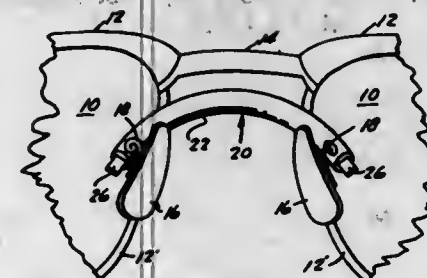
3,515,467

EYEGLASS BRIDGE ATTACHMENT FOR RELIEVING NOSE PAD PRESSURE

Dale A. Stewart, 122 N. Mill, Beloit, Kans. 67420
Filed Mar. 22, 1968, Ser. No. 715,218

Int. Cl. G02c 5/10
U.S. Cl. 351—130

1 Claim



An attachment for eyeglasses of the nasal pad type, said device comprising a plastic bridge engageable with the pad-supporting wires and bearing on the upper portion of the nose of the eyeglass wearer whereby to relieve pressure on the nasal pads, said bridge having at each end thereof means to engage the nasal pad-supporting wires of the eyeglasses.

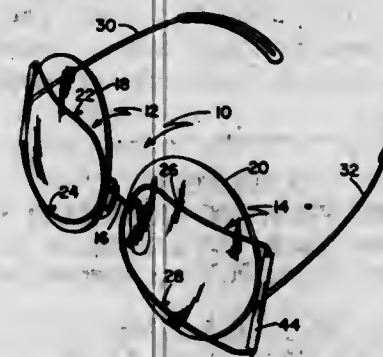
3,515,468

SPECTACLE HINGE

Atherton R. Mitchell, San Francisco, Calif., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware

Filed Oct. 3, 1968, Ser. No. 764,700
Int. Cl. G02c 5/22
U.S. Cl. 351—153

1 Claim



A hinge is provided for pivotally connecting the temples to the frame portion of a pair of spectacles. A sleeve is used on both temples which rotates about pins integral

with the frame. Extended segmental portions of the sleeves cooperate with elbows on the pins to act as stops, restricting pivotal movement of the temples beyond normal positions when in use.

3,515,469

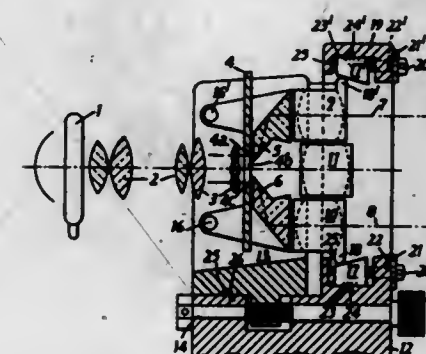
CINEMATOGRAPHIC PROJECTOR

Wilhelm Winzenburg, Dresden, Germany, assignor to VEB Pentacon Dresden Kamera- und Kinowerke, Dresden, Germany

Filed Aug. 28, 1967, Ser. No. 663,700
Int. Cl. G03b 21/32

U.S. Cl. 352—40

2 Claims



A cinematographic projector is constructed with a film gate which can accommodate at least two successive frames at any instant and with at least two lens systems effecting projection through the gate. The images produced by the lens system are mutually superimposed upon a single screen. The distance between the axes of the two lens systems is greater than the frame pitch.

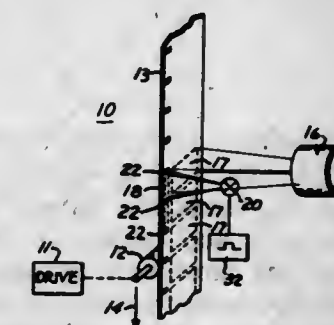
3,515,470

CONTROL INFORMATION RECORDING AND SENSING METHODS AND APPARATUS

Lewis B. Browder, Alhambra, Calif., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 20, 1967, Ser. No. 684,253

Int. Cl. G03b 21/50, 21/52
U.S. Cl. 352—92

13 Claims



Methods and apparatus for providing and for sensing light-transmitting control markings between sprocket holes of elongated information carriers.

3,515,471

MOTION PICTURE CONSOLE

Ernest E. Gregg Sussalla, 155 Fell St., San Francisco, Calif. 94102

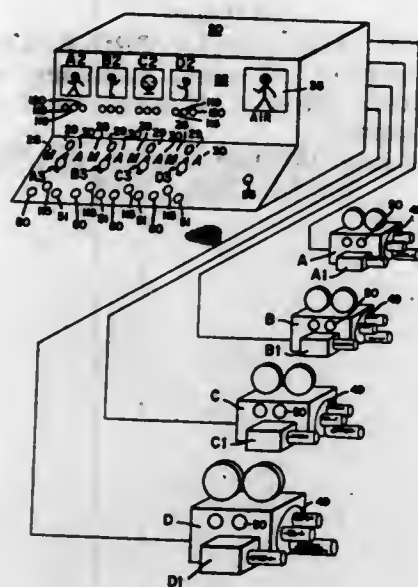
Filed July 12, 1967, Ser. No. 652,802
Int. Cl. G03b 29/00

U.S. Cl. 352—131

5 Claims

A motion picture console and switching mechanism in which a plurality of motion picture cameras are each provided with a television camera viewing system and in which a control console is arranged to simultaneously

project the respective images from each of the cameras on the console and which is further arranged to allow the switch of a selective one of the cameras to cause it



to be active in a motion picture taking mode while simultaneously projecting the image from the associated television camera at the console.

3,515,472

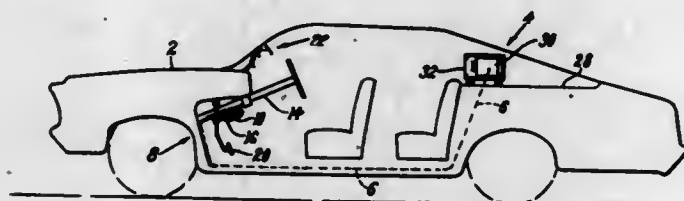
VEHICLE CAMERA SYSTEMS

Ralph K. Schwitzgebel, Belmont, Mass.
(5 Pelham Road, Waltham, Mass. 02154)
Filed Nov. 14, 1967, Ser. No. 682,954

Int. Cl. G03b 19/00, 29/00

U.S. Cl. 352-132

8 Claims



A vehicle camera system comprising means for mounting a motion picture camera on a vehicle, which mounting means operates to protect the camera against shock, fire and missile hazards, and camera control means for causing operation of the camera either manually or automatically by means responsive to vehicle control means, the camera control means being operative to continue camera operation after release of the camera control means or vehicle control means.

3,515,473

MOVIE CAMERA

Anton Theer, Munich, and Johann Zanner, Unterhaching, Munich, Germany, assignors to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany

Filed July 14, 1966, Ser. No. 565,122

Claims priority, application Germany, July 21, 1965, A 24,095

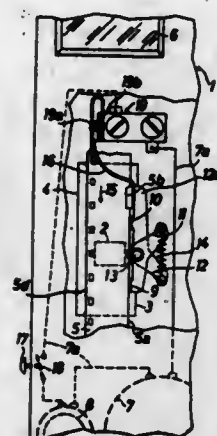
Int. Cl. G03b 1/50

U.S. Cl. 352-224

13 Claims

A motion picture camera wherein one edge portion of the film is biased against a fixed guide extending along one side of the film gate. Such biasing action is produced by a pair of presser members which are mounted on

pivotable levers and bear against the other edge portion of the film opposite the fixed guide. One or more springs urge the presser members against the other edge face of the film with the same force. At least one of the presser



members may enter a notch at the trailing end of the film to thereby arrest the motor of the camera or to produce a signal which indicates that the supply of unexposed film is exhausted.

3,515,474

CUE SIGNAL FOR MOTION PICTURE FILM

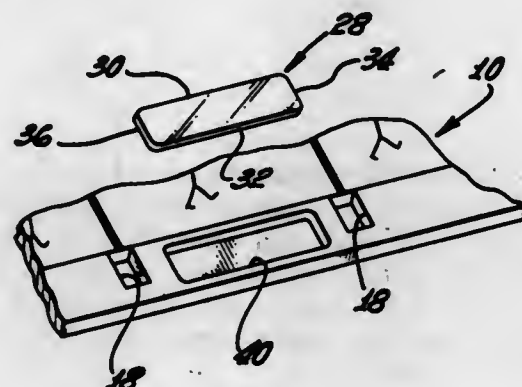
Sidney P. Solow, Beverly Hills, Calif., assignor to Consolidated Film Industries, Hollywood, Calif., a corporation of New York

Filed May 3, 1968, Ser. No. 726,506

Int. Cl. G03b 21/50

U.S. Cl. 352-236

9 Claims



A cue signal device for motion picture negatives, or originals, and method of forming same. The signal device includes a cue signal comprising a substance affixed in a recess formed in the film adjacent the marginal edge thereof so that the varying density of the film can be cued to a motion picture film printer whereby responsive mechanism within the printer can adjust the proper light intensity during the preparation of a print. The cue signal can also be employed to trigger other responsive mechanism within the printer for creating lap dissolves, fades, etc.

3,515,475

APPARATUS FOR VIEWING COINS OR THE LIKE

Lee J. Zukor, New York, N.Y., assignor to House of Coins, Inc., New York, N.Y., a corporation of New Jersey

Filed Dec. 30, 1966, Ser. No. 606,271

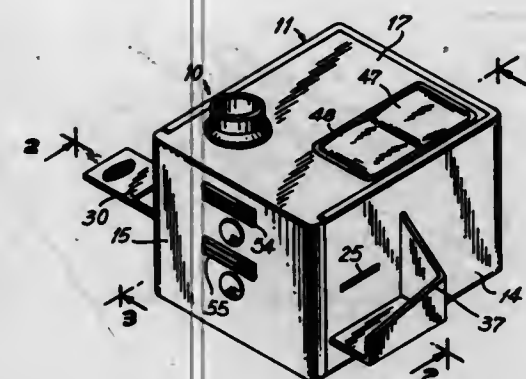
Int. Cl. G03b 21/00, 21/28

U.S. Cl. 353-78

4 Claims

A viewing apparatus for an article, such as a stamp, coin or the like. The viewing apparatus has a housing and a holder disposed within the housing intermediate

two surfaces thereof for holding an article in position to be viewed. Illuminating apparatus is provided for illuminating opposite sides of the article. There is also provided a pair of reflective surfaces operable to reflect rays from opposite sides of the article to provide erect images thereof. To that end, one of the reflective surfaces is the first face of a first prism. The other reflective surface is the first face of a second prism. The viewing



apparatus of the present invention has, further, exhibiting apparatus carried by the housing. There is at least one additional reflective surface comprising the second face of one of the prisms. This additional reflective surface directs light from the respective surfaces of the first pair of surfaces to the exhibiting apparatus, which is in a position to present the erect image of the opposite article sides to an observer.

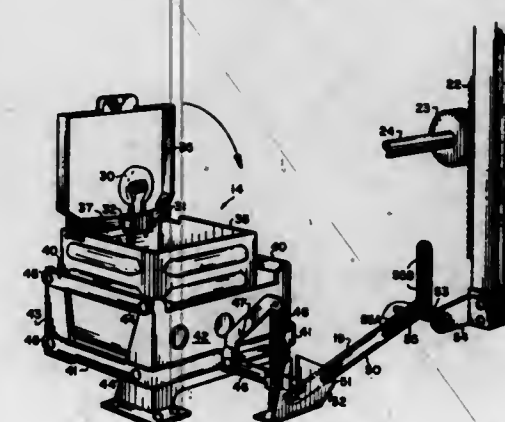
3,515,476

OVERHEAD PROJECTOR

Phillip M. Field, Maplewood, and John C. Nememylk, Nutley, N.J., assignors to Charles Beseler Company, East Orange, N.J., a partnership

Filed July 14, 1967, Ser. No. 653,400

Int. Cl. G03b 21/20



An improved overhead projector provided with (1) a front focusing knob which repositions both the projection lamp and the projection head to maintain the proper optical distance relationship between the two when the projection head is repositioned for focusing the image on a screen, (2) a bellows-sealed segmented projection head having a second interior sealed chamber which compensates for the change in air volume in the projection head when one portion of the segmented head is pivoted relative to the other, (3) a pivoted lamp holder which facilitates removal of inoperative lamps and reinsertion of replacement lamps, and (4) a projection stage latch assembly operative from the focusing knob to open the top of the projector.

3,515,477

PHOTOGRAPHIC PROJECTION PRINTING APPARATUS

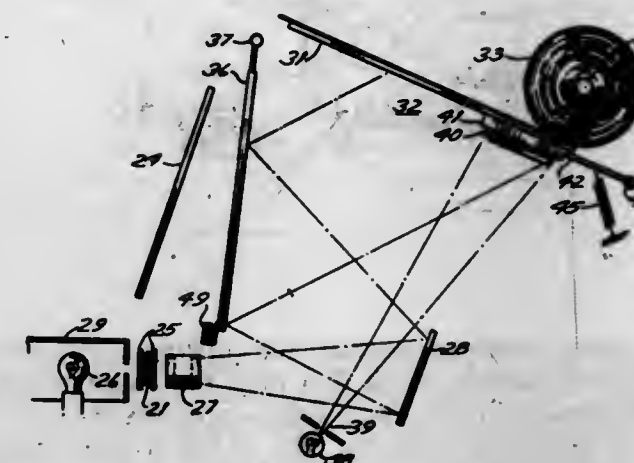
Henry F. Hein, North Bellmore, N.Y., and Roger W. Patterson, Hillsdale, N.J., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 6, 1967, Ser. No. 665,925

Int. Cl. G03b 27/70

U.S. Cl. 355-42

18 Claims



A microfilm reader-printer machine makes two projection prints of the same film. The first print has an optically superimposed legend thereon bearing information supplementing the information on the film. The machine includes a projectable, image-bearing legend stored on a motor driven frame. A print switch turns on the motor, moving the legend into its print position. An auxiliary light source projects an image carried by the legend through a neutral density filter to form a latent image on a print in the reader-printer exposure station. At the same time, another light source is directed through the film and is projected to expose a portion of the film image on the print. A relay circuit then turns off the frame driving motor so the frame can return to its stored position, turns off the auxiliary light source and initiates a second film printing cycle to make a second print of the same film.

3,515,478

CHECK PHOTOGRAPHING APPARATUS

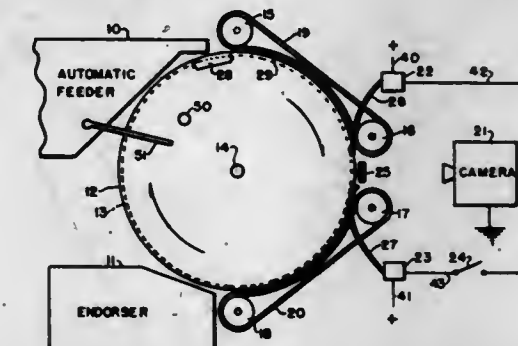
Thomas Blessinger, 34-19 29th St., Long Island City, N.Y. 11106

Filed Aug. 23, 1967, Ser. No. 662,604

Int. Cl. G03b 27/48, 27/50

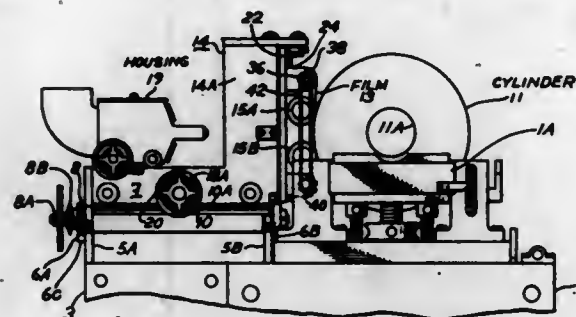
U.S. Cl. 355-48

4 Claims



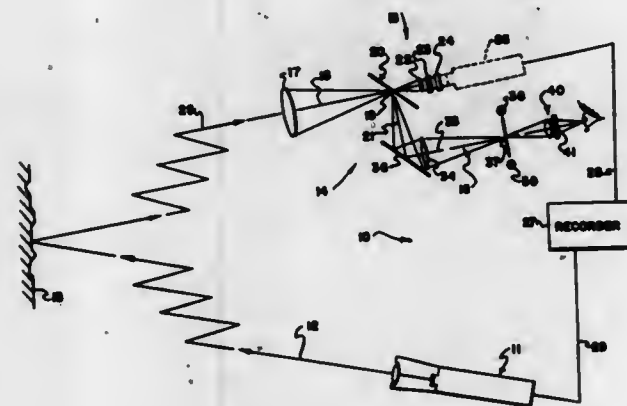
Check photographing apparatus has a rotating drum containing circumferential grooves into which two feeders extend. The drum has a stub copy display area under a transparent window in its surface. One feeder activates a moving film camera on being contacted by a check to photograph each check being carried about by the rotating drum. The other feeder may be selectively activated to cause the camera to continue operating and photograph stub copy with each check.

3,515,479
PHOTOCOMPOSING MACHINE FOR CYLINDERS
 Alfred B. Poschel, % Canterbury Court, 1220 N. State St.,
 Chicago, Ill. 60610
 Filed Apr. 25, 1968, Ser. No. 724,020
 Int. Cl. G03b 27/04
 U.S. Cl. 355—86 6 Claims



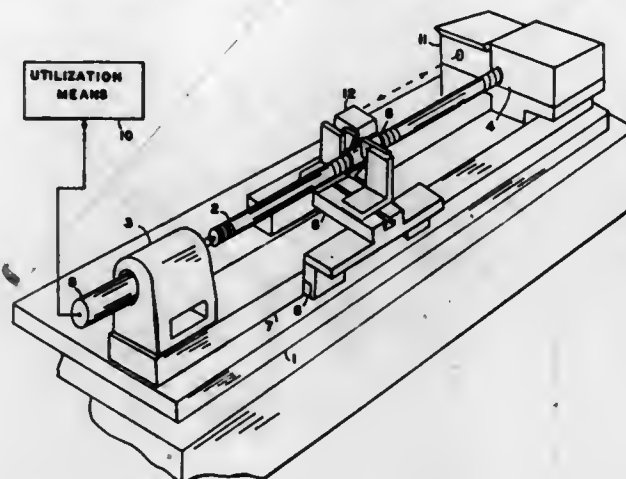
A photocomposing machine for copying a design from a relatively narrow width film onto the entire length of an elongated cylinder. The machine provides structure for copying the design from the film on the printing cylinder in a predetermined position, and then moving the film to a predetermined next registering position to thereby copy designs along the length of the printing cylinder. An elongated cylindrical transparent rod or tubing functions as a light beam intensifier to provide an adjustable thin beam of light to the film for copying the impression thereon onto the photosensitive coating of the printing cylinder.

3,515,480
OPTO-ELECTRONIC RADIANT ENERGY BEAM RANGE FINDER
 Richard M. Altman, Beverly Hills, Calif., and Herbert D. Korones, Brighton, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
 Continuation-in-part of application Ser. No. 332,128, Dec. 20, 1963. This application July 24, 1967, Ser. No. 660,553
 Int. Cl. G01c 3/00
 U.S. Cl. 356—4 11 Claims



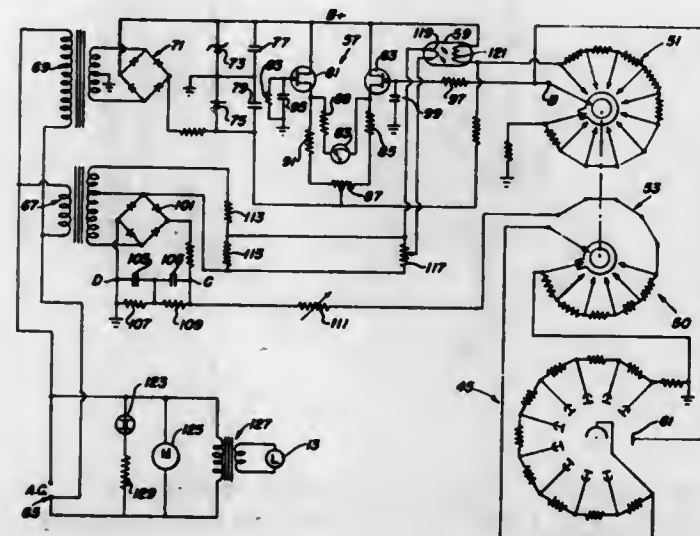
An opto-electric long distance range finder comprising means for projecting a small extremely coherent and monochromatic pulsed radiation such as a laser beam upon a distant solid object, the beam which is reflected from said surface being received by complex receiving apparatus including an optical telescope which views said object and a radiation pulse sensing electrical device which simultaneously receives the incoming radiation pulses and evaluates the time displacement thereof against the pulsed transmitted beam to yield a range value.

3,515,481
LEAD SCREW MEASURING MEANS
 Andre R. Brault, North Merrick, and Anwar K. Chitayat, Plainview, N.Y., assignors to OPTOMECHANISMS, Inc., Plainview, N.Y.
 Filed Sept. 9, 1966, Ser. No. 578,201
 Int. Cl. G01n 21/00
 U.S. Cl. 356—73 4 Claims



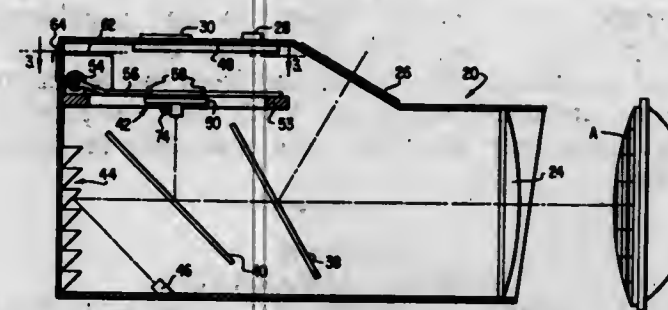
A lead screw to be tested is rotatably mounted by a headstock and a tailstock. A traveling carriage is mounted on air bearings. The carriage is connected to be driven by and parallel to the rotatably mounted lead screw by means of a nut or other means such as a probe or quill type follower. The carriage movement is measured by an interferometer.

3,515,482
AEROSOL PHOTOMETER WITH IMPROVED ELECTRONIC CIRCUITRY
 Peter J. Garrow, Oakland, and Edwin H. Colledge, Vacaville, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
 Filed June 27, 1967, Ser. No. 649,366
 Int. Cl. G01n 21/12, 21/26; H01j 39/12
 U.S. Cl. 356—103 3 Claims



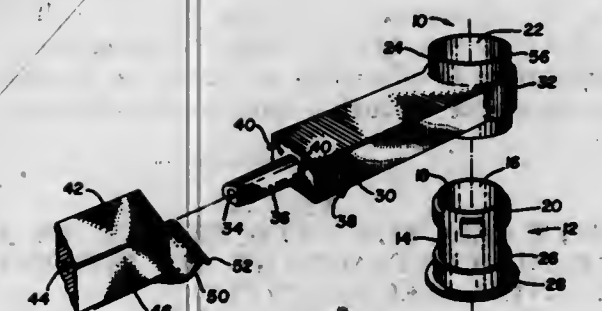
A detection device for detecting atmospheric contaminants by passing light through sampled air and collecting the light scattered by the contaminants in the sampled air in a mirror system that focuses the scattered light on a light sensing device for continuous monitoring. An electronic circuit including field effect transistors, a photoreistor and gang switches for providing automatic control, high impedance compatible with photomultiplier tube light sensing devices, and means for cancelling out the stray light and dark current of the photomultiplier tube.

3,515,483
METHODS OF AIMING AND DETERMINING MISALIGNMENT OF VEHICLE HEADLIGHTS
 Lee K. Irwin, Emporia, Kans., assignor to Hopkins Manufacturing Corp., Emporia, Kans., a corporation of Kansas
 Filed Feb. 10, 1966, Ser. No. 526,598
 Int. Cl. G01j 1/00
 U.S. Cl. 356—121 7 Claims



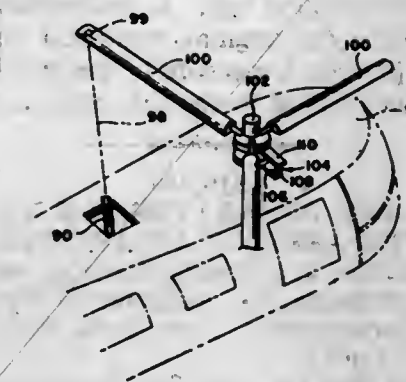
Methods of aiming and determining the misalignment of headlights involving the generating of a beam image of substantially constant light intensity. The light intensity of one or more peripheral portions of a normal image of the beam is measured and compared with the light intensity of the reference image of substantially constant light intensity. The location of the normal image, where the light intensity measurements of peripheral portions bear desired fractional relationship to the light intensity of the reference image, determine either a condition of desired alignment or a degree of misalignment of the beam.

3,515,484
ADJUSTABLE VACUUM CHUCK FOR HOLDING LENSES HAVING DIFFERENT RADII DURING OPTICAL EXAMINATION
 Robert H. de Normand, Riga, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
 Filed May 16, 1968, Ser. No. 729,723
 Int. Cl. B25b 11/00
 U.S. Cl. 356—124 6 Claims



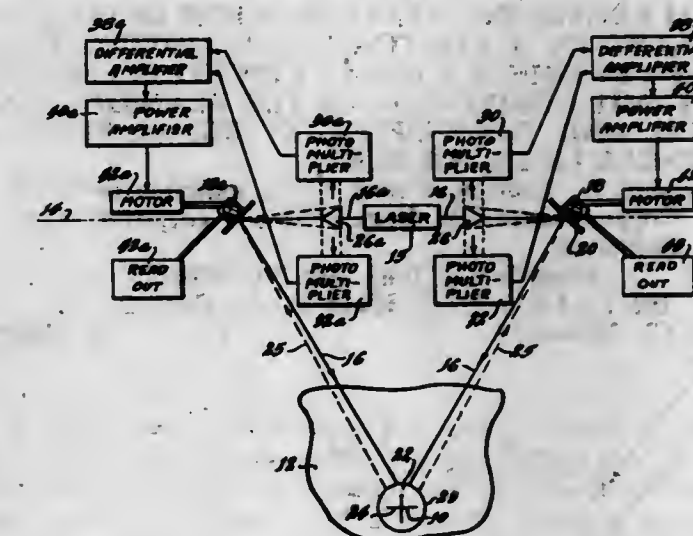
An adjustable vacuum chuck for holding lenses having different radii during optical examination is provided in which a vacuum chamber configured as an axially extended annular space is formed between two telescoping tubular members. The lens to be examined is held on a seat which is formed by one end of each of the tubular members, the other end of the vacuum chamber is effectively sealed by an enlarged section of the inner tubular member. A hole is provided in the wall of the outer tubular member for connecting a vacuum pump to the vacuum chamber in the chuck. A beam of light, as from a laser, may be passed unobstructed through the inner member to optically examine the lens while it is being held.

3,515,485
BLADE TRACKING SYSTEM
 Edward C. Frank, Glenolden, Pa., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
 Filed Dec. 29, 1966, Ser. No. 605,698
 Int. Cl. G01b 11/26
 U.S. Cl. 356—152 11 Claims



A helicopter mounted blade tracking system for indicating the displacement characteristics of the planes of rotation of rotating helicopter blades. The blade tracking system directs a defined beam of coherent energy, such as a beam of coherent light, upwardly, from the fuselage of the helicopter, and into the planes of rotation of the blades. A signal generating energy sensitive element is mounted near the tip of each blade and receives the beam of energy only when the blade is describing a specific plane of rotation relative to the angular direction of the beam. Upon alignment of the element in a blade with the beam, a signal is generated, and the displacement characteristics of the blade with respect to an established plane of reference can be determined from the angular direction of that beam with the plane of reference.

3,515,486
OPTICAL RANGING DEVICE
 Robert H. Vonderohr, Downers Grove, Ill., John H. Doede, Shorewood, Minn., and Carl W. Lindenmeyer, Aurora, Ill., assignors to the United States Atomic Energy Commission
 Filed Nov. 22, 1967, Ser. No. 685,178
 Int. Cl. G01b 11/27
 U.S. Cl. 356—152 9 Claims



A CW laser transmits a collimated light beam of circular cross section along a reference line to a flat rotatable mirror which reflects the beam to a curved mirror located at an object point. The curved mirror reflects the collimated light with an elliptical cross section back along its transmitted path to a beam splitter located intermediate

the flat mirror and the laser along the reference line. The beam splitter divides the reflected elliptical light into two beams whose intensities are proportional to deviation of the reflected elliptical light from the reference line. Differential light responsive means derives a signal from the dual beam output from the beam splitter to drive the rotatable flat mirror and effect axial coincidence between transmitted and reflected light. A resolver and phase comparator determine the angular rotational position of the flat mirror to provide a measure of the spatial position of the object point relative to the reference axis.

3,515,487

METHODS AND APPARATUS FOR MEASURING THE AREA OF AN ARTICLE

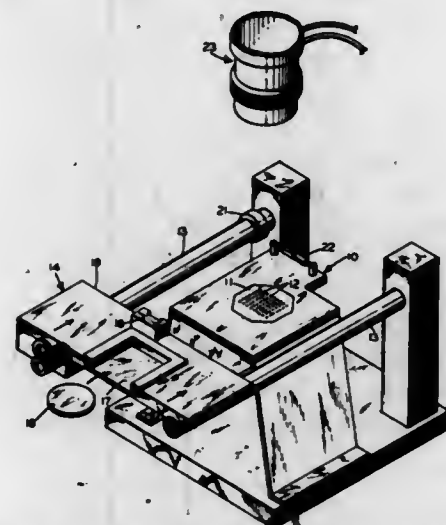
Arthur L. Hatcher, Jr., Sinking Springs, and Arthur G. Naylor, Wyomissing, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 20, 1966, Ser. No. 603,352

Int. Cl. G01b 11/28

U.S. Cl. 356-157

7 Claims



The area of an article can be measured by inserting same between an array of light-activated silicon controlled rectifiers connected in parallel, and a light source. The rectifiers are so arranged that each produces a negligible output upon receiving light energy and produces an output signal upon the absence of light energy. Circuitry is provided for summing the output signals.

3,515,488

FILM EXAMINING APPARATUS FOR DETECTING FLAWS IN A CONTINUOUSLY MOVING FILM WEB IN WHICH A DELAY CIRCUIT IS USED TO PERMIT DERIVING BOTH THE BLANKING SIGNAL AND THE INSPECTION SIGNAL FROM A SINGLE LIGHT SOURCE

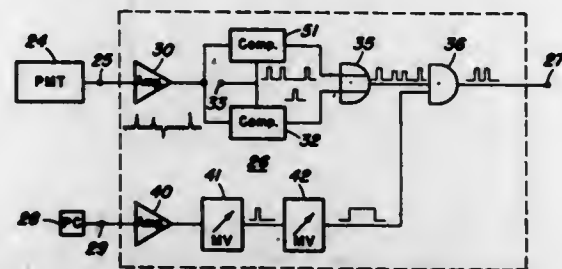
Robert W. Houser, Vestal, N.Y., assignor to GAF Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 8, 1968, Ser. No. 696,285

Int. Cl. H01j 39/12; H01n 21/30; G01n 21/16

U.S. Cl. 356-200

6 Claims



A laser beam is directed to a web of film, and a reflected beam is picked up by a photomultiplier tube. To distinguish between edge and defect signals, and further to read defect signals which increase or decrease the in-

tensity of the reflected beam, an electronic recognition circuitry is provided which includes a pair of reference comparators to compare average, low defect outputs from the photomultiplier tube with the actual output and providing trigger pulses whenever there is a substantial change, in increasing or decreasing direction; a second photoelectric cell is located next to the web, energized upon the beginning of a transverse scan, triggering a time delay circuit adjusted for the scanning time from the cell to the edge of the film, which in turn triggers a one-shot multi-vibrator adjusted to have a pulse time corresponding to the width of the film. Output from the second one-shot multi-vibrator and from the defect comparators are combined in an AND Gate, to provide a defect signal only when the beam is actually on the web of film.

3,515,489

OPTICAL APPARATUS

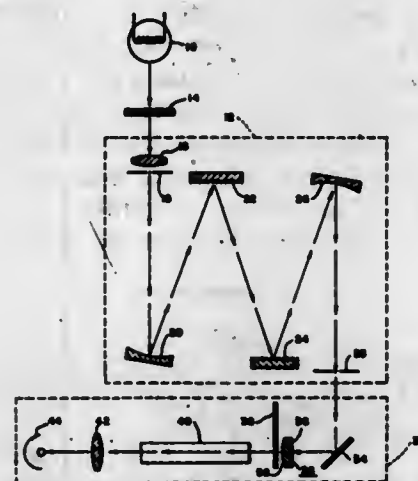
James J. Chisholm, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Mar. 3, 1966, Ser. No. 531,508

Int. Cl. G01n 21/22

U.S. Cl. 356-201

4 Claims



Disclosed is an optical system for a photometer wherein there is provided means for effectively collimating radiation rays from a source of radiation having an elongated shape. The system is further characterized in that use is made of a pseudo collimating effect for controlling the path of incident radiation. Pseudo collimating is achieved by a lens of a particular combination of surface configurations to effectively collimate the rays emanating from the source through a sample compartment.

3,515,490

SAMPLE CELL FOR DETECTION OF AN ATMOSPHERIC CONTAMINANT BY INTERNAL REFLECTION SPECTROMETRY

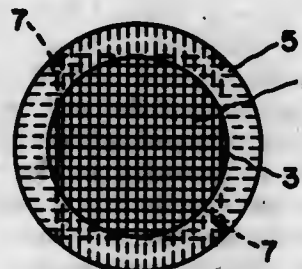
Marc George Dreyfus, Stamford, Conn., and Edward Bleistein, Queens Village, N.Y., assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 11, 1967, Ser. No. 630,033

Int. Cl. G01n 21/16

U.S. Cl. 356-244

7 Claims



Formation of thin liquid films from liquid aerosols by use of thin mesh screen and combination of thin

mesh screen and frustrated multiple internal reflection cell as detection device for liquid aerosols and gases.

3,515,491

FLUID SAMPLE FLOW CELL

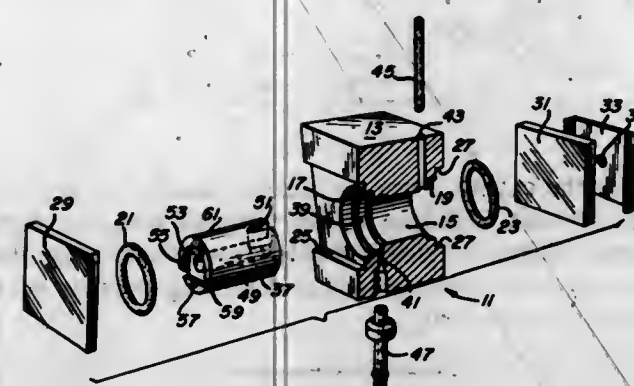
Robert J. Emery, Oberlin, Ohio, assignor to Gilford Instruments Laboratories, Inc., Oberlin, Ohio, a corporation of Ohio

Filed Oct. 27, 1966, Ser. No. 589,935

Int. Cl. G01n 1/10, 1/20

U.S. Cl. 356-246

14 Claims



A configured cylindrical passageway within a fluid sample flow cell. At the entry end of the passageway there is an elongate entrance parallel to the axis of the passageway. Near the exit end of the passageway there is a coaxial well and a cross-channel, only the ends of which are in fluid communication with the well. The cell has an exit port whose entrance is exclusively in communication with the coaxial well. In a preferred embodiment, an inert cylindrical insert defines the passageway, elongate entrance, and cross-channel. The latter embodiment is further improved by a chemical treating process which increases the wettability of the passageway.

3,515,492

COMBINED PHYSICAL COLOR AND SUBJECTIVE COLOR

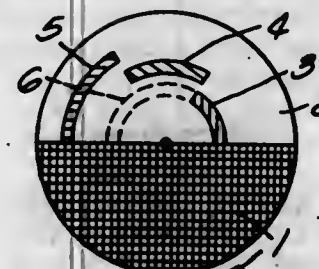
James F. Butterfield, Van Nuys, Calif., assignor to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Filed Mar. 24, 1967, Ser. No. 625,813

Int. Cl. G09f 19/12, 13/34

U.S. Cl. 356-256

20 Claims



Physical color and subjective color may be combined to provide mixed color or saturated color. This may be accomplished by modulating light emanating from a physical color in accordance with a subjective color code, such as by modulating a physical color light source in accordance with a subjective color code, and if the code is one for producing a subjective color of the same hue as the physical color the result will be highly saturated color. These concepts may be used in conjunction with color television, lasers, signal lights, displays, and the like. Also disclosed is the modulation of a light source with a complex code to provide subjective color.

3,515,493

HOLDER FOR STICK OF PASTY MATERIAL

Ralph Grucka, Saint-Maur, France, assignor to Ejector S.A., Geneva, Switzerland, a company of Switzerland

Filed Sept. 26, 1967, Ser. No. 669,025

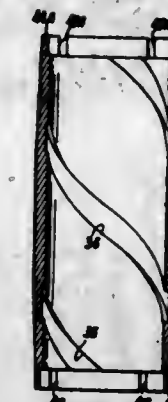
Claims priority, application France, Sept. 22, 1966,

77,220; June 2, 1967, 166,851

Int. Cl. A43d 40/04

U.S. Cl. 401-74

7 Claims



A holder for a lipstick or the like is provided with two relatively rotatable tubular shells and a cup for holding the stick. Radial lugs on the cup extend through slots in the shells. The slots in one shell are axial and in the other are helical so that the cup moves axially on relative rotation of the shells. A cover encloses the shells. In order to reduce the likelihood of inadvertent relative rotation thereby pushing the stick onto the cover, mutually engaging friction surfaces are provided on the shells.

3,515,494

SELF-PRIMING FLUID PUMP

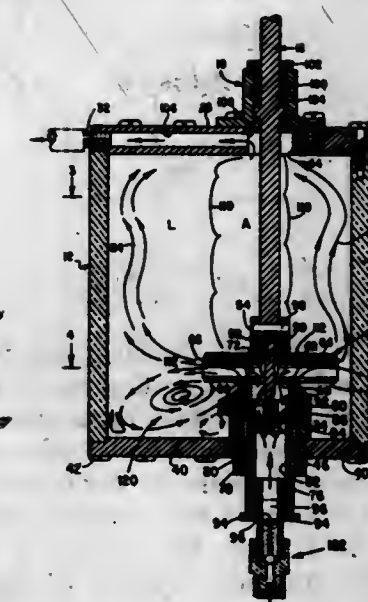
Oscar Pross, Hollywood, Fla., assignor to Coulter Electronics, Inc., Hialeah, Fla., a corporation of Illinois

Filed Apr. 9, 1968, Ser. No. 719,906

Int. Cl. F04d 13/02, 9/00, 29/08

U.S. Cl. 415-53

3 Claims



A self-priming centrifugal fluid pump having a cylindrical housing, a shaft eccentrically mounted within the housing, an impeller mounted upon said shaft for rotation within the housing, an inlet path through the impeller and an outlet path having its entrance in the vicinity of the shaft, the impeller being of shallow cylindrical configuration and having an entrance, radial passageways leading from the axial entrance to the housing interior and a plurality of secondary axial openings communicating with the radial passageways with the net effect that air entering the pump is discharged preferentially from the impeller and from the outlet thereby making.

ing the pump self-priming. There further is described a deep-sea fluid sampling head system in which the pump of the invention is advantageously utilized.

3,515,495 SUBMERSIBLE PUMP ASSEMBLY

Albert Blum, Scheidegger, Siegreis,
Bezirk-Cologne, Germany

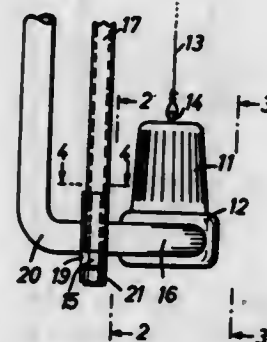
Filed Feb. 27, 1968, Ser. No. 708,689

Claims priority, application Germany, Feb. 28, 1967,
B 91,389

Int. Cl. F04d 13/02; F04b 21/00

U.S. Cl. 415-126

5 Claims



This invention is essentially concerned with a submersible pump assembly wherein guide means are provided for guiding a pump into a liquid to be pumped, such that downward movement of the pump effectively connects the pump outlet to a delivery conduit.

3,515,496 VARIABLE CAPACITY POSITIVE DISPLACEMENT PUMP

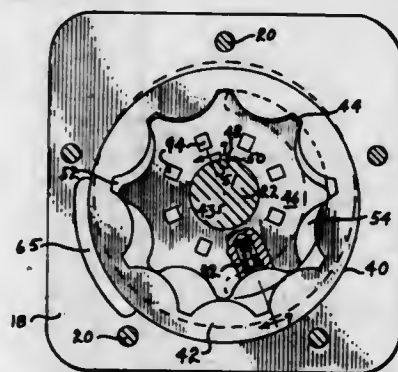
Robert T. Eddy, South Bend, Ind., assignor to Reliance Electric Company, a corporation of Delaware

Filed May 6, 1968, Ser. No. 726,877

Int. Cl. F04c 1/02, 15/02, 17/06

U.S. Cl. 417-440

10 Claims



A pump of the positive displacement type having a rotor defining a series of expanding and a series of contracting pump chambers, a fluid inlet passage connected to the inlet chambers and fluid outlet passages connected to the contracting chambers. A rotatable port plate is mounted along the side of the chamber for removing a portion of the fluid from the contacting chambers to vary the effective pumping capacity of the contracting chambers.

3,515,497 CENTRIFUGAL PUMP HAVING HYDRAULIC SEAL MEANS

James B. Studebaker, Littleton, Irvin F. Zagar, Denver, and Lawrence T. Goble, Arvada, Colo., assignors to A. R. Willey and Sons, Inc., Denver, Colo.

Filed Aug. 27, 1968, Ser. No. 755,586

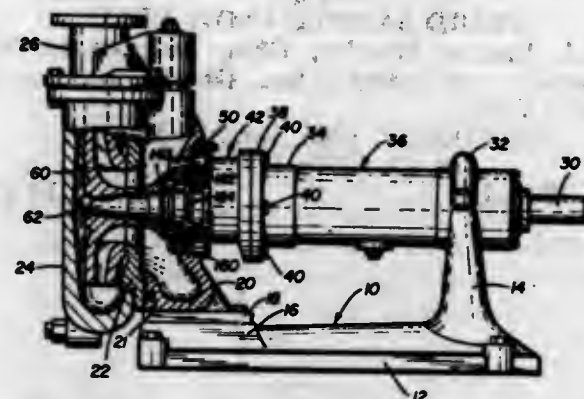
Int. Cl. B65d 53/00; F04d 29/00, 1/00

U.S. Cl. 415-112

8 Claims

Hydraulic seal producing expeller means is provided between the impeller of the pump and sealing means which seals a valvular space between the pump shaft and

the adjacent casing. The expeller means includes a plurality of separate axially spaced expeller plates carried by the shaft and having vanes thereon. The plates are separated from one another by separator plate means



carried by the casing. Purging means includes an arrangement for introducing fluid under pressure into the expeller means. Means is also provided for introducing fluid into the space between oppositely pumping expeller plates to provide a vapor seal.

3,515,498 BLOWER

Akira Tomita, Kawaguchi-shi, Saitama-ken, Japan, assignor to Asahi Denryo Kabushiki Kaisha, Saitama-ken, Japan, a company of Japan

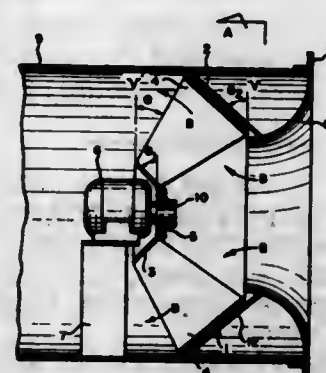
Filed Sept. 23, 1968, Ser. No. 761,527

Claims priority, application Japan, Oct. 28, 1967,
42/91,235

Int. Cl. F04d 19/00, 29/26, 25/26

U.S. Cl. 415-208

3 Claims



A blower comprising an impeller means having an inner ring and an outer ring provided at an angle of 30 to 60 degrees to the line perpendicular to the center of the axis of the wind channel and a suitable number of vanes radially arranged between the said rings.

3,515,499 BLADES AND BLADE ASSEMBLIES FOR TURBINE ENGINES, COMPRESSORS AND THE LIKE

Rudolf E. Beer and Clarence E. Klessig, Carmichael, and Richard J. La Botz, Fair Oaks, Calif., assignors to Aerojet-General Corporation, El Monte, Calif., a corporation of Ohio

Filed Apr. 22, 1968, Ser. No. 722,999

Int. Cl. F01d 5/08, 5/18

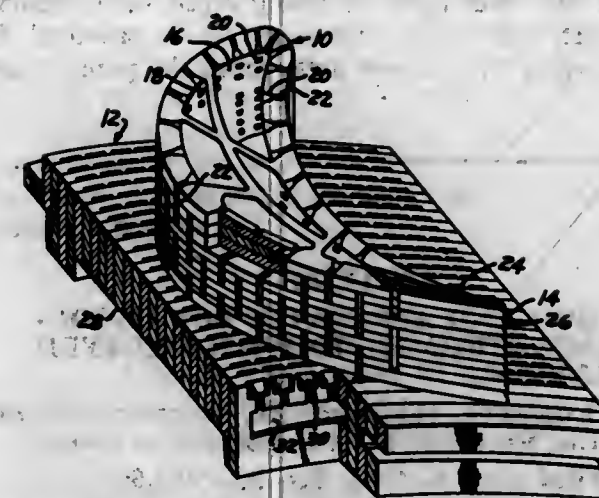
U.S. Cl. 416-95

20 Claims

Blades and blade assemblies for use in turbine engines, compressors and the like comprising a stack of a plurality of discrete wafers bonded together to form a unitary structure. A controlled pattern of flow passages is provided on a planar surface of each wafer and a means is provided for delivering coolant to the flow passages. Slots are provided in the edge surface of each wafer and each slot is in fluid communication with a flow passage on each of the wafers. The slots and flow passages may be curved to

improve cooling of the blade assembly. The wafers are sufficiently thin to permit thermal equilibrium between

angularly spaced apart blades, and interconnecting the root portions of the blades by means of at least one length of fibrous material through which are transmitted centrifugal stresses produced on rotation of the assembly.



the wafers and the coolant in the flow passages so that maximum exploitation of the coolant is attained.

3,515,500 AIRCRAFT ROTOR OR PROPELLER HAVING BLADES WHICH FOLD WITH PITCH CONTROL MECHANISM CONTROLLING BLADE PITCH DURING NORMAL OPERATION AND DURING THE FOLDING AND UNFOLDING OPERATION

James H. Nachod, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 20, 1968, Ser. No. 714,533

Int. Cl. B64c 27/28, 27/50

U.S. Cl. 416-142

30 Claims



An aircraft propeller or rotor having blades intended to be folded in flight and including provisions for controlling the blade pitch during normal rotor operation and during blade folding operation, the latter including a cam and follower cooperating between the blade and the rotor hub.

3,515,501 ROTOR BLADE ASSEMBLY

Jack Palfreyman, Tansley, near Matlock, Derby, and Henry Edward Middleton, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

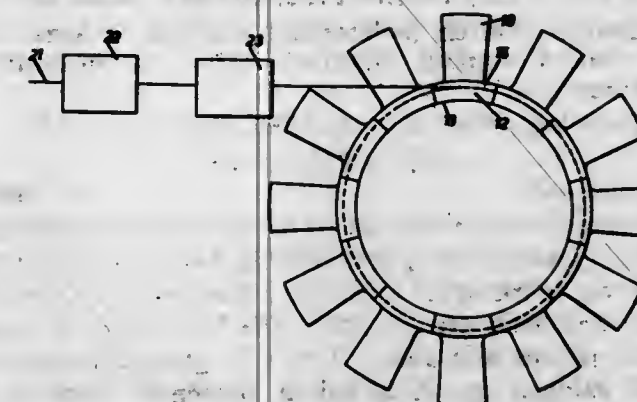
Filed Apr. 11, 1968, Ser. No. 720,600

Claims priority, application Great Britain, Apr. 12, 1967,
16,873/67

Int. Cl. F01d 5/24

U.S. Cl. 416-193

11 Claims



The invention concerns a method of making a rotor blade assembly comprising forming at least one row of

3,515,502 MULTIPURPOSE CONTROL VALVE

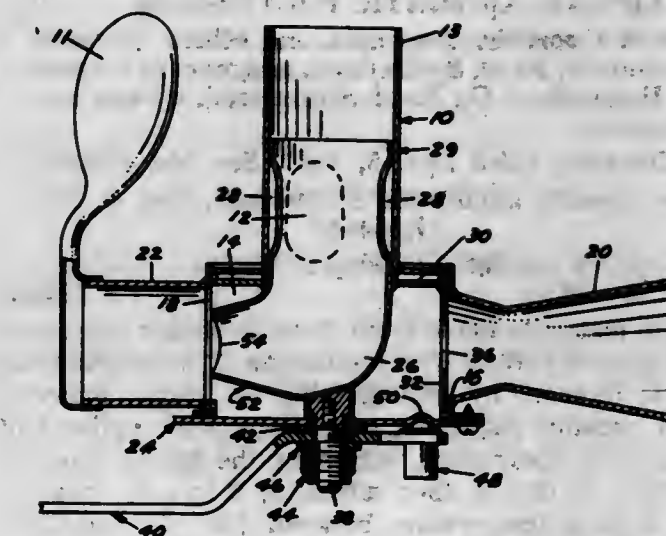
John E. Coordan, Oakland, Mich., assignor to the United States of America as represented by the Secretary of the Army

Filed July 26, 1967, Ser. No. 656,637

Int. Cl. F04f 5/20, 5/48

U.S. Cl. 417-178

10 Claims



A multipurpose control valve comprising an outer casing having an inlet tube, a cylindrical valve chamber, an aspirator and an exhaust tube, an inner casing rotatably journaled in said outer casing and comprising an elbow-shaped tubular member and a control handle for varying the direction of flow and function of the valve, said valve incorporating the functions of a directional valve, an aspirator and a relief valve in a single composite structure.

ERRATUM

For Class 417-440 see:
Patent No. 3,515,496

3,515,503 PUMP STRUCTURE

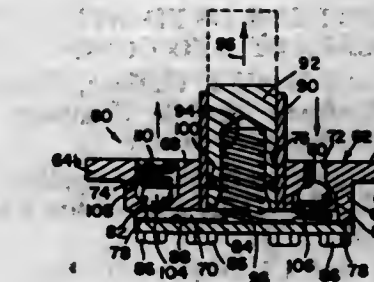
Larry J. Metheny and Joseph R. Mibelick, Columbus, Ind., assignors to Reliance Electric Company, a corporation of Delaware

Original application May 23, 1968, Ser. No. 731,487, now
Patent No. 3,482,651. Divided and this application
Sept. 4, 1969, Ser. No. 855,186

Int. Cl. F04b 19/22; F16n 21/00

U.S. Cl. 417-559

11 Claims



A pump comprising a housing member formed with a centrally located cavity in one generally flat face thereof, the cavity defining a perimetral extending mounting

boss, a first bore extending therethrough and generally perpendicularly to the said one face and providing a first valve seat facing the said one face, a second bore extending therethrough and generally parallel to the first bore and providing a second valve seat facing away from the said one face, and a third bore extending therethrough and generally parallel to the first bore, a plunger ar-

ranged for axial reciprocation in the third bore, and a plate mounted on the perimetally extending mounting boss and covering the cavity to define a pump chamber into which the bores open. A spring urged valve member engages each valve seat and a spring is provided for yieldably urging the plunger away from the pump chamber.

CHEMICAL

3,515,504

METHOD FOR CONTINUOUS DYEING OF TEXTILE MATERIALS MADE FROM LINEAR AROMATIC POLYESTERS

Hendrik Goorhuis, Birmingen, and Milica Urosevic-Jovanovic, Basel, Switzerland, assignors to Durand & Hoguenin A.G., Basel, Switzerland, a Swiss corporation

No Drawing. Filed Dec. 5, 1967, Ser. No. 688,005
Claims priority, application Switzerland, Dec. 6, 1966, 17,364/66

Int. Cl. D06p 3/56

U.S. Cl. 8-46

5 Claims

Textile materials made from linear aromatic polyesters are continuously dyed, with production of water-insoluble azo dyes thereon, by impregnating the textile material with an aqueous dispersion of a diazotizable amine and of a coupling component, subjecting the textile material to steaming or drying, then subjecting it to a dry heating treatment at a temperature between 140° C. and 230° C., and finally treating it with an aqueous solution of an acid and a salt of nitrous acid, all these operation steps being carried out in succession in a continuous manner.

3,515,505

TEXTILE PROCESS WHICH USES CONCENTRATED SULFURIC ACID AFTER RESIN TREATMENT

Hans Kraenig and Ricardo Bellvill, Schwerzenbach, Switzerland, assignors, by same assignments, to Heberlein & Co. A.G., Wattwil, St. Gall, Switzerland, a corporation of Switzerland

No Drawing. Continuation-in-part of application Ser. No. 470,895, July 9, 1965. This application Dec. 14, 1965, Ser. No. 513,812

Claims priority, application Switzerland, July 10, 1964, 9,094/64

Int. Cl. D06m 13/12

U.S. Cl. 8-116.3

16 Claims

The instant invention is concerned with a process in which textile materials are treated with resin precondensate, dried below the curing temperature, and then treated with an aqueous solution of concentrated sulfuric acid to fix the precondensate and removing the acid.

3,515,506

POLYPROPYLENE DYED WITH METAL COMPLEXES OF AZO COMPOUNDS

James M. Straley and David J. Wallace, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 394,063, Sept. 2, 1964. This application Feb. 23, 1968, Ser. No. 707,438

Int. Cl. D06p 1/10

U.S. Cl. 8-42

8 Claims

Polypropylene fibers dyed with a complex metal compound containing one atom of nickel or cobalt in complex union with two moles of certain ortho-alkoxyphenylazo-hydroxy-naphthoic acid amides and esters.

3,515,507

METHOD AND APPARATUS FOR DECONTAMINATING FLUID WITH DELAYED FILTERING

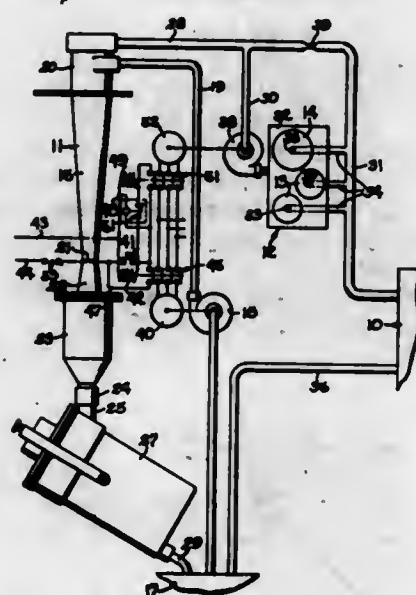
Mark R. Estabrook, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois

Filed Aug. 6, 1968, Ser. No. 750,567

Int. Cl. D06f 43/02, 39/10; B01d 37/00

U.S. Cl. 8-158

5 Claims



A drycleaning and fluid decontamination apparatus and method wherein fluid initially is circulated from a reservoir through a hydroclone separator, then through a washer and a batch of articles to be cleaned, and then back to the reservoir for recirculation. After the separator has cleaned the fluid (and the batch) for a timed interval, a timer starts a pump which directs the output of the hydroclone through final cleaners in the form of filter and chemical cartridges for the remainder of the cycle, the clean fluid from the final cleaners passing through the washer and back to the reservoir.

3,515,508

SYNTHESIS OF SINGLE CRYSTALS OF $ZrSiO_4$ AND $HfSiO_4$ BY A HALOGEN TRANSPORT REACTION

Fritz Halliger, Zurich, Switzerland, assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 6, 1968, Ser. No. 727,056

Int. Cl. C01b 33/20

U.S. Cl. 23-21

6 Claims

Well-shaped single crystals of tetragonal zirconium and hafnium silicates, $ZrSiO_4$ and $HfSiO_4$, are prepared by the halogen vapor transport technique. Metallic zirconium or hafnium and SiO_2 are heated at the hot end in a vapor transport system with about 10^{-4} to 10^{-3} gram equivalents/cm² of halogen gas X added in elemental form or as zirconium tetrahalide, ZrX_4 or HfX_4 , respectively, in which X is chlorine, bromine or iodine, the hot end of the transport zone being maintained at a temperature

between 1150° and 1250° C., with the cool end of the zone at 1050° to 1150° C. The SiO_2 may be present in the form of powder or wool, or may be derived from the walls of an uncoated quartz tube if the latter is used as the container during the process. Where separate SiO_2 is introduced, the surface of the tube can be of some other material, such as for example a coating of silicon carbide. The presence of small amounts of antimony, arsenic or phosphorus, of the order of about 1/10 as much as the zirconium or hafnium metal, seems to speed up the transport process.

3,515,509

PROCESS FOR EXTRACTING AND CONCENTRATING EUROPIUM

Paul Rombeau, Guillaumont, France, assignor to Produits Chimiques Pechiney-Saint-Gobain, Neuilly-sur-Seine, France

No Drawing. Filed Jan. 16, 1967, Ser. No. 609,296

Claims priority, application France, Jan. 31, 1966, 47,789

Int. Cl. C22b 59/00

U.S. Cl. 23-22

9 Claims

The process of extracting europium from others of the rare earth metals comprises reacting the mixture containing the europium in the normal trivalent state with bivalent samarium in the presence of sulphuric acid to reduce the trivalent europium to bivalent europium sulfate.

3,515,510

RECOVERY OF ZINC VALUES FROM SULFIDE ORES

Ernest A. Winter, College Park, Ga., William A. Satterwhite, Lakeland, Fla., and Richard L. Meek, Atlanta, Ga., assignors to Tennessee Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 28, 1967, Ser. No. 700,314

Int. Cl. C01g 9/00

U.S. Cl. 23-55

14 Claims

Roasted zinc sulfide ore is heated in the presence of a reducing agent in order to reduce the zinc ferrite formed in the roasting operation from the ferric to the ferrous state. The ore is thereafter leached with an alkaline solution in order to extract a very high percentage of the zinc values as an alkaline zincate solution. Only trace amounts of the iron and manganese present in the sulfide ore are dissolved in the alkaline solution.

3,515,511

FAUJASITE PRODUCTION

William H. Flank, Broomall, Pa., assignor to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Aug. 22, 1967, Ser. No. 662,304

Int. Cl. C01b 33/26, 33/28; B01j 11/40

U.S. Cl. 23-112

2 Claims

A catalytic grade of raw kaolin is calcined at a temperature above about 965° C. and below about 1095° C. to provide a reactive kaolin which, upon DTA (i.e., Differential Thermal Analysis) at about 980° C., exhibits an exotherm which is less than 15% of the DTA exotherm of raw kaolin. A composition is prepared consisting of: from about 2 to about 6 parts of such calcined kaolin; from about 2 to about 6 parts of water; and about 1 part of sodium hydroxide equivalent. This composition is promptly transferred to an aging zone in which the heat transfer fluid is maintained at a substantially uniform temperature. Particular attention is directed to the feature of maintaining the composition quiescently in only a single aging zone for from about 14 hours to about 14 days until the desired concentration of sodium faujasite has developed, whereupon the product is withdrawn from the aging zone. The procedure has the advantages of high selectivity for sodium faujasite preparation (i.e., small

proportions of other zeolites). Surprisingly, the single stage of quiescent aging provides reproducibility of faujasite formation when the process is conducted by factory technicians, and is accordingly superior to multi-step aging procedures sometimes producing products other than the desired sodium faujasite.

3,515,512

COMPLEX SULFITES OF COPPER AND IRON AND THE METHOD OF PREPARING THEM

Roald R. Sharbo, Lexington, Mass., assignor to Kennecott Copper Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 5, 1968, Ser. No. 695,864

Int. Cl. C01g 1/14

U.S. Cl. 23-129

12 Claims

Complex sulfites containing copper, iron, and a metal selected from the metals of Groups Ia, IIa, VIIb and VIII other than iron of the Periodic Table, and the process for making the complex sulfites are claimed.

3,515,513

CARBONATION PROCESS FOR SO_2 REMOVAL

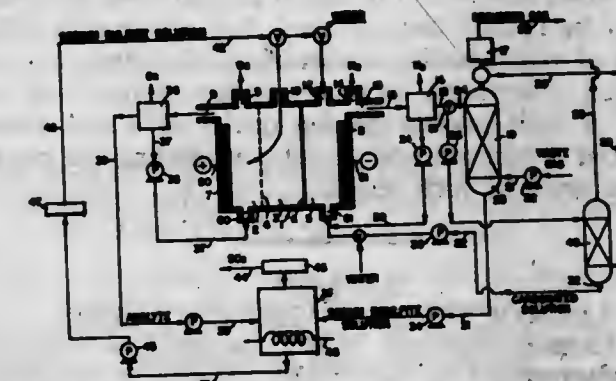
Edgardo J. Parsi, Watertown, Mass., assignor to Ionics, Incorporated, Watertown, Mass.

Continuation-in-part of application Ser. No. 704,284, Feb. 9, 1968. This application Feb. 3, 1969, Ser. No. 795,921

Int. Cl. C01b 17/56; B01d 13/02; B01k 3/00

U.S. Cl. 23-178

5 Claims



This invention is directed to increasing the current efficiency of the cation exchange membrane located next to the cathode in a three chamber cell for the electrolytic conversion of an alkali metal sulfate for use in the removal and recovery of sulfur dioxide contaminants from flue gases. After the removal of said sulfur dioxide contaminant from flue gas, carbon dioxide is introduced into the cell's catholyte solution by contacting catholyte solution with at least a portion of the said treated flue gas at any point in the catholyte system, preferably by recycling the catholyte solution between the cell's cathode compartment and a carbonation tower.

3,515,514

PRODUCTION OF HYDROGEN CONTAINING GASES

Peter Desmond Holmes, 9 Greenwich Cove Drive, Old Greenwich, Conn. 06870, and Alan Richard Thornhill, 131 Manor Green Road, Epsom, Surrey, England

No Drawing. Continuation-in-part of application Ser. No. 360,747, Apr. 17, 1964. This application May 25, 1967, Ser. No. 641,153

Claims priority, application Great Britain, Apr. 23, 1963, 15,935/63

Int. Cl. C01b 1/02

U.S. Cl. 23-212

13 Claims

Commercial methanol is cracked to give hydrogen by passing it first over a supported nickel catalyst to destroy impurities and then over a zinc oxide, copper oxide catalyst which may also comprise chromium oxide to complete the cracking.

3,515,515

PROCESS OF REDUCING PHOSPHORUS CONTENT OF SLUDGE OBTAINED AS A BYPRODUCT OF PHOSPHORUS MANUFACTURE

John A. Hinkbein, Manchester, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Original application Aug. 25, 1964, Ser. No. 391,895, now Patent No. 3,436,184, dated Apr. 1, 1969. Divided and this application July 22, 1968, Ser. No. 767,550

Int. Cl. C01b 25/02, 25/04

U.S. Cl. 23—223 2 Claims

The phosphorus content of sludge produced as a byproduct in condensing phosphorus containing gases in an aqueous medium is reduced by the presence of an oxidizing agent in the condensing medium.

3,515,516

METHOD FOR DETERMINING FEMALE HORMONE DEFICIENCY

Robert R. Horton, Santa Barbara, Calif., assignor, by direct and mesne assignments, to St. Croix Research Company, St. Paul, Minn., a corporation of Minnesota

No Drawing. Filed Dec. 28, 1965, Ser. No. 527,632

Int. Cl. G01m 15/02

U.S. Cl. 23—230 4 Claims

1. A method for determining the progesterone balance in a human female which comprises subjecting a sample of the cells obtained from a vaginal smear or from centrifuging a urine sample of such female for microscopic examination on a surface having calibrated markings thereon of about 5 microns whereupon cells within the field of observation having nuclei greater than this diameter may be readily distinguished from those cells within the field of vision having nuclei of smaller diameters, and from such observation ascertaining the approximate proportion of cells present having nuclei of a size greater than about 5 microns and thereby estimating the progesterone balance of such female.

3,515,517

LEUKOCYTE DNA VISCOSITY TEST

H. A. Carper, Pullman, Wash., assignor to Uni-Tech Manufacturing Co., Sun Valley, Calif., a corporation of California

No Drawing. Filed Jan. 31, 1967, Ser. No. 612,788

Int. Cl. G01m 11/08, 11/00, 31/16

U.S. Cl. 23—230 10 Claims

A method and an improved reagent for determining leukocyte numbers in body fluids. The estimation of blood leukocyte numbers is accomplished by an analytical deoxyribonucleic acid viscosity test. A lysing reagent is prepared by making a solution of sodium lauryl sulfate in aqueous disodium ethylenediaminetetraacetic acid. The analytical method comprises the steps of preparing a predetermined quantity of aliphatic sulfate reagent, adding a quantity of body fluid containing leukocytes to the reagent, mixing the reagent and the body fluid, and measuring the viscosity of the reagent-body fluid mixture. The viscosity of the unknown solution is compared to viscosities on standard calibration curves.

3,515,518

COOLANT FOR PROPELLANT ACTUATED GAS GENERATOR

Arthur M. Halstead, deceased, late of Ardmore, Pa., by Alberta M. Halstead, administratrix, Ardmore, Pa., and Oryp Nimylowicz, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army

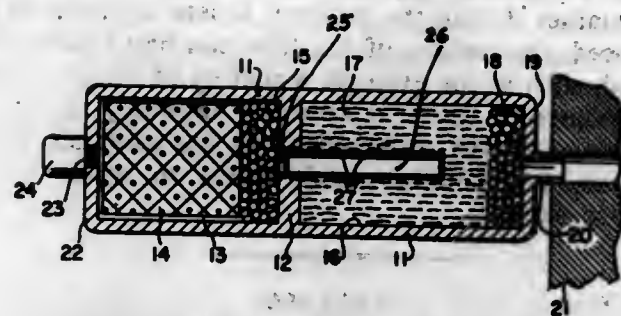
Filed Aug. 23, 1967, Ser. No. 662,826

Int. Cl. B01j 7/00; F42b 3/04

U.S. Cl. 23—281 4 Claims

A propellant actuated gas generator having a metallic carbonyl coolant such as molybdenum-hexacarbonyl in a

forward chamber and surrounding a dispersing tube for developing substantially permanent or sustaining gas pressure for inflating purposes. A first filter bed is positioned in the rearward chamber forward of the propellant and a second filter bed is located in the forward chamber forwardly of the metallic carbonyl coolant.



tioned in the rearward chamber forward of the propellant and a second filter bed is located in the forward chamber forwardly of the metallic carbonyl coolant.

3,515,519

APPARATUS FOR ELECTRIC ARC-CRACKING OF HYDROCARBONS

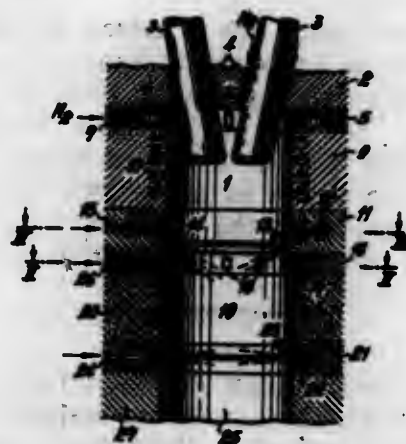
Kurt Sennwald, Knapsack, near Cologne, Ludwig Bender, Brühl, near Cologne, Klaus Gehrman, Knapsack, near Cologne, Heinrich Kallrath, Emmerting, near Burghausen, Gunter Peantek, Hermulheim, near Cologne, Erich Schallus, Cologne, Hans-Werner Stephan, Cologne-Klettenberg, and Lothar Strie, Knapsack, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany

Original application July 30, 1965, Ser. No. 475,938, now Patent No. 3,377,402, dated Apr. 9, 1968. Divided and this application Aug. 3, 1967, Ser. No. 658,082

Claims priority, application Germany, Aug. 11, 1964, K 53,716

Int. Cl. H05b 7/18; C07c 11/24

U.S. Cl. 23—284 3 Claims



An apparatus comprises in coaxial arrangement a conventional arc chamber, a circular cylindrical reaction chamber, and a circular cylindrical quenching chamber. Between the arc chamber and the reaction chamber there is an annular inclined slit. The reaction chamber is surrounded by an annular channel. An annular slit is disposed in the entrance portion of a quenching chamber.

3,515,520

REACTOR WITH INTERNAL PROTECTIVE SLEEVE FOR CORROSIVE SYSTEMS

George L. Hervet, Downers Grove, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,663

Int. Cl. B01j 3/02, 9/04

U.S. Cl. 23—290 1 Claim

A reactor for accommodating corrosive materials wherein a corrosion resistant liner is suspended within

3,515,522

METHOD OF PRODUCING ALKALI METAL BOROHYDRIDES

Vaclav Pecak, Jaroslav Vlt, and Vladimir Prochazka, Prague, Czechoslovakia, assignors to Ceskoslovenska Akademie Ved, Prague, Czechoslovakia

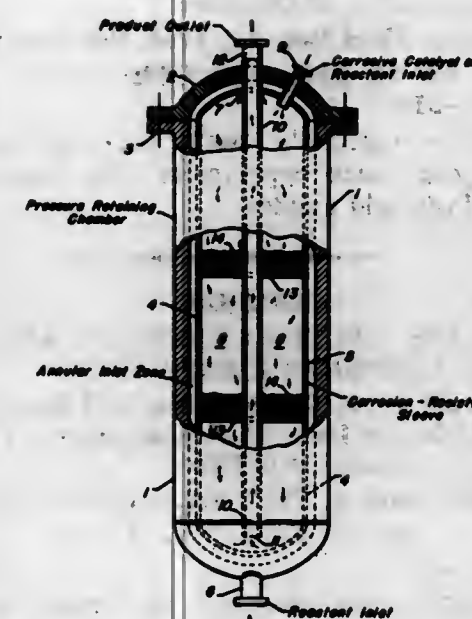
Continuation-in-part of application Ser. No. 585,216, Sept. 22, 1966. This application Aug. 8, 1967, Ser. No. 659,222

Claims priority, application Czechoslovakia, Aug. 13, 1966, 5,358/66; Oct. 24, 1966, 6,766/66

Int. Cl. C01b 6/14

U.S. Cl. 23—363 12 Claims

Alkali metal borohydrides, particularly sodium and potassium borohydrides are produced by forming a thin layer of a suspension in a liquid which is inert with respect to the reactants and the reaction product, of an alkali metal hydride which may be a sodium or potassium hydride, or a sodium or potassium aluminum hydride, and of a boron compound capable of reacting with the hydride under formation of the alkali metal borohydride and subjecting the thin layer of the suspension to a sufficiently high temperature so as to react the hydride and the boron compound under formation of the alkali metal borohydride. It is essential that the layer which is thus reacted is sufficiently thin so that the reaction will occur substantially simultaneously throughout the entire reacting cross-section of the layer, thereby preventing contact and possibly reaction between the reaction produce and as yet unreacted reactants.



passageway at the top of the liner for admission of such gases, and an adjacent corrosive fluid inlet into the liner, with centrally disposed discharge means from said liner for exit of reaction products of the corrosive and non-corrosive gases.

3,515,521

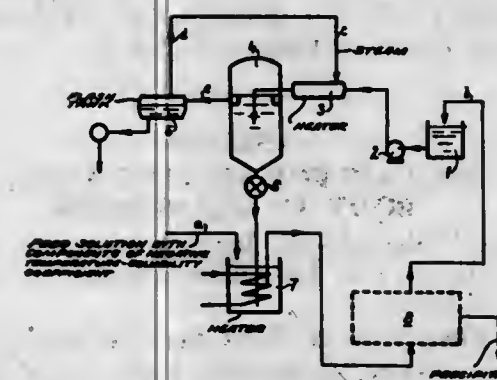
APPARATUS FOR THE SEPARATION OF SALTS FROM SOLUTIONS

Miroslav Čáp, 32 Dimitrovo nam., Prague 7, Czechoslovakia; Zdeněk Čiháček, 49 Mamesova, and Rudolf Dohnálek, 13 Blanická, both of Prague 2, Czechoslovakia; Jiří Chvojka, 111 Na Pankraci, Prague 4, Czechoslovakia; and Vítězslav Karkočka, 1125 Hlavní, Rychvald, Czechoslovakia

Filed Aug. 3, 1966, Ser. No. 569,915

Int. Cl. B01d 9/02

U.S. Cl. 23—273 2 Claims



A solution having a negative temperature solubility coefficient is first heated sufficiently to precipitate a solute which is separated. The solution is then heated at super-atmospheric pressure to further precipitate the solute. The remaining mother liquor is then removed and reduced in pressure converting the solvent to steam which is used to heat the mother liquor. Concentrated suspension is then returned to the first heating vessel.

3,515,524

SINTERED CARBIDE COMPOUND

Jinrich Grambal, Brno, Czechoslovakia, assignor to Zavody Jana Svermy, narodni podnik, Brno, Czechoslovakia

No Drawing. Filed July 18, 1967, Ser. No. 654,057

Int. Cl. B22f 7/06

U.S. Cl. 29—182.7 2 Claims

Composition of a sintered carbide composite using an admixture of phosphorus and possibly also of boron resulting in a reduction of the temperature for sintering the composite by about 300° to 400° C. A grinding tool comprising diamond particles bonded by said sintered carbide compound.

ERRATUM

For Class 29—182.8 see:
Patent No. 3,514,818

3,515,525

FIRE BUILDING DEVICE

Robert E. Fearon, Tulsa, Okla., assignor to Electro Chemical Laboratories Corporation, Tulsa, Okla., a corporation of Delaware

Continuation-in-part of application Ser. No. 340,933, Jan. 29, 1964. This application Sept. 5, 1967, Ser. No. 678,130

Int. Cl. C101 11/00

U.S. Cl. 44—38

3 Claims

The specification of which this a summary discloses fire-building compositions of oxidizing material which yield gaseous oxygen when heated, and heat and oxygen resistant support members to which masses of the oxidizing material are attached. The oxidizing material is made up from the class of chlorates, perchlorates or nitrates of the alkali metals, together with manganese dioxide, and with inert substances added to assist mechanical cohesion of the oxidizing material. Means of using the fire-building device are disclosed.

3,515,526

LIQUID SMUDGE FUEL COMPOSITIONS

Wesley R. Cherry, Prospect Park, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 28, 1966, Ser. No. 597,245

Int. Cl. C101 1/04, 1/14

U.S. Cl. 44—61

7 Claims

Liquid fuel compositions useful as smudge pot fuels comprise bituminous material and an additive. The additive is selected from the group consisting of ethylbenzene, cyclohexane, octene-1, octene-2 and styrene. The fuels may contain as little as 0.1 weight percent additive in the case of styrene or 0.5 weight percent when the other additives are used. The compositions may also contain a naphthalene ignitor and a petroleum solvent spirit.

3,515,527

CATALYTIC TREATMENT OF HYDROCARBONS

Robert George Cockerham and Thomas Alan Yarwood, Solihull, England, assignors to The Gas Council, London, England, a British body corporate

No Drawing. Filed July 25, 1966, Ser. No. 567,391

Claims priority, application Great Britain, Aug. 4, 1965, 33,414/65

Int. Cl. C01b 2/14; B01J 11/00

U.S. Cl. 48—214

5 Claims

A catalyst comprising nickel, alumina and an oxide, hydroxide or carbonate of an alkaline earth metal, the nickel and alumina having been prepared by co-precipitation, the proportions being such as to provide from 10% to 30% by weight of the alkaline earth metal and from 25% to 75% by weight of the nickel based on the combined weights of the nickel, alumina and alkaline earth metal. The alkaline earth metal is preferably barium. The catalyst has a long life and is suitable for the steam reforming of hydrocarbons at temperatures of 400° C.—600° C.

3,515,528

BLOCK COPOLYMER STRIPPABLE COATINGS OF BUTADIENE STYRENE BLOCK COPOLYMER CONTAINING A FATTY ACID AMIDE

William B. Luther and Donald L. Martinson, Long Beach, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 14, 1965, Ser. No. 513,832

Int. Cl. B24b 1/00; C08f 19/08

U.S. Cl. 51—310

7 Claims

Compositions especially useful for chemical milling masks comprise block copolymers with fractional percentages of fatty acid amides.

3,515,529

GLASS MELTING FURNACE AND METHOD OF OPERATION

William Harold Love, Toledo, Ohio, and Eastace Harold Mumford, Ottawa Lake, Mich., assignors to Owens-Illinois, Inc., a corporation of Ohio

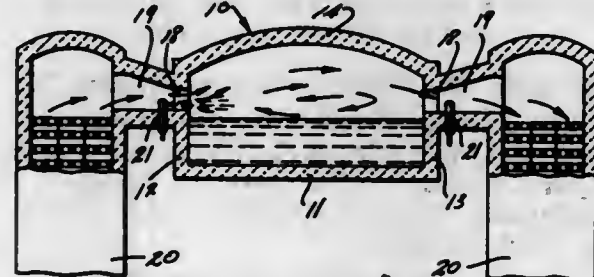
Filed June 8, 1967, Ser. No. 644,626

Int. Cl. C03b 5/16, 5/24

U.S. Cl. 65—27

11 Claims

A regenerative type glass melting furnace in which a combustible fuel is introduced through side wall ports opening into the furnace space above the glass level within the furnace. A fuel burner placed in each port is supplied with a fluid fuel under pressure, particularly fuel oil, without the introduction of air under pressure as an atomizing means. The fuel is sprayed into the region overlying the molten glass and batch to be melted. The burners along one side of the furnace are all fired at the same time, while the burners on the opposed side of the furnace are shielded by rotation of the fuel spray nozzle through an angle of approximately 90°, to thus



protect the non-firing burner nozzles from becoming clogged with the combustion products produced by the opposed set of burners. Intrusion of gases into the non-firing burners is also prevented by the introduction of air under slightly elevated pressure and the burners themselves, after firing, are purged of fuel oil.

3,515,530

PROCESS FOR SEALING METAL BODY TO GLASS BODY

Eizo Goto, Chigasaki-shi, Japan, assignor to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan

Filed May 29, 1967, Ser. No. 642,022

Claims priority, application Japan, June 1, 1966, 41/34,760, 41/34,761, 41/34,762; Sept. 21, 1966, 41/61,893

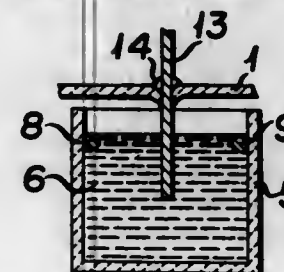
Int. Cl. C03c 27/04, 27/02; C03b 23/26

U.S. Cl. 65—43

8 Claims

A metal body is sealed to a glass body by positioning a glass body adjacent a bath of molten glass so as to soften the glass body locally by the radiated heat from the bath. Pressing the metal body to be sealed to said glass body on the softened part of said glass body in such a manner that said metal body can penetrate through said glass body, to immerse at least a part of said metal body pene-

trated through said glass body in said molten glass bath so that the part of said glass body contacted with said



metal body can be sealed thereto by the heat conducted through said metal body.

3,515,531

HIGH TEMPERATURE TRACTION ROLLS

Norman Shorr, Pittsburgh, and Hubertus W. V. Willems, Natrona Heights, Pa., assignors to PPG Industries, Inc., a corporation of Pennsylvania

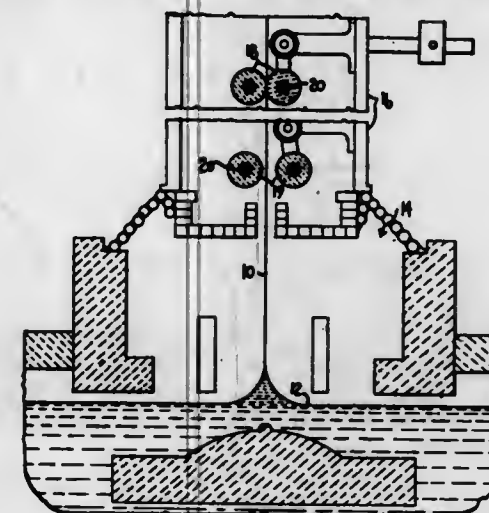
Filed May 1, 1967, Ser. No. 635,155

Int. Cl. C03b 13/16

U.S. Cl. 65—253

4 Claims

Traction rolls capable of use in material handling processes and apparatus especially for operation at elevated temperatures. The material engaging surface contains a



mixture of anthophyllite asbestos fibers and an aluminum silicate fibrous material with a suitable binder.

3,515,532

FERTILISER COMPOSITIONS

John Ramsay Anderson, Bracknell, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 23, 1967, Ser. No. 677,070

Int. Cl. C05c 9/00

U.S. Cl. 71—28

2 Claims

A fertilizer composition comprising urea and a hydrolysis inhibiting amount of at least one quinone and at least one polyhydric phenol.

3,515,533

STABLE FERTILIZER AMMONIATING SOLUTION AND METHOD OF MAKING SAID SOLUTION

Robert John Church, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 17, 1967, Ser. No. 639,064

The portion of the term of the patent subsequent to Apr. 15, 1986, has been disclaimed

Int. Cl. C05c 9/00, 9/02

U.S. Cl. 71—30

4 Claims

Urea-formaldehyde containing solutions are commonly used in the preparation of mixed fertilizers. Urea-formaldehyde solutions such as those described in our co-pending application, S.N. 483,842, which has matured to Pat. No. 3,438,764, can be improved by admixture of 1-

30% of ammonium nitrate with ammonia, urea, formaldehyde, water, and carbon dioxide if any is included, in preparing the ammoniating solution. The resulting solutions have a lower crystallization temperature, between -20 and -47° C. and improved stability.

3,515,534

RECYCLING AMMONIUM SULFATE IN NITRIC PHOSPHATE PROCESSING

Owen W. Livingston, Killen, Ala., assignor to

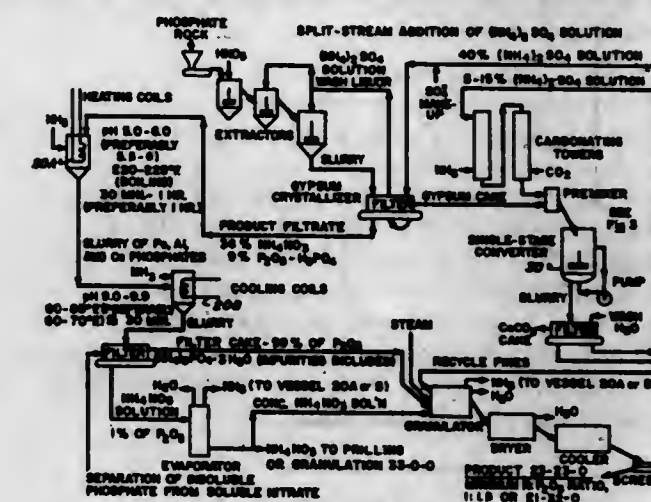
Tennessee Valley Authority, a corporation
Continuation-in-part of application Ser. No. 706,367, Feb. 19, 1968. This application Sept. 30, 1969, Ser. No. 864,276

Int. Cl. C05b 7/00; C01b 25/28

U.S. Cl. 71—34

12 Claims

Methods for (1) obtaining N:P₂O₅ ratios in subject products other than the normal 2:1 which involve ammoniation of the usual product acid filtrate to form an insoluble phosphate which is separated from a soluble nitrate; (2) agglomerating the normal precipitated impurities encountered in such a separation to facilitate rapid removal of all solids formed in the separation step; (3) obtaining an unusually high conversion and a fast-



FLOW DIAGRAM OF IMPROVED AMMONIUM SULFATE RECYCLE PROCESS

filtering slurry of calcium carbonate resulting from the reaction of gypsum cake with ammonium carbonate solution by conditions of mild but adequate agitation; (4) forming gypsum slurry in which a resulting higher filtering rate is obtained.

3,515,535

HERBICIDAL COMPOSITION

Gordon Lindsey, 2124 Cortez,
West Covina, Calif. 91790

No Drawing. Filed Apr. 11, 1966, Ser. No. 541,487

Int. Cl. A01n 5/00

U.S. Cl. 71—65

6 Claims

A herbicidal composition consisting essentially of from about 2% to about 60% by weight of ammonium thio-sulfate and from about 10% to about 15% by weight of a surfactant and a solvent therefor is applied to weeds, particularly those of the Euphorbiaceae or spurge family.

3,515,536

PHENYL-GLYOXIME AS A NOVEL PLANT GROWTH REGULATOR

Kenneth L. Hill, Middleport, and Clinton J. Peake, Medina, N.Y., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 433,158, Feb. 16, 1965. This application July 15, 1968, Ser. No. 747,007

Int. Cl. A01n 21/02, 9/20

U.S. Cl. 71—77

7 Claims

Plant growth is enhanced by compositions comprising phenylglyoxime as an essential ingredient. Examples of

this plant growth regulant activity include early plant maturation, breaking of bud dormancy, increased fruit size, and promotion of emergence of new axillary shoots.

3,515,537

POLYCHLORO- α -HYDROXYBENZYLPHOSPHONIC AND PHOSPHINIC DERIVATIVES AS PLANT GROWTH CONTROL AGENTS

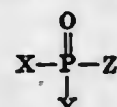
Edward D. Well, Yonkers, Edwin Dorfman, Grand Island, and Jerome Linder, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Original application Mar. 14, 1966, Ser. No. 533,792. Divided and this application Nov. 29, 1967, Ser. No. 701,798

Int. Cl. A01n 9/36, 13/00

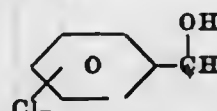
U.S. Cl. 71—86

6 Claims

1. A method for the control of plant growth in a locus which comprises applying to the locus a growth regulating amount of the compound having the formula



where at least one and a maximum of two of the substituents X, Y and Z is



where w is an integer between two and five and the remaining substituents are selected from the group consisting of hydrogen, alkoxy having from 1 to 12 carbon atoms, hydrocarbyl aryloxy having from 6 to 12 carbon atoms and no more than one hydroxy group, and the inorganic and unsubstituted lower alkyl ammonium salts of those compounds having hydrogen and/or hydroxy substituents on the phosphorus atom.

3,515,538

2-ACYLAMINO-4-METHYL-5-HALOTHIAZOLES AS SELECTIVE HERBICIDES

Kisaburo Ueno, Kamakura, Masato Koshi, Fujio Tada, and Akira Hirose, Yokohama, and Yoshio Takazawa, Chigasaki, Japan, assignors to Mitsui Koatsu Chemicals, Incorporated, Tokyo, Japan, a corporation of Japan

No Drawing. Continuation-in-part of application Ser. No. 570,710, Aug. 8, 1966. This application Feb. 10, 1969, Ser. No. 798,117

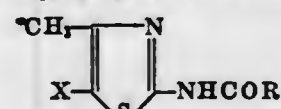
Claims priority, application Japan, Aug. 11, 1965, 40/48,410

Int. Cl. A01n 9/12

U.S. Cl. 71—90

5 Claims

Compounds having the general formula:



wherein R is an alkyl or alkenyl radical having 1 to 4 carbons and X is Cl or Br are useful to selectively inhibit the growth of broad leaf and grass weeds.

3,515,539

METHOD FOR PRODUCING FINELY DIVIDED POWDERS

Richard J. Wether, San Francisco, Calif., assignor of thirty percent to David B. Mogilefsky and twenty percent to Richard E. Peterson, both of San Francisco, Calif.

No Drawing. Filed Dec. 30, 1965, Ser. No. 517,792

Int. Cl. B22f 9/00

U.S. Cl. 75—5

15 Claims

Finely divided sub-micronic particles are produced by (1) forming a homogeneous solution of metallic ions

with polymer-forming constituents, (2) polymerizing the mixture to a solid mass incorporating the metallic ions on an ionic scale, and (3) thermally degrading the polymer completely and recovering the particles. Thermal degradation may be either (a) charring the polymer in an inert atmosphere to produce a mixture of carbon particles and metal-containing particles, (b) charring the polymer and oxidizing it to produce metal oxide particles, or (c) charring and oxidizing as in (b) and then reducing the oxide particles to metal particles.

3,515,540

MIXED COBALT/TUNGSTEN CARBIDE POWDERS
Geoffrey W. Meadows, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 660,986, Aug. 16, 1967. This application June 4, 1969, Ser. No. 830,532

Int. Cl. C22c 29/00

U.S. Cl. 75—5

16 Claims

Powder mixtures of tungsten carbide and from 1 to 30 percent by weight of tungsten-cobalt alloy, are useful in preparing tungsten carbide cutting tools or bits for cutting or shaping very hard materials. The powder mixtures are characterized by having a specific surface area greater than 0.1 square meter per gram, and tungsten-cobalt alloy containing from 8 to 33 percent by weight of tungsten.

3,515,541

PROCESS FOR THE RECOVERY OF NOBLE METALS

Helmut Wimmer, Linz-Urfahr, Anton Wagner, Linz (Danube), Rudolf Staudigl, Pasching, and Hermann Rudorfer, Linz (Danube), Austria, assignors to Österreichische Stickstoffwerke Aktiengesellschaft, Linz (Danube), Austria

No Drawing. Filed May 3, 1967, Ser. No. 635,677

Int. Cl. C22b 11/02; B01j 11/04, 11/08

U.S. Cl. 75—83

2 Claims

There is provided an improvement in the process for the recovery of precious metals which are lost during exothermic chemical reactions performed on catalysts consisting of such metals or alloys thereof. In a known process, heat-resisting acid-insoluble materials are employed in chemical devices for such metals. The recovery capability of such materials is increased by way of the present invention by an activation treatment prior to their employment in collection devices. The materials are subjected to chemical treatment wherein the chemicals attack the surface of the collection substances and increase substantially the surface area thereof. Following the treatment the substances are employed in the collection devices in the known manner.

3,515,542

METHOD OF MAKING DISPERSION-STRENGTHENED DUCTILE MATERIALS

Earl I. Larsen, Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Filed Jan. 27, 1967, Ser. No. 616,751

Int. Cl. C22c 1/00

U.S. Cl. 75—122.5

10 Claims

An element that is soluble in a melt of ductile material is added to such melt and a gas is then bubbled through the resulting solution to form a compound of the element which is insoluble in the ductile material.

3,515,543

HAFNIUM ALLOYS

Peter Harlow Morton, Solihull, and Peter Vincent McDonald Clark, Moseley, Birmingham, England, assignors to Imperial Metal Industries (Kynoch) Limited, Witton, Birmingham, England, a corporation of Great Britain

No Drawing. Filed Nov. 28, 1966, Ser. No. 597,205
Claims priority, application Great Britain, Dec. 2, 1965, 51,235/65

Int. Cl. C22c 31/00

U.S. Cl. 75—134

7 Claims

Hafnium-base alloys suitable for nuclear reactor control rods consist of, by weight, at least one of the beta-stabilising elements zirconium 5–30% and niobium 15–30%, up to 2% in total amount of at least one of the beta-stabilising elements chromium, molybdenum, nickel and iron, up to 0.5% silicon, and up to 2% in total amount of one or both of the alpha stabilising elements tin and aluminum, the total content of alloying elements being not greater than 30%, balance hafnium and impurities.

3,515,544

HAFNIUM ALLOYS

Peter Harlow Morton, Solihull, and Peter Vincent McDonald Clark, Birmingham, England, assignors to Imperial Metal Industries (Kynoch) Limited, Witton, Birmingham, England, a corporation of Great Britain

No Drawing. Filed Nov. 28, 1966, Ser. No. 597,206
Claims priority, application Great Britain, Dec. 2, 1965, 51,234/65

Int. Cl. C22c 31/00

U.S. Cl. 75—134

9 Claims

Hafnium base alloys of improved tensile strength and suitable for nuclear reactor control rods consist of, by weight, 0.1–5% in total amount of one or more of the beta-stabilising elements niobium, chromium, molybdenum, nickel and iron, up to 0.5% silicon, up to 2% in total amount of at least one of the alpha stabilising elements tin and aluminum with the total alpha and beta stabilisers not exceeding 5%, balance hafnium and impurities.

3,515,545

REFRACTORY AND CERAMIC BRAZING ALLOYS

Domenic A. Canonico, Oak Ridge, Lloyd G. Bryson, Powell, and Gerald M. Slaughter, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 29, 1967, Ser. No. 671,883

Int. Cl. C22c 15/00

U.S. Cl. 75—134

1 Claim

The present invention relates to a class of brazing alloys having particular utility for brazing parts of (a) a refractory metal selected from the group consisting of tantalum, molybdenum, titanium, and niobium, and alloys thereof, and (b) ceramics such as alumina, beryllia, and titania to themselves and to each other which comprises an alloy containing equal parts, by weight, of titanium and zirconium and a ternary metal additive selected from the group consisting of tantalum, silicon, germanium, chromium, boron, and niobium, the ternary addition being in such amounts as to form a ternary alloy whose melting point is at or below the melting point of the binary titanium-zirconium alloy.

3,515,546

ALUMINUM ALLOY SOLIDIFICATION

Herbert Greenwald, Jr., Columbus, Ohio, assignor to North American Rockwell Corporation

Filed Mar. 13, 1968, Ser. No. 712,674

Int. Cl. C22c 21/00; C22f 1/02

U.S. Cl. 75—138

8 Claims

A method for solidifying molten aluminum alloys wherein the molten material is subjected to environmental cycling in a closed chamber both prior to cooling the

alloy below the alloy liquidus temperature and again after the alloy has been solidified to a temperature in the temperature range extending from the alloy liquidus temperature to the alloy solidus temperature. After subsequent complete solidification, the alloy is preferably solution and homogenization heat-treated in a vacuum environment at a temperature in the range extending from the alloy solidus temperature to the alloy solid solubility limit temperature develop improved physical and metallurgical properties upon proper cooling and aging.

3,515,547

TRI LAYER PHOTOGRAPHIC FILM WITH A VESICULAR LAYER AND PROCESS

Norman Allentoff and Richard J. Rotondo, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 15, 1965, Ser. No. 487,626

Int. Cl. G03g 5/00; G03c 3/04, 1/52

U.S. Cl. 96—1

19 Claims

A light-sensitive photographic element comprising a transparent support having (1) an initially transparent layer of a thermoplastic resin having a low gas permeability and having dispersed therein a compound decomposable by exposure to ultraviolet light with the liberation of gas to cause, upon heating, the formation of myriad tiny vesicles in the said resin layer which are white and highly reflective and (2) a light-sensitive layer having as the light-sensitive material a photographic silver halide emulsion, an azido compound, an azonium compound, a light-sensitive polymer, etc., is used advantageously to make photographic copies by contact printing. After image exposure the latent image is developed to a visible image, fixed, exposed to ultraviolet light and immediately or simultaneously heated to form opaque vesicles.

3,515,548

CHARGING PROCESS FOR ELECTROSTATIC SCREENING OF COLOR TUBES

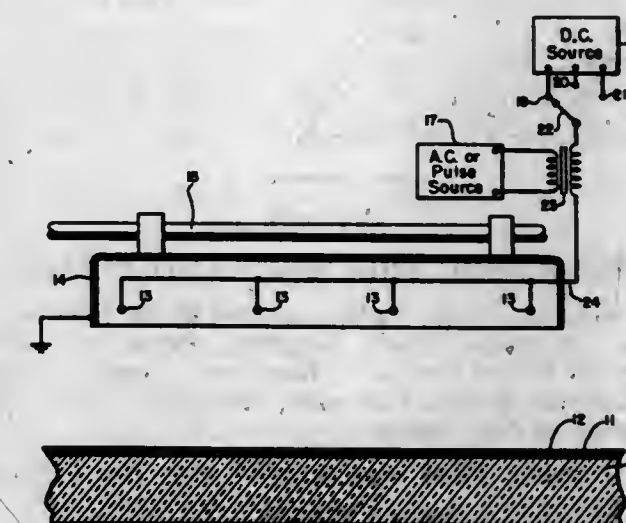
Howard George Lange, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Mar. 16, 1966, Ser. No. 534,893

Int. Cl. G03g 13/22

U.S. Cl. 96—1

3 Claims



The screen of a color cathode-ray tube is formed electrostatically by covering the screen with a photoconductive layer, charging the layer to a uniform level by means of a corona device, exposing the layer through the shadow mask to establish a charge image, and applying a developer to develop that image. The energizing potential of the corona device has a first value in screening one color phosphor but is reduced to a lower value in screening the next phosphor.

3,515,549

PHOTOELECTROLOGRAPHIC ARTICLE AND METHOD UTILIZING DIAZO MATERIAL

William E. Bixby, Deerfield, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 27, 1965, Ser. No. 490,293

Int. Cl. G03g 13/22

U.S. Cl. 96—1.5

15 Claims



A method and article used therein for forming high resolution images, such as micro images, by the technique referred to as photoelectrolography. The article is made by interposing a layer of "Kalvar" or other diazo material between a film base and a successive laminar disposition of a conductive layer, a soluble plastic layer, and a surface layer comprising a photoconductive material. In the method, the film base record medium is first charged and exposed to a light image and then the exposed portions of the photoconductive layer are deposited on the aluminum layer during a first development step comprising dissolving the plastic layer. After a blanket ultraviolet exposure, the diazo material may be developed with an alkaline material, or if "Kalvar" material is used, the second development step is accomplished by heat. As a final step, the selenium and aluminum layers are removed.

3,515,550

ELECTROPHOTOGRAPHIC COMPOSITION COMPRISING ZINC OXIDE AND A METALLIC NAPHTHENATE

Stephen C. Heidecker, Minneapolis, David D. Taft, Edina, and Walter A. Wallman, Minneapolis, Minn., assignors to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

No Drawing. Filed Aug. 29, 1966, Ser. No. 575,565

Int. Cl. G03g 5/08

U.S. Cl. 96—1.8

5 Claims

The electrical properties of an acrylic resin employed as a binder in a photoconductive coating composition are improved by the inclusion of an adjuvant amount of an active metallic drier, particularly exemplary of which are cobalt and zinc naphthenate.

3,515,551

PHOTOGRAPHIC PROCESSES AND ELEMENTS

Roger Gaston Louis Andran, Jean-Claude Hilaire, and Jean Alexandre Louis Bourdon, Paris, and André François Pierre Lestienne, Bordeaux, France, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 3, 1967, Ser. No. 637,047

Int. Cl. G03c 1/72

U.S. Cl. 96—35

19 Claims

The ability of an enzyme to hydrolyze protein can be altered upon exposure to light in the presence of a photosensitive material, thus permitting the production of photographic images. The enzyme can be converted from an active state to an inactive state, or vice versa. After exposure, development with water hydrolyzes and removes the protein from those areas where the enzyme is present in the active state.

3,515,552

LIGHT-SENSITIVE IMAGING SHEET AND METHOD OF USING

George H. Smith, Maplewood, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 16, 1966, Ser. No. 579,838

Int. Cl. G03c 1/68

U.S. Cl. 96—35.1

8 Claims

A photosensitive imaging sheet employing a cationically polymerizable vinyl ether in conjunction with a photoinitiator which liberates halogen free radicals.

3,515,553

PHOTOLITHOGRAPHIC DEPOSITION OF PHOSPHORS ON FACEPLATE OF CRT USING SPRAYING OF PHOTSENSITIVE PVA-PHOSPHOR SUSPENSION IN PLURAL LAYERS

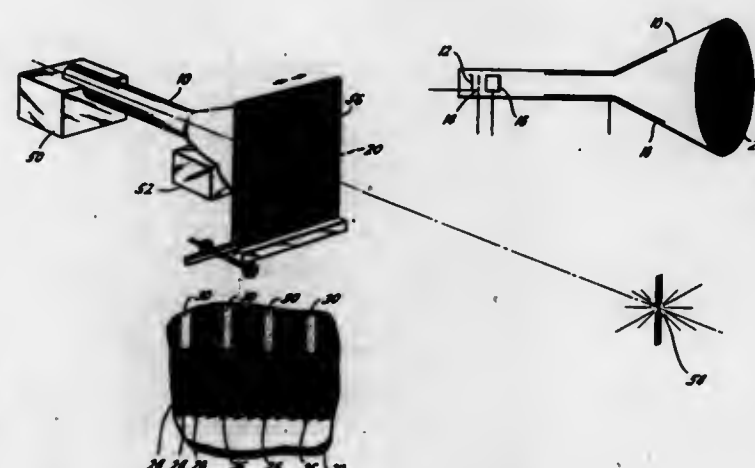
John W. Tilley, Hatboro, Pa., assignor, by mesne assignments, to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Sept. 26, 1951, Ser. No. 248,356

Int. Cl. G03c 5/00

U.S. Cl. 96—36.1

9 Claims



A method of depositing on the faceplate of a color television picture tube an array of discrete elements of a phosphor emissive of light of a given color, each element being precisely configured and positioned and having a uniform thickness great enough to emit substantial light upon energization thereof. Such array of phosphor elements is deposited by spraying a suspension consisting of a polyvinyl alcohol, an alkali-dichromate salt, and the phosphor in particulate form over the entire substrate in a plurality of successive layers, one after the other, using sufficient air such that the suspension reaches the substrate in a tacky condition. The photosensitive coating so formed is exposed to actinic radiation in those areas where phosphor elements are desired, thereby to render those areas insoluble in a solvent in which the unexposed portions of said coating are soluble, and is washed with such solvent to remove the unexposed portions of the coating.

To deposit on the screen additional arrays of phosphor elements emissive of light of respectively different colors, the foregoing group of steps is repeated, in each instance with a suspension containing the particular phosphor to be deposited. After all the phosphor elements respectively emissive of different colored lights have been so deposited, the faceplate is baked to fix the exposed portions and remove the polyvinyl alcohol by pyrolysis.

3,515,554

DIAZO TYPE PAPER AND NEW HIGH SPEED DIAZO REPRODUCTION PROCESS

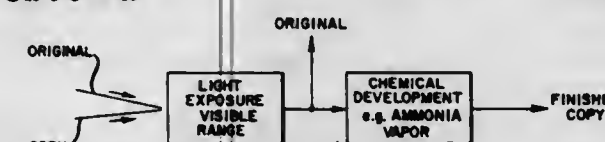
Jean J. A. Robillard, Paris, France, assignor to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware

Filed July 25, 1966, Ser. No. 567,483

Int. Cl. G03c 1/54, 5/34

U.S. Cl. 96—49

15 Claims



A high speed diazo reproduction process is provided which comprises exposing an image pattern and a diazo sheet to a radiation in the visible range of the spectrum, the diazo sheet containing a diazonium compound, a coupler and a radiation sensitive promoter which triggers a chain-reaction type decomposition of the diazonium compound exposed to the light source, and developing the latent image by shifting the pH of the diazo paper toward the basic region. A novel diazo sheet is also described.

3,515,555

TONING COMPOSITION FOR DIRECT POSITIVE PAPER

Henry J. Fassbender, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 8, 1967, Ser. No. 621,460

Int. Cl. G03c 7/00

U.S. Cl. 96—52

8 Claims

Toning compositions containing an inorganic sulfur-containing compound, an alkali metal hydroxide, a thioamine or derivative thereof and an alkali metal iodide are used to produce a warmer tone than previously obtainable on direct positive photographic paper.

3,515,556

PHOTOGRAPHIC DEVELOPING PROCESS UTILIZING HEMLOCK TANNIN POLYMER

Harold D. Russell and Charles F. Amering, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 1, 1967, Ser. No. 657,540

Int. Cl. G03c 5/24

U.S. Cl. 96—63

14 Claims

Processing of photographic silver halide emulsions with processing compositions containing a dispersing agent which is a hemlock tannin polymer, such as a mixture of copolymers of catechin with leucocyanidin extracted from certain tree bark.

3,515,557

PHOTOGRAPHIC COLOR FILM AND PROCESS OF MAKING SAME

Victor F. H. Chu, East Brunswick, and Jacob Quentin Umberger, Holmdel, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 12, 1965, Ser. No. 447,573

Int. Cl. G03c 7/32

U.S. Cl. 96—74

9 Claims

A photographic color film comprising a support, a light-sensitive gelatino-silver halide layer which is essentially sensitive to one primary region of the visible spectrum and contains a lipophilic color coupler dispersed in a continuous phase of a hydrophilic color coupler containing at least one solubilizing carboxylic or sulfonic group, both of said color couplers being capable of forming the same dye color which is complementary to said primary color region, at least one of the color couplers being polymeric and the ratio of said hydrophilic to lipophilic

coupler being about 30 to 300 parts of hydrophilic to about 100 parts of lipophilic color coupler.

3,515,558

PHOTOGRAPHIC ROLL FILM CONSTRUCTED SO AS TO REDUCE DEFORMATION FOG

Alfred Winkler, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Germany

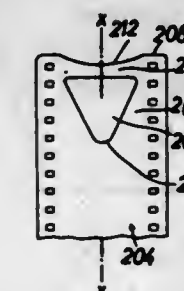
Filed Feb. 16, 1965, Ser. No. 433,023

Claims priority, application Germany, Mar. 4, 1964, A 45,387

Int. Cl. G03c 3/02, 1/34

U.S. Cl. 96—78

10 Claims



A flexible photographic roll film having two transversely extending end faces provided with recesses whose depth increases gradually from the edges toward the central symmetry plane of the film. Such recesses enhance the flexibility of the end portions. The flexibility can be further enhanced by the provision of triangular cutouts in the end portions of the film.

3,515,559

DRY PROCESS PROOF SHEET COMPOSITION

Leonard J. Druker and Leonard Wayne Sachl, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 30, 1966, Ser. No. 583,432

Int. Cl. G03c 1/34

U.S. Cl. 96—109

8 Claims

A proof sheet useful in taking proofs of photographic negatives prior to preparation of lithographic printing plates comprises a light-sensitive heat-developable silver salt composition containing stabilizing amounts of an α,β -unsaturated condensation product of a cyclic aldehyde with cyclohexanone or cyclopentanone.

3,515,560

FLUOROCARBON GAS AS A FOAM IMPROVING ADDITIVE FOR CARBONATED BEVERAGES

Peter D. Bayne, Shorewood, Wis., assignor to Jos. Schlitz Brewing Company, Milwaukee, Wis., a corporation of Wisconsin

No Drawing. Filed Aug. 15, 1966, Ser. No. 572,223

Int. Cl. C12h 1/14

U.S. Cl. 99—49

8 Claims

A carbon dioxide containing beverage having improved foam characteristics is produced by dissolving in the beverage in addition to the carbon dioxide, a non-toxic fluorocarbon gas.

3,515,561

METHOD OF PREPARING A CHOPPED MEAT COMPOSITION

Peter Flesch, Maler-Becker-Str. 5, Mainz-Gonsenheim, Germany, and Gerhard Bauer, Am Mittelfeld 17, Haltingen, Germany

No Drawing. Filed Aug. 25, 1966, Ser. No. 574,916

Claims priority, application Switzerland, Aug. 25, 1965, 11,927/65

Int. Cl. A22c 11/00

U.S. Cl. 99—108

5 Claims

Sausage meat compositions containing an alkali phosphate, sorbic acid and/or potassium sorbate.

3,515,562

FROZEN CONFECTIONS CONTAINING GLYCEROL AND PROPYLENE GLYCOL MONOESTERS OF ISOSTEARIC ACID

Bert W. Landfried, Independence, Mo., and Harold J. Bassett, Prairie Village, and John R. Moneymaker, Overland Park, Kans., assignors to Top-Scor Products, Inc., Kansas City, Kans., a corporation of New York
No Drawing. Filed May 5, 1967, Ser. No. 636,543
Int. Cl. A23g 5/00

U.S. Cl. 99—136

5 Claims

Structurally modified saturated fatty acid having 18 carbons, and a titre below about 15° C. (isostearic acid) is esterified with a polyhydric alcohol, the ester having one or more free alcoholic hydroxyl groups on the alcohol component of the ester, and dispersed into an oil-in-water emulsion type frozen confection mix, producing improved surface dryness.

ERRATUM

For Class 99—194 see:
Patent No. 3,515,053

3,515,563

AUTOCATALYTIC METAL PLATING SOLUTIONS

Svetlana Hodoley, Bronx, and John F. McCormack, Roslyn Heights, N.Y., assignors to Photocircuits Corporation, Glen Cove, N.Y., a corporation of New York

No Drawing. Filed Dec. 28, 1967, Ser. No. 694,086

Int. Cl. C23c 3/02

U.S. Cl. 106—1

11 Claims

The present invention relates to autocatalytic plating of metal, and more particularly, to improved autocatalytic metal plating solutions having an enhanced rate of deposition.

3,515,564

STABILIZATION OF ELECTROLESS PLATING SOLUTIONS

Glenn O. Mallory, Jr., Inglewood, and Donald W. Baudrand, Temple City, Calif., assignors, by mesne assignments, to Allied Research Products, Inc., Baltimore, Md., a corporation of Maryland

No Drawing. Filed May 27, 1968, Ser. No. 732,091

Int. Cl. C23c 3/02

U.S. Cl. 106—1

10 Claims

The spontaneous reaction of nickel with contaminants present in an electroless nickel plating bath is significantly arrested by addition thereto of a sulfonic acid stabilizing compound. Isethionic acid and salts thereof, such as sodium isethionate or potassium isethionate, as well as vinyl sulfonic acid and its salts, have proven to be especially valuable in extending the operating life of the plating solutions.

3,515,565

SELF-EXTINGUISHING CELLULOSE ACETATE COMPOSITIONS

Edwin Lee Wood and Roger E. Gibson, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 3, 1967, Ser. No. 679,541

Int. Cl. C08b 27/58

U.S. Cl. 106—177

1 Claim

Cellulose acetate compositions self-extinguishing when subjected to the Underwriter's Laboratories burning test composed of 100 parts by weight cellulose acetate, about 36 to 59 parts by weight of plasticizer mixture which includes 32 to 53 parts by weight of at least one trialkylphosphate and about 5 to 10 parts by weight of an organic

bromine compound having a bromine content of about 30% to 80% by weight.

3,515,566

PROCESS FOR PRODUCING COATED TITANIUM DIOXIDE PIGMENT

John Robert Moody, Umbagogitwini, Natal, Republic of South Africa, and Gerald Lederer, Stockton-on-Tees, England, assignors to British Titan Products Company Limited, Billingham, England, a corporation of the United Kingdom

Continuation-in-part of application Ser. No. 332,988, Nov. 19, 1963. This application June 26, 1967, Ser. No. 648,832

Claims priority, application Great Britain, Nov. 20, 1962, 43,846/62

Int. Cl. C09c 1/36, 3/00

U.S. Cl. 106—300

7 Claims

Titanium dioxide pigments have been improved by having applied thereto various hydrous oxides such as the hydrous oxides of silicon, aluminum or titanium. Such coatings have been found to have certain defects apparently arising from the manner in which the coatings are applied. It has now been found that coatings of any of the above hydrous oxides or of zirconium or cerium may be advantageously applied to titanium dioxide pigment in a two-step coating process. In this process the titanium dioxide is suspended in an aqueous solution of a water-soluble salt corresponding to the hydrous oxide coating to be applied. The hydrous oxide is then precipitated onto the suspended particles. Without separating the first coated suspended particles from the suspension, additional amounts of the water-soluble salts are added to the suspension and a second precipitation of hydrous oxide is effected. The resulting product is significantly superior to pigment having a single coating of the same quantity of the same hydrous oxides.

3,515,567

METHOD OF SURFACE TREATING POLYMER FILM TO PRODUCE PAPER-LIKE ARTICLE

Kaneyasu Tani, 113 2-chome, Nozawa-cho., Getagaya-ku, Tokyo, Japan; Bunkichi Yamada, 2-6 3-chome, Shinden, Adachi-ku, Tokyo, Japan; Shozo Imoto, 2380 5-chome, Kami Meguro, Meguro-ku, Tokyo, Japan; Shiro Kawazoe, 5-2 1-chome, Ohji Honcho, Kita-ku, Tokyo, Japan; Wachi Ichihara, 680 Oaza Gohdo, Kawaguchi-shi, Saitama-ken, Kawaguchi-shi, Japan; Tatsuhiro Nagai, 22-15 1-chome, Taira-machi, Meguro-ku, Tokyo, Japan; and Hiroaki Noguchi, 4-22 3-chome, Kashiwaza, Ageo-shi, Saitama-ken, Japan

Continuation-in-part of application Ser. No. 596,083, Nov. 22, 1966. This application Jan. 20, 1967, Ser. No. 610,481

Claims priority, application Japan, Jan. 26, 1966, 41/4,092; Feb. 4, 1966, 41/6,126; Feb. 21, 1966, 41/10,092; Feb. 23, 1966, 41/10,512; Mar. 3, 1966, 41/12,573; Apr. 4, 1966, 41/20,692; May 14, 1966, 41/30,549; June 20, 1966, 41/57,719; June 24, 1966, 41/40,704; July 5, 1966, 41/63,865; Aug. 24, 1966, 41/55,206; Aug. 26, 1966, 41/55,806; Oct. 22, 1966, 41/69,274, 41/69,275, 41/69,276, 41/69,277, 41/69,278

Int. Cl. B41m 5/14; D21h 5/00

U.S. Cl. 117—11

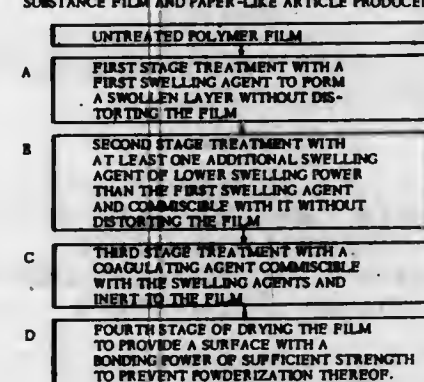
18 Claims

A method of manufacturing a paper-like article from a polymer film, comprising the steps of:

- a first stage of treating a surface of the film with a swelling agent, thereby forming a swollen layer without distorting the film;
- a second stage of treating said swollen layer of undistorted film with at least one additional swelling agent of a lower swelling power than the previous swelling agent, the additional swelling agent being co-miscible with the previous swelling agent without distorting the film;

- a third stage of treating the swollen layer with a coagulating agent, whereby the swollen layer is coagulated, said coagulating agent being co-miscible with said swelling agents and inert to the film;

METHOD FOR SURFACE-TREATMENT OF HIGH MOLECULAR SUBSTANCE FILM AND PAPER-LIKE ARTICLE PRODUCED THEREBY



- a fourth stage of drying the film, whereby an opaque roughened layer is formed on the film to provide a paper-like article with a surface having a sufficient surface bonding strength so as to prevent powderization thereon.

3,515,568

PROCESSING OF ERASING FROM A THERMOGRAPHIC ELEMENT

Martin Goldman and William J. Staudenmayer, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 3, 1967, Ser. No. 650,634

Int. Cl. B41m 5/14; H01j 37/22

U.S. Cl. 117—2

11 Claims

A colored quinhydrone complex, contained in a thermographic element, will dissociate to the quinone compound and the dihydroxybenzene compound upon heating to a temperature within the range of 60° C. to 100° C., thereby regenerating the element. The quinhydrone complex can be formed by heating an element containing the quinone compound and the dihydroxybenzene compound, or by coating these compounds on the element from certain solvents.

3,515,569

METHOD OF PREPARING SMOOTH SURFACED ARTICLES AND ARTICLES PROVIDED BY THE METHOD

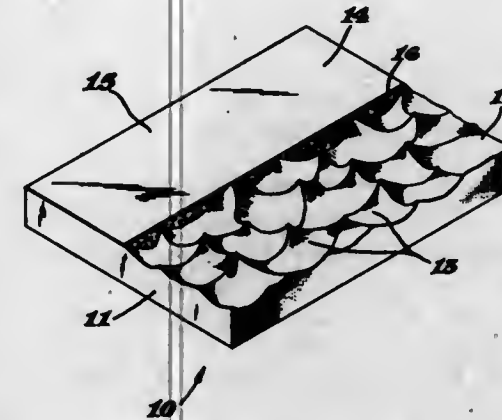
Harold A. Walters, Beaverton, and Donald S. Morehouse, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Nov. 21, 1966, Ser. No. 595,843

Int. Cl. B44d 1/94, 1/26

U.S. Cl. 117—21

18 Claims



Expandable or unexpanded microspheres are applied to a rough surface such as paper and formed by heat to provide a light weight, smooth surfaced substrate.

3,515,570

HEAT-SENSITIVE SHEET AND METHOD OF THERMOGRAPHIC REPRODUCTION USING THE SAME

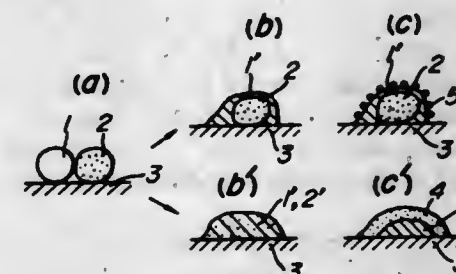
Takashi Suzuki, Ikeda-shi, Japan, assignor to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

Continuation-in-part of application Ser. No. 514,792, Dec. 20, 1965. This application Nov. 12, 1968, Ser. No. 774,714

Int. Cl. B41m 5/26; B44d 1/94

U.S. Cl. 117—25

2 Claims



A heat-sensitive sheet comprising a support, and a heat-sensitive layer coated on said support, said heat-sensitive layer containing fine solid particles of a first material which shows a stable supercooling property and has a melting point of 45° C. to 120° C. and fine solid particles of a second material which does not show any stable supercooling property and has a melting point at least 10° C. higher than the melting point of said first material, said heat-sensitive layer being such that both said fine particles appear on the surface when they are heated to melt and the surface of said heat-sensitive layer is covered with said second material not showing any stable supercooling property when the fine particles of both said materials are cooled after being melted and a method of thermographic reproduction using said heat-sensitive sheet.

3,515,571

DEPOSITION OF GOLD FILMS

Donald J. Levy, Mountain View, Calif., assignor to Lockheed Aircraft Corporation, Los Angeles, Calif.

No Drawing. Filed July 2, 1963, Ser. No. 292,433

The portion of the term of the patent subsequent to June 2, 1986, has been disclaimed

Int. Cl. C23c 3/02

U.S. Cl. 117—35

11 Claims

1. A method for applying a gold film to a surface which comprises simultaneously spraying said surface with an aqueous gold solution containing a gold salt in an amount greater than about 10⁻³ moles per liter, free aquo-coordinated gold ions in an amount not exceeding 10⁻¹⁶ gram ions per liter, and a ligand for complexing the remainder of the gold ions in solution, and with an aqueous reductant solution containing from about 0.1 to about 6 moles per liter of hydrazine and less than about 2 moles per liter of an alkali metal hydroxide, said solutions reacting to deposit a film of gold on said surface.

3,515,572

TRANSFER SHEET FOR OBLITERATING TYPED CHARACTER

Wolfgang Dabisch, Eltville, Germany, assignor to Tipp-Ex-Fabrikation, Wolfgang Dabisch, a corporation of Germany

No Drawing. Continuation-in-part of application Ser. No. 562,473, July 5, 1966. This application Dec. 16, 1968, Ser. No. 784,206

Claims priority, application Germany, Nov. 26, 1958, 1,192,219

Int. Cl. B32b 35/00; B41m 5/10

U.S. Cl. 117—36.1

6 Claims

A material for obliterating erroneously typed characters from typed paper. The material comprises a rela-

tively dense base sheet and a covering layer composition. The covering layer is microporous and not substantially penetrated into the base sheet. The covering layer composition is weakly adherent to the base sheet, detachable therefrom by pressure of a typewriter key, and compressible and transferable thereby in substantially the thickness of the covering layer and with substantially sharp contours of the typewriter key. The composition is a barrier for oils, polyhydric alcohols and water and is free from hygroscopic substances and those which are liquid below 50° C. The composition comprises substantially a particulate mixture of about 75-98% by weight of a light-colored pigment not soluble in or swellable in the composition constituents; about 1-20% by weight of a hard wax or hard paraffin, both having a molecular weight above 400 and a melting point not lower than 70° C., or an aluminum soap; and 0.5-10% by weight of a macromolecular soft resin having a molecular weight of at least 3000.

3,515,573

METHOD FOR COATING IMPREGNATED TEXTILE SUBSTRATES WITH POLYMERIC COATINGS FREE OF PITS, AIR BUBBLES, AND BLISTERS
Archle B. Japs, Akron, and Walter T. Murphy, Cuyahoga Falls, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 528,381, Feb. 18, 1966. This application Mar. 28, 1969, Ser. No. 811,673

Int. Cl. D06n 3/14; B44d 1/44

U.S. Cl. 117-47 3 Claims
Textile fibrous substrate, impregnated with a synthetic polymer, is coated with a synthetic polymer solution, immersed in a bath of fluid which is a nonsolvent for said coating polymer, said bath coagulating said coating polymer and extracting the solvent therefor. Smoothness of the applied polymeric coating and freedom thereof from pits and blisters is assured by prewetting the impregnated substrate with an inert fluid such as water before applying said synthetic polymer solution.

3,515,574

METHOD FOR METALLIZING A BORON NITRIDE CONTAINING BODY
Lionel C. Montgomery, North Olmsted, Ohio, assignor to Union Carbide Corporation, a corporation of New York

Filed Dec. 5, 1967, Ser. No. 688,074

Int. Cl. B32b 15/04, 31/26

U.S. Cl. 117-71 16 Claims
A method is provided for metallizing a boron nitride containing body which comprises coating a surface of the boron nitride containing body with a titanium-silicon alloy and heating the so-coated body at a temperature sufficient to cause a portion of the titanium-silicon alloy to diffuse into said boron nitride containing body and react with the contacted boron nitride therein while leaving at least a molecular layer of undiffused titanium-silicon alloy on the surface of the boron nitride containing body. The resultant metallized boron nitride containing body can be readily joined to metal articles by conventional metal bonding techniques.

3,515,575

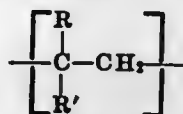
PROCESS OF DEACTIVATING AND COLLECTING PAINTS WITH A WATER CURTAIN
Roger F. Arnold, Norwood, Ohio, assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 6, 1968, Ser. No. 710,719

Int. Cl. B01d 47/00

U.S. Cl. 117-102 7 Claims
An improvement in the process of deactivating and collecting paints with a water curtain in a water wash booth

comprises maintaining in the water at least 0.5 p.p.m. of a water-soluble polymer having an average molecular weight of from 1,000 to 15,000,000 and having repeated groups with the formula



wherein R is a hydrogen or methyl group and R' is an amide or carboxyl group.

3,515,576

SINGLE CRYSTAL SILICON ON BERYLLIUM OXIDE

Harold M. Manasevit, Anaheim, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Jan. 26, 1966, Ser. No. 523,217

Int. Cl. C23c 11/06

U.S. Cl. 117-106 7 Claims
This invention is directed to a composite structure comprising a substrate of single crystal beryllium oxide and a film of single crystal silicon epitaxially disposed atop said substrate.

3,515,577

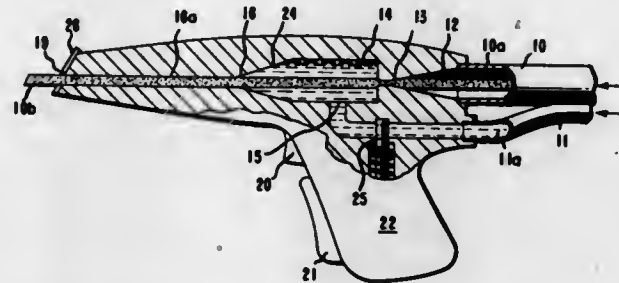
APPARATUS AND PROCESS FOR IMPREGNATING POROUS ARTICLES

Howard D. Irwin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 7, 1966, Ser. No. 577,725

Int. Cl. B05c 3/12

U.S. Cl. 117-115 5 Claims



An apparatus and process for impregnating a long strip of porous resilient material (e.g. polyurethane foam) with a liquid (e.g. polyurethane) wherein there are (A) a chamber holding a liquid under pressure, (B) a duct for introducing a pressurized liquid into the chamber (e.g. at about 25-500 p.s.i.), (C) a duct for introducing a strip of porous resilient material into the chamber while compressing the strip, the pressurized liquid causing the strip to move forward at the desired rate, and (D) a duct for conveying the impregnated strip out of the apparatus with little or no compression; the apparatus can be in the form of a gun with a trigger-operated valve to control duct (B), and a trigger-operated cutter to cut the impregnated strip.

3,515,578

PRESSURE-SENSITIVE-ADHESIVE TAPE

Jun Tomita and Thomas W. Strahan, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Continuation-in-part of abandoned application Ser. No. 513,538, Dec. 13, 1965. This application Mar. 14, 1969, Ser. No. 807,442

Int. Cl. C09j 7/02; C09d 5/18

U.S. Cl. 117-122 10 Claims
Flame-retardant pressure-sensitive adhesives and tapes are disclosed. The adhesives comprise a pressure-sensi-

tive-adhesive polyacrylate polymer modified with a tris-(halogenated alkyl) phosphate; preferred adhesives also include antimony oxide.

3,515,579

NON-FOGGING TRANSPARENT MATERIAL

Thomas H. Shepherd, Hopewell, and Francis E. Gould, Princeton, N.J., assignors to National Patent Development Corporation, New York, N.Y., a corporation of Delaware

Continuation-in-part of applications Ser. No. 567,856, July 26, 1966, Ser. No. 654,044, July 5, 1967, and Ser. No. 738,887, June 21, 1968. This application Feb. 26, 1969, Ser. No. 802,619

Int. Cl. C09k 3/18

U.S. Cl. 117-124

20 Claims



A transparent non-fogging coating is applied to a normally fogging transparent of reflecting substrate. The non-fogging coating comprises a hydrophilic acrylate or methacrylate polymer. To increase resistance to ammonia and detergents an amine containing unsaturated monomer is included. Increased abrasion resistance is obtained by also including an unsaturated amide and an aminotriazine or urealdehyde cross-linking agent or by adding ammonium dichromate.

Typical substrates include automobile, train and airplane windows, sunglasses, camera lenses, microscope lenses, binoculars, telescope lenses, meat wrappers, diving masks, ski glasses and mirrors.

3,515,580

UREA/SALT OF AN ACID COMPLEX AND A WETTING AGENT - ANTISTATIC COMPOSITION FOR SYNTHETIC POLYMERS

Frank E. Eastes, Spartanburg, S.C., assignor to W. R. Grace & Co., Duncan, S.C., a corporation of Connecticut

No Drawing. Filed Apr. 6, 1967, Ser. No. 628,836

Int. Cl. B44d 5/00; C09d 5/24

U.S. Cl. 117-138.8 13 Claims

An admixture of urea and a salt of an acid with a wetting agent in a liquid dispersing agent is provided as an antistatic agent and coated on synthetic polymer surfaces such as polypropylene film to provide a product of synthetic polymer with a coating of the urea and salt with the wetting agent.

3,515,581

TEXTILE-SIZING PROCESSES

Robert A. Isaksen, East Longmeadow, Raymond I. Longley, Jr., Springfield, and Charles R. Williams, Longmeadow, Mass., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Continuation-in-part of applications Ser. No. 481,932 and Ser. No. 481,975, both filed Aug. 23, 1965. This application June 25, 1968, Ser. No. 739,608

Int. Cl. C08f 29/30; D06m 15/36

U.S. Cl. 117-139.5 9 Claims

Disclosed herein is an improvement in a process for sizing textiles wherein the improvement comprises employing as the textile sizing agent a system comprising a water-soluble polyvinyl alcohol, a compound having a

molecular weight of between 60 and 2000 and containing hydroxyl groups, amide groups, ether groups or mixtures thereof, and a compound selected from the group consisting of magnesium, calcium, barium, cupric, zinc, strontium and manganese chlorides, bromides, iodides, nitrates, nitrites, thiocyanates, acetates, formates, propionates and butyrates; magnesium, cupric, zinc, strontium and manganese sulfates; barium hydroxide and mixtures thereof.

3,515,582

FLUORINATED PARAFFIN WAX COATINGS

William D. Blackley, Wappingers Falls, and William R. Siegart and Harry Chafetz, Poughkeepsie, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application June 15, 1965, Ser. No. 464,187, now Patent No. 3,429,937. Divided and this application Sept. 5, 1968, Ser. No. 778,891

Int. Cl. C09d 5/00; D06m 13/08

U.S. Cl. 117-143 6 Claims

An oil, water or oil and water wettable solid material surface having a coating therein in an amount sufficient to reduce said wettability, of fluorinated macrocrystalline paraffin wax of a molecular weight between about 1000 and 3000, a melting point between about 50 and 150° C., a wt. percent carbon content between about 25 and 30, a wt. percent fluorine content of between about 65 and 75 and a wt. percent hydrogen content of less than about 1.

3,515,583

METHOD FOR MANUFACTURING SEMICONDUCTOR DEVICES

Morio Inoue and Gota Kano, Suita-shi, and Jinichi Matsuno and Shigetoshi Takayanagi, Kyoto, Japan, assignors to Matsushita Electronics Corporation, Osaka, Japan, a corporation of Japan

No Drawing. Filed Mar. 20, 1967, Ser. No. 624,125
Claims priority, application Japan, Mar. 29, 1966, 41/10,208

Int. Cl. H01d 7/00, 7/20

U.S. Cl. 117-200 1 Claim

A method for manufacturing a semiconductor device by first depositing, by hydrogen reduction of a halide of molybdenum or tungsten, a mixture of molybdenum or tungsten and lower halides of such metal onto a semiconductor substrate consisting of silicon, germanium or gallium arsenide heated at 400° C. to 500° C., and then subjecting the composite body of substrate and deposited film to heat-treatment in a hydrogen atmosphere, whereby a semiconductor device having a good Schottky barrier between semiconductor and film can be obtained.

3,515,584

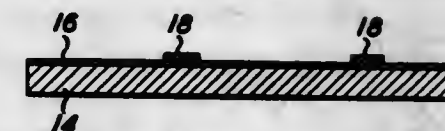
XEROGRAPHIC MASTER

Frank Y. Yang, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Mar. 27, 1967, Ser. No. 626,313

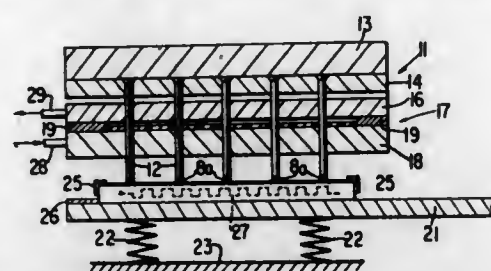
Int. Cl. B41n 1/04, 1/20; B44d 1/094

U.S. Cl. 117-212 2 Claims



A xerographic master and method of fabrication. The master comprises a conductive substrate with a thin

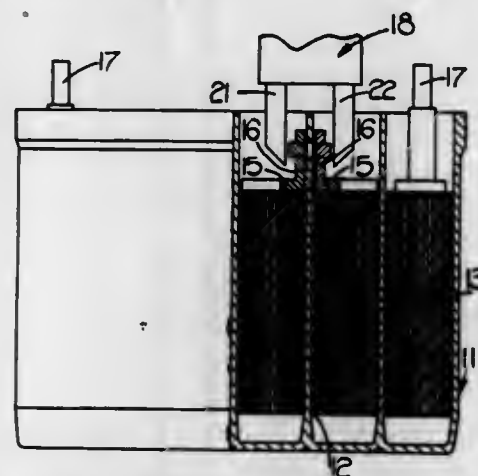
sheet, directly adhering the severed elements to an electrode sheet and stacking said sheets with additional elec-



trode sheets, the spacer elements serving to provide the substantially uniform spacing.

3,515,597 METHOD OF MAKING INTERCELL CONNECTORS IN BATTERIES

Stanley Charles Barnes, Berkswell, near Coventry, John Derek Harris, Solihull, and Kenneth Stanley Owen, Birmingham, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England, a British company
Filed Sept. 6, 1968, Ser. No. 757,989
Claims priority, application Great Britain, Sept. 8, 1967, 41,066/67; Jan. 1, 1968, 16/68
Int. Cl. H01m 35/18, 35/32
U.S. Cl. 136—134 7 Claims



In the formation of an intercell connection in an electric storage battery by resistance welding through a hole in the cell wall, the material to fill the hole in the cell wall is provided by a projection which extends rearwardly from a strap connected to the plates. The rearward extension allows the plates to be inserted into the cells, but the projection can be forced through its strap into the hole before the resistance welding operation.

3,515,598 STABLE PREPARATION FOR THE PRODUCTION OF PRINTS ON AN OXIDE FILM ARTIFICIALLY PRODUCED ON ALUMINUM

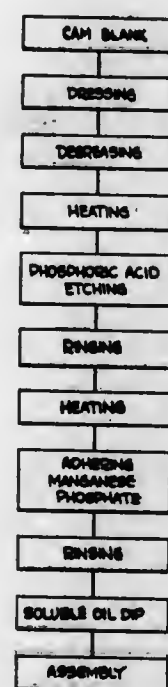
Hans Schenkel, Neuweiler, near Basel, Switzerland, assignor to Durand & Huguenin A.G., Basel, Switzerland, a corporation of Switzerland
No Drawing. Filed Mar. 29, 1967, Ser. No. 626,683
Claims priority, application Switzerland, Oct. 27, 1966, 15,580/66
Int. Cl. C23f 7/06, 5/04

U.S. Cl. 148—6.1 4 Claims
Oxide film on aluminum or aluminum alloy is printed with a printing preparation which contains organic solvent, a substance for regulating viscosity which is capable of swelling or dissolving in the organic solvent and also in water, and a low-molecular-weight hydrophobic substance which is insoluble in water and is sparingly volatile to nonvolatile at temperatures up to 100° C. The preparation preferably also contains a dyestuff which is soluble in organic solvents, but is sparingly soluble to insoluble in water.

3,515,599 PROCESS FOR TREATING FERROUS SURFACES

La Vern R. Connelly, Marshall, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio
Continuation-in-part of application Ser. No. 414,695, Nov. 30, 1964. This application May 14, 1968, Ser. No. 736,518

Int. Cl. C23f 7/10 5 Claims
U.S. Cl. 148—6.15



A process for treating the bearing surface of ferrous bodies to increase the resistance to wear thereof including the deposition of a polyvalent metal phosphate on the surface which has previously been machined smooth and etched with an aqueous solution of mineral acid.

3,515,600 METAL TREATING PROCESS AND COMPOSITION

William N. Jones, Livonia, and Jefferson W. Ellis, Garden City, Mich., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Oct. 19, 1966, Ser. No. 587,661
Int. Cl. C23f 7/08

U.S. Cl. 148—6.16 6 Claims
A composition for treating zinc and zinc alloy surfaces which is an aqueous alkaline solution containing alkali metal ions, at least one metal ion other than the alkali metal ion, a complexing agent in an amount sufficient to keep the other metal ions in solution and at least 0.75% by weight of the solution of phosphate ions. The preferred metal ions other than the alkali metal ions in the solution are iron and/or cobalt.

ERRATUM

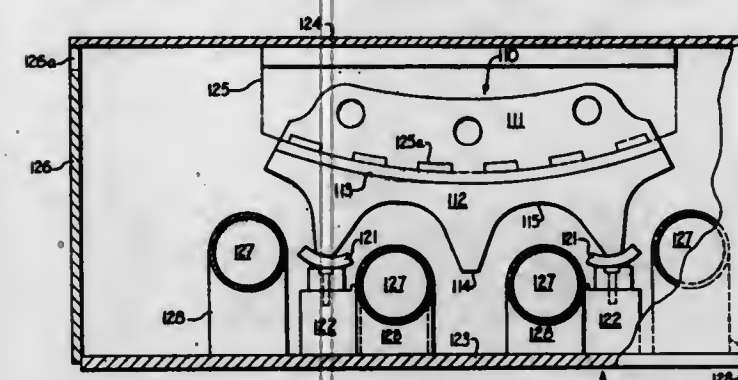
For Class 148—9.5 see:
Patent No. 3,515,189

3,515,601 SPRAY CLOSET QUENCH

Jack E. Sansom, Eureka, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed May 15, 1967, Ser. No. 638,359
Int. Cl. C21d 1/64

U.S. Cl. 148—147 3 Claims
Irregularly-shaped wear-pieces are quenched to obtain uniform case hardness at their surfaces without distortion, cracking, etc. by heating them to their critical temperature ranges, positioning them in any empty spray closet,

subsequently impinging metered sprays of quenching fluid on portions of such wear-pieces having the heavier section, and thereafter continuing said directed sprays to flood the spray closet and establish currents of quenching fluid directed at such portions to uniformly drop the tem-



perature of the surfaces of the wear-pieces at a critical rate to establish uniform hardness of such surfaces. Once uniform hardness is obtained in such wear-pieces they may subsequently be tempered, if desired, in a conventional manner.

3,515,602 METHOD OF MAKING A SELF-LOCKING SCREW

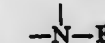
Alton W. Gross, Laurel Lane, Farmington, Conn. 06032
No Drawing. Filed Sept. 1, 1967, Ser. No. 664,931
Int. Cl. C21d 1/00, 1/42, 1/52

U.S. Cl. 148—154 8 Claims
A method of manufacture of a self-locking screw wherein a limited region along the length of the screw is annealed to provide a portion which exhibits reduced resistance to torque when compared to the remainder of the screw. The annealed and unannealed portions, being capable of a limited amount of twisting relative to one another, provide locking action when normal driving torque is exceeded.

3,515,603 FLUORINATED SYM-TRIAZINE DERIVATIVES

Harvey A. Brown, St. Paul, John G. Erickson, Stillwater, Donald R. Husted, St. Paul, and Charles D. Wright, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 856,877, Dec. 2, 1959. This application Dec. 3, 1962, Ser. No. 243,179
Int. Cl. C06b 15/00; C08g 9/30

U.S. Cl. 149—109 15 Claims
1. A highly fluorinated, amorphous, shock-sensitive oxidant composition consisting essentially of the atoms carbon, nitrogen and fluorine in the ratio of about C:N_(1.5-4):F_(1.5-4), having molecular weight ranging from about 280 to 4000, containing polyfluorinated heterocyclic systems containing 5-6 membered rings consisting of individual cyclic units, each unit consisting of at least three nitrogen atoms and not more than 3 carbon atoms in configuration such that any one of the carbon atoms which are present is separated from any other carbon atom by at least one nitrogen atom, said oxidant composition further containing a plurality of nitrogen to fluorine bonds in



and —NF₂ groups, and having oxidizing capacity equal to about 14 to 50 milliequivalents of iodine per gram.

14. 2,4-bis(difluoroamino)-perfluoro-s-triazine.
15. 2-difluoroamino-perfluoro-s-triazine.

3,515,604 HIGH TEMPERATURE EXPLOSIVE SYSTEM CONTAINING TRINITROMESITYLENE

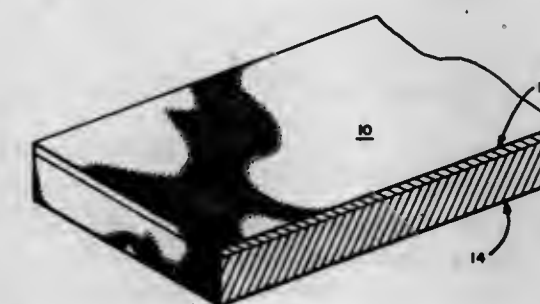
Joseph T. Hamrick, Roanoke County, Va.
(6364 Jae Valley Road SE., Roanoke, Va. 24014)
No Drawing. Filed Oct. 10, 1966, Ser. No. 585,236
Int. Cl. C06b 9/04

U.S. Cl. 149—107 3 Claims
The invention relates to a high explosive system containing various combinations of trinitromesitylene, 2,4,6 trinitrotoluene, picric acid, RDX, HMX, and atomized aluminum. The explosives of this system can withstand environmental temperatures up to approximately 440° F. depending upon which combination is used.

3,515,605 METHOD OF MAKING A METALLIC FILTER

Richard J. La Botz, Fair Oaks, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Nov. 12, 1965, Ser. No. 507,315
Int. Cl. C23f 1/02

U.S. Cl. 156—3 8 Claims

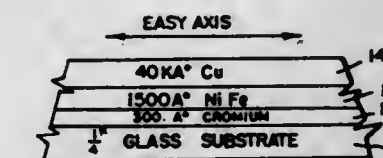


Ultra-thin metal members having accurately dimensioned fluid flow passages thereon and a method of making the same wherein a layer of etchant-resistant material is joined to at least one layer of etchant-susceptible material having a thickness equal to the desired depth of flow passages of the members, the layers of material forming a unitary structure. The etchant-susceptible material is masked to define a precise pattern of flow passages thereon whereby when the masked unitary structure is exposed to an etchant bath and passages are etched to expose the etchant-resistant material, an ultra-thin metal member having a pattern of flow passages of precise dimensions is formed.

3,515,606 METHODS OF IMPROVING MAGNETIC CHARACTERISTICS OF FILMS FOR MEMORY APPLICATION

Thomas S. Crowther, Bedford, Mass., assignor to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 25, 1966, Ser. No. 537,452
Int. Cl. C23f 1/02; H01f 10/02

U.S. Cl. 156—3 4 Claims



Vacuum evaporated 2-layer films of Permalloy and copper or tin annealed in vacuum and in silicone oil

causing diffusion of the copper or tin into the Permalloy such that the magnetic properties result in converted films ($H_c > H_k$) with moderate angular dispersion. The combination of these properties permits increased digit current margins for thin film memory applications; the films can then be etched with conventional techniques providing much closer density and higher current margins than hitherto attained.

3,515,607

METHOD OF REMOVING POLYMERISED RESIST MATERIAL FROM A SUBSTRATE

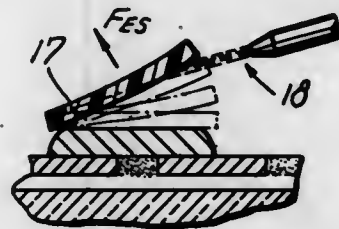
William R. Wanesky, Wecosville, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed June 21, 1967, Ser. No. 647,675

Int. Cl. B08b 3/02; G03c 11/24; H01l 7/00

U.S. Cl. 156—17

6 Claims



A layer of resist material bonded to a mounted substrate and having a peripheral lip projecting beyond the edges of the substrate is removed by projecting against (1) the edge of the projecting lip and (2) the plate on which the substrate is mounted, a stream of fluid having a sufficient effective force component acting upon the projecting lip to initiate separation of the resist from the substrate. The stream is then directed against the newly exposed portion of the resist layer to completely remove the layer from the substrate.

3,515,608

PROCESS FOR INSULATING THE JOINTS OF ELECTRICAL CONDUCTORS

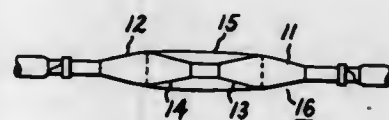
Joseph F. Nuccio, Ballston Spa, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 24, 1966, Ser. No. 588,902

Int. Cl. H01r 43/00

U.S. Cl. 156—49

2 Claims



This invention relates to an improved process for insulating the joints of electric conductors, cables and the like and to conductor joints so made. More particularly, the invention relates to preparing joints of high voltage, high tension or high potential electrical conductors in which the electrical stress-relief at the cable shields includes at the ends two regularly spaced tapering electrical stress-relief cones, the intervening space between said stress-relief cones being electrically reinforced with reversely disposed stress cones and regularly disposed stress cones, all of said stress cones being fabricated from preformed, generally pennant shaped strips of electrical insulating material.

METHOD OF MANUFACTURE OF REINFORCED UNWOVEN FELTS

Bernard Rudloff, Marckolsheim, Bas-Rhin, France

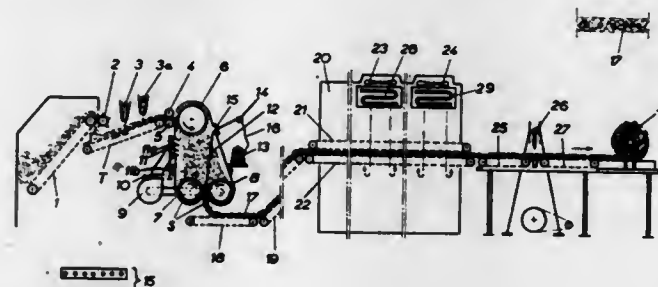
Filed Mar. 1, 1966, Ser. No. 530,914

Claims priority, application France, Sept. 27, 1965, 8,422

Int. Cl. B32b 5/28; D04h 1/60

U.S. Cl. 156—62.8

1 Claim



A process for the manufacture of reinforced, unwoven felts, with or without fillers, which comprises the steps of incorporating regularly spaced in the texture of the sheet of unwoven felt an intimate mixture of textile fibers and resins and fillers in a chamber under negative pressure, causing passage of the mixture between two perforated drums creating the suction which entrains the mixture of threads of a material selected from the group consisting of twisted or cabled cotton, flax, jute, hemp or ramie, or metal wires having an individual dynamometric resistance to traction, with the purpose of imparting the desired breakage resistance to the entire reinforced sheet thus formed after passage between the perforated drums, the reinforced unwoven felts being capable of supporting considerable tractions.

3,515,610

METHOD OF FORMING A BAND OF MINERAL FIBERS AND MAKING TUBING FROM SAID BAND

Mauro Comastri and Valentino Wiquel, Milan, Italy, assignors to S.p.A. Vetreria Italiana Balzaretto Modigliani, Milan, Italy, an Italian corporation

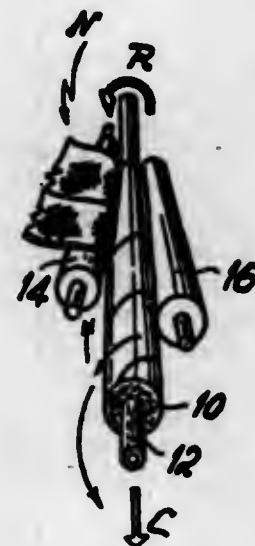
Filed June 4, 1968, Ser. No. 734,346

Claims priority, application Italy, June 10, 1967, 17,077/67

Int. Cl. B32b 17/04

U.S. Cl. 156—62.8

14 Claims



The continuous production of a conglomerated band of mineral fibers, such as glass fibers, adapted to be wound on a rotary mandrel in partially superposed spirals to form

continuously heat-insulating cylindrical tubing which is withdrawn axially from the mandrel, said band being formed by the deposition of the raw mineral fibers onto a movable foraminous collecting surface, such as a rotary truncated conical member, which advances the formed mat at different linear velocities along the width thereof, thereby initially imparting to the band a curvature in the plane thereof, which may be increased by a supplemental deformation, and which facilitates the laying up of the successive spirals on the mandrel. By varying the thickness of the band along its width, smooth cylindrical surfaces may be obtained on the exterior and interior of the cylindrical tubing.

3,515,611

METHOD FOR CEMENTING CHEMICALLY RESISTANT TILES

Heinz-Joachim Muhlberg, Albertstrasse, Montabaur, Germany; Eckhard Schacht, Schenkendorfplatz 11, Hohn-Grenzhausen, Germany; and Josef Brach, Burgwies 4, Herschbach-Westerwald, Germany

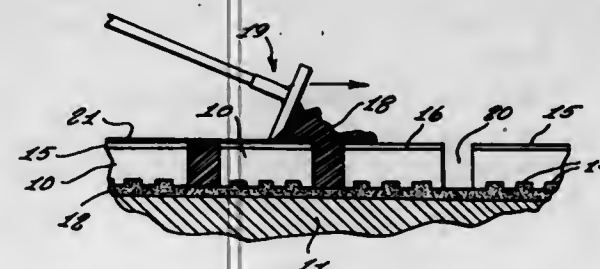
Filed Feb. 8, 1968, Ser. No. 704,027

Claims priority, application Germany, Feb. 9, 1967, G 49,212; Feb. 15, 1967, G 49,273

Int. Cl. E04f 13/00

U.S. Cl. 156—71

6 Claims



A method for rapidly cementing a protective tile covering to a surface to form a lining which would otherwise be exposed to the action of corrosive liquids, particularly acids. Prior to setting, the outer surface of each tile is pre-coated with a protective layer. A synthetic resin cement, in slurry form, is spread over the coated surfaces of the tiles to fill the interstices of the joints where no protective pre-coating is present. The cement and the pre-coated layer interact partially to dissolve or to soften the pre-coated layer so that the protective layer and an unavoidable thin overlying layer of excess cement may be easily removed as a unit after the cement has started to cure or the curing has been completed.

3,515,612

METHOD OF MAKING FOAM SANDWICH

Horst W. Rauhut, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 24, 1967, Ser. No. 626,368

Int. Cl. B32b 3/26, 27/40, 5/18

U.S. Cl. 156—79

4 Claims

A low dielectric loss foam sandwich structure useful in delay lines made by coating two substrate sheets with a resinous mixture containing 10-70 parts of an ethylene-propylene terpolymer, 30-90 parts of a styrene monomer or an inert volatile solvent, 1-2 parts of a free radical polymerization initiator and 1-5 parts of a blowing agent; heating the coated substrate sheets at 60-80° C. to foam the resinous mixture; placing the resultant foamed surfaces face to face in the form of a sandwich; and heating the sandwich at 70-90° C. to complete polymerization and vulcanization of the foamed resinous mixture.

METHOD FOR COVERING THE OUTER FACES OF A CONTAINER

Vittorio Zucchelli, Via Massarenti 190, Bologna, Italy

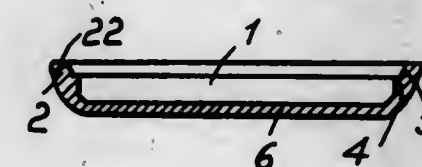
Filed June 10, 1966, Ser. No. 556,732

Claims priority, application Italy, June 12, 1965, 13,173/65

Int. Cl. B29c 17/02

U.S. Cl. 156—213

5 Claims



This disclosure relates to the techniques of covering the outer faces of a container with a covering sheet material, which is first spanned over a seat and the container is caused to press the spanned portion of the covering sheet material into said seat adapted to receive the container and thereby to bend and press the covering sheet material over the outer faces thereof.

3,515,614

METHOD FOR APPLYING ADHESIVE STRIPS TO CAN BODY BLANKS

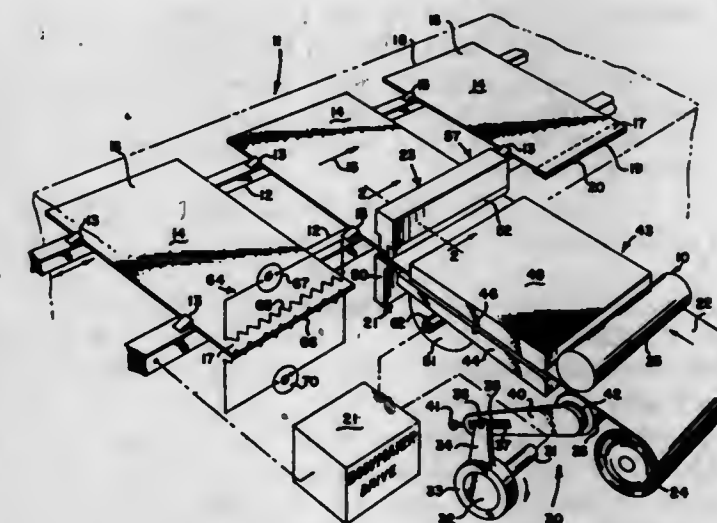
Robert W. Wolfe, Oak Lawn, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed July 31, 1967, Ser. No. 657,407

Int. Cl. B32b 31/10, 31/18, 31/20

U.S. Cl. 156—265

13 Claims



A method for applying a strip of thermoplastic adhesive along a marginal edge portion of body blanks for solderless cans.

The method comprises intermittently advancing a series of blanks in single file along a path toward a strip applying station. Heating the marginal edge portion of each advancing blank that is to have a strip of adhesive applied thereto. Intermittently advancing a terminal end of thermoplastic strip forming material of a width as long as the blank edge into the strip applying station so that the end portion of the strip forming material is in lapped juxtaposition with the edge portion of a blank temporarily stationarily positioned at the strip applying station. The entire end portion of strip forming material lapping the blank edge portion is then sheared off and the sheared off strip is pressed into adhering engagement with the heated blank edge portion after which the blank is moved out of the strip applying station and the next blank is moved in.

3,515,615

METHOD FOR BONDING SYNTHETIC RESIN SHEETS AND METAL SHEETS

Yoichi Okada and Tsutomu Watanabe, Yokohama, and Akemi Hasegawa, Yokosuka-shi, Japan, assignors to Sumitomo Bakelite Company Limited, Tokyo, Japan, a corporation of Japan

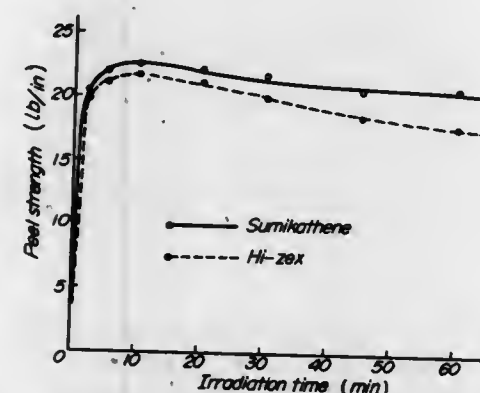
Filed Aug. 30, 1965, Ser. No. 483,477

Claims priority, application Japan, Sept. 5, 1964, 39/50,798

Int. Cl. B29c 19/02

U.S. Cl. 156—272

14 Claims



When ultraviolet rays of 2,100 to 1,600 Å., especially of 1,849 Å., are emitted from a low pressure mercury lamp whose tube is of quartz having a purity of not less than 99.90% and are irradiated in the presence of oxygen onto a synthetic resin sheet, the irradiated surface of the synthetic resin sheet becomes very reactive in melt-adhesion and a strong structural bond of the synthetic resin sheet to a metal sheet can be obtained.

3,515,616

PROCESS FOR BONDING POLYPROPYLENE MATERIALS WITH RUBBERS

Haruo Miyamoto, Hideo Uchida, Katsuhiko Uzawa, and Tsutomu Ohbayashi, Nagoya, Japan, assignors to Mitsubishi Rayon Co., Ltd., Chuo-ku, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Dec. 6, 1966, Ser. No. 599,395

Claims priority, application Japan, Dec. 6, 1965, 40/74,905

Int. Cl. C09j 3/00

U.S. Cl. 156—330

9 Claims

The present invention relates to a process for permanently and firmly bonding a polypropylene material with a rubber or an analogue thereof. The adhesive used in bonding the polypropylene material to the rubber is a solution containing at least one member selected from the group consisting of chlorinated, chlorosulfonated, and sulfonated crystalline polyolefins.

3,515,617

APPARATUS FOR REGISTERING AND ADHERING WRAP-AROUND PLATES TO CARRIER SHIMS

Karl Schaeffer, Edware, Middlesex, England, assignor to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft, Wurzburg, Germany

Original application Dec. 7, 1966, Ser. No. 599,914.

Divided and this application June 14, 1968, Ser. No. 751,646

Claims priority, application Great Britain, Jan. 17, 1966, 2,186/66

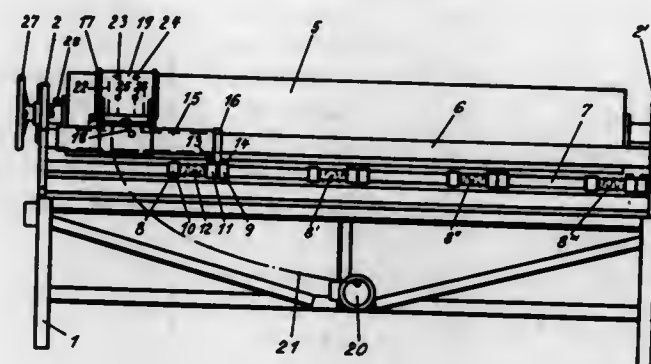
Int. Cl. B32b 31/04

U.S. Cl. 156—388

4 Claims

An apparatus for producing composite wrap-around plates for multicolor printing by mounting at least one

original or duplicate printing block in accurate register on each of several flexible carrier shims which, in turn, are mounted on a common registering cylinder from which



the completed wrap-around plates are subsequently removed for being mounted on the printing cylinders of a multicolor printing press.

3,515,618

CHOPPER

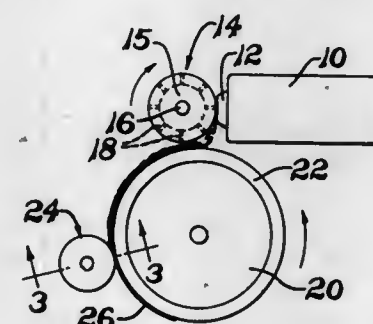
James Sidles, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed June 15, 1966, Ser. No. 557,795

Int. Cl. B26d 5/20; B29c 17/16; B29h 17/36

U.S. Cl. 156—405

3 Claims



This invention provides for the applying of small fibrous particles of rubber directly onto a rotating green tire by chopping a continuously fed material directly onto a green tire to form a contoured tread and contour stitching of such particles onto the green tire.

3,515,619

RESINOUS PLASTIC SHEETS, SHAPES, PANELS AND SLABS SIMULATING OBSIDIAN AND QUARTZ

Stanley R. Barnette, 90 Cherokee St., Miami Springs, Fla. 33166

Original application Nov. 19, 1964, Ser. No. 412,516, now Patent No. 3,306,956, dated Feb. 28, 1967. Divided and this application Feb. 27, 1967, Ser. No. 618,596

The portion of the term of the patent subsequent to June 27, 1984, has been disclaimed

Int. Cl. B44f 5/00, 9/04; B29c 27/18

U.S. Cl. 161—5

15 Claims

A monolayered natural appearing plastic manufactured product of the type of quartz and obsidian comprising a

3,515,621

STRIATED CROSS-LAPPED NONWOVEN FABRIC SIMULATING WOVEN FABRIC

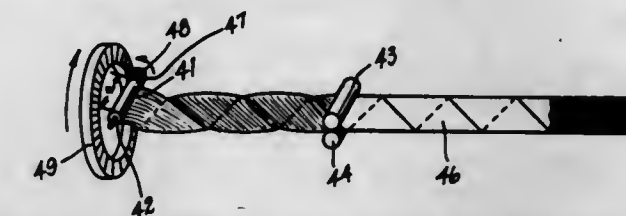
George A. Watson, Charlotte, N.C., assignor to Celanese Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 3, 1967, Ser. No. 606,984

Int. Cl. D04h 11/04

U.S. Cl. 161—58

4 Claims



Making non-woven fabrics which look like woven cloth by striating a web of crimped parallel filaments, setting the striated web, and cross-lapping the striated web.

3,515,622

LAMINATED CARPET OR MAT

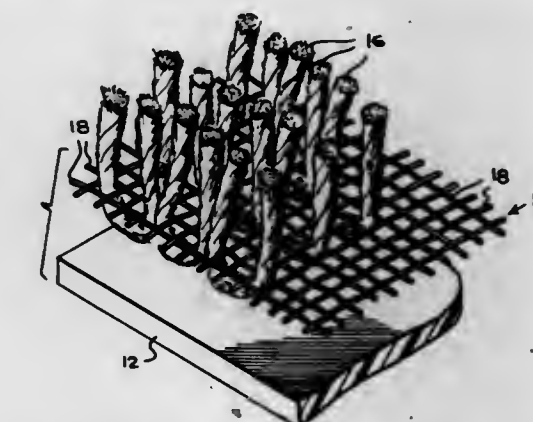
James E. Jordan, Floyd County, Ga., assignor to Outside Carpets, Inc., Rome, Ga., a corporation of Georgia

Filed Sept. 19, 1967, Ser. No. 668,799

Int. Cl. D05c 17/02

U.S. Cl. 161—66

7 Claims



compatible mixture of plastic simulation of resinous material with filler means reinforcement of which provides a unitary homogenous layer wherein the cured combined



mixture of materials permits a matching of the refractive index and whereby at least the filler means appears transparent.

3,515,620

DECORATIVE, LAMINATED WOOD PANEL AND METHOD OF MAKING SAME

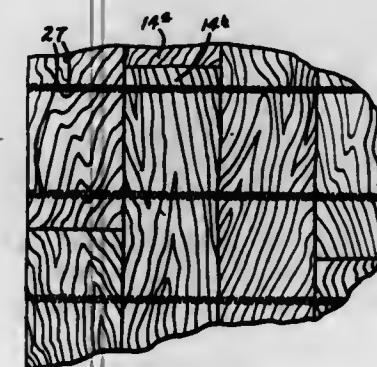
Frank W. McPherson, Longview, Wash., assignor to Pope & Talbot, Inc., San Francisco, Calif., a corporation of California

Filed Feb. 23, 1967, Ser. No. 618,106

Int. Cl. B32b 3/16

U.S. Cl. 161—38

6 Claims



A decorative panel with face ply comprising multiple regular width strips, rough-sawn along longitudinal edges, disposed in rows with some of these rows including end-butt strips, cross-grain roughening having been applied to the face ply after its preparation with textured streaks of the cross-grain roughening extending in the direction of the line of division between end-butt strips.

3,515,623

WOVEN FABRIC HAVING BONDED CROSSOVERS AND METHOD OF FORMING SAME

Thomas E. Bates, Anderson, S.C., assignor to Clark-Schwebel Fiber Glass Corporation, Anderson, S.C., a corporation of New York

Filed Feb. 23, 1967, Ser. No. 617,959

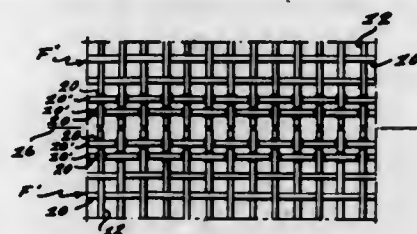
Int. Cl. B32b 17/04; D03d 25/00

U.S. Cl. 161—36

14 Claims

A woven fabric of glass fiber or other inorganic warp and weft in which one or more selected warp ends are

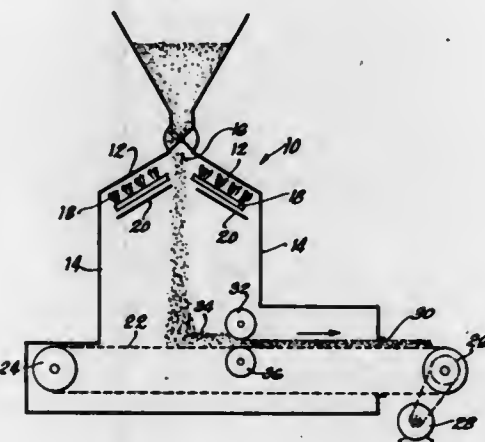
secured at each weft crossover by a bond of thermoplastic material, suitably nylon, deposited selectively thereat; the selective depositing of the bonds being accomplished by weaving the fabric with the thermoplastic material associated in strand form with the selected warp



ends and then, after beating-up but before take-up, locally melting the thermoplastic strand completely as the woven fabric passes. The resulting fabric structure is effectively stabilized wherever necessary, as at cut selvages, in this manner.

3,515,624
STRUCTURAL MATERIAL OF EXPANDED MINERALS AND METHOD FOR MANUFACTURE

Anthony L. Garner, Wheaton, Ill., assignor, by mesne assignments, to Central Manufacturing District, Chicago, Ill., a trust of Massachusetts
Continuation of application Ser. No. 714,831, Feb. 12, 1958. This application July 8, 1964, Ser. No. 381,145
Int. Cl. B32b 19/00
U.S. Cl. 161—159 2 Claims



1. A composite, porous, thermal insulation panel characterized by dimensional stability and structural strength consisting essentially of expanded perlite particles which are interbonded one to another by interfusion between the surfaces of the perlite particles while in a pyroplastic state to form a porous perlite panel.

2. An insulation panel as claimed in claim 1 in which the panel is formed in cross-section with layers of different densities.

3,515,625
COMPOSITE FLEXIBLE MATERIAL CONTAINING A HIGH PROPORTION OF FILLER PARTICLES

Steve Sedlak, 201 E. 21st St., New York, N.Y. 10010, and Albert Mavromatis, Elmhurst, N.Y.; said Mavromatis assignor to said Sedlak

Filed Apr. 20, 1965, Ser. No. 449,593

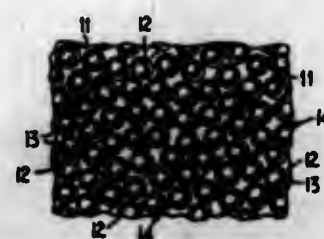
Int. Cl. B32b 3/26; C04b 35/68

U.S. Cl. 161—160

13 Claims

In the particular embodiments of the invention described herein, elastomeric materials containing a high proportion of filler particles are prepared by adding particles which have a low bond-forming tendency to the uncured elastomeric material. After curing, the composite

material is stretched to break any bonds which may have formed between the filler particles and the elastomeric



matrix. To inhibit such bond formation, certain types of filler particles are coated with a low adherent material.

3,515,626
THERMOPLASTIC LAMINATES HAVING IMPROVED SURFACE PROPERTIES

Alan Duffield, Wheatthampstead, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Feb. 7, 1966, Ser. No. 525,356
Claims priority, application Great Britain, Feb. 22, 1965, 7,594/65
Int. Cl. B32b 5/16, 27/36; C08g 51/04
U.S. Cl. 161—162 6 Claims

Laminates comprising layers of oriented films of thermoplastic materials in which at least one of the outermost layers of film contains a suitable inert additive are prepared. The laminates of this invention are particularly useful as films which may be written on with a pencil or crayon.

3,515,627
ACRYLIC COMPOSITE FIBERS HAVING IRREVERSIBLE THREE-DIMENSIONAL COIL CRIMPS

Hideto Sekiguchi, Kaitaro Shimoda, and Kenji Takeya, Saidaiji, Japan, assignors to Japan Exlan Company Limited, Osaka, Japan
Filed Mar. 24, 1967, Ser. No. 625,781
Claims priority, application Japan, Mar. 26, 1966, 41/18,866
Int. Cl. D01a 5/22; D02g 3/04
U.S. Cl. 161—173 6 Claims

An acrylic composite fiber comprising two different acrylic polymer components laminarily conjugated together along the length of the fiber, said components consisting predominantly of acrylonitrile but copolymerized with at least one hydrophobic non-crystalline high polymer-forming comonomer in different proportions so as to cause difference in thermal shrinkage between said components, the high shrinkage component containing a strong acidic group providing dyeing site for a cationic dye in an amount less than that in the other fiber component so that the initial dyeing rates of these two components are substantially equal and the fiber has three-dimensional coily crimps which are irreversible even when exposed to water or other swelling agent. Each component contains 5-15% by weight of the hydrophobic non-crystalline high polymer-forming comonomer, but there is a difference of 0.5-6% by weight in content of said comonomer between the two acrylic polymer components.

3,515,628
POLYESTER RESIN MELT ADHESIVE LAMINATE AND METHOD OF MAKING SAME

Winston J. Jackson, Jr., and John R. Caldwell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed May 4, 1966, Ser. No. 547,441
Int. Cl. B32b 27/36, 27/38; C09j 5/00
U.S. Cl. 161—184 8 Claims

Hot melt adhesives of linear, aliphatic, thermoplastic, saturated and heat resistant polyesters derived from at

least one dicarboxylic acid and at least one glycol, having a T_g below about 30° C. and a crystallinity of greater than about 5% and less than about 25% provide improved adhesives for bonding together a wide variety of substrates. Exemplary are the polyesters of 1,4-butanediol and terephthalic, isophthalic, hexahydroterephthalic, or hexahydroisophthalic acid.

3,515,629
ELECTRICAL DEVICE HAVING INTERMEDIATE DIELECTRIC LAYER

Dilip K. Das, Bedford, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Sept. 30, 1966, Ser. No. 583,327
Int. Cl. B32b 15/16; H01 3/00
U.S. Cl. 161—220 4 Claims



An electrical device such as a capacitor which comprises a single unitary metallic body comprised of contiguous metal and alloy portions and having a dielectric region at the interface between the contiguous alloy and metal portions.

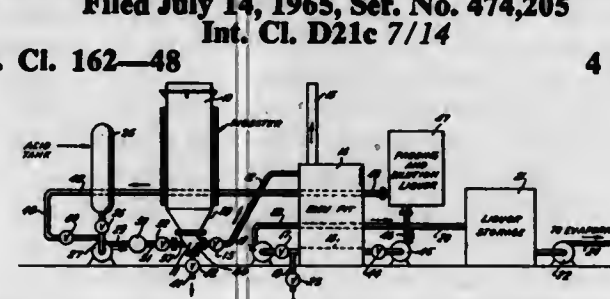
3,515,630
RESIN ADHESIVE COMPOSITION AND LAMINATED STRUCTURE UTILIZING THE SAME

Peter S. Columbus, Whitestone, and Ronald T. Mason, New York, N.Y., assignors to Borden, Inc., a corporation of New Jersey
No Drawing. Filed Aug. 4, 1965, Ser. No. 477,293
Int. Cl. B32b 27/08, 27/10, 27/30
U.S. Cl. 161—245 5 Claims

This invention relates to an adhesive composition comprising (1) an interpolmer of vinyl acetate with a C_7 - C_{10} ester of an acid selected from the group consisting of fumaric, maleic, acrylic acids and mixtures thereof, and 0 to 5%, based on total weight of interpolmer, of a polymerizable monomer selected from the group consisting of ethenoid bond containing carboxylic acids, acid amides, and mixtures thereof; (2) a starch component selected from the group consisting of waxy starches, hydroxyalkyl starch ethers, acid modified starches, oxidized starches, and dextrans, and (3) a plasticizer for said interpolmer, there being, on a solids basis, about four parts of interpolmer and plasticizer combined for each part of the starch component; and to laminates made with such adhesives.

3,515,631
METHOD AND SYSTEM FOR FLUSHING SULPHITE PULP DIGESTERS

Curt Fredrick Rosenblad, % Rosenblad Corporation, P.O. Box 585, Princeton, N.J. 08540, and Valno Somer, Kaukas, Finland; Hannu Somer, administrator of said Valno Somer, deceased
Filed July 14, 1965, Ser. No. 474,205
Int. Cl. D21c 7/14
U.S. Cl. 162—48 4 Claims

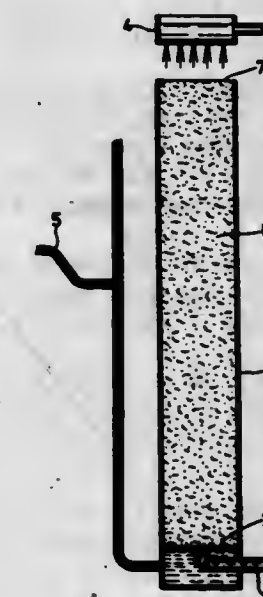


The method and system provide for introducing flushing liquor into a digester through a special fitting applied

to the bottom of the digester. This is done a short time prior to the blow to lift and break up the lumps of stock in the digester, particularly in the bottom cone thereof, so that the stock will flow out readily when the blow begins. The blowing takes place through the same special fitting. The flushing may continue for some time after the blow starts. Also the flushing initially employs hot liquor and continues with cooled liquor after the blowing commences.

3,515,632
COUNTER-FLOW WASHING METHOD FOR REMOVING LIQUID FROM A PRODUCT DISTRIBUTED THEREIN

Carl Arne Bergholm, Sundsvall, Sweden, assignor to Svenska Cellulosa Aktiebolaget, Sundsvall, Sweden
Continuation of application Ser. No. 463,207, June 11, 1965. This application July 7, 1969, Ser. No. 846,627
Claims priority, application Sweden, June 12, 1964, 7,219/64
Int. Cl. D21c 9/02
U.S. Cl. 162—60 4 Claims



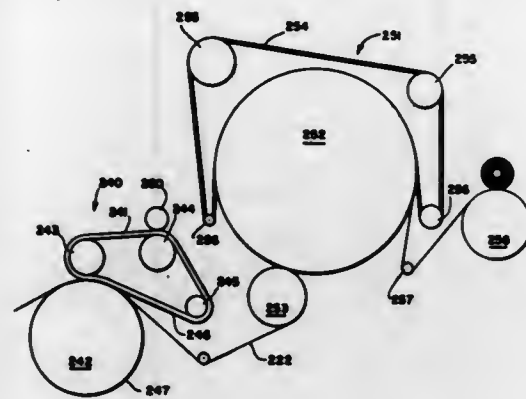
In washing cellulosic pulp a vertical column of the same is maintained by introducing pulp suspension into the lower end of the column, introducing washing liquid into the upper end of the column, removing suspension of pulp in washing liquid from the upper end of the column and withdrawing separated liquid from the lower end of the column. In withdrawing separated liquid the same is effected at a rate equal to the rate of supply of washing liquid, which rate is such that the downward pressure exerted on the pulp is insufficient to effect substantial concentration of pulp in said suspension. Thereby it is ensured, that the downward pressure exerted in the column does not equal the internal shear resistance of the contents of the column.

3,515,633
COMPACTING OF PAPER AND SIMILAR FIBER WEBS

James M. Futch, Jr., Yonkers, S.C., assignor to Clupak, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 27, 1967, Ser. No. 618,792
Int. Cl. D21f 3/02
U.S. Cl. 162—206 5 Claims

Process and apparatus for compacting paper and similar cellulosic-fiber-containing webs, to enhance the stretchability and toughness thereof, in a pressure nip at moisture contents within a range. To achieve such compaction the pressure nip includes conventional resilient surface element and a special hard surface element the

surface of which has a combination of characteristics such that it exerts very low drag with respect to the web at



the moisture contents involved. The compaction of the web is immediately followed by machine glazing.

3,515,634

METHOD OF PRODUCING A FIBROUS FLEECE BASE MATERIAL FROM THREE TYPES OF FIBERS

Erwin Sommer, Obernburg, Klaus Boehme, Erlenbach, and Klaus Gerlach, Obernau, Germany, assignors to Glanzstoff AG, Wuppertal, Germany

Filed Dec. 12, 1966, Ser. No. 600,357

Claims priority, application Germany, Dec. 14, 1965, V 29,924

The portion of the term of the patent subsequent to July 23, 1985, has been disclaimed

Int. Cl. D21f 11/00; D21h 5/12

U.S. Cl. 162-146

6 Claims

This invention relates to a method of producing a fibrous fleece web suitable as a base material for artificial leather. The method involves the steps of using a paper-making machine to waterlay a mixture of three specific types of fibers, removing only a minor amount of water from the resulting web, then subjecting the wet web to a brief heat treatment in the absence of pressure and tension, and finally drying the web in the absence of pressure and tension.

3,515,635

PAPERMAKING MACHINE HEADBOX

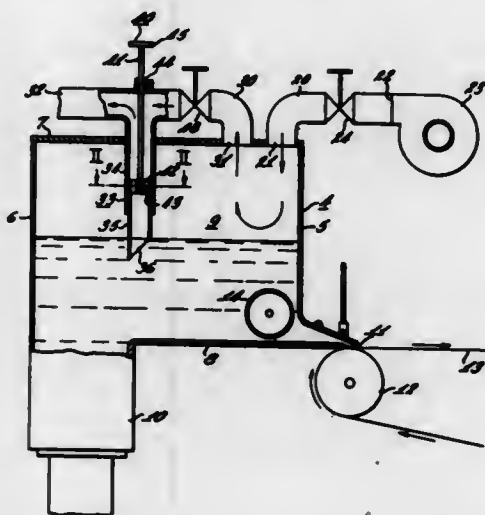
Donald R. Curtis, Appleton, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Mar. 27, 1967, Ser. No. 626,309

Int. Cl. D21f 1/02

U.S. Cl. 162-339

5 Claims



A stock inlet portion of a papermaking machine is disclosed having a headbox for containing a pond of stock

and arranged to discharge the stock through a slice outlet. The headbox may be constructed to operate with above atmospheric pressure or with a partial vacuum over the pond within the headbox. A gas inlet conduit and a gas outlet conduit are both connected to the top of the headbox and project therefrom. The projecting end of one of the conduits is connected to a gas pump for causing air to move in and out of the space within the headbox over the stock pond. A vertical standpipe assembly depends from the gas outlet and terminates on its lower end with an orifice that provides for a relatively stabilized head of stock around the standpipe assembly within the headbox at the level of the orifice.

3,515,636

FOURDRINIER DRAINAGE FOIL ASSEMBLY

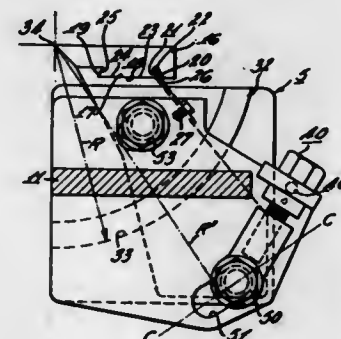
George E. Reynolds and Lee R. Loughran, Appleton, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Oct. 2, 1967, Ser. No. 672,117

Int. Cl. D21f 1/38

U.S. Cl. 162-352

3 Claims



A portion of a paper making machine is disclosed where paper stock discharged from a headbox is deposited upon a Fourdrinier type web forming wire provided with drainage foil assemblies beneath the wire (substituted for table rolls), and a foil assembly is supported beneath the wire by a support mechanism carried on rails beneath and parallel to the edges of the wire. The assembly includes a body which is connected to the support mechanism and a foil cap mounted on top of the foil body. The foil body and foil cap are of special design providing a spring loaded dovetail connection between the foil body and foil cap.

3,515,637

PAPERMAKING MACHINE PRESS SECTION

George E. Reynolds, Fred J. Gedemer, and Howard K. Ainsworth, Appleton, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Mar. 27, 1967, Ser. No. 626,308

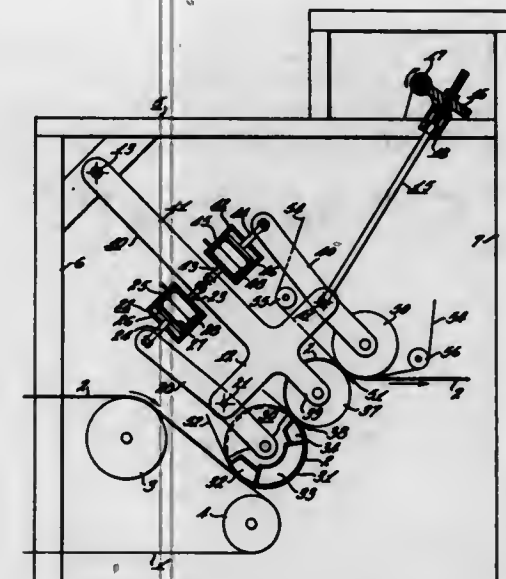
Int. Cl. D21f 3/06

U.S. Cl. 162-360

5 Claims

A portion of a papermaking machine is disclosed where a newly formed web of paper is lifted from a Fourdrinier type web forming wire and passed between a first and second press nip to press water out of the newly formed web. The first and second press nips are defined by a stack of three rolls, with the lower roll being a suction pickup roll and the two upper rolls being press rolls. The entire assembly of three rolls can be raised and lowered to adjust the pressure of the pickup roll (i.e. the bottom roll) on the Fourdrinier wire. Additionally, the bottom and top rolls are carried by pivotable arms that provide for adjusting the pressure of the first and second press nips. Raising or lowering the bottom roll (i.e. the web pickup roll) to adjust the first nip between the bottom and middle roll of course changes the pressure of the bottom

roll on the Fourdrinier wire. The pressure of the bottom roll on the wire is therefore readjusted after an adjustment



of the first nip to restore the pressure of the bottom roll on the wire to that desired by the operator.

3,515,638

FUEL SYSTEMS FOR NUCLEAR REACTORS

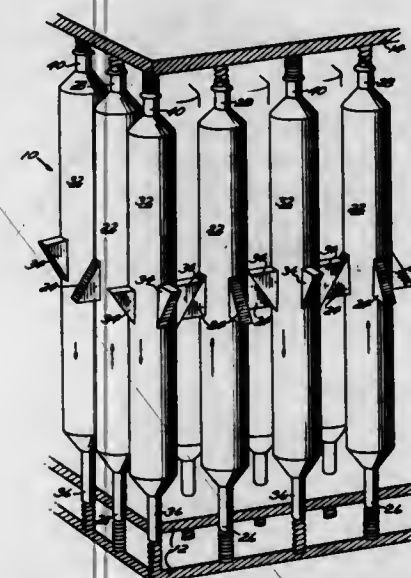
John B. Nims, Jr., Royal Oak, Mich., assignor to Atomic Power Development Associates, Inc., Detroit, Mich., a corporation of New York

Filed May 12, 1967, Ser. No. 638,098

Int. Cl. G21c 19/02

U.S. Cl. 176-28

6 Claims



A nuclear reactor comprising an array of fuel sub-assemblies having tapered cooperating interface surfaces, whereby longitudinal expansion of the sub-assembly causes radial core expansion.

3,515,639

AXIAL-MECHANISM CONTROL-ROD ACTUATOR

Kurt Pflugrad, Aix-en-Provence, France, assignor to Commissariat a l'Energie Atomique

Filed Nov. 16, 1967, Ser. No. 683,543

Int. Cl. G21c 7/14

U.S. Cl. 176-36

3 Claims

A control rod actuator for a nuclear reactor comprising a leak-tight containment vessel and closed by a top seal plug. The actuator comprises a vertical translation mechanism which traverses said seal plug and is

coupled at its upper end to a drive unit and at its lower end to said control rod by means of a releasable system. The vertical translation mechanism has two sections which can be engaged in end-to-end relation by coupling



means. The upper section is adapted to slide within a guide tube carried by an arm which is rotatable about a vertical axis and fitted with a releasable bolt for retaining the lower section in the bottom position.

3,515,640

COMBINATION PUMP AND OXYGENATOR

Craig R. Rudlin, 202 Overlook Road,

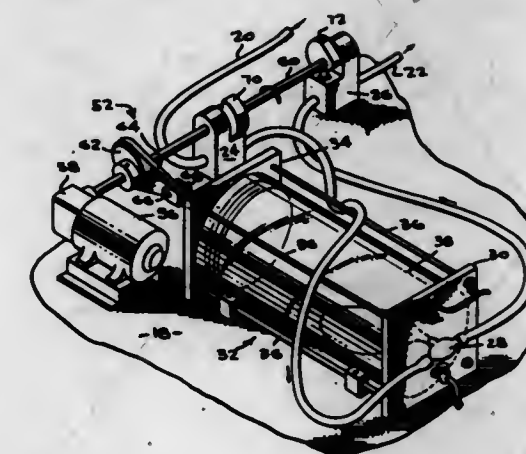
Richmond, Va. 23229

Filed Feb. 13, 1968, Ser. No. 705,067

Int. Cl. A61m 1/03

U.S. Cl. 195-1.8

11 Claims



A method and device for both circulating and oxygenating blood, said device having a flexible oxygen permeable bladder mounted in a surrounding bath of gaseous oxygen rich fluorocarbon liquid so that oxygen in the fluorocarbon passes through the bladder to oxygenate blood pulsatingly circulated through the bladder by cyclic pressurization of the fluorocarbon bath.

3,515,641

PROTEOLYTIC ENZYMES

Donald R. Whitaker, Ottawa, Ontario, Canada, assignor to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada

No Drawing. Filed Dec. 5, 1966, Ser. No. 598,952

Int. Cl. C07g 7/28; C12d 13/10

U.S. Cl. 195-62

18 Claims

Two proteolytic enzymes have been isolated from a species of myxobacteria (Sorangium), purified and char-

acterized. Both enzymes have bacteriolytic and fibrinolytic properties and exhibit activity against certain nematodes and cestodes.

anticholinesterases utilizing a dual substrate and enzyme-catalyst system.

3,515,642

METHOD FOR PREPARING A STABILIZED ENZYME COMPOSITION

Hiroyuki Mima, Nishinomiya, and Seizo Hisada, Takarazuka, Japan, assignors to Takeda Chemical Industries, Ltd., Osaka, Japan

No Drawing. Filed Dec. 6, 1966, Ser. No. 599,401
Claims priority, application Japan, Dec. 6, 1965, 40/74,949

Int. Cl. A61k 19/00

U.S. Cl. 195—63

6 Claims

The initial enzyme preparation is stabilized against loss of enzyme activity, upon being subjected to pressure-consolidation, etc., by the expedient of incorporating into the composition a stabilizing amount of sorbitol, whereby a solid product, e.g. in tablet form, is obtained with substantially full enzyme activity.

3,515,643

PROCESS FOR THE PRODUCTION OF LYSOZYME

Giuseppe Ghilmetti and Carlo Trinchera, Milan, Italy, assignors to SPA—Societa Prodotti Antibiotici S.p.A., Milan, Italy

No Drawing. Filed Feb. 17, 1967, Ser. No. 616,784
Claims priority, application Great Britain, Feb. 28, 1966, 8,675/66

Int. Cl. C07g 7/026; A61k 19/00

U.S. Cl. 195—66

5 Claims

A method of producing lysozyme from egg white in which the egg white is contacted with a weakly acidic ion exchange resin, and this resin then eluted, first to remove contaminating proteins and thereafter to remove the lysozyme.

3,515,644

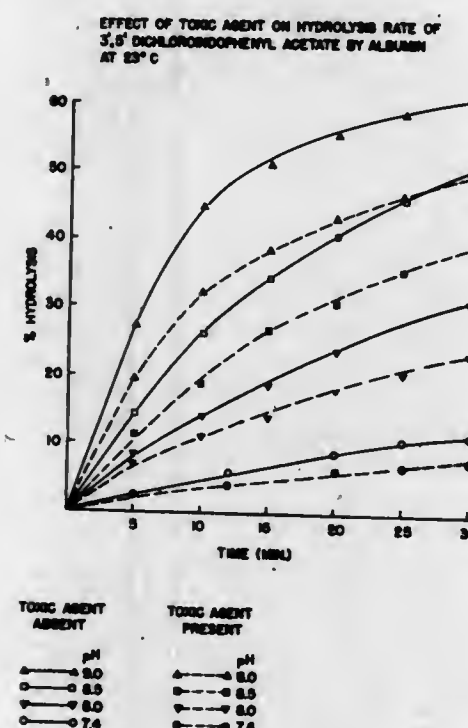
REVERSED ENZYMATIC DETECTION METHOD FOR ANTICHOLINESTERASES

David N. Kramer, Stevenson, and Robert M. Gamson, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 10, 1967, Ser. No. 632,146

Int. Cl. C12k 1/04

U.S. Cl. 195—103.5

8 Claims



New enzyme detection method for toxic vapors and aerosols of chemical agents, for example G and V, or any

3,515,645

EVAPORATOR-CONDENSER UNIT FOR A DISTILLATION SYSTEM

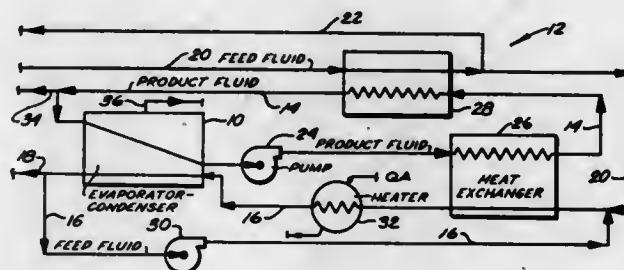
Joseph R. Wetch, Sherman Oaks, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 26, 1967, Ser. No. 648,582

Int. Cl. B01d 3/06; C02b 1/06

U.S. Cl. 202—173

6 Claims



An evaporator-condenser unit for a distillation system which uses the vapor reheat process with direct condensation wherein the unit develops a flowing vapor that flashes from a flowing feed fluid and condenses in a flowing product fluid. The improved evaporator-condenser unit increases the rate of heat and mass transfer between the feed fluid and the product fluid which are interconnected by a common vapor space.

3,515,646

VERTICAL MULTI-STAGE FLASH EVAPORATOR WITH SEPARATE HORIZONTAL CONDENSING CHAMBER

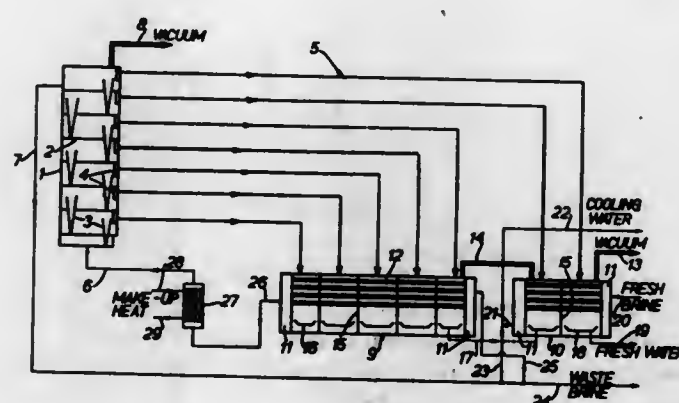
Peter Thomas Walker, Reading, and Ivan Henry Newson, Chilton, England, assignors to Weir Westgarth Limited, Glasgow, Scotland, a British company

Filed Apr. 20, 1967, Ser. No. 632,354

Int. Cl. B01d 3/02

U.S. Cl. 202—173

3 Claims



A brine desalination system is provided in which the heated brine is delivered to the bottom of a sectionalized tower in which it foams so that a mixture of steam and brine is formed as the brine flows up the tower from section to section to be withdrawn at the top. A steam withdrawal connection is provided for each tower section, from which the steam at a plurality of pressures is led away by separate lines to be condensed in different sections of a sectionalized condenser operating at different degrees of vacuum.

3,515,647

METHOD FOR DISTILLING STYRENE AND SUBJECTING BOTTOMS TO THIN FILM EVAPORATION

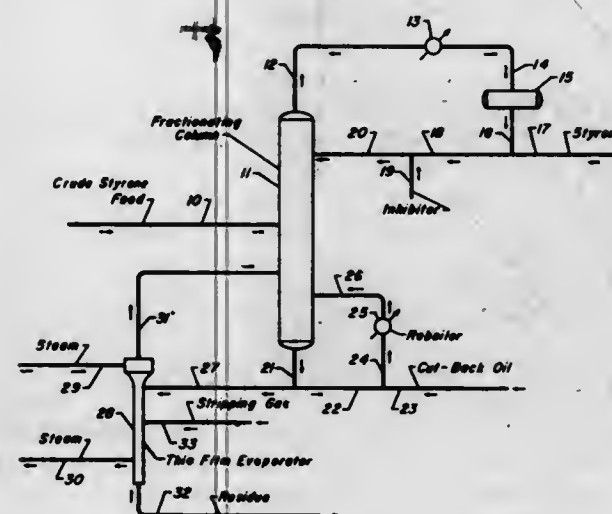
Harry M. Van Tassel and Wayne N. Root, Des Plaines, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Continuation-in-part of application Ser. No. 735,425, June 7, 1968. This application Dec. 6, 1968, Ser. No. 781,867

Int. Cl. B01d 3/34, 3/28

U.S. Cl. 203—49

5 Claims



Method for purifying styrene via a distillation scheme having associated therewith a wiped wall thin film evaporator to maximize recovery of styrene from the residue material. Styrene in a purity of at least 99% by weight is recovered as a separate product stream.

3,515,648

ANIONIC RESIN FOR ELECTROCONDUCTIVE PAPER

Thomas T. Chiu, Midland, Dale M. Pickelman, Auburn, and Eugene R. Moore, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 14, 1967, Ser. No. 645,895

Int. Cl. B41m 5/20

U.S. Cl. 204—2

13 Claims

Water-soluble salts of a copolymer of an α,β -unsaturated dicarboxylic anhydride and a vinylidene monomer are effective electroconductive additives for paper used in electrographic printing.

3,515,649

PRE-PLATING CONDITIONING PROCESS

Ivan C. Hepfer, 4587 W. Shore Drive, Rte. 1, Caledonia, Mich. 49316

No Drawing. Continuation-in-part of application Ser. No. 375,359, June 15, 1964. This application May 2, 1967, Ser. No. 635,396

Int. Cl. C23f 17/00; C23b 5/60

U.S. Cl. 204—38

11 Claims

A special two stage chemical pre-etch and etch conditioning of plastic parts prior to plating such non-conductive parts, the pre-etch stage being in a special sulfuric acid-chromic acid bath containing a fluorocarbon surfactant, and the etch stage being in a different special sulfuric acid-chromic acid bath.

3,515,650

METHOD OF ELECTROPLATING NICKEL ON AN ALUMINUM ARTICLE

Tabei Asada, Kobe, Japan, assignor to Kabushiki Kaisha Toyota Chuo Kenkyusho, Nagoya, Japan

No Drawing. Filed May 19, 1967, Ser. No. 639,638

Claims priority, application Japan, June 2, 1966, 41/35,656

Int. Cl. C23b 9/00, 17/00

U.S. Cl. 204—42

10 Claims

A method for electroplating nickel on an aluminum article, comprising the steps of immersing the article as one electrode together with a second electrode in a plating bath formed of an electrolyte consisting of an aqueous solution of nickel salts; a pH value modifier and an electrical conductivity promoter, applying alternating current to the electrodes to produce a layer of aluminum oxide mixed with nickel oxide on the article, then applying direct current to the electrodes with the aluminum articles as the cathode to reduce said oxides and deposit additional nickel to form a firmly adherent coating on the article. The article is then removed, washed and desirably heat treated to make the nickel coating even more firmly adherent.

3,515,651

PLATING SOLUTIONS FOR RHODIUM AND RHODIUM ALLOY PLATINGS HAVING LOW INTERNAL STRESS

Katsuhiko Ohkubo, 9-12, 6-chome, Higashi Mukonjima, Sumida-ku, Tokyo, Japan

No Drawing. Filed Feb. 2, 1967, Ser. No. 613,407

Claims priority, application Japan, Feb. 7, 1966, 41/6,729, 41/6,730

Int. Cl. C23b 5/24, 5/32

U.S. Cl. 204—43

6 Claims

An electrolyte for electroplating low stress rhodium and rhodium alloy deposits. The electrolyte comprises a rhodium salt, optionally a salt of another metal capable of alloying with rhodium, and at least one member of the group consisting of hexametaphosphoric acid and alkali metal and ammonium hexametaphosphates.

3,515,652

BRIGHT NICKEL PLATING

Malcolm J. Law, Greenford, England, assignor to John Preston and Company (Chemicals) Limited, Greenford, England

No Drawing. Filed Nov. 25, 1966, Ser. No. 596,750

Int. Cl. C23b 5/08, 5/46

U.S. Cl. 204—49

13 Claims

Bright nickel deposits are produced by electroplating nickel from an aqueous acidic solution of at least one nickel salt, the reaction product of an acetylene alcohol and an alkali metal perborate, and a water-soluble sulpho-oxygen compound.

3,515,653

PREPARATION OF ADDITIVES FOR ELECTROPLATING BATHS

Ronald Sykes, Selby, England, assignor to The Yorkshire Dyeware & Chemical Co. Ltd., Selby, England

No Drawing. Filed Dec. 8, 1966, Ser. No. 600,062

Int. Cl. C23b 5/14

U.S. Cl. 204—54

6 Claims

The invention provides new additives for electroplating baths particularly for deposition of tin which are either a reaction product of a sulphonating agent and certain aromatic hydroxy compounds or a condensation product

of such a reaction product with formaldehyde. The additive is conveniently stored and used as an aqueous concentrate.

3,515,654
METHOD AND APPARATUS FOR REGULATING SUPPLIED CURRENT IN CATHODIC PROTECTION.

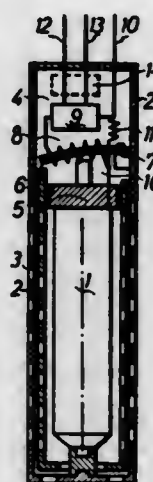
Knut Børdalen, Stabekk, near Oslo, and Ellif Risberg, Oslo, Norway, assignors to Sentralenstitutt for Industriell Forskning, Oslo, Norway

Filed May 25, 1965, Ser. No. 458,630

Int. Cl. C23f 13/00

U.S. Cl. 204—147

9 Claims



Regulation of cathodic protection of metal constructions in electrolyte solutions where inert anodes are connected to a source of electricity and where such regulation is by mechanical means. The mechanical means varies the permitted flow of electrolyte to and from the anode by perforated screens overlying the anode and adjustable with respect to each other to vary the size of the perforations. Movement of the screens may be effected by bi-metal elements heated by the anode current in turn controlled by a reference electrode in the solution. Such mechanical means may be concentric perforated cylinders, expandable and contractable resilient means operable to close or open passages to said anode or may include means for varying the shapes of individual anodes or varying the position of adjacent anodes with respect to each other.

3,515,655
ELECTROLYTIC DECONTAMINATION OF RADIO-ACTIVELY CONTAMINATED EQUIPMENT

Szmul Raviv, Beer-Sheva, Elsa Rabinovitz, Dimona, and Shimon Malkiely, Beer-Sheva, Israel, assignors to The State of Israel, Ministry of Defence, Hakiria, Tel-Aviv, Israel

No Drawing. Filed Sept. 15, 1967, Ser. No. 668,224

Int. Cl. C23b 1/00, 3/02

U.S. Cl. 204—141

3 Claims

Removal of radioactive contamination from various equipment. The equipment is connected as cathode into an electrolytic circuit in which the electrolyte is an aqueous 1 to 9 N nitric acid solution.

3,515,656
PHOTOPOLYMERIZATION PROCESS FOR HYDROXY ALKYL ACRYLATES

Ching Yun Huang, Minoo-shi, Katsuo Sato, Nishinomiya-shi, and Masuya Ikegami, Osaka, Japan, assignors to Japan Gas-Chemical Company, Inc., Tokyo, Japan, a corporation of Japan

No Drawing. Filed July 15, 1966, Ser. No. 565,405

Int. Cl. C08d 1/16, 1/18

U.S. Cl. 204—159.22

9 Claims

Acrylates or methacrylates having a hydroxyl group or a bromine atom in an intramolecular position can easily

and rapidly be polymerized alone or with a copolymerizable vinyl monomer at low temperatures, which had heretofore been impossible by subjecting said monomers to light having a wavelength of less than 3,800 Å. Further, said acrylates or methacrylates can themselves act as polymerization accelerators, and hence a conventional accelerator is not always required to effect said polymerization. This process is useful for production of large castings from the above monomers noted for the absence of casting voids resulting from heat polymerization common to large castings in which polymerization induced by thermal means or a radical catalyst.

3,515,657
PRODUCTION OF ACRYLONITRILE POLYMERS BY PHOTO-POLYMERIZATION IN AN AQUEOUS THIOCYANATE SOLUTION

Iyohiko Nakanome and Yoshihiro Uno, Saldaiji, Japan, assignors to Japan Exlan Company Limited, Kita-ku, Osaka, Japan

No Drawing. Filed June 20, 1967, Ser. No. 647,309

Claims priority, application Japan, June 25, 1966,

41/41,524

Int. Cl. C08f 1/16

U.S. Cl. 204—159.24

11 Claims

Acrylonitrile polymers are produced by photo-solution-polymerization by irradiating monomeric acrylonitrile or a mixture of more than 50% of the latter with less than 50% of ethylenically unsaturated monomer copolymerizable with acrylonitrile, in conc. aqueous (advantageously sodium) thiocyanate solution, with light having a wave length range from 340 mμ to 500mμ. The polymerization is optimally effected at below 50° C. and advantageously in the presence in the polymerization system of a light sensitizer and of molecular weight controlling agent. The light rays are advantageously first passed through aqueous solutions for filtering out rays of less than 340 mμ wave length and or more than 500 mμ wave length respectively.

3,515,658
ELECTROCHEMICAL SENSOR

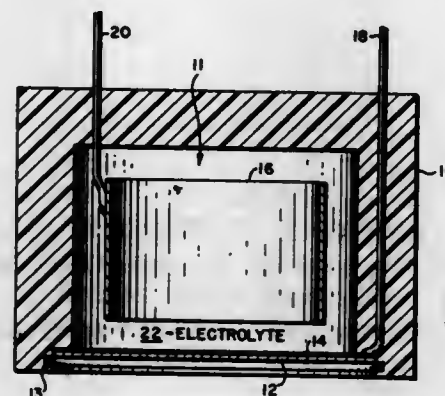
Elias J. Amdur, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Jan. 26, 1968, Ser. No. 700,800

Int. Cl. G01n 27/54, 27/46

U.S. Cl. 204—195

7 Claims



An improved electrochemical cell for sensing and/or measuring gases wherein the cell electrolyte essentially contains sulfide ions and the anode comprises one of the following metals: silver, lead, copper, tin, mercury or mercury amalgams.

3,515,659
APPARATUS FOR ELECTRO CHEMICAL MACHINING

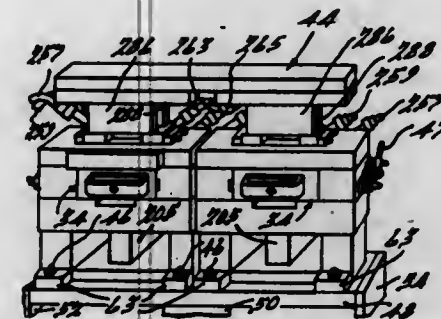
Robert C. Broast, Vernon Center, Walter H. Krupa, New York Mills, and George William Cooley, Utica, N.Y., assignors to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed Jan. 30, 1967, Ser. No. 612,576

Int. Cl. B23p 1/02, 1/16

U.S. Cl. 204—224

18 Claims



A device for the electro chemical machining of hard metallic parts such as turbine blades or the like. A part to be machined is placed in a shuttle that is inserted in a fixture between relatively movable electrodes shaped to the configurations to be produced on the opposite sides of the part. The fixture has die cavities to receive the electrodes and it is formed with passages for the high volume flow of electrolyte through said cavities between the opposite sides of the part and the electrodes. This flow is assisted by the provision of "dams" in the die cavities that contain the electrolyte and enhance its high velocity flow across the part.

3,515,660
ELECTRODE STEM CONNECTOR, ELECTRODE ASSEMBLY AND ELECTROLYTIC CELL INCLUDING THE SAME

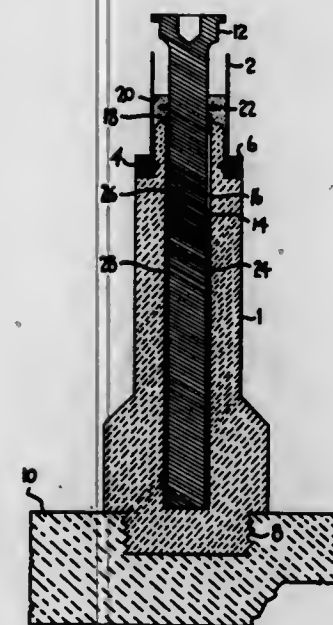
James C. Starkey, New Martinsville, W. Va., assignor to PPG Industries, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 13, 1967, Ser. No. 682,378

Int. Cl. C22d 1/04

U.S. Cl. 204—250

22 Claims



An electrode stem connector and an electrode are described. The structure common to both includes a metal rod entering a recess in a current conducting member. The smaller dimensions of the rod result in a space between the rod and the member which is filled with a

liquid metal and a gas and then sealed. Mercury is disclosed to be the preferred liquid metal and air the preferred gas. The liquid metal serves to relieve thermal and mechanical strains and the gas maintains a positive pressure on the interior of the assembly to retard corrosion of the interior parts by electrolyte or fluid products. The gas-liquid metal combination also aids in the detection of cracked assemblies. Particular applicability of the electrode stem connector and electrode to chlor-alkali mercury cathode cells is taught.

3,515,661
ELECTROLYTIC CELLS HAVING DETACHABLE ANODES SECURED TO CURRENT DISTRIBUTORS

Michael Oliver Coulter and David Bell, Holmes Chapel, near Crewe, England, assignors to Murgatroyd's Salt and Chemical Company Limited, a British company

Filed Nov. 2, 1966, Ser. No. 591,563

Claims priority, application Great Britain, Nov. 4, 1965, 46,728/65

Int. Cl. B01k 3/10

U.S. Cl. 204—263

11 Claims

An improved diaphragm cell for the electrolysis of aqueous solutions of alkali metal halides is provided having a cell casing a plurality of inverted U-shaped anodes, a plurality of elongate current distributors which are aluminum or copper bars covered with a titanium, niobium or tantalum sheath, and manifolding means. The plurality of anodes comprise electrode sections of a metal selected from the group consisting of titanium, niobium and tantalum which when made anodic within said diaphragm cell will form an electrical resistance of the same or greater order than that formed on titanium under identical conditions. Said electrode sections have at least one surface plated with a platinum group metal, each anode being secured in electrical contact by bolts to fins of titanium, niobium or tantalum welded to one of the said elongate current distributors. Each distributor traverses the cell and extends through at least one side wall thereof and has manifolding means exterior of the cell for connection with the extensions of the other current distributors for attachment to a supply of direct current.

3,515,662
ELECTROFORMING ASSEMBLY FOR PRODUCING COMPLEXLY SHAPED ARTICLES

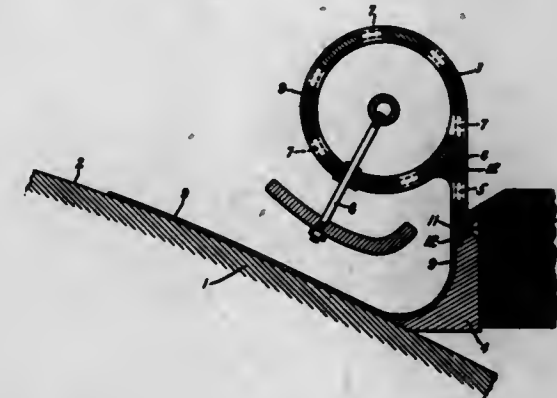
Ferenc J. Schmidt, Ardmore, Pa., assignor to General Electric Company, a corporation of New York

Filed Dec. 27, 1966, Ser. No. 604,799

Int. Cl. B01k 3/02, 1/00

U.S. Cl. 204—281

2 Claims



Perforations in the recessed area of a surface mold are provided to produce smooth, even, relatively stress-free deposition on the recessed area. Fusible fillets may

also be used to form rigid bridges over parts of the recessed area. A specific product is an integrally formed, rigidly supported, relatively stress-free, electroplated mirror.

3,515,663

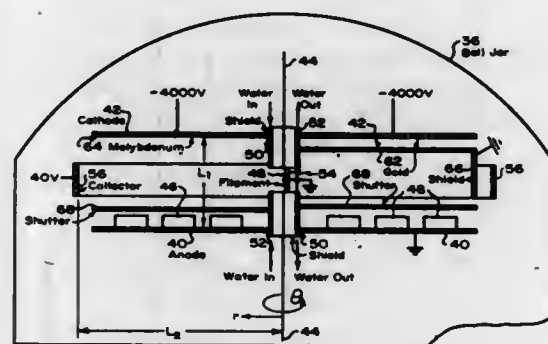
TRIODE SPUTTERING APPARATUS USING AN ELECTRON EMITTER

George E. Bodway, Mountain View, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed Feb. 1, 1968, Ser. No. 702,284
Int. Cl. C23c 15/00

U.S. Cl. 204—298

10 Claims



A triode sputtering system having a circular anode and a circular cathode spaced apart a distance approximately equal to the mean free path of the atoms to be sputtered from the cathode. A cylindrical collector is positioned between the anode and the cathode and around a shielded filament that is rotatably supported along a common axis of the anode and the cathode. The collector is symmetrically spaced from the filament a distance approximately equal to the mean free path of electrons. A semi-circular shield is provided for use in shielding a selected portion of the cathode. The above-described structure is mounted within a bell jar filled with an inert gas at low pressure.

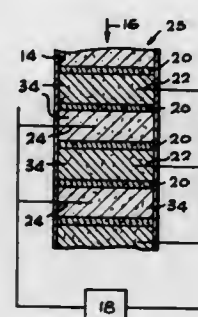
3,515,664

DEMINERALIZING PROCESS AND APPARATUS
Allan M. Johnson, 7423 Balcolm Ave., Reseda, Calif. 91335, and Richard F. Gilman, 768 Erringer Road, Simi, Calif. 93065

Filed Jan. 17, 1967, Ser. No. 609,825
Int. Cl. B01d 13/00, 13/02

U.S. Cl. 204—301

8 Claims



Anion responsive and cation responsive electrodes are located alternately in a flow path and adjacent electrodes are separated by a porous separator layer. The electrodes and separators are both permeable to fluid flow so that the electrolyte fluid can flow through the electrodes. A D.C. source has its positive and negative sides connected to alternate ones of the electrodes and the separator insulates adjacent electrodes from one another. Each of the

electrodes is formed of unconsolidated carbon particles, some being treated with a cation responsive material in fluid form which is later polymerized and others of the electrodes being treated with an anion conducting material in fluid form which is later polymerized. The polarity of the D.C. source and the direction of fluid flow is reversible.

3,515,665

CONTINUOUS LOW PRESSURE CATALYTIC REFORMING PROCESS WITH WATER AND AMMONIA EXCLUSION AND PROGRAMMED SULFUR ADDITION

John C. Hayes, Palatine, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 560,903, June 27, 1966. This application July 17, 1969, Ser. No. 842,713

Int. Cl. C10g 35/08

U.S. Cl. 208—138

9 Claims

An improved method of operation is provided for a catalytic, low pressure process for continuously reforming a hydrocarbon charge stock boiling in the gasoline range for a catalyst life of about 15 barrels of charge per pound of catalyst without catalyst regeneration. In this process the charge stock, hydrogen, and a sulfur or sulfur-containing compound are continuously contacted in a reforming zone with a reforming catalyst containing a platinum component at reforming conditions including a pressure of 50 to 350 p.s.i.g. and an LHSV of 0.1 to 5 hr.⁻¹ Moreover, the reforming zone is maintained substantially free of water and of ammonia throughout the reforming process and the sulfur or sulfur-containing compound is continuously introduced into the reforming zone. Improved method of operation involves controlling the amount of sulfur continuously entering the reforming zone according to the following three-step program: first, the process is started-up and lined-out with sulfur entering the reforming zone in an amount selected from the range equivalent to about 1000 to about 5000 wt. p.p.m. of the charge stock; second, the amount of sulfur entering the reforming zone is decreased, during a time period of at least 2 barrels of charge per pound of catalyst to a value equal to about 10 to about 25% of the amount established during the start-up step; and finally, the amount of sulfur entering the reforming zone is thereafter maintained constant as the value attained at the end of the second step.

ERRATA

For Classes 210 thru 210—33 see:
Patent Nos. 3,515,275 thru 3,515,277

3,515,666

METHOD OF TREATING AQUEOUS LIQUIDS AND COMPOSITIONS

Oliver M. Bacon, Cincinnati, Ohio, assignor to The Hunne- well Soap Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 470,581, July 8, 1965. This application May 31, 1967, Ser. No. 642,307

Int. Cl. B01d 21/01

U.S. Cl. 210—52

8 Claims

This invention relates to an improved process for treating aqueous liquids to effect clarification thereof by forming a flocculent precipitate in said liquid and settling the floc so formed. The invention features improved coagulant aid compositions which are based on the matrix associated with phosphatic materials or, correspondingly, on phosphatic clays derived from low grade phosphatic

materials. These are employed preferably in conjunction with known coagulant aids, such as polyelectrolytes and inorganic salts, such as sodium aluminate, ferrous and ferric sulfates, and the like.

3,515,667

DRILLING FLUID ADDITIVE

Joe L. Mogg, Roseville, Minn., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 12, 1966, Ser. No. 600,755
Int. Cl. C10m 3/48, 3/22

U.S. Cl. 252—8.5

6 Claims

Aqueous mixture of an organic compound such as starch, gums and proteins decomposable by enzymatic action, and methylene blue, particularly adapted for use as additive to drilling fluids.

3,515,668

OLEOPHILIC GRAPHITE AND HEAVY METAL SULPHIDES

Aleksander Jerzy Groszek, London, England, assignor to The British Petroleum Company Limited, London, England

No Drawing. Filed Aug. 15, 1968, Ser. No. 752,753
Claims priority, application Great Britain, Aug. 24, 1967, 38,979/67

Int. Cl. C10m 5/02

U.S. Cl. 252—12

1 Claim

Solid carbon compositions for use as seals e.g. in gasoline pumps, can be formed by compressing oleophilic graphite, with or without a binder and optionally with reinforcing agents or solid lubricants.

3,515,669

HIGH MOLECULAR WEIGHT CARBOXYLIC ACID ESTER STABILIZED METAL DISPERSIONS AND LUBRICANTS AND FUELS CONTAINING THE SAME

William M. Le Suer, Cleveland, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 6, 1967, Ser. No. 681,028
Int. Cl. C10l 1/18, 1/32; C10m 3/20

U.S. Cl. 252—39

19 Claims

Process for preparing Group I and/or Group II metal dispersions in essentially inert diluents by contacting a Group I or Group II basically reacting metal compound with an acidic material in the presence of a stabilizing agent and promoted. A typical process comprises carbonating a mixture of barium hydroxide monohydrate, heptyl phenol, and the reaction product of polyisobutenyl-substituted-succinic anhydride and pentaerythritol or an alkylene polyamine. The metal-containing dispersions thus produced are useful as additives for fuels and lubricants.

3,515,670

IDOETHYL-SUBSTITUTED ORGANOSILICON COMPOUND LUBRICATING COMPOSITIONS AND USE THEREOF

Edgar D. Brown, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Sept. 11, 1967, Ser. No. 666,947
Int. Cl. C10m 1/50

U.S. Cl. 252—49.6

9 Claims

Organosilanes and organosiloxanes containing silicon-bonded iodoethyl groups have been found useful per se as lubricants and lubricant additives, particularly for lubricating difficult to lubricate surfaces, such as stainless steel and titanium. A typical lubricating compound is

3,515,671

MICROBIOCIDALLY TREATED METAL WORKING FLUIDS

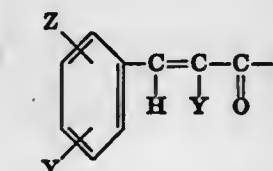
Phillip Adams, Murray Hill, Edward Griffin Shay, Belle Mead, and Alphonso N. Petrocci, Glen Rock, N.J., assignors to Millmaster Onyx Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed July 19, 1968, Ser. No. 746,001
Int. Cl. C10m 1/30

U.S. Cl. 252—54

6 Claims

This invention relates to the use in metal working lubricants of antimicrobial α -halo, α,β -unsaturated carbonyl compounds of the type which may be derived by, for example, the Claisen-Schmidt condensation of a substituted or unsubstituted aromatic aldehyde with an aldehyde or a ketone, followed by halogenation and subsequent dehydrohalogenation, and having the general formula:



wherein X is a halogen, and Y and Z may be hydrogen, halogen, alkyl or nitro, and R may be hydrogen or alkyl, aryl or cycloalkyl containing from 1 to 8 carbon atoms.

3,515,672

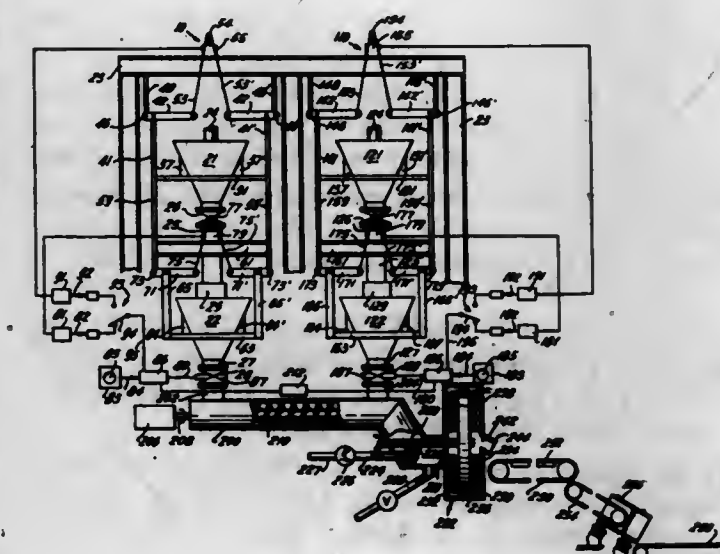
APPARATUS AND PROCESS FOR THE PREPARATION OF DETERGENT COMPOSITIONS

Martin David Reinisch, Emerson, and Lowell Ashton Ledgett, Ridgewood, N.J., assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed June 24, 1965, Ser. No. 466,795
Int. Cl. C11d 9/10

U.S. Cl. 252—109

26 Claims



An apparatus and a process for preparing detergent compositions having a low bulk density in which a slurry is continuously mixed with an additive material one of these components being difficultly flowable because of its

high solids content and in which the proportions of these components are carefully controlled and in which they are mixed under conditions of high shear, the high shear mixing being performed in the presence of a normally gaseous substance.

3,515,673

CHELATING AND CLEANING COMPOUND AND METHOD

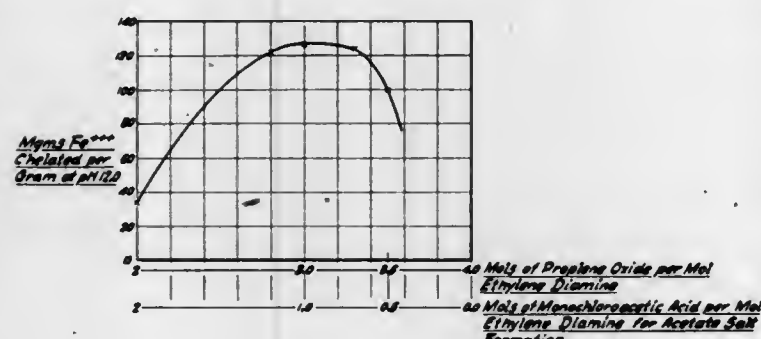
Paul W. Kersnar and Samuel Taormina, San Francisco, Calif., assignors to Progressive Products Co., a corporation of California

Continuation-in-part of application Ser. No. 578,963, Sept. 13, 1966. This application July 10, 1967, Ser. No. 652,183

Int. Cl. C11d 7/32

U.S. Cl. 252-152

1 Claim



A chelating and cleaning composition comprising an alkali metal salt of the carboxymethylated reaction product of 1 mol of ethylene diamine and about 2.0 to 3.5 mols of propylene oxide (the optimum ratio being about 2.8 to 3.3). There are at least two terminal and most effectively, three terminal beta hydroxy propyl groups, with the remaining terminal group or groups acetate groups. Such product, advantageously the monosodium salt of tris (beta hydroxy propyl) ethylene diamine monoacetic acid, exhibits markedly improved metal chelating properties, especially for ferric iron ions in environments of relatively high pH, as well as manganese, nickel, chromium and copper ions, all of which form insoluble hydroxide precipitates at high pH. It is advantageously useful in preventing iron precipitation on fabrics during laundering, in removing precipitated iron stain from fabrics, as well as other iron ion sequestering applications. It is also useful, in combination with other chelates, as an improved detergency booster, and in combination with water-soluble salts of iron or manganese for agricultural purposes.

3,515,674

PROCESS FOR PRODUCING CHEMILUMINESCENCE BY REDUCTION OF THE 1,6 DIAMINOPYRENE RADICAL CATION

David M. Hercules, Arlington, and Fred E. Lytle, Cambridge, Mass., assignors to the United States Atomic Energy Commission

No Drawing. Filed May 5, 1967, Ser. No. 637,877

Int. Cl. C09c; C09k 1/02

U.S. Cl. 252-188.3

2 Claims

A chemiluminescence process useful as an emergency light source wherein light is produced as the result of the

reaction between the radical cation [1,6 diaminopyrene]⁺ and a reductant.

3,515,675

METHOD FOR MAKING LUMINESCENT MATERIALS

William H. Byler, Morristown, and James J. Mattis, Dover, N.J., Stanley A. Ring, Palo Alto, Leon E. Sobon, Los Altos, Melvin Tecotzky, Palo Alto, and Kenneth A. Wickersheim, Mountain View, Calif., assignors to Lockheed Aircraft Corporation, Los Angeles, Calif.

Filed Dec. 27, 1966, Ser. No. 604,784

Int. Cl. C09k 1/14

U.S. Cl. 252-301.4

9 Claims

A method for making europium activated lanthanum oxysulfide phosphors useful as red cathodoluminescent phosphors and as fluorescent and high pressure mercury vapor lamp phosphors. A solution containing as the solute rare earth lanthanum and europium ions is reacted with a precipitation agent to form a crystalline precipitate; for example, a hydrochloric acid solution is reacted with oxalic acid to form rare earth oxalate. The precipitate is calcined to the oxide. The oxide is converted to crystalline, rare earth oxysulfide by heating the oxide in a controlled atmosphere containing as the reactive constituent a gas mixture yielding under elevated temperatures hydrogen, sulfur and oxygen.

3,515,676

OIL FOG GENERATING DEVICE

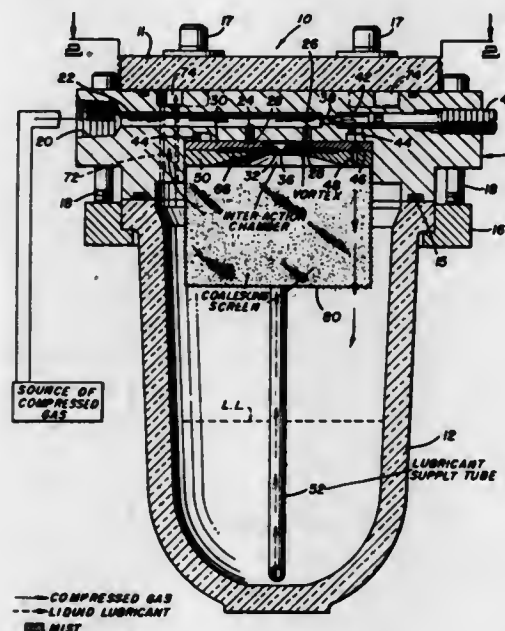
Lars J. Hierta, Westland, and Werner G. Mannhardt, Detroit, Mich., assignors to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 18, 1967, Ser. No. 668,625

Int. Cl. B05b 7/30

U.S. Cl. 252-359

4 Claims



This invention relates to an aerosolization or fog generating unit for aerosolizing liquid lubricant or other liquids into finely divided particles. Pressurized gas is fed into a vortex generating chamber wherein the gas is accelerated to high velocity and discharged through an opening which is proximate a supply of liquid. The high velocity gas aspirates the liquid into an inter-mixing zone and through the process of ligamentation, a liquid fog or aerosol is generated.

3,515,677

PHthalOCYANINE-IMPREGNATED HONEY-COMBED CERAMIC CATALYST

Donald R. Pochowicz, Brookfield, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed June 24, 1966, Ser. No. 560,075

Int. Cl. C10g 19/00, 27/04

U.S. Cl. 252-430

7 Claims

An improved catalyst composite comprising honey-combed ceramic impregnated with a phthalocyanine compound, such as cobalt phthalocyanine fulfonate. These catalysts are useful in the oxidation of sulfhydryl compounds and in sweetening sour hydrocarbons.

3,515,678

SELECTIVE HYDROGENATION OF SOYBEAN OIL WITH SUPPORTED COPPER CATALYSTS

Sambasivarao Koritala, Peoria, Ill., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 10, 1967, Ser. No. 660,881

Int. Cl. B01j 11/82, 11/58

U.S. Cl. 252-432

2 Claims

Extremely active and selective hydrogenation catalysts that permit soybean oil to be sufficiently hydrogenated in about 11 minutes for subsequent winterizing to a stable salad oil comprise copper deposited either on micronized silica having a high content of surface hydroxyl groups or on molecular sieve zeolites having pore sizes of either 4 A or 10 A.

3,515,679

METAL CONTAINING CATALYSTS AND PREPARATION

Rudolf H. Gaeth, Lake Jackson, Tex., and Bert Horvath, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 29, 1967, Ser. No. 686,753

Int. Cl. B01j 11/58, 11/22

U.S. Cl. 252-454

9 Claims

Supported metal catalysts or catalytic components are prepared by vaporizing a metal in the presence of a catalyst support material by the application of electrical energy.

3,515,680

CONTACT MASSES CONTAINING FAUJASITE

William H. Flank, Broomall, Pa., assignor to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of applications Ser. No. 540,201, Apr. 5, 1966, and Ser. No. 574,306, Aug. 23, 1966. This application Sept. 29, 1966, Ser. No. 583,078

Int. Cl. B01j 11/40; C10g 11/04

U.S. Cl. 252-455

6 Claims

Supplemental silica is included in the composition employed for making a sodium faujasite by aqueous aging of amorphous aluminum disilicate having reactivity by reason of calcination in the 965-1095° C. range. A higher silica to alumina ratio in the faujasite component of the product is achieved, and is attributable to such supplemental silica.

3,515,681

FAUJASITE IN MATRIX PARTICLES

William H. Flank, Broomall, James E. McEvoy, Morton, and George Alexander Mills, Swarthmore, Pa., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 540,201, Apr. 5, 1966. This application Apr. 5, 1967, Ser. No. 628,518

Int. Cl. B01j 11/40; C01b 33/26

U.S. Cl. 252-455

3 Claims

Hydrated aluminum disilicate such as kaolin is calcined at about 1030° C. to produce reactive kaolin. Upon differential thermal analysis, said reactive kaolin shows less than 15% of the exotherm exhibited at about 980° C. by raw kaolin. The reactive kaolin is mixed with an aqueous alkaline solution so that in the mixture, the weight ratios of such reactive kaolin to water to sodium hydroxide are about 4-6:4-6:1, desirably about 4.5:5:1. This mixture is transferred to a hot aging zone, where it is maintained quiescently in the hot aging range, 80-120° C., for from five hours to five days, desirably about one day, for transforming the mixture into a faujasite-containing mass. Said faujasite-containing mass is comminuted and employed as a faujasite-contributing component. For example, cracking catalyst particles can be prepared from such comminuted faujasite in aluminosilicate matrix material.

3,515,682

CRACKING CATALYST MANUFACTURE

William H. Flank, Broomall, and James E. McEvoy, Springfield, Pa., and George Alexander Mills, Bethesda, Md., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of applications Ser. No. 540,201, Apr. 5, 1966, and Ser. No. 574,306, Aug. 23, 1966. This application Dec. 6, 1968, Ser. No. 781,951

Int. Cl. B01j 11/58

U.S. Cl. 252-455

11 Claims

Calcination of a mineral such as perlite, halloysite and/or kaolin yields a dehydrated aluminosilicate which, if it passes a leaching test, can be transformed to impure sodium faujasite by two stage alkaline aging. Interstage addition of water or aqueous modifier is optional. Ammonium exchange yields cracking catalysts.

3,515,683

CERIUM FAUJASITE CATALYST

William H. Flank, Broomall, and James E. McEvoy, Springfield, Pa., and George Alexander Mills, Bethesda, Md., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 540,201, Apr. 5, 1966. This application Jan. 28, 1969, Ser. No. 794,792

Int. Cl. B01j 11/40; C01b 33/28

U.S. Cl. 252-455

3 Claims

Kaolin is calcined at a temperature at which an exotherm occurs to prepare a reactive kaolin. A composition comprising sodium faujasite in an amorphous aluminosilicate matrix is prepared by aging a slurry of such reactive kaolin in aqueous alkali. Particular advantages arise from the enhanced thermal stability of the faujasite by reason of the amorphous aluminosilicate matrix in which it is distributed. The sodium faujasite is subjected to ion-exchange with a basic nitrogen compound until the fauja-

site is substantially free from ion-exchangeable sodium. The ammonium faujasite is treated with a controlled amount of an aqueous solution of rare earth salts to prepare a composition comprising both ammonium faujasite and rare earth faujasite. Catalyst particles such as fluidizable particles or spheroids suitable for a moving bed are prepared either before or after such ion-exchange treatment. The cracking catalyst particles are subjected to a gas stream comprising steam at a temperature removing substantially all of the basic nitrogen compound to provide catalyst particles featuring both hydrogen faujasite and rare earth faujasite. Such particles have outstanding thermal stability and an attractive combination of activity, selectivity, and stability for the conversion of gas oil to gasoline.

3,515,684 FLUIDIZABLE CATALYST PARTICLE FORMATION

James E. McEvoy, Springfield, Pa., assignor to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 492,883, Oct. 4, 1965. This application Feb. 17, 1969, Ser. No. 799,919

Int. Cl. B01j 11/40; C01b 33/28

U.S. Cl. 252—455 7 Claims
An impeller rotating in oil to provide a peripheral speed of from 3 to 30 meters per second provides an annular fringe zone of intense agitation. A dispersion of finely divided plastic particles in oil, said particles comprising kaolin and water, and said oil and plastic particles being at substantially the same temperature, is subjected to such intense agitation zone for at least a minute to agglomerate the particles to provide a size distribution suitable for fluidized cracking. The composition of the fluidizable particles withdrawn as product of the method is substantially the same as that of the smaller particles fed to the intense agitation zone. The thus agglomerated particles are precursors which may be transformed into fluidizable cracking catalyst particles comprising crystalline zeolite in a matrix of the kaolin type by any standard method.

3,515,685 MANUFACTURE OF CHROMIA ALUMINA CATALYSTS

John C. Hayes, Palatine, and Roy T. Mitsche, McHenry, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Sept. 1, 1967, Ser. No. 664,932

Int. Cl. B01j 11/06

U.S. Cl. 252—465 3 Claims
The manufacture of a spherical chromia-alumina catalytic composite. Aluminum is digested in an acidic solution of a compound of chromium and the resulting mixture dispersed as droplets in a hot oil bath.

3,515,686
ELECTRICALLY CONDUCTIVE ZINC OXIDE
Robert S. Bowman, Pittsburgh, Pa., assignor to St. Joseph Lead Company, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 2, 1967, Ser. No. 657,779

Int. Cl. H01b 1/08

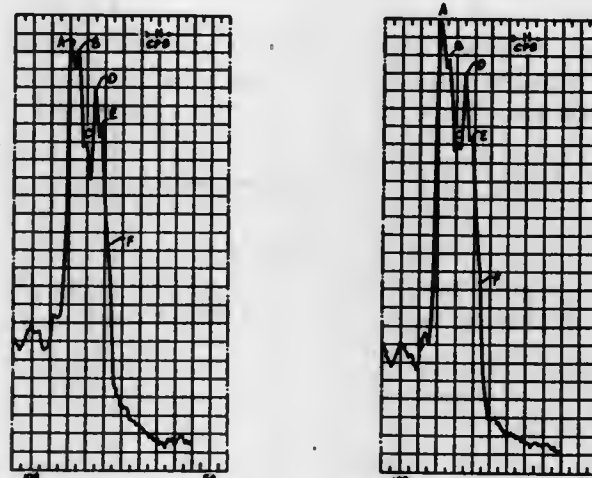
U.S. Cl. 252—512 6 Claims
Normally non-conductive zinc oxide is converted into an electrically conductive form by heating zinc oxide in the presence of an oxide of aluminum, gallium, indium, germanium or tin or a precursor thereof convertible into such oxide under the conditions of treatment and of zinc or magnesium vapor.

3,515,687
STERICALLY REARRANGED POLYMERS
Gregory Julius Listner, Kendall Park, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Continuation-in-part of application Ser. No. 629,056, Mar. 31, 1967. This application July 26, 1967, Ser. No. 656,110

Int. Cl. C08f 3/02

U.S. Cl. 260—2

17 Claims



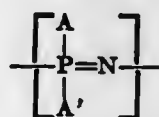
This application relates to sterically rearranged stereoregular polymers prepared by reacting specific stereoregular polymers with a bromine compound and a free radical initiator.

3,515,688
EXTREME SERVICE PHOSPHONITRILE ELASTOMERS
Selwyn H. Rose, Beachwood, Ohio, assignor to Horizons Incorporated, a division of Horizons Research Incorporated, a corporation of Ohio
No Drawing. Filed Aug. 30, 1967, Ser. No. 664,296

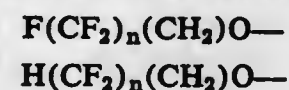
Int. Cl. C08d; C08f; C08g

U.S. Cl. 260—2

7 Claims
Copolymers containing randomly repeating units



in the polymer in which A and A' are any of



and n is not greater than about 9, and the units contain various A's, and their preparation.

3,515,689
AQUEOUS, ELECTRODEPOSITABLE COMPOSITIONS OF POLYCARBOXYLIC ACID RESIN AND AN ORGANOPHILIC CATION-MODIFIED CLAY
Ralph M. Brane, Avon Lake, and Donald P. Hart, North Olmstead, Ohio, assignors to PPG Industries, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Original application Dec. 15, 1965, Ser. No. 514,111. Divided and this application May 7, 1969, Ser. No. 842,050

Int. Cl. C09d 3/64; C08g 39/08

U.S. Cl. 260—22

6 Claims
Aqueous, electrodepositable compositions of improved properties are provided by the combination of a solubilized

polycarboxylic acid resin vehicle and an organophilic cation modified clay in which the clay cation has been replaced by an onium base cation. The inclusion of such a clay overcomes the tendency of the electrodeposited coating to creep away from edges of the coated article during baking of the coating.

3,515,690
COPOLYMER SALTS FOR WATER DILUTABLE SURFACE COATING COMPOSITIONS
Thomas Hunt, Barry, Glamorgan, Wales, assignor to British Resin Products Limited, London, England, a British company
No Drawing. Filed Nov. 13, 1967, Ser. No. 682,602
Claims priority, application Great Britain, Nov. 29, 1966, 53,291/66

Int. Cl. C08f 21/00, 21/04; C09d 3/68

U.S. Cl. 260—22

5 Claims

A copolymer salt for use in surface coating compositions having improved water resistance when dried in air to form films wherein the salt is formed from a primary C₁ or C₂ alkyl amine and a copolymer formed by (a) reacting an ester of a polyhydric alcohol and an unsaturated fatty acid (e.g. linseed oil) with an acyclic olefinically unsaturated dicarboxylic acid or anhydride (e.g. maleic acid or anhydride) and (b) copolymerizing the reaction product (e.g. maleinized linseed oil) so formed with an unsaturated monomer (e.g. styrene) copolymerizable therewith.

3,515,691
WAX POLYMER COATING COMPOSITIONS
Karekin G. Arablan, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 29, 1967, Ser. No. 642,183

Int. Cl. D21h 1/36, 1/40; C08d 13/16

U.S. Cl. 260—28.5

1 Claim

A wax polymer coating composition resistant to peeling and cracking at low temperatures and having good scuff resistance comprising (a) a paraffin wax having a melting point of 130 to 150° F., (b) a scuff resistant wax having a melting point of 170 to 190° F., (c) polyethylene and (d) an ethylene vinyl acetate copolymer having a vinyl acetate content of 25–26% by weight.

3,515,692
PROCESS FOR PREPARATION OF ACRYLONITRILE-BUTADIENE-STYRENE GRAFT COPOLYMERS
Frederick E. Carrock, Paramus, and Kenneth W. Doak, Wyckoff, N.J., assignors to Dart Industries Inc., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 267,342, Mar. 22, 1963. This application Oct. 24, 1966, Ser. No. 588,769

Int. Cl. C08f 19/18, 45/28; C08d 11/02

U.S. Cl. 260—33.6

8 Claims

A process for preparing ABS graft copolymers comprises dissolving a linear polybutadiene in a mixture of monomers such as acrylonitrile and styrene, prepolymerizing the resulting solution to convert a portion of the monomers to polymers, adding the prepolymer to an aqueous solution containing hydroxyethyl cellulose as a suspending agent and substantially completely polymerizing the mixture in suspension in the presence of tertiary

butyl perbenzoate by gradually increasing the temperature from about 90° C. to 125°–1150° C. The graft copolymer beads recovered from this process have high impact strength and uniform and narrow size distribution.

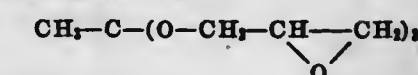
3,515,693
ORTHOESTER STABILIZED POLYVINYL-CHLORIDE RESINS
Louis L. Wood, Washington, D.C., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Original application Dec. 12, 1966, Ser. No. 612,066. Divided and this application May 22, 1968, Ser. No. 750,662

Int. Cl. C08f 45/58

U.S. Cl. 260—45.8

2 Claims

Polyvinyl chloride resin is thermally stabilized by the addition of the orthoester



A polyhydric alcohol R(OH)_x where R is an organic radical and x has a value of from 1–6 may also be added in a concentration of 1% to 10% to further enhance the thermal stability.

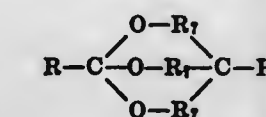
3,515,694
ORTHOESTER STABILIZED POLYVINYL-CHLORIDE RESINS
Louis L. Wood, Washington, D.C., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Original application Dec. 12, 1966, Ser. No. 612,066. Divided and this application May 22, 1968, Ser. No. 750,690

Int. Cl. C08f 45/58

U.S. Cl. 260—45.8

3 Claims

Polyvinyl chloride resins are stabilized by the addition of orthoester compounds having a structure



wherein R is selected from the group consisting of hydrogen, alkyl, phenyl, phenylalkyl, alkylphenylalkyl, halophenyl, nitrophenyl, and alkenyl; and R₁ is alkylene. A polyhydric alcohol may also be added in a concentration of from 1% to 10% to further enhance thermal stability.

3,515,695
POLYDISALICYLIDE POLYMERS
Gerard A. Loughran, Kettering, and Jerald L. Burkett, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
No Drawing. Filed Oct. 6, 1967, Ser. No. 674,066

Int. Cl. C08g 17/02

U.S. Cl. 260—47

14 Claims

This invention comprises new polymers containing polydisalicylide linkages such as prepared from the condensation polymerization of 4,4'-diacetoxydiphenylether-3,3'-dicarboxylic acid, 4,4'-dihydroxydiphenyl-3,3'-dicarboxylic acid, or 2,5-diacetoxy derivative of terephthalic acid, or the corresponding acid chlorides. The

polymerization proceeds through an initial linear polymer formation and then the second pair of functional groups from adjacent ring structures condense to form an eight-membered ring which gives the polymer a double strand structure which can be either of boat or chair configuration. The polymers of this invention have high thermal stability and are useful for producing molded articles, laminates, films, adhesives and ablative materials.

3,515,696

POLYESTERS FROM HYDROXYALKOXYBENZOIC ACIDS, POLYOLS AND POLYCARBOXYLIC ACIDS

Takaakira Tsuji and Kenichi Tanabe, Kurashiki, Japan, assignors to Kurashiki Rayon Company Limited, Kurashiki, Japan, a corporation of Japan

No Drawing. Filed Aug. 7, 1964, Ser. No. 388,325
Claims priority, application Japan, Aug. 16, 1963, 38/43,244

Int. Cl. C08g 17/08

U.S. Cl. 260—47 6 Claims

Method of manufacturing high molecular weight polyesters which comprises polycondensating an aromatic hydroxycarboxylic acid (A), a hydroxy compound (B) and a carboxyl compound (C), wherein (B) and/or (C) is a compound having at least three functional groups.

3,515,697

PRODUCTION OF MELAMINE-ACETOGLUANAMINE-TOLUENESULFONAMIDE COPOLYCONDENSATE RESINS

Tetsuo Miwa, Higashi Osaka, Zenzaburo Shibata, Osaka, Hiroaki Araki, Osaka Prefecture, Tadamoto Tanaka, Hirakata, and Hiroshi Sakaguchi, Nara, Japan, assignors to Matsushita Electric Works, Ltd., Kodoma, Japan

Filed May 29, 1967, Ser. No. 641,790

Claims priority, application Japan, June 3, 1966, 41/36,039

Int. Cl. C08g 9/28, 9/30, 37/30

U.S. Cl. 260—67.6 1 Claim

A method of producing a thermosetting melamine-acetoguanamine-toluenesulfonamide condensate resin which comprises condensing a methylolmelamine having 2-5 methylol groups per melamine molecule with acetoguanamine and toluene-sulfonamide in such a proportion that the total of the acetoguanamine and toluenesulfonamide is 0.2-1.5 mol. per mol. of the methylolmelamine and the toluenesulfonamide is 0.3-2.5 mols per mol. of the acetoguanamine.

3,515,698

HIGH MOLECULAR WEIGHT POLYMERS CONTAINING THE REACTION PRODUCT OF AN ALIPHATIC AMINE AND A MONO- OR DIOXIRANE AS ANTISTATIC AGENT

Otto Mauz, Niederhofheim, Taunus, Eugen Reindl, Burgkirchen an der Alz, and Hans Joachim Vetter, Frankfurt am Main-Schwannheim, Germany, assignors to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 24, 1967, Ser. No. 640,812

Int. Cl. C08f 3/02, 7/02; C08g 17/00
U.S. Cl. 260—75 6 Claims

The tendency for high molecular weight polymers such as polyolefins and polyesters, and particularly shaped

articles of such polymers, to accumulate electrostatic charges is reduced by incorporating into the polymer, prior to article formation, from about 0.05 to about 4% by weight of the polymer of the reaction product of a primary or secondary aliphatic amine with certain mono- or dioxiranes which are, for example, phenyl ethylene oxides, phenyl glycidyl ethers, alkyl glycidyl ethers, mono- or polyethylene glycol diglycidyl ethers and diepoxy alkanes.

3,515,699

STERILIZABLE BATTERY CONTAINERS

Eugene A. Burns, Palos Verdes Estates, and Hyman R. Lubowitz, Redondo Beach, Calif., assignors to TRW Inc., Redondo Beach, Calif., a corporation of Ohio

No Drawing. Filed May 8, 1967, Ser. No. 636,655

Int. Cl. C08g 17/00

U.S. Cl. 260—75 4 Claims

A sterilizable battery container for non-aqueous electrolyte batteries which is molded from thermosetting block polymers of 1,2-polybutadiene-hydrocarbons or polyethers. The thermoset block polymer containers are stable at sterilizing temperatures and are highly resistant to dissolution by organic electrolytes.

3,515,700

PROCESS FOR THE PREPARATION OF POLYESTER FOR SLIDEABLE FILM

Rei Yokouchi, Yoshimitsu Ichikawa, Syotaro Izeki, and Takeo Fusayama, Mishima-shi, Shizuoka-ken, Japan, assignors to Toyo Rayon Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Continuation-in-part of application Ser. No. 364,837, May 4, 1964. This application Dec. 31, 1968, Ser. No. 788,315

Claims priority, application Japan, May 8, 1963, 38/23,524

Int. Cl. C08g 17/015

U.S. Cl. 260—75 9 Claims

A method for the preparation of polymeric polyesters which may be shaped into a film of excellent sliding characteristics. More specifically, the method relates to the preparation of polyesters for highly slidable film which comprises contacting difunctional carboxylic acid or ester-forming functional derivatives thereof with a diol in the presence of a catalyst consisting of a zinc compound, an alkaline earth metal compound, and a titanium compound.

3,515,701

RUBBERY POLYPERFLUOROALKYLENE OXIDES AND PROCESS THEREFOR

George Van Dyke Tiers, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 262,252, Mar. 1, 1963. This application May 31, 1966, Ser. No. 553,696

Int. Cl. C08g 33/00; C07c 59/00

U.S. Cl. 260—78.4 10 Claims

By pyrolysis of mercury or silver salts of dibasic oxoatom containing perfluorocarboxylic acids, as such or mixed with such salts of dibasic perfluorocarboxylic acids or perfluoromonocarboxylic acids, there are obtained rubbery, fluorocarbon solvent-swellable polyperfluoroalkylene oxides having from 100 to 10,000 oxygen-linked repeating units.

3,515,702

LAUROLACTAM COPOLYAMIDE SHAPED ARTICLES HAVING HIGHLY ADHESIVE SURFACES

Fritz Raabe, Bonn (Rhine), Germany, assignor to Dr. Plate G.m.b.H. Chemische Fabrik, Bonn, Germany, a corporation of Germany

No Drawing. Filed Feb. 6, 1967, Ser. No. 614,018
Claims priority, application Germany, Feb. 11, 1966, P 38,767

Int. Cl. C08g 20/10

U.S. Cl. 260—78 1 Claim

There is provided a plastic article of manufacture having highly adhesive surfaces at elevated temperatures formed by condensing together 80% to 20% by weight lauro lactam and 20% to 80% by weight of at least one other polymerizable amide.

3,515,703

POLYAMIDE FILAMENT

Kelzo Ueda, Nishinomiya-shi, Tsuneo Ohkawahara, Hirakata-shi, Masab Matsui, Osaka-fu, and Satoshi Ando, Osaka-shi, Japan, assignors to Kanegafuchi Boseki Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Continuation of application Ser. No. 368,691, May 19, 1964. This application Sept. 26, 1968, Ser. No. 768,956

Claims priority, application Japan, May 25, 1963, 38/27,269; July 18, 1963, 38/38,891

Int. Cl. C08g 20/00

U.S. Cl. 260—78 1 Claim

A drawn nylon filament having superior heat durability, Young's modulus and dyeability which consists essentially of a copolyamide of undecamethylene terephthalamide and epsilon-caproamide, the latter being present in the range of from about 3 to 40% by weight of the copolyamide.

3,515,704

PROCESS FOR THE POLYMERIZATION OF EPISULPHIDES

Raymond T. Woodhams, Toronto, Ontario, and Bertie B. J. Wood, Georgetown, Ontario, Canada, assignors to The Dunlop Company Limited, London, England, a British company

No Drawing. Continuation-in-part of application Ser. No. 446,431, Apr. 7, 1965. This application Mar. 8, 1968, Ser. No. 711,474

Claims priority, application Great Britain, Apr. 23, 1964, 16,793/64

Int. Cl. C08g 23/00

U.S. Cl. 260—79 10 Claims

Polymerization of at least one vicinal episulphide in the presence of an anionic compound of lithium, sodium or potassium and a compound selected from polythiol hydrocarbon compounds, polyhydroxy hydrocarbon compounds, hydrogen sulphide and ammonia.

3,515,705

PROCESS FOR THE POLYMERISATION OF ACRYLONITRILE

Georges Baltrand, Chantoiseau, France, assignor to Rhone-Poulenc S.A., Paris, France, a French body corporate

No Drawing. Filed May 15, 1967, Ser. No. 638,558
Claims priority, application France, May 17, 1966, 61,921

Int. Cl. C08f 3/76, 15/22

U.S. Cl. 260—85.5 12 Claims

Acrylonitrile can be polymerised or copolymerised with other vinyl monomers in solution with a new initiator comprising a peroxy compound, a reducing agent, and a boron compound.

875 O.G.—8

3,515,706

LACTONIZED ACRYLIC POLYMERS AND PRODUCTION THEREOF

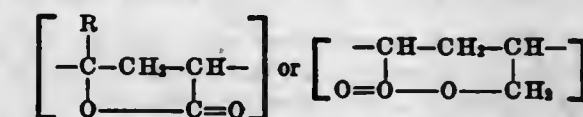
Takashi Minato and Yasuo Matsumura, Saidaiji, Yukio Kojima, Okayama, and Kunio Maruyama, Saidaiji, Japan, assignors to Japan Exlan Company Limited, Osaka, Japan

Filed Mar. 31, 1967, Ser. No. 627,364

Int. Cl. C08f 3/74, 15/02

U.S. Cl. 260—85.5 10 Claims

An acrylonitrile copolymer containing a lactone unit of the formula



wherein R is a hydrogen atom or methyl group, is prepared by treating a copolymer of acrylonitrile and at least one monomer selected from the group consisting of monomers having a hydroxy group and monomers capable of forming a hydroxyl group with a medium of an acid content of not higher than 40% and at a pH not higher than 2. Such copolymer, because of its excellent physical properties, such as stretch-ability, transparency, strength, etc., as hereinafter exemplified for fibers, is excellently suitable for the manufacture not only of fibers but also of films and other molded articles.

3,515,707

METAL DERIVATIVES OF NOVEL SATURATED HETEROCYCLIC POLYMERS

Herbert K. Reimschuessel, Morristown, N.J., and Franklin Boardman, Ossining, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 16, 1967, Ser. No. 616,482

Int. Cl. C08f 3/90, 3/81, 5/00

U.S. Cl. 260—89.7 2 Claims

N,N-diallyl-α-amino carboxylic acids and N,N-diallyl quaternary ammonium compounds may be free radical polymerized to form saturated heterocyclic polymers with functional side chains. These polymers form metal chelate complexes.

3,515,708

PROTECTING DOGS AGAINST BRUCELLA CANIS BACTEREMIA WITH KILLED BRUCELLA ABORTUS STRAIN 45/20 VACCINE

James M. Williams, St. Joseph, Mo., assignor to Phillips Roxane Inc., St. Joseph, Mo., a corporation of Delaware

No Drawing. Filed Feb. 23, 1968, Ser. No. 707,432

Int. Cl. C12k 3/00; A61k 23/00

U.S. Cl. 424—92 3 Claims

This invention relates to a method of protecting animals which comprises administering to a non-bovine animal susceptible to natural attack by a pathogenic Brucella organism a small but effective amount of inactivated bovine *Brucella abortus* strain 45/20.

3,515,709

PROCESS FOR ELIMINATING POLYMER BUILD-UP ON REACTOR WALLS DURING POLYMERIZATION OF WATER-INSOLUBLE MONOETHYLENICALLY UNSATURATED LIQUID MONOMERS

Alfred R. Nelson, Bay City, and Vernon D. Floria, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 2, 1967, Ser. No. 657,778

Int. Cl. C08f 1/11, 1/13, 3/22

U.S. Cl. 260—92.8 9 Claims

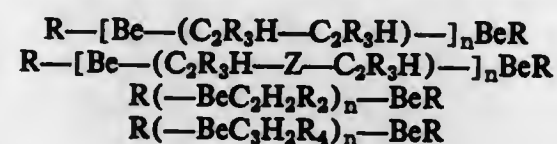
This invention relates to a process for essentially eliminating undesirable polymer build-up on the interior

walls of the reaction vessel during the polymerization of substantially water-insoluble monoethylenically unsaturated liquid monomer in aqueous dispersion comprising: essentially uniformly contacting such reactor walls, prior to polymerization of the monomer, with certain water-soluble derivatives of amino polycarboxylic acids.

3,515,710 BERYLLIUM CONTAINING POLYMERIC COMPOSITION

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware
No Drawing. Continuation-in-part of applications Ser. No. 751,567, July 28, 1958, Ser. No. 761,484, Sept. 17, 1958, and Ser. No. 762,227, Sept. 22, 1958. This application Sept. 27, 1961, Ser. No. 141,013
Int. Cl. C08f 7/02, 7/04

U.S. Cl. 260—93.5 20 Claims
1. A polymer selected from the class consisting of:



wherein n is an integer having a value of at least 2, R represents a member of the class consisting of hydrogen and a hydrocarbon group, and Z represents a polyvalent hydrocarbon group.

3,515,711 PROTEINACEOUS CONSTITUENT FOR GLUE CONSISTING OF THE REACTION PRODUCT OF POWDERED BLOOD AND FORMALDEHYDE VAPOR IN THE DRY STATE

John P. Richards, La Grange, and Peter L. Shanta, Park Ridge, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 484,850, Sept. 3, 1965. This application Nov. 28, 1966, Ser. No. 601,820
Int. Cl. C08h 1/02, 7/00

U.S. Cl. 260—112 16 Claims
A dry powder suitable for mixing with an alkaline solution to produce an adhesive is made by reacting, in the dry state, formaldehyde vapor and a dry, particulate proteinaceous substance such as powdered blood, casein or soybean protein.

3,515,712 CONTINUOUS PROCESS FOR REACTING TURPENTINE AND ALKYLPHENOLS WITH PHOSPHORUS PENTASULFIDE

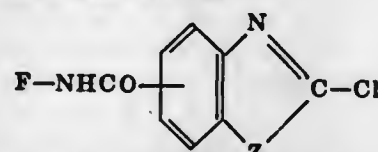
Fred C. Goldsmith, Mentor, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
Original application Oct. 23, 1961, Ser. No. 132,316, now Patent No. 3,335,158. Divided and this application Apr. 20, 1967, Ser. No. 632,417
Int. Cl. C07f 9/18; C07g 17/00

U.S. Cl. 260—139 3 Claims
Reactions of solids with liquids, wherein the product is a liquid, are carried out under continuous conditions by circulating a slurry of the solid reagent, a major of the liquid phase of the slurry being inert to the reaction (that is, being either product or solvent), in a closed system and adding the liquid reagent while maintaining an excess of the solid reagent. The liquid product is drawn off at about its rate of formation. The method is particularly applicable to the reaction of phosphorus pentasulfide with phenols or turpentine.

3,515,713 REACTIVE DYESTUFFS CONTAINING 2-CHLORO-OXAZOLE, 2-CHLOROTHIAZOLE OR 2-CHLORO-BENZIMIDAZOLE RINGS

Edgar Siegel, Leverkusen, and Klaus Sasse, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
No Drawing. Filed Feb. 27, 1962, Ser. No. 176,111
Claims priority, application Germany, Mar. 10, 1961, F 33,390
Int. Cl. C09b 62/38, 62/40, 62/42

U.S. Cl. 260—146 13 Claims
1. A dyestuff of the formula:



wherein F stands for the residue of a water-soluble organic dyestuff selected from the group consisting of an azo, anthraquinone, and phthalocyanine dyestuff and Z stands for a member selected from the group consisting of $-O-$ and $-S-$.

3,515,714 THIAZOLYL MONOAZO DYES CONTAINING THE IMIDOETHYLSULFONYLETHYL GROUP

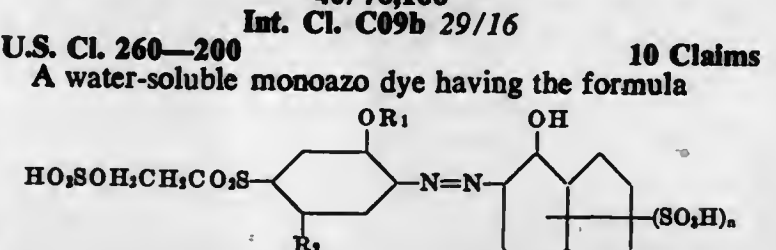
John I. Dale III, and Max A. Weaver, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 22, 1966, Ser. No. 567,048
Int. Cl. C09b 29/36; D06p 1/02

U.S. Cl. 260—158 7 Claims
Water-insoluble thiazolyl-azo-aniline compounds in which the nitrogen atom of the aniline coupling component is substituted by a dicarboximidoethyl-sulfonyl group are useful as dyes for hydrophobic textile materials.

3,515,715 QUATERNIZED PYRAZOLYL AZO DYES

James M. Straley, John G. Fisher, and David J. Wallace, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Jan. 23, 1967, Ser. No. 611,165
Int. Cl. C09b 29/36; C07d 49/20

U.S. Cl. 260—163 8 Claims
Pyrazolylazo compounds, prepared by diazotizing a 3-aminopyrazole, coupling the diazonium salt formed with an aniline coupling component and quaternizing the pyrazolylazo compound, and the use of such compounds as dyes for acrylic, modacrylic and acid modified textile materials. The disclosed compounds give red to violet dyeings having improved fastness to light on such textile materials.



wherein R_1 means methyl or ethyl radical, R_2 means methyl, methoxy or ethoxy radical and n means an integer of 1 to 3.

3,515,717 PROCESS FOR ISOLATING ANTIBIOTICS

Dae Yang Cha, Oshtemo, and Heinz K. Jahnke, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Dec. 16, 1968, Ser. No. 784,195
Int. Cl. C07c 47/18, 103/19; C07d 99/14

U.S. Cl. 260—210 10 Claims
Process for isolating a lincomycin antibiotic from fermentation beers or aqueous processing solutions by resin sorption of the lincomycin antibiotic on a resin comprising a non-ionic macro porous copolymer of styrene cross-linked with divinylbenzene. The resin is eluted with an organic or aqueous organic solvent in which the sorbed lincomycin antibiotic is soluble. This process is more efficient than a carbon adsorption process for recovering lincomycin from fermentation beers.

U.S. Cl. 260—233.3 1 Claim
Cyanoethylated starch in intact granule form is oxidized with hypochlorite under mildly alkaline conditions that preserve the intact granule form and prevent internal crosslinks. The product has carboxyl, carbonyl, cyanoethyl, and carboxyethyl functionality and forms stable, high solids aqueous solutions after being pasted in hot water. The solutions are used as paper sizings.

ERRATUM

For Class 260—309.2 see:
Patent No. 3,515,866

3,515,719 7-METHYL-6,19-EPOXY STEROIDS OF THE ANDROSTANE SERIES

J. Allan Campbell, John C. Babcock, and John E. Pike, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Mar. 15, 1967, Ser. No. 623,223
Int. Cl. C07c 173/00

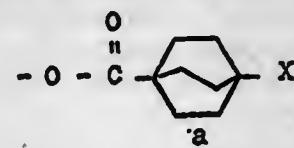
U.S. Cl. 260—239.55 21 Claims
This invention relates to novel processes for the production of 7 α -methyl-19-nor-17 β -hydroxy-4-androsten-3-one, novel physiologically active intermediates obtained in its production and novel physiologically active analogues obtained therefrom, e.g.,
7 α -methyl-6 β ,17 β -dihydroxy-4-androsten-3-one 17-acylate,
7 α -methyl-6 β ,17 β -dihydroxy-5 β -androstan-3-one 17-acylate,
7 α -methyl-6 β ,19-epoxy-17 β -hydroxy-5 β -androstan-3-one 17-acylate,
7 α -methyl-2 β -bromo-6 β ,19-epoxy-17 β -hydroxy-5 β -androstan-3-one 17-acylate,
7 α -methyl-6 β ,19-epoxy-17 β -hydroxy-5 β -androsten-1-en-3-one 17-acylate,
7 α -methyl-6 β ,19-epoxy-17 β -hydroxy-4-androsten-3-one 17-acylate,
7 α -methyl-17 β ,19-dihydroxy-4-androsten-3-one 17-acylate,
17 β -hydroxy-7 α -methyl-3-oxo-4-androsten-19-oic acid, 17-acylate,
7 α -methyl-17 β ,19-dihydroxy-4-androsten-3-one, 3,17-dioxo-7 α -methyl-4-androsten-19-oic acid,

7 α -methyl-5(10)-estrene-3,17-dione,
3,3-dialkoxy-7 α -methyl-5(10)-estren-17-one,
3,3-dialkoxy-7 α -methyl-17 α -alkenyl-5(10)-estren-17 β -ol,
3,3-dialkoxy-7 α -methyl-17 α -alkyl-5(10)-estren-17 β -ol,
7 α -methyl-17 β -hydroxy-17 α -alkynyl-5(10)-estren-3-one,
7 α -methyl-17 β -hydroxy-17 α -alkyl-4-estren-3-one,
7 α -methyl-17 β -hydroxy-5(10)-estren-3-one 17-acylate and 7 α -methyl-3,3-dialkoxy-5(10)-estren-3 β -ol 17-acylate.

3,515,720 ESTERS OF TESTOSTERONE AND SELECTED DERIVATIVES THEREOF WITH BICYCLO[2.2.2]OCTANE-1- AND -OCTENE-1-CARBOXYLIC ACIDS

Richard M. Scribner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 579,515, Sept. 15, 1966. This application Nov. 5, 1968, Ser. No. 773,629
Int. Cl. C07c 173/00, 169/22

U.S. Cl. 260—239.55 19 Claims
Described are the novel esters of certain 3 keto steroids, in which the C-17 substituent has the formula

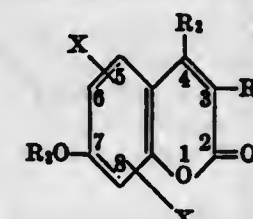


wherein a can be either a single or a double bond or an epoxy group; and X can be hydrogen, a lower alkyl, isoalkyl, or trifluoromethyl, and in some cases also lower alkoxy, halogen, or the cyano group. These new esters have a high ratio of anabolic to androgenic activity and are useful as inhibitors of pituitary gonadotrophin.

3,515,721 3-TERTIARY-AMINOETHYL-4-METHYL OR PHENYL-7-ETHOXYCARBONYLMETHOXY-HALO OR MONONITRO COUMARINS AND CONGENERS

Heinrich Ritter, Dornigheim, Kreis Hanau, Rudi Beyerle, Bruchkobel, Kreis Hanau, and Rolf-Eberhard Nitz, Frankfurt am Main-Fechenheim, Germany, assignors to Cassella Farbwerke Mainkur Aktiengesellschaft, Frankfurt am Main-Fechenheim, Germany, a company of Germany
No Drawing. Filed June 26, 1967, Ser. No. 649,002
Int. Cl. C07d 87/36

U.S. Cl. 260—247.2 4 Claims
Known coronary vasodilators are subject to various disadvantages such that they are not usable in hypotonic patients and in those having an acute myocardial infection. The coronary vasodilators of the present invention specifically dilate the coronary vessels only and, thus, do not exhibit a hypotensive action and at the same time possess long term activity. Our new vasodilators having these desirable properties are derivatives of the 7-hydroxy-coumarin having the formula



wherein the X is selected from the group consisting of chlorine, bromine, iodine and mononitro or one of the X is selected from the group consisting of chlorine, bromine, iodine and mononitro and the other X is a hydrogen atom, R_1 is selected from the group consisting of piperidino ethyl, morpholino ethyl, pyrrolidino ethyl, diethylamino ethyl and diethylamino propyl, R_2 is selected from the group

consisting of methyl and phenyl, and R_3 is selected from the group consisting of ethoxy-carbonyl-methyl and ethoxy-carbonyl-ethyl.

3,515,722

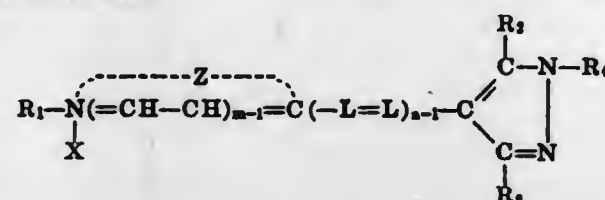
CYANINE DYES

Earl J. Van Lare, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 23, 1966, Ser. No. 604,161

Int. Cl. C09b 23/00

U.S. Cl. 260—240 11 Claims
Cyanine dyes are provided which have the following general formula:



wherein m represents a positive integer of from 1 to 2; n represents a positive integer of from 2 to 3; L represents a methine linkage; R_1 represents a member selected from the group consisting of an alkyl group of from 1 to 4 carbon atoms, an alkenyl group, and a phenyl group; R_2 and R_3 each represents a member selected from the group consisting of a hydrogen atom, an alkyl group of from 1 to 4 carbon atoms and a phenyl group; R_4 represents a member selected from the group consisting of an alkyl group of from 1 to 4 carbon atoms and a phenyl group; X represents an acid anion; and, Z represents the non-metallic atoms necessary to complete a desensitizing heterocyclic nucleus containing 5 to 6 atoms in the heterocyclic ring, said desensitizing nucleus being selected from the group consisting of nitrobenzothiazole, nitrobenzoselenazole, imidazo[4,5-b]quinoxaline, 3,3-dialkyl-3H-pyrrolo[2,3-b]pyridine, 3,3-dialkyl-3H-dialkyl-3H-nitroindole, thiazolo[4,5-b]quinoline, nitroquinoline, nitrothiazole, nitronaphthothiazole, nitrooxazole, nitronaphthoxazole, nitroselenazole, nitronaphthoselenazole and nitropyridine nuclei. The dyes of this invention are electron acceptors and spectral sensitizers for fogged direct positive silver halide emulsions.

3,515,723

2-(5-AMINO-1H-1,2,4-TRIAZOL-3-YL)-3-AMINOPYRAZINES AND PROCESSES FOR THEIR PREPARATION

Edward J. Cragoe, Jr., Lansdale, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 14, 1967, Ser. No. 682,978

Int. Cl. C07d 51/76

U.S. Cl. 260—250 16 Claims
3-aminopyrazinamidoguanidines are cyclized by heating to 2-(5-amino-1H-1,2,4-triazol-3-yl)-3-aminopyrazines. The products are effective diuretic agents.

3,515,724

PROCESS FOR THE PREPARATION OF SUBSTITUTED 4-PHENYL OR 4-PYRIDYL-1,2-DIHYDROQUINAZOLINE COMPOUNDS AND NOVEL SUBSTITUTED 4-PYRIDYL-1,2-DIHYDROQUINAZOLINE PRODUCTS

George Francis Field, West Caldwell, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1966, Ser. No. 600,742

Int. Cl. C07d 51/48

U.S. Cl. 260—251 19 Claims
Substituted 4-phenyl or 4-pyridyl-1,2-dihydroquinazolines or the respective 3-oxides thereof are prepared

by treating a correspondingly substituted 2-aminophenyl-aryl ketone with a substituted imine or hydroxylimine. The product dihydroquinazolines are useful as intermediates in the preparation of medicinally valuable 5-aryl-1,4-benzodiazepines.

3,515,725

2,3a-DIAZAHYDRINDANONE AND 3H-PYRIDO-[1,2-c]PYRIMIDIN-3-ONE DERIVATIVES

Joseph Hellerbach, Basel, Switzerland, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 28, 1967, Ser. No. 626,387

Claims priority, application Switzerland, Apr. 6, 1966, 5,052/66

Int. Cl. C07d 57/20

U.S. Cl. 260—251 22 Claims

2,3a-diazahydrindanone and 3H-pyrido-[1,2-c]pyrimidin-3-one derivatives useful as analgesics, antiphlogistics, anti-allergics and anti-inflammatory agents.

3,515,726

2,2'-BIS(PYRIDYL-N-OXIDE) DITHIOLCARBONATES AND TRITHIOLCARBONATES

Rudiger D. Haugwitz, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Oct. 16, 1968, Ser. No. 768,171

Int. Cl. C07d 31/50

U.S. Cl. 260—294.8 4 Claims

Selected dithiolcarbonates and trithiolcarbonates are prepared by reacting various 2-mercaptopyridine N-oxides with phosgene and thiophosgene in the presence of a base. These compounds have been found to be effective biocides for a wide variety of applications.

3,515,727

SUBSTITUTED TETRAZOLE

William L. Garbrecht, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Apr. 14, 1967, Ser. No. 630,832

Int. Cl. C07d 55/56; A61k 27/00

U.S. Cl. 260—308 4 Claims

5-(3-hydroxyphenoxy)-1H-tetrazole is prepared via reaction of resorcinol monoacetate with cyanogen bromide in the presence of triethylamine and sodium azide, followed by hydrolysis under basic conditions. The product, or a nontoxic, physiologically acceptable salt thereof, is used as a sugar substitute for sweetening caloric or non-caloric materials and for the control of viruses.

3,515,728

SEMICARBAZONE AND THIOSEMICARBAZONE DERIVATIVES OF 5-NITROIMIDAZOLES

David W. Henry, Menlo Park, Calif., and Dale R. Hoff, Cranford, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application Feb. 4, 1965, Ser. No. 430,250, which is a continuation-in-part of application Ser. No. 352,966, Mar. 18, 1964. Divided and this application Oct. 25, 1968, Ser. No. 794,815

Int. Cl. C07d 49/36

U.S. Cl. 260—309 4 Claims

1-substituted-2-formyl-5-nitroimidazoles, 1-substituted-2-keto-5-nitroimidazoles and the corresponding oxime, hydrazone, semicarbazone and thiosemicarbazone derivatives, useful in the treatment of protozoal diseases.

3,515,729

PROCESS FOR THE PRODUCTION OF BROMINATED PHTHALOCYANINES

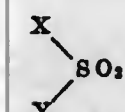
Istvan Toth, Basel, and Walter Frey, Muttens, Basel-Land, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Nov. 13, 1967, Ser. No. 682,521
Claims priority, application Switzerland, Nov. 15, 1966, 16,400/66; Mar. 10, 1967, 3,481/67; Mar. 15, 1967, 3,987/67

Int. Cl. C09b 47/10

U.S. Cl. 260—314.5 6 Claims

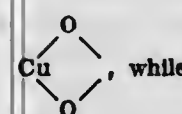
Bromination of phthalocyanines by suspending the phthalocyanine in liquid bromine, together with a compound of formula



as reaction accelerant,

wherein

X stands for $NaO-$, $KO-$, $ZO-$ or NH_2 and Y stands for $NaO-$, $KO-$, $ZO-$ or $HO-$ or X and Y jointly stand for



Z represents an ammonium group

and maintaining the suspension at temperatures between $150^\circ C.$ and $300^\circ C.$ until bromination is sufficient.

3,515,730

THENYL ESTERS OF CYCLOPROPANE-CARBOXYLIC ACIDS

Masanao Matsui, Tokyo, Kenzo Ueda, Saltama-ken, Toshio Mizutani, Ikeda-shi, Nobushige Itaya and Shige-yoshi Kitamura, Minoo-shi, Akira Fujinami, Takarazuka-shi, Yositosi Okuno, Nishinomiya-shi, and Keimei Fujimoto, Kyoto, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Oct. 26, 1967, Ser. No. 678,219
Claims priority, application Japan, Jan. 13, 1967, 42/2,619; Feb. 6, 1967, 42/7,542

Int. Cl. A01n 9/12; C07d 63/12

U.S. Cl. 260—332.2 6 Claims

Novel thenyl esters of cyclopropanecarboxylic acids having insecticidal activities which are quick acting and harmless to mammals. These novel esters are prepared by esterifying cyclopropanecarboxylic acids having in the ring lower alkyl and methyl groups as substituents with thenyl alcohols having in the thiophene ring a halogen atom or an alkyl, benzyl, thenyl, furfuryl, alkanyl, alkadienyl or alkylene group. This esterification is effected by the reaction of said acids, or halides or anhydrides thereof, with said alcohols, or by the reaction of thenyl halides with said acids.

3,515,731

ANTIBACTERIAL AGENTS

Lloyd H. Conover, Quaker Hill, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application June 17, 1966, Ser. No. 558,267. Divided and this application Apr. 3, 1967, Ser. No. 627,871

Int. Cl. C07c 121/74

U.S. Cl. 260—351 6 Claims

A series of 4,10-dioxo-1,2,3,4,4a,9,9a,10-octahydroanthracenes having at the 2-position a formyl, carboxy, carboalkoxy, carbobenzyloxy, carbothioalkyl, carbothio-benzyl chloroformyl, cyanoaminomethyl, or cyanohy-

droxymethyl group which are useful as intermediates for the synthesis of tetracycline-type antibiotics, as bactericides and/or chelating agents; and methods for their preparation. Tetracyclines are produced by a multistep process beginning with 4,10-dioxo-1,2,3,4,4a,9,9a,10-octahydro-2-anthraldehyde comprising: (1) condensation with acetone cyanohydrin followed by reaction with an amine to give a 2-(cyanoaminomethyl)-4,10-dioxo-1,2,3,4,4a,9,9a,10-octahydroanthracene; (2) hydrolysis of the nitrile to the corresponding 2-(carboxyaminomethyl)-1,2,3,4,4a,9,9a,10-octahydroanthracene; (3) conversion of the acid to a mixed anhydride; (4) acylation of a malonic ester derivative with the mixed anhydride; (5) followed by cyclization of the acyl malonate derivative to a 12a-deoxytetracycline which is then hydroxylated to a tetracycline.

3,515,732

VAT DYESTUFFS CONTAINING SULFONAMIDE GROUPS

Max Staebule and Kurt Weber, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Continuation of application Ser. No. 202,959, June 18, 1962. This application Aug. 23, 1966, Ser. No. 574,474

Claims priority, application Switzerland, Dec. 31, 1958, 67,908/58; Mar. 2, 1959, 70,227/59

Int. Cl. C09b 3/30

U.S. Cl. 260—354 4 Claims

Vat dyestuffs are provided which contain at least one grouping of the formula $-SO_2NH-R$ in which R represents a β -sulfatoalkyl group and especially a lower β -sulfatoalkyl group. In addition to the said grouping the dyestuffs may contain substituents that are customarily present in vat dyestuffs, for example, halogen atoms or alkoxy, acylamino or alkyl groups. A process for the preparation of such vat dyestuffs is also provided. The dyestuffs are suitable for dyeing a wide variety of materials, and especially, for the dyeing or printing of textile materials of natural or regenerated cellulose by the methods usual for the dyeing or printing of vat dyestuffs. The dyeings and prints produced possess excellent fastness to light and wet fastness.

3,515,733

BASIC DYES

Roland Entschel and Curt Mueller, Basel, and Walter Wehrli, Riehen, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

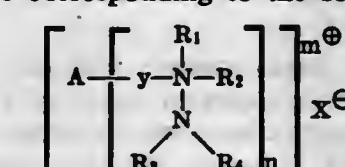
No Drawing. Continuation of application Ser. No. 356,065, Mar. 31, 1964, which is a continuation-in-part of applications Ser. No. 188,837 and Ser. No. 188,889, Apr. 19, 1962; Ser. No. 250,787, Ser. No. 250,788, and Ser. No. 250,789, Jan. 11, 1963; and Ser. No. 296,362, July 19, 1963. This application Apr. 27, 1966, Ser. No. 545,776

Claims priority, application Switzerland, Apr. 21, 1961, 4,709/61; Jan. 12, 1962, 359/62; Apr. 24, 1962, 4,898/62; Mar. 14, 1963, 3,225/63; May 3, 1963, 5,588/63; Feb. 25, 1964, 2,264/64

Int. Cl. C09b 1/16, 1/32

U.S. Cl. 260—377 7 Claims

The invention provides basic dyes of the anthraquinone series corresponding to the formula



(I)

wherein

A represents the radical of a dye of the anthraquinone series free from carboxylic and sulfonic acid groups, y a substituted or unsubstituted methylene group or an organic divalent radical bound to the adjacent N through such a methylene group,

R₁ a substituted or unsubstituted alkyl, cycloalkyl or aralkyl radical or together with R₂ and the adjacent N atom, a heterocyclic ring system or, together with the bridge member y and the adjacent N atom, a heterocyclic ring system,

R₂ a substituted or unsubstituted alkyl radical or a substituted or unsubstituted cycloalkyl or aralkyl radical or, together with R₁ and the adjacent N atom, a heterocyclic ring system,

R₃ hydrogen or a substituted or unsubstituted alkyl or phenyl radical,

R₄ hydrogen or a substituted or unsubstituted alkyl radical,

n the integer 1 or 2,

m the integer 1 or 2, when n is 2, and

X an anion equivalent to a dye cation.

3,515,734

CHOLESTEROL-SUBSTITUTED SILOXANES

Robert S. Craig, Waukegan, Ill., assignor to General Electric Company, a corporation of New York

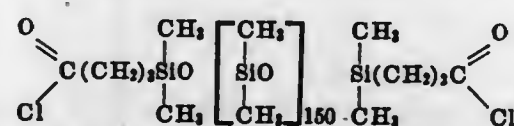
No Drawing. Filed Dec. 1, 1967, Ser. No. 687,121

Int. Cl. C07c 169/64

U.S. Cl. 260—397.2

10 Claims

One or more cholesterol radicals are joined to a siloxane through a urethane alkyl or an ester alkyl linkage. A compound within the scope of the disclosure is made by reacting a cholesterol with a siloxane of the average formula:



The compounds of the present disclosure are useful in sunburn preventative formulations.

3,515,735

2-(LOWER-ALKOXY)METHYLENE-ANDROSTAN-17β-OL-3-ONES AND PREPARATION THEREOF

Raymond O. Clinton, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,671

Int. Cl. C07c 169/20

U.S. Cl. 260—397.4

7 Claims

1. 2-(lower-alkoxy)methyleneandrostan-17β-ol-3-one.

3,515,736

PROCESS FOR REMOVING AFLATOXIN FROM PEANUTS

Leo A. Goldblatt and James A. Robertson, Jr., New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Apr. 13, 1965, Ser. No. 447,922

Int. Cl. C11b 1/10

U.S. Cl. 264—412.4

1 Claim

A fungi-related toxic material, aflatoxin, is removed from essentially oil-free peanut meal by extracting the meal with the azeotropic mixture of acetone, hexane, and water boiling at 48° C. under standard conditions until

an extract thereof, when subjected to thin layer chromatography employing Silica Gel G, shows no fluorescence under ultraviolet light of wave length 365 mμ.

3,515,737

PRODUCTION OF ORGANIC ACIDS

Bertram Yeomans, Hesse, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

Continuation-in-part of application Ser. No. 556,516, June 9, 1966. This application Sept. 20, 1968, Ser. No. 761,181

Claims priority, application Great Britain, July 22, 1965, 31,173/65

Int. Cl. C07c 5/00, 53/00

U.S. Cl. 260—413

7 Claims

The process for the preparation of neo-carboxylic acids from olefins by reaction with formic acid and sulfuric acid, followed by addition of water, is improved by using a molar ratio of olefin:formic acid:sulfuric acid, in the range of between 1:1:2 and 1:4:12 and by the use of a small amount of water in the last step, that is, between 3 and 25% of the weight of the sulfuric acid present in the reaction mixture containing water. The acids are easily isolated from the organic phase. The sulfuric acid may be recycled after addition of sulfur trioxide and the process may be operated continuously.

3,515,738

REACTION PRODUCTS OF TWO CHLORIDES OF CERTAIN METALS WITH BORATE ESTERS

Robert C. Wade, Ipswich, Mass., assignor to Ventron Corporation, Beverly, Mass., a corporation of Massachusetts

No Drawing. Continuation-in-part of application Ser. No. 670,417, Sept. 25, 1967, which is a division of application Ser. No. 670,419, Sept. 25, 1967. This application Dec. 23, 1968, Ser. No. 786,447

Int. Cl. C07f 5/06, 7/28, 11/00

U.S. Cl. 260—429.5

16 Claims

This invention relates to products of unknown complex chemical structures prepared by reacting a substantially anhydrous borate ester such as trimethyl borate, triethyl borate, tripropyl borate, trihexyl borate, trihexylene glycol diborate, tri(m, p, cresyl) borate, and trimethoxyboroxine with a chloride of a first metal selected from the group consisting of Ti(IV), Zr(IV), Hf(IV), Sn(IV), Al(III), Fe(III), Ga(III), In(III), Mo(V), Nb(V), Ta(V), and W(VI) in a molar ratio of at least 0.33 mole of the selected borate ester for each mole of the chloride of the selected metal in an inert diluent, such as the selected borate ester, methylene chloride, chloroform, and carbon tetrachloride, at a temperature between room temperature and about 200° C. until the reaction mixture ceases to give off organic chloride thereby forming a liquor comprising the diluent and a compound of complex chemical structure comprising the selected metal, boron, carbon, hydrogen, chlorine, and oxygen. Then adding to said liquor the chloride of a second metal selected from the above group in a molar quantity not greater than that of the chloride of the first selected metal to react with said complex compound at a temperature between room temperature and about 200° C. thereby forming a second compound of complex chemical structure. The second compound of complex structure is isolated by removing volatile material from the reaction mixture by evaporation. The product can be applied to surfaces such as glass and cellulosic fabrics and marked water repellency develops.

3,515,739

TETRAMETHYLLEAD RECOVERY

Shiri E. Cook, Baton Rouge, La., and Thomas O. Sistrunk, Birmingham, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Continuation-in-part of application Ser. No. 200,965, June 8, 1962, which is a continuation-in-part of applications Ser. No. 809,609, Apr. 29, 1959, Ser. No. 41,783, July 11, 1960, Ser. No. 91,598, Feb. 27, 1961, and Ser. No. 104,773, Apr. 24, 1961. This application Feb. 6, 1969, Ser. No. 797,260

The portion of the term of the patent subsequent to Aug. 14, 1979, has been dedicated to the Public

Int. Cl. C07f 7/26

U.S. Cl. 260—437

3 Claims

Tetramethyllead is subjected to steam distillation while associated with a hydrocarbon such as toluene. This enables recovery of the tetramethyllead while protecting it against thermal decomposition.

3,515,740

CYANO CYCLOHEXENYL COMPOUNDS

Orville D. Frampton, 58 W. Charlotte Ave., Wyoming, Ohio 45215, and Julian Feldman, 7511 Sagamore Drive, Cincinnati, Ohio 45236

No Drawing. Filed Feb. 20, 1967, Ser. No. 617,042

Int. Cl. C07c 121/00

U.S. Cl. 260—464

9 Claims

Bifunctional cyclohexenyl and cyclohexanyl quaternary carbon compounds such as 4-cyano, 4-(2-cyanoethyl) cyclohexene; 4-carbamyl, 4-(2-carbamylethyl) cyclohexene; and 1-cyano, 1-(2-cyanoethyl) cyclohexane. These compounds are useful for the preparation of spasmolytics, insecticides, pesticides and soporifics. The bifunctional compounds are prepared by the reaction of 1,1-disubstituted ethylene compounds (e.g., 2,4-dicyanobutene-1) and 1,3-diene (e.g., butadiene) in a 1 to 1 mole ratio at a temperature of about 50° to 200° C.

3,515,741

1-CYANOPHENOXY-2-AMINO-ALKANES

Otto Thoma and Herbert Koppe, Ingelheim, Gerhard Ludwig, Wedel, and Anton Mentrup and Karl Zelle, Ingelheim, Germany, assignors to Boehringer Ingelheim G.m.b.H., Ingelheim am Rhine, Germany, a corporation of Germany

No Drawing. Continuation-in-part of application Ser. No. 448,881, Apr. 16, 1965. This application Nov. 8, 1967, Ser. No. 681,582

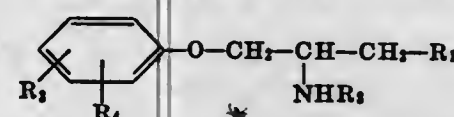
Claims priority, application Great Britain, Apr. 20, 1964, 16,202/64; Netherlands, Nov. 18, 1966, 6616293; Germany, Apr. 6, 1967, 1,593,771

Int. Cl. C07c 93/06, 121/52; C07d 13/10

U.S. Cl. 260—465

14 Claims

1-phenoxy-2-amino-alkanes of the formula



wherein R₁ is selected from the group consisting of hydrogen and alkyl of 1 to 3 carbon atoms, R₂ is selected from the group consisting of hydrogen and alkyl of 1 to 4 carbon atoms, R₃ is selected from the group consisting of trifluoromethyl and cyano, R₄ is selected from the group consisting of hydrogen, halogen and trifluoromethyl and R₃ and R₄ taken together may be methylenedioxy and their optical antipodes and their non-toxic, pharmaceutically acceptable acid addition salts which compounds are useful for curbing appetites of warm-blooded animals.

3,515,742

ADIABATIC PROCESS FOR PREPARING AMINO-NITRILES USING HEAT RECYCLE

Charles R. Morgan, Laurel, and John J. Godfrey, Silver Spring, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed May 8, 1967, Ser. No. 636,662

Int. Cl. C07c 121/42, 121/52

U.S. Cl. 260—465.5

7 Claims

Aminonitriles are prepared by reacting an amine, hydrogen cyanide and formaldehyde in an acid reaction media under substantially adiabatic reaction conditions. The heat liberated during the reaction is subsequently removed from the reacted reaction mixture and transferred to the incoming reactants.

3,515,743

1,2,3-TRICHLORO-2-CYANOPROPANE AND THE METHOD FOR PREPARING SAME

Masaaki Tsurushima, Itami, Hyogo, and Kozo Yatan, Ashiya, Hyogo, Japan, assignors to Takeda Chemical Industries, Ltd., Osaka, Japan

No Drawing. Filed May 15, 1967, Ser. No. 638,616

Claims priority, application Japan, May 14, 1966, 41/30,794

Int. Cl. C07c 121/00, 121/16

U.S. Cl. 260—465.7

1 Claim

The invention provides the compound 1,2,3-trichloro-2-cyanopropane and the process for producing such compound. The process comprises reacting chlorine gas with 3-chloro-2-cyanopropene under conditions of irradiation to produce the objective compound.

3,515,744

SUBSTITUTED N-PHENYL CARBAMATES

Gustav Steinbrunn, Schwegenheim, Pfalz, and Adolf Fischer, Mutterstadt, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 9, 1966, Ser. No. 600,387

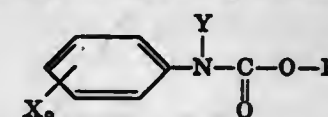
Claims priority, application Germany, Jan. 7, 1966, 1,542,817

Int. Cl. C07c 101/44, 121/78; C07d 5/16

U.S. Cl. 260—471

2 Claims

Herbicides having the following formula



in which X, Y and R denote substituents such as halogen, lower alkyl, etc.

3,515,745

SYNTHESIS OF ARYLAMINO METHYLENEMALONATES

Roger J. Tull, Metuchen, Leonard M. Weinstein, Rocky Hill, and Dennis M. Mulvey, Iselin, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 5, 1967, Ser. No. 672,996

Int. Cl. C07c 101/44

U.S. Cl. 260—471

6 Claims

Diloweralkyl alkoxymethylenemalonates are prepared by reaction of a diloweralkyl hydroxymethylenemalonate or a salt thereof with a loweralkanol in the presence of acid.

Arylaminomethylenemalonates are prepared by the reaction of a substituted aniline compound with diloweralkyl hydroxymethylenemalonate or a salt thereof in a loweralkanol solvent medium and in the presence of acid.

3,515,746

TRICYCLIC ACIDS

William Laszlo Bencze, New Providence, N.J., assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 612,345, Jan. 30, 1967. This application Oct. 30, 1967, Ser. No. 679,153

Int. Cl. C07c 65/14, 69/76
U.S. Cl. 260—473 16 Claims
Tricyclic phenoxy-acids, e.g. those of the formula



A=alkylene or alkenylene and their functional derivatives are hypocholesterolemic agents.

3,515,747

POLYESTERS, POLYAMIDES, AND POLYESTER-AMIDES OF MIXTURES OF NITRILOTRIACETIC AND N-(ACETAMIDE)-IMINODIACETIC ACIDS

Nelson S. Marans, Silver Spring, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 10, 1968, Ser. No. 766,616
Int. Cl. C08g 20/30, 17/04, 20/00
U.S. Cl. 260—482 5 Claims

A process for preparing a novel copolymer comprising: heating at about 110–250° C. for about 5–600 minutes a reaction mixture consisting essentially of an inert liquid medium in which the polymer is substantially insoluble, the medium boiling at about 120–260° C. at about 760 millimeters of mercury absolute pressure, N-(acetamide)-iminodiacetic acid, nitrilotriacetic acid, and a member selected from a group consisting of diols having the formula HO—G—OH, amino alcohols having the formula HO—G—NH₂, and diamines having the formula H₂N—G—NH₂, wherein G is an alkylene group having about 2–12 carbon atoms, the mole ratio of N-(acetamide)-iminodiacetic acid: nitrilotriacetic acid: the group member being about 1:0.1–9.0:1.0–10 to form the copolymer and water, the water being removed substantially as it is formed; separating; and recovering the copolymer.

3,515,748

PREPARATION OF AROMATIC CARBOXYLIC ACIDS AND NITRO-SUBSTITUTED AROMATIC CARBOXYLIC ACIDS

Danford H. Olson and Phillip W. Storms, Littleton, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 29, 1965, Ser. No. 452,011
Int. Cl. C07c 79/46, 63/02
U.S. Cl. 260—515 11 Claims

A method of effecting substantially simultaneous oxidation and nitration of aromatic compounds to form nitro-substituted aromatic carboxylic acids comprising reacting a substituted aromatic compound with a nitrating agent such as dinitrogen tetroxide in the presence of a sulfoxide such as dimethyl sulfoxide. The method is carried out at comparatively low temperatures and provides significant yields of the desired end products which can be readily separated from the reaction mixtures in accordance with standard procedures.

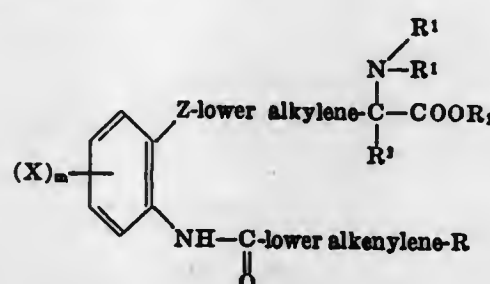
3,515,749

AMINO ACID DERIVATIVES

Josef Fried, Chicago, Ill., and John Krapcho, Somerset, N.J., assignors to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 269,150, Mar. 29, 1963. This application May 17, 1967, Ser. No. 639,026

Int. Cl. C07c 161/00, 101/44
U.S. Cl. 260—516 10 Claims
The invention relates to new chemical compounds of the general formula



and to salts of these compounds which are useful as anti-hypertensive agents and disinfectants.

3,515,750

PREPARATION OF METHACRYLIC ACID

Günter Schröder, Ober-Ramstadt-Eiche, and Herbert Fink, Bickenbach, Germany, assignors to Rohm & Haas G.m.b.H., Darmstadt, Germany

No Drawing. Filed Oct. 11, 1966, Ser. No. 585,755
Claims priority, application Germany, Oct. 29, 1965, R 41,860

Int. Cl. C07c 57/04
U.S. Cl. 260—526 8 Claims

A process has been provided for preparing methacrylic acid from methacrylonitrile. This process comprises the steps of reacting methacrylonitrile with sulfuric acid in a molar ratio of 1:1 to 1.5, respectively, and water in a molar ratio based on sulfuric acid of 4.5 to 6.0:1, respectively, at a temperature from 70° C. to 200° C., optionally under pressure, and separating methacrylic acid as the top layer of the reaction mixture. A two step sequence can also be employed in which water is added after the addition of sulfuric acid and the reaction mixture is further reacted. The novel process can also be carried out in a pipe reactor zone. When utilizing this process, industrially attractive yields of methacrylic acid are obtained.

3,515,751

PROCESS FOR OXIDATION OF CYCLOHEXANE

Arthur E. Oberster, North Canton, and George E. P. Smith, Jr., Akron, Ohio, and Kelly Farhat, Leominster, Mass., assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 25, 1967, Ser. No. 670,422
Int. Cl. C07c 51/20
U.S. Cl. 260—533 4 Claims

This disclosure relates to a process for the production of epsilon-hydroxycaproic acid in which cyclohexane is oxidized by liquid phase air oxidation in the presence of a catalytic amount of a lower aliphatic carboxylic acid and a catalytic amount of a peroxide under certain reaction conditions so that most of the oxidation products are found in a second, heavy liquid layer, and are directed to the production of epsilon-hydroxycaproic acid.

3,515,752

PRODUCTION OF PHOSGENE

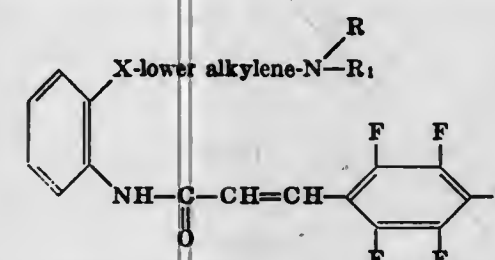
William V. Bauer, New York, N.Y., assignor to The Lummus Company, New York, N.Y., a corporation of Delaware
Filed Dec. 28, 1965, Ser. No. 516,979
Int. Cl. C07c 51/58

U.S. Cl. 260—544 5 Claims
Process for producing phosgene wherein hydrogen chloride is catalytically oxidized to chlorine and the chlorine reacted with carbon monoxide to produce phosgene. In another embodiment, the chlorine is reacted with sulfur monochloride to produce sulfur dichloride, the sulfur dichloride reacted with carbon monoxide to produce phosgene and sulfur monochloride and the sulfur monochloride recycled to the reaction with chlorine.

3,515,753

PENTAFLUOROCINNAMANILIDE DERIVATIVES
Jack Bernstein and Harry Louis Yale, New Brunswick, N.J., assignors to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 8, 1968, Ser. No. 696,093
Int. Cl. C07c 103/38

U.S. Cl. 260—558 9 Claims
This invention relates to new (2,3,4,5,6-pentafluorophenyl)acryloylanilide compounds of the formula



and their salts, which are useful as immunosuppressive agents.

3,515,754

N,N-DISUBSTITUTED AMIDES

Robert R. Mod, Frank C. Magne, and Evald L. Skau, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application Dec. 16, 1966, Ser. No. 632,464. Divided and this application Apr. 10, 1969, Ser. No. 837,972
Int. Cl. C07c 103/28

U.S. Cl. 260—558 1 Claim
This invention relates to N,N-disubstituted amides which are useful as hydrophobic and hydrophilic resin plasticizers.

3,515,755

LOWER ALKANOYL AMIDO BENZOPHENONES

Leo Henryk Sternbach, Upper Montclair, and Arthur Stempel, Teaneck, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Application May 31, 1967, Ser. No. 642,357, now abandoned, which is a division of application Ser. No. 80,983, Jan. 6, 1961, now Patent No. 3,336,295, dated Aug. 15, 1967. Divided and this application June 18, 1968, Ser. No. 737,861
Claims priority, application Switzerland, Dec. 2, 1960, 13,489/60, 13,490/60, 13,491/60, 13,492/60, 13,493/60, 13,494/60, 13,495/60
Int. Cl. C07c 103/42

U.S. Cl. 260—562 8 Claims
Alkoxy- or hydroxy-substituted lower alkanoyl amido benzophenones which are intermediates in the production of alkoxy- or hydroxy-substituted 5-phenyl-1,4-benzodiazepines. The 5-phenyl-1,4-benzodiazepines are useful as sedatives, muscle relaxants, anticonvulsants and tranquilizers.

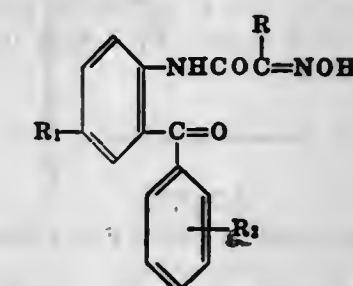
3,515,756

PROCESS FOR PREPARING 1,4-BENZO-DIAZEPIN-2-ONES

Arthur Stempel, Teaneck, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application Jan. 6, 1966, Ser. No. 519,017, now Patent No. 3,405,123, dated Oct. 8, 1968, which is a continuation-in-part of application Ser. No. 431,174, Feb. 8, 1965. Divided and this application June 20, 1968, Ser. No. 738,422
Int. Cl. C07c 103/42

U.S. Cl. 260—562 5 Claims
A compound of the formula



wherein

R₁ and R₂ are selected from the group consisting of hydrogen, halogen, nitro, trifluoromethyl and lower alkyl and R is selected from the group consisting of hydrogen and lower alkyl.

These compounds are convertible by catalytic hydrogenation into pharmaceutically desirable 1,4-benzodiazepines.

3,515,757

ORGANIC COMPOUNDS AND PROCESSES

John W. Sibert, Birmingham, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Apr. 1, 1966, Ser. No. 539,300
Int. Cl. C07c 45/08

U.S. Cl. 260—604 5 Claims
A rhodium complex such as hydridocarbonylbis(triphenylphosphine)dichlororhodium is described. A process for preparing aldehydes from olefins, carbon monoxide and hydrogen utilizing said rhodium complex as a homogeneous catalyst, is also described.

3,515,758

PROCESS FOR THE PRODUCTION OF ETHYLENE COMPOUNDS

Duncan Clark, Percy Hayden, and John Charlton, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 2, 1966, Ser. No. 554,652
Claims priority, application Great Britain, June 17, 1965, 25,672/65

Int. Cl. C07c 43/00, 43/04
U.S. Cl. 260—614 9 Claims

In the production of vinyl ethers from vinyl acetate and an alcohol using a palladium compound as catalyst, the vinyl acetate is provided in the form of a vinyl acetate/acetic acid mixture derived from the liquid phase palladium catalyzed oxidation of ethylene in the presence of a palladium compound, the reaction medium comprising 1,1- or 1,2-diacetoxyethane and at most 30% acetic acid. The vinyl acetate and water distilled from this reaction medium undergoes phase separation into a water phase and a vinyl acetate/acetic acid phase, the latter being a suitable feedstock for the vinyl ether forming process.

3,515,759

PREPARATION OF ALCOHOLS

Robert A. Dombro, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Jan. 11, 1968, Ser. No. 697,009

Int. Cl. C07c 29/00

U.S. Cl. 260—618

9 Claims

Alcohols are prepared by treating a sulfoxide with an alkali or alkaline earth metal hydroxide in an organic solvent at elevated temperature, specific examples being the preparation of n-butyl alcohol by treating di-n-butyl sulfoxide with sodium hydroxide in an ethyl alcohol solvent, the preparation of n-hexyl alcohol by similar treatment of n-hexyl phenyl sulfoxide, and the preparation of β -phenylethyl alcohol by similar treatment of di- β -phenylethyl sulfoxide.

3,515,760

ISOMERIZATION PROCESS

Darrel Dean Wild, La Place, La., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 10, 1968, Ser. No. 720,385

Int. Cl. B01j 11/00; C07c 21/04

U.S. Cl. 260—654

1 Claim

A process for the isomerization of 3,4-dichlorobutene-1 to 1,4-dichlorobutene-2, or vice versa, by heating the butene compound in the presence of (1) a metal salt complexed with an organic compound and (2) greater than 1% by weight of the total mixture of the organic compound used to complex the metal salt in uncomplexed form.

3,515,761

METHOD OF PRODUCING CYCLOPROPANES

William D. Hoffman, Park Forest, and Jin Sun Yoo, Riverdale, Ill., assignors to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 19, 1968, Ser. No. 738,124

Int. Cl. C07c 5/20

U.S. Cl. 260—666

15 Claims

A method of using a pentacyanocobaltate complex to catalyze the formation of cyclopropanes in an aqueous medium is disclosed. 1,3-dihalogenated alkyl hydrocarbons are reacted in an inert atmosphere at about 5 to 110° C. with the cyanocobaltate and in the presence of an optional stabilizer such as an alkali metal halide or hydroxide.

3,515,762

METHOD FOR INHIBITING POLYMERIZATION OF CONJUGATED DIENES

Takeo Koide, Iwaki Nishitai, and Masaaki Niimura, Takaoka-shi, Japan, assignors to The Japanese Geon Co., Ltd., a corporation

No Drawing. Filed July 17, 1968, Ser. No. 745,373

Claims priority, application Japan, July 26, 1967, 42/47,587

Int. Cl. B01d 3/34; C07c 7/08, 7/18

U.S. Cl. 260—666.5

5 Claims

N-methyl pyrrolidone (the cyclic amide, N-methylbutyrolactam) at 0.01%–10% concentration in acyclic amide solvents such as dimethyl formamide, methylethyl acetamide etc. inhibits polymerization of conjugated diolefins and prevents adherence of tar to the surface of vessels and piping. For isoprene in DMF, tested for 120 hours at 150° C. and 3 atm., the best concentration is about 0.5–3%, for 1% polymer or less as against 25%

polymer with no inhibitor and about 5% polymer at 0.05% or 10% NMP. Conventional inhibitors may be used with the cyclic-acyclic amide mixture.

3,515,763

PRODUCTION OF STYRENE

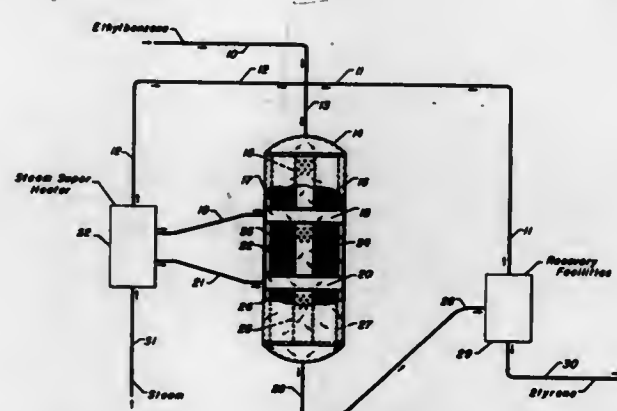
Kenneth D. Utti, Bensenville, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 22, 1968, Ser. No. 722,986

Int. Cl. C07c 15/10, 5/18

U.S. Cl. 260—669

7 Claims



Method and apparatus for the dehydrogenation of ethylbenzene to styrene. The conversion takes place in a radial flow reactor configuration wherein conversions as high as 50% and, in some cases, up to 73% of ethylbenzene to styrene is made possible.

3,515,764

CATALYTIC CONVERSION PROCESS

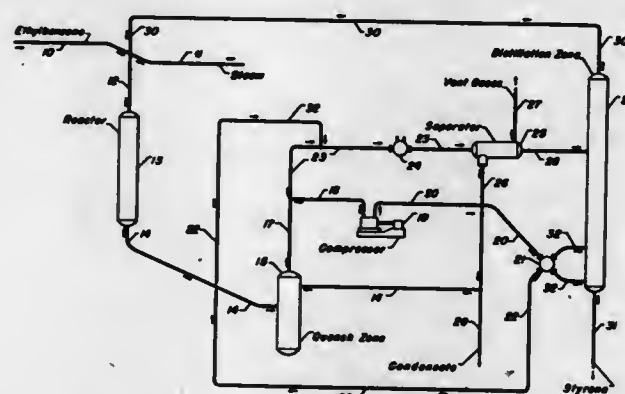
Newt M. Hallman, Mount Prospect, and Dennis J. Ward, Lombard, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed May 21, 1968, Ser. No. 730,773

Int. Cl. C07c 5/18, 15/10

U.S. Cl. 260—669

5 Claims



Process for converting hydrocarbons, such as ethylbenzene to styrene, wherein the entire reaction zone effluent is compressed and used to provide reboiler heat to fractionators utilized in recovering styrene from the effluent of the reaction zone.

3,515,765

CATALYTIC CONVERSION PROCESS

Charles V. Berger, Western Springs, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed May 21, 1968, Ser. No. 730,774

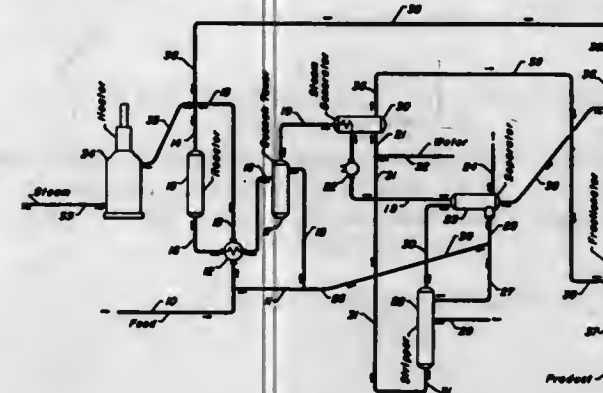
Int. Cl. C07c 5/18, 15/10

U.S. Cl. 260—669

5 Claims

Process for converting hydrocarbons, such as ethylbenzene to styrene wherein subatmospheric pressure

steam is generated, preferably from the heat of the quenched reaction zone effluent. The resulting low pres-



sure steam is used directly as a heating and stripping medium in subsequent recovery fractionation columns.

3,515,766

CATALYTIC CONVERSION PROCESS

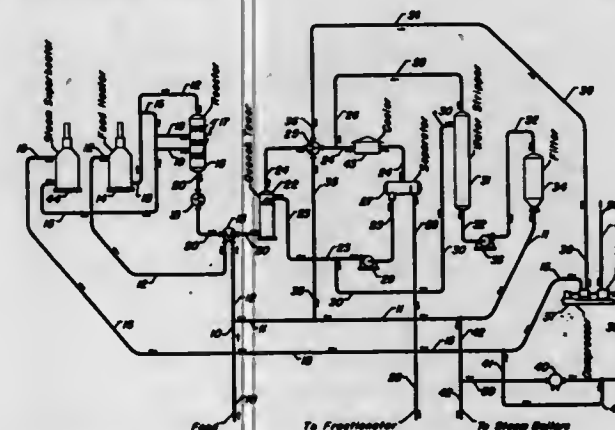
Wayne N. Root, Des Plaines, and Kenneth D. Utti, Bensenville, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed May 21, 1968, Ser. No. 730,782

Int. Cl. C07c 5/18, 15/10

U.S. Cl. 260—669

8 Claims



Process for converting hydrocarbons, such as ethylbenzene to styrene, wherein the steam condensate separated from the reaction zone effluent is purified by stripping and filtration.

3,515,767

CATALYTIC CONVERSION PROCESS

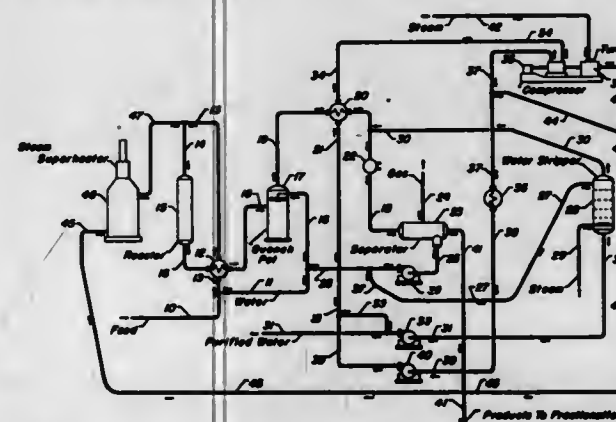
Don B. Carson, Mount Prospect, and Kenneth D. Utti, Bensenville, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed May 21, 1968, Ser. No. 730,824

Int. Cl. C07c 15/10

U.S. Cl. 260—669

7 Claims



Process for converting hydrocarbons, such as ethylbenzene to styrene, wherein subatmospheric pressure steam is generated from the heat of quenched reaction

zone effluent. The resulting low pressure steam is compressed and utilized, for example, as reboiler heat in the product recovery fractionation facilities, as well as for reactor diluent steam.

3,515,768

PROCESSES FOR SEPARATING A XYLENE MIXTURE INTO ITS COMPONENTS WITH HIGH PURITY

Tamotsu Ueno and Takashi Nakano, Niigata-shi, Japan, assignors to Japan Gas-Chemical Company, Inc., Tokyo, Japan, a corporation of Japan

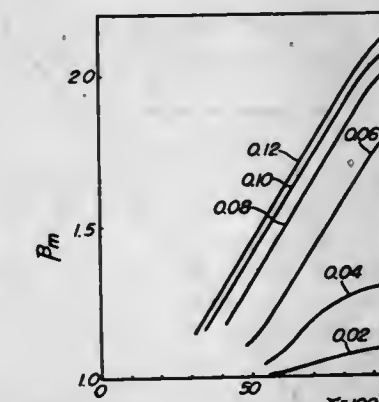
Filed June 3, 1966, Ser. No. 555,168

Claims priority, application Japan, June 3, 1965, 40/32,915; June 23, 1965, 40/37,735

Int. Cl. C07c 7/10, 15/08

U.S. Cl. 260—674

7 Claims



A xylene mixture containing m-xylene is separated into an HF extract phase containing m-xylene of high purity and a raffinate phase substantially free of m-xylene by contacting said xylene mixture with an extracting agent consisting of HF and BF₃ and with a mixture of reflux m-xylene and extraction diluent under operating conditions wherein the molar ratio of BF₃/HF in the HF extract has a value between 0.02 and 0.12, the molar ratio γ of reflux m-xylene to the mixture of diluent and reflux m-xylene has a value between 0.3 and 1.0, and the molar ratio α of total m-xylene to BF₃ has a value of from 0.96 to 1.04 times the value of molar ratio β of m-xylene to BF₃ in the HF extract, β being determined by applying the above values of BF₃/HF ratio and γ to the γ - β equilibrium relation diagram shown in FIG. 2 wherein BF₃/HF is the parameter; other xylene isomers may be separated from the raffinate phase.

3,515,769

POLYMERIZATION PROCESS

Norman A. Fishel, Lansing, Mich., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed June 30, 1967, Ser. No. 650,205

Int. Cl. C07c 3/10

U.S. Cl. 260—683.15

9 Claims

An unsaturated organic compound is polymerized utilizing a catalyst comprising a crystalline aluminosilicate chemically combined with a metal subfluoride vapor.

3,515,770

ALKYLATION IMPROVEMENT THROUGH ALKYLATE RECYCLE

Edward T. Tregilgas, Palos Verdes Estates, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Apr. 23, 1968, Ser. No. 723,417

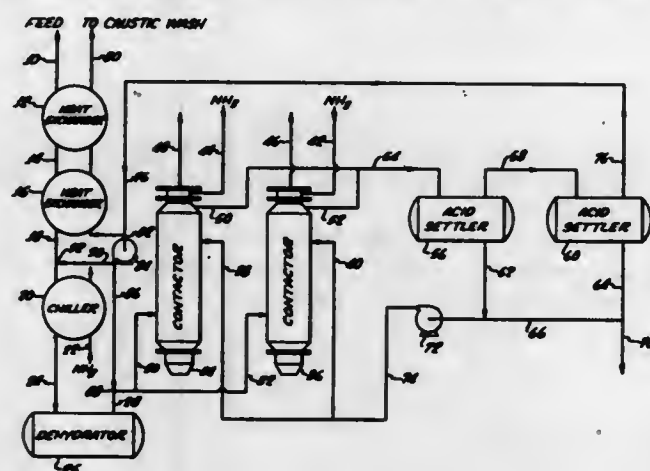
Int. Cl. C07c 3/54

U.S. Cl. 260—683.48

1 Claim

An improvement for conventional alkylation processes in which a low molecular weight olefin and a low molecular weight paraffin are mixed and contacted with an acid

catalyst at controlled temperatures, wherein a portion of the alkylate hydrocarbon effluent is mixed with the feed



prior to contact with the acid catalyst for improving the performance number of the alkylate product.

3,515,771

HEAT RESISTANT NATURAL RUBBER COMPOSITIONS COMPRISING MORPHOLINE DISULFIDE AND AROMATIC AMINES

Hrishikesh Chandra Roy, Planegg, near Munich, Germany, assignor to Metzeler A.G., Munich, Germany
No Drawing. Filed May 4, 1967, Ser. No. 636,029
Int. Cl. C08c 11/46, 11/52

U.S. Cl. 260-788 6 Claims

A natural rubber stock that contains elementary sulfur and N-dicyclohexyl-2-benzothiazylsulfenamide is improved by adding morpholine disulfide together with a metal inhibitor and aging resistant agent. The metal inhibitor may be mercaptobenzimidazole. The inhibitor may also be applied in combination with the age resistor. The two may be combined for instance, in the ratio of 1 to 1. The aging properties of natural rubber, particularly during heat build-up are substantially improved.

3,515,772

CYCLIZED POLYDIENE-POLYETHER RESINS

Hyman R. Lubowitz, Redondo Beach, and Eugene A. Burns, Palos Verdes Peninsula, Calif., assignors to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
No Drawing. Filed Aug. 4, 1966, Ser. No. 570,171
Int. Cl. C08d 9/10; C08f 29/12, 41/12

U.S. Cl. 260-836 13 Claims

This invention relates to a novel class of thermosetting copolymeric resins and more particularly to cyclized, cross-linked polydiene-polyether copolymers and their method of manufacture. The copolymers are produced by reacting either 1,2-polybutadiene or 3,4-polyisopropylene with a chain-extending organic compound, a polyether compound, and a peroxide free radical initiator to produce an elastomeric material having the peroxide initiator molecularly dispersed therethrough substantially unreacted. Subsequently, the copolymer is cured to a clear, firm resinous material by the application of heat.

3,515,773

PRESSURE-SENSITIVE ADHESIVES FROM POLYURETHANE POLYMERS AND HYDROXYLATED ELASTOMERS

Rolf Dahl, West Columbia, S.C., assignor to Continental Tapes, Incorporated, Columbia, S.C., a corporation of South Carolina

No Drawing. Continuation-in-part of application Ser. No. 512,002, Dec. 6, 1965. This application Sept. 26, 1968, Ser. No. 762,995

Int. Cl. C08g 41/04, 22/00

U.S. Cl. 260-859 15 Claims
This invention discloses pressure-sensitive adhesion in which both internal strength and tackiness are achieved

by the use of polyurethane polymers and hydroxylated elastomers, without the use of the usual tackifying resins and plasticizers.

3,515,774

PROCESS FOR THE PRODUCTION OF POLYBLENDS

Yoon Chai Lee, Springfield, Mass., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 26, 1967, Ser. No. 648,981
Int. Cl. C08f 19/08

U.S. Cl. 260-880 10 Claims

There is disclosed a process for producing improved polyblends wherein a polymerizable formulation consisting essentially of a monovinylidene aromatic hydrocarbon is admixed with rubber and polymerization to at least the point of phase inversion is conducted en masse. A small amount of an unsaturated nitrile monomer is added to the partially polymerized mixture and polymerization is then conducted in suspension. The result is a graft polyblend in which the predominant portion of the unsaturated nitrile appears in the graft superstrate.

3,515,775

POLYOLEFIN BLENDS FOR FILMS AND SHEETING

Robert Leonard Combs, David Frank Slonaker, and Willis Carl Wooten, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 534,649, Mar. 16, 1966. This application Dec. 1, 1967, Ser. No. 687,097

Int. Cl. C08f 37/18

U.S. Cl. 260-897 3 Claims

A composition blend capable of being formed into optically clear products comprising about 75%-98.5% by weight of a crystalline polypropylene having a density ≥ 0.89 and a melt flow > 12 , about 0.5%-10% by weight of a crystalline polyethylene having a density ≥ 0.93 and a melt index \geq about 5, and about 1%-15% by weight of an amorphous ethylene-propylene copolymer having an inherent viscosity of 0.3-0.9 and a second order transition temperature $\leq -15^\circ\text{C}$.

3,515,776

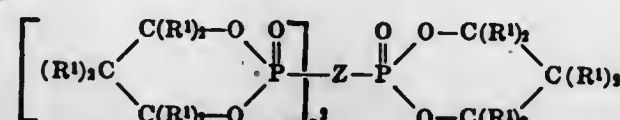
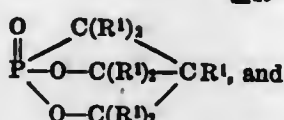
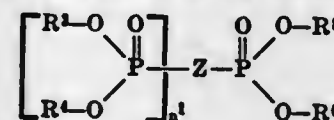
MIXED ESTERS OF PHOSPHONIC ACID AND PREPARATION

Charles F. Baranaukas and Irving Gordon, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Continuation of application Ser. No. 348,252, Feb. 28, 1964. This application Oct. 23, 1967, Ser. No. 678,157

Int. Cl. C07f 9/08, 9/38; C09k 3/00

U.S. Cl. 260-927 11 Claims

Mixtures of phosphonates of the formulas



wherein R^1 , R^2 , R^3 , R^4 , R^5 , and Z are either substituted or unsubstituted alkyl, cycloalkyl, alkene, alkylene, aryl or epoxy, R^1 is selected from the same group plus hydrogen, n^1 and n^2 are from zero to 5, it being required that from 1 to 32 hydroxyls must be present in the compounds. Homopolymers of these materials are also in-

cluded in the mixtures. Also described are methods for manufacture of the mixed phosphonates.

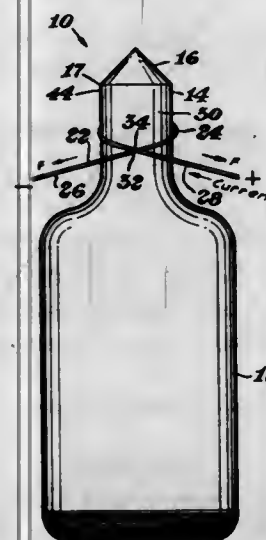
Polyurethane foams are made flame retardant by addition of the mixtures of phosphonates.

3,515,777

METHOD OF OBTAINING A CONVENIENT OPENING DEVICE

Richard L. Holthaus, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Jan. 5, 1968, Ser. No. 695,923
Int. Cl. B29c 27/02

U.S. Cl. 264-27 6 Claims



A convenient opening device is taught in combination with a thermoplastic bottle wherein generally the opening device is of the tear string variety and comprises a current conducting wire embedded within the bottle wall. Specifically, such an opening device can be obtained by looping a length of wire about the neck of the bottle, applying a force to the two ends of the loop wire such that the intermediate or loop portion thereof is brought into intimate engagement with the surface of the neck, and placing a voltage across the two ends to electrically heat the wire to a temperature sufficient to melt the plastic adjacent the loop portion. The wire is maintained in a heated and tensioned condition a sufficient time to allow the melted plastic to flow over and embed the loop portion of the wire within the neck wall. The two ends of the wire protrude from the embedded loop portion and serve as means to actuate the same as a tear string.

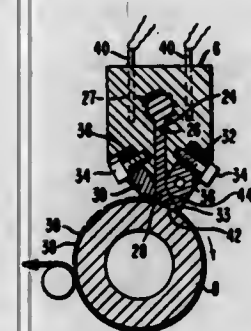
3,515,778

CONTINUOUS MOLDING OF THERMOPLASTIC RESIN

Reuben T. Fields and Martval J. Hartig, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Continuation-in-part of application Ser. No. 552,191, May 23, 1966. This application Mar. 2, 1967, Ser. No. 619,994

Int. Cl. B29f 3/012, 3/08; B29d 7/14

U.S. Cl. 264-40 14 Claims

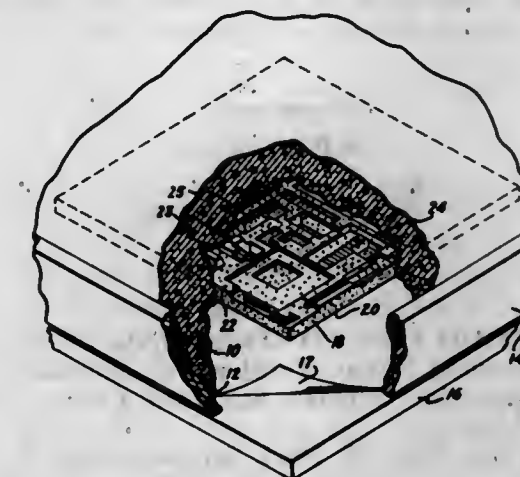


Molten thermoplastic resin, e.g., polyethylene is forced into a pattern on the surface of rotating rolls to form a

MOLD AND METHOD FOR CASTING CONCRETE PANELS

Robert L. Jones, Santa Ana, Calif., assignor of one-half to James T. Palm, Anaheim, Calif.
Filed Aug. 1, 1966, Ser. No. 569,397
Int. Cl. B28b 1/08, 7/16, 7/34

U.S. Cl. 264-41 10 Claims



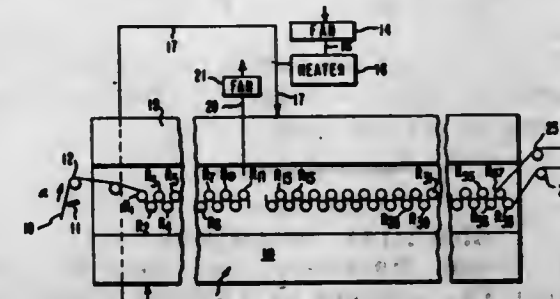
A mold and method are provided for casting a concrete wall. The mold comprises an outer frame structure defining the periphery of the wall to be cast and an artistic mold placed within the frame structure and fastened to the bottom of the mold. The artistic mold has an unobstructed open face bearing an intaglio pattern of an artistic relief facing away from the bottom of the mold and comprises a generally flat, thin plate formed from a rigid and substantially noncompressible cellular plastic foam. In the method for casting the wall, the frame structure is provided and the artistic mold is formed and secured to the bottom of the mold within the frame. Concrete is then poured into the mold and about and over the artistic mold. The concrete is permitted to cure and the frame and artistic mold are removed to obtain the finished wall.

3,515,780

PROCESS FOR DRYING GEL-REGENERATED CELLULOSE FILM

William Grogan O'Connell, Buffalo, Herbert Brooks Sanford, Jr., Kenmore, and Bernard S. Edwards, Tonawanda, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 21, 1967, Ser. No. 624,900
Int. Cl. B29c 25/00; F26b 3/24

U.S. Cl. 264-342 2 Claims



Regenerated cellulose film structures containing up to 350% moisture are dried to about 8% moisture while shrinking said film structures between 5% and 11% in the length direction thereof by passing the wet film structures over drying rolls and relieving tension therein while also maintaining the film structures in intimate contact at all times with the surfaces of the drying rolls. Permitting the film to shrink at least 3% before 40%

of the original moisture content is removed results in a greater degree of total shrinkage.

3,515,781

COLD CAPSULE

Wallace H. Steinberg, Matawan, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Oct. 12, 1967, Ser. No. 674,750
Int. Cl. A61j 3/06, 3/07, 9/04

U.S. Cl. 424—37 3 Claims
A capsule containing menthol, thymol and an oral decongestant and which upon dissolution in the mouth releases these substances for the alleviation of nasal congestion, running nose or sinus congestion due to the common cold or hayfever.

ERRATUM

For Class 424—92 see:
Patent No. 3,515,708

3,515,782

METHOD FOR CONTROLLING INSECTS

Kenneth Gordon Nolan, Yardley, Pa., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

Filed Nov. 27, 1964, Ser. No. 414,077
Int. Cl. A01n 9/36

U.S. Cl. 424—213

5 Claims

MALATHION TECHNICAL			MALATHION 5% EC		
10.0	5.0	2.5	10.0	5.0	2.5

There is provided a process for protecting an area against insect infestation by applying to said area at a rate from about two to about thirty-two ounces per acre of discrete droplets of undiluted, adjuvant-free malathion.

3,515,783

ANTIBACTERIAL COMPOSITION CONTAINING 5-METHYL-3-SULFANILAMIDOISOXAZOLE AND TRIMETHOXYBENZYL PYRIMIDINE

Emanuel Grunberg, North Caldwell, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 20, 1967, Ser. No. 676,700
Int. Cl. A01n 9/16, 27/00

U.S. Cl. 424—229 8 Claims
Antibacterial compositions containing 5-methyl-3-sulfanilamidoisoxazole and 2,4-diamino-5-(3,4,5-trimethoxybenzyl)-pyrimidine are described.

3,515,784

BIOCIDAL METHODS

Gerhard R. Wendt, Havertown, and Kurt W. Ledig, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 610,005, Jan. 18, 1967. This application Feb. 27, 1968, Ser. No. 708,521

Int. Cl. A61k 17/00

U.S. Cl. 424—238

5 Claims

Means are provided to control the growth of microorganisms, especially pathogenic bacteria, fungi, protozoa,

amebae, and the like, and also helminths comprising contacting said microorganisms and helminths with a biocidal composition containing as the active biocidal agents, fentumine or fentumidine.

3,515,785

COMPOSITIONS AND METHODS FOR TREATING ENDOGENOUS DEPRESSION WITH 3-CHLORO-5-(γ-DIMETHYLAMINO-PROPYL)-IMINODIBENZYL

Walter Schindler, Riehen, and Henri Dietrich, Arlesheim, Basel-Land, Switzerland, assignors to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 857,274, Dec. 4, 1959. This application Nov. 16, 1964, Ser. No. 411,552

Claims priority, application Switzerland, Dec. 6, 1958, 67,046/58, 67,049/58; Jan. 12, 1959, 68,201/59
Int. Cl. A61k 27/00

U.S. Cl. 424—244

7 Claims

A method of treating endogenous depression by the administration of 3-chloro-5-(γ-dimethylamino-propyl)-iminodibenzyl; and an antidepressive composition containing the compound and a pharmaceutical carrier.

3,515,786

HYPOTENSIVE COMPOSITIONS CONTAINING A 3,4-DIHYDRO-1,2,4-BENZOTHIADIAZINE-1,1-DIOXIDE AND A HYDRAZINO PHTHALAZINE

George de Stevens, Woodland Park, and Lincoln Harvey Werner, Summit, N.J., assignors to Ciba Corporation, Summit, N.J., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 578,964, Sept. 13, 1966. This application June 2, 1969, Ser. No. 829,784

The portion of the term of the patent subsequent to Nov. 29, 1983, has been disclaimed
Int. Cl. A61k 27/00

U.S. Cl. 424—246

13 Claims

Pharmaceutical compositions comprising essentially (1) a 3,4-dihydro-1,2,4-benzothiadiazine-1,1-dioxide and (2) a 1-hydrazino-phthalazine, or a therapeutically acceptable salt thereof, are useful in the management or treatment of hypertension.

3,515,787

COMPOSITIONS AND METHODS FOR PRODUCING A MUSCLE RELAXING EFFECT IN AN ANIMAL WITH 2,3-SUBSTITUTED-6-AMINO-4-QUINAZOLONES

Hermann Breuer, Hans Hoehn, and Egon Roesch, Regensburg, Germany, assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

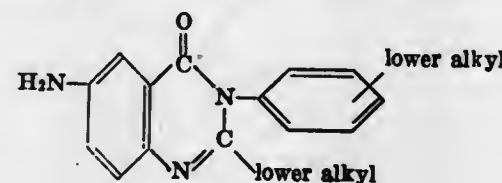
No Drawing. Original application Dec. 16, 1964, Ser. No. 418,909, now Patent No. 3,414,573, dated Dec. 3, 1968. Divided and this application Sept. 15, 1967, Ser. No. 679,274

Int. Cl. A61k 27/00

U.S. Cl. 424—251

8 Claims

This invention relates to new quinazalone derivatives of the formula



to acid addition salts thereof and to compositions containing them. The compounds are produced by catalytic

reduction of the corresponding nitro, nitroso, acylamino or benzylamino compounds. The compositions are useful as sedatives, hypnotics, anticonvulsants and especially as muscle relaxants.

3,515,788

ANTI-TUBERCULAR COMPOSITIONS AND METHODS EMPLOYING PYRIDINE DERIVATIVES

Albrecht Edenhofer, Riehen, Henri Ramuz, Birsfelden, and Hans Spiegelberg, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 9, 1967, Ser. No. 681,914

Claims priority, application Switzerland, Nov. 23, 1966, 16,802/66

Int. Cl. A61k 27/00

U.S. Cl. 424—263

22 Claims

Certain benzophenones substituted by a 3-pyridyl-2-hydroxypropoxy group or a 3-pyrazinyl-2-hydroxypropoxy group were found to possess useful activity against mycobacterial infections particularly against *Mycobacterium tuberculosis*.

3,515,789

ANALGESIC-HYPNOTIC THERAPY WITH 4-IMIDAZOLEACETIC ACID

Eugene Roberts, Pasadena, Calif., assignor to City of Hope, a National Medical Center, Duarte, Calif., a corporation of California

Continuation-in-part of application Ser. No. 553,186, May 26, 1966. This application July 17, 1967, Ser. No. 660,548

Int. Cl. A61k 27/00

U.S. Cl. 424—273

7 Claims

In accordance with the invention, analgesia and sleep, as well as the sedation and tranquilization associated therewith, are brought about in animals by administering, by any selected route such as oral or parenteral, a therapeutically effective dose of imidazoleacetic acid, which may be in the free acid form, or in the form of a salt thereof, such as sodium, potassium, sulfate, acetate, and

the like, or in the form of a lower alkyl ester thereof, such as ethyl, propyl, and the like.

3,515,790

SUBSTITUTED BENZOQUINONES AND FUNGICIDAL METHOD EMPLOYING SAME

Kurt E. Burdeska, Basel, Jost von der Crone, Riehen, Raphael Menassé, Basel, and André Pugin, Riehen, Switzerland, assignors, by mesne assignments, to H. A. Whitten & Co., New York, N.Y., a partnership
No Drawing. Continuation of application Ser. No. 394,373, Aug. 10, 1964, which is a division of application Ser. No. 338,006, Jan. 17, 1964. This application July 9, 1968, Ser. No. 744,619

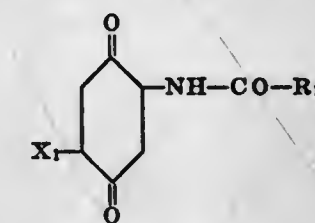
Claims priority, application Switzerland, Jan. 25, 1962, 926/62; Sept. 6, 1962, 10,610/62; Jan. 16, 1963, 504/63; July 23, 1963, 9,164/63

Int. Cl. A01n 9/20

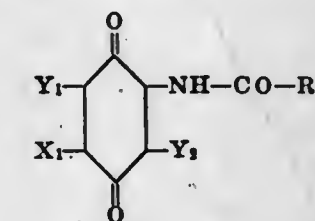
U.S. Cl. 424—309

14 Claims

A method is provided for combatting phytopathogenic fungi. The method comprises applying to an area of a substrate infested with fungi either (1) a halogenated acylamino-1,4-benzoquinone of the formula



wherein X₁ is chlorine, bromine or fluorine and R₁₁-CO— is one of several specified acylamino groups, or (2) a halogenated acylamino-1,4-benzoquinone of the formula



wherein X₁ is chlorine, bromine, or fluorine, each of Y₁ and Y₂ is bromine or chlorine and R₁₁-CO— is one of several specified acylamino groups.

ELECTRICAL**ERRATUM**

For Class 84—1.01 see:
Patent No. 3,515,039

3,515,791

PIANO KEYING CIRCUIT FOR ELECTRICAL MUSICAL INSTRUMENT, WITH SELECTIVE BY-PASS CIRCUITS FOR OTHER INSTRUMENTAL EFFECTS

Floyd A. Cordry, Granada Hills, Calif., assignor to Warwick Electronics Inc., Chicago, Ill., a corporation of Delaware

Filed June 22, 1966, Ser. No. 559,548

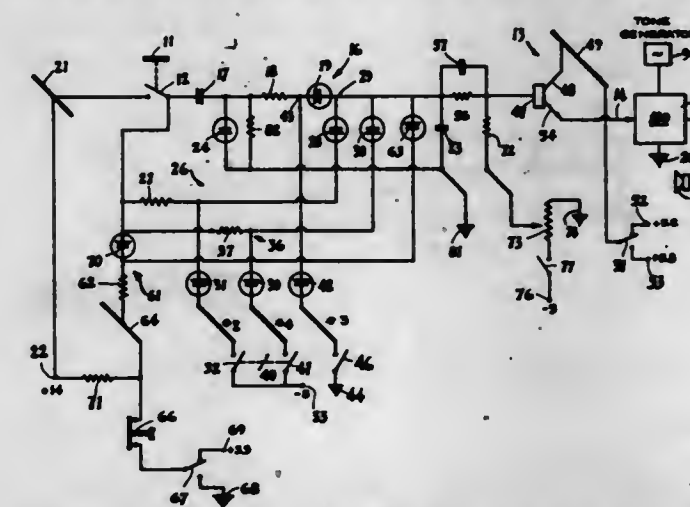
Int. Cl. G10h 1/00, 1/02

U.S. Cl. 84—1.01

8 Claims

A keying circuit is provided for an electrical musical

instrument which permits the artist to simulate piano tones,



and which includes a plurality of by-pass circuits which may be selectively actuated for other tonal effects.

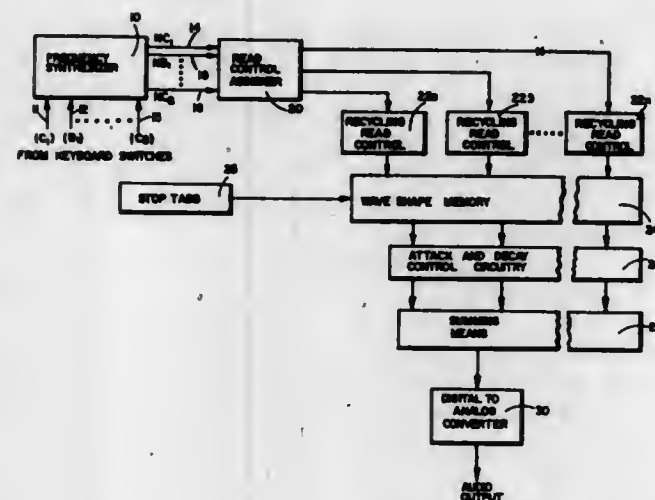
3,515,792

DIGITAL ORGAN

Ralph Deutsch, Sherman Oaks, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Aug. 16, 1967, Ser. No. 660,997
Int. Cl. G10f 1/00; G10h 1/02, 3/04
U.S. Cl. 84-1.03

46 Claims



A digital electronic organ wherein a digital representation of an organ pipe wave shape is stored in a memory. A frequency synthesizer activated by a manual or pedal key produces a clock frequency at Nf , where f is the frequency of the note selected, and N is the number of sample points in the stored wave shape. The digitized wave shape is read out repetitiously at the generated clock frequency and converted to analog form to produce a musical note having a wave shape corresponding to that stored in the memory. Circuitry is provided to sum digitally notes which are played simultaneously; to shape each note in attack and decay using digital operations; and to read out stored multiple wave shapes to implement harmonic and mutation stops.

3,515,793

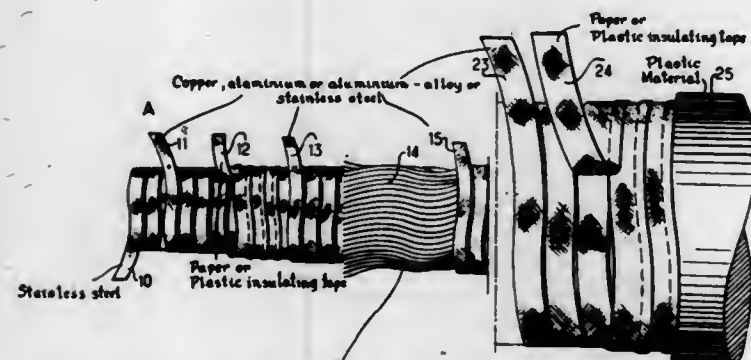
CRYOGENIC POLYPHASE CABLE

Marcel Aupoix, Paris, and François Moisson-Franckhauser, Bretigny-sur-Orge, France, assignors to Compagnie Generale d'Electricite, Paris, France, a corporation of France

Filed Dec. 29, 1967, Ser. No. 694,680
Claims priority, application France, Dec. 29, 1966, 89,367

Int. Cl. H02g 15/26; H01b 7/34
U.S. Cl. 174-13

13 Claims



Aluminum of high degree of purity, refined copper, silver or beryllium or aluminum coated with lead, sodium, niobium, titanium or niobium-titanium alloy

A polyphase cryogenic cable including an outer part comprising first and second concentric members joined together by expandable means and an inner current-carry-

ing part wherein each current phase assembly comprises a conductive layer positioned between wound layers of metal tape, the conductive layers being in the form of wires or conductors having a wavy configuration or having spaced folded portions capable of absorbing changes in length of the conductors due to temperature changes.

3,515,794

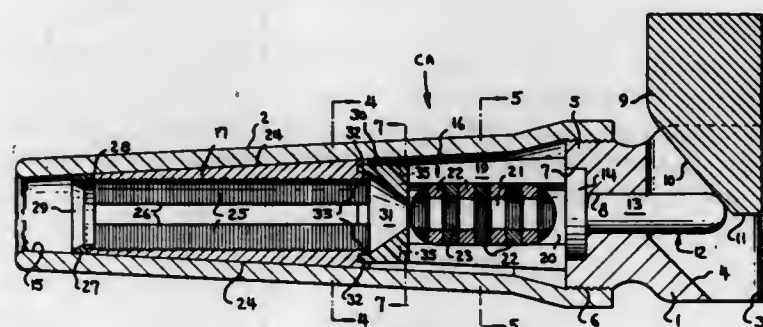
ELECTRICAL CONNECTOR ASSEMBLY

Ernest Lloyd Beinhaus, Harrisburg, and Frederick William Wahl, Middletown, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Continuation-in-part of application Ser. No. 548,541, May 9, 1966. This application Aug. 13, 1968, Ser. No. 752,194

Int. Cl. H02g 15/08
U.S. Cl. 174-90

9 Claims



An electrical connector assembly securable on electrical conductor means comprises a hollow shell having a tapered internal surface, conductor-receiving means within the hollow shell including a plurality of conductor-gripping means compressible on the conductor means at spaced locations therealong, and force-driving means in the hollow shell engageable with the conductor-receiving means to drive the conductor-receiving means along the tapered internal surface and compress the conductor-gripping means on the conductor means at the spaced locations therealong.

3,515,795

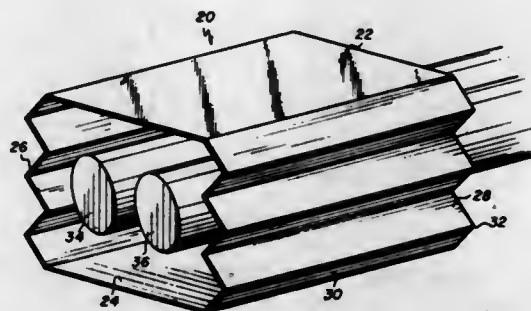
CONNECTOR FOR ELECTRICAL CONDUCTORS WITH DEFORMABLE SIDE PANELS FOR CONTACT WITH SUCH CONDUCTORS

Ted L. C. Kuo, Elizabeth, N.J., assignor to Thomas & Betts Corporation, Elizabeth, N.J., a corporation of New Jersey

Filed Dec. 14, 1967, Ser. No. 690,655

Int. Cl. H02g 15/08
U.S. Cl. 174-94

7 Claims



The invention is directed to a connector and more particularly to a connector for coupling a plurality of members, such as conductors, together. The connector is made of a top member and a bottom member and two side members coupled thereto. The side members are arranged to be deformable such that when the connector is subjected to externally applied compression forces, the side

members will deform towards the center of the connector thereby to apply compression forces in the direction of the externally applied force as well as transverse force to the members placed within the connector. Thus, providing holding forces on all sides of the members placed therein. That is to say, the compression forces applied externally of the connector will cause the top and bottom members to grasp the members placed therein and in addition the deformation of the side members, towards the center of the connector, will apply transverse force to the members placed within the connector to provide additional holding force to the members. The connector body can also include a lug for receipt of additional conductors.

3,515,796

INSULATED TELEPHONE CABLE

Roger J. Schoerner, Carrollton, Ga., assignor to Southwire Company, Carrollton, Ga., a corporation of Georgia

No Drawing. Continuation-in-part of application Ser. No. 779,376, Nov. 27, 1968, which is a continuation-in-part of application Ser. No. 730,933, May 21, 1968. This application Apr. 7, 1969, Ser. No. 814,200

Int. Cl. B21c 1/00; C22f 1/04
U.S. Cl. 174-113

14 Claims

An insulated telephone cable is prepared from individually insulated conductors which are gathered together and insulated as a unit. The individually insulated conductors are prepared from aluminum alloy wires having an acceptable electrical conductivity of at least sixty-one percent based on the International Annealed Copper Standard and an increased tensile strength when compared to conventional aluminum alloy wire of the same percent ultimate elongation. In addition, the present wire has an increased percent ultimate elongation when compared to conventional wire of the same tensile strength. The aluminum alloy wires contain substantially evenly distributed iron aluminate inclusions in a concentration produced by the addition of more than about 0.30 weight percent iron and no more than 0.15 weight percent silicon to an alloy mass containing less than about 99.70 weight percent aluminum and trace quantities of conventional impurities normally found within a commercial aluminum alloy. The substantially evenly distributed iron aluminate inclusions are obtained by continuously casting an alloy consisting essentially of less than about 99.70 weight percent aluminum, more than 0.30 weight percent iron, no more than 0.15 weight percent silicon and trace quantities of typical impurities to form a continuous aluminum alloy bar, hot-working the bar substantially immediately after casting in substantially that condition in which the bar is cast to form continuous rod which is subsequently drawn into wire without intermediate anneals, annealed after the final draw and insulated. After annealing and insulating, the individual wires are brought together and insulated with an outer sheath. The telephone cable generally consists of two or more individually insulated wires brought together in a conventional stranding operation.

3,515,797

ELECTRICAL WIRING PROTECTOR

Levi J. Hochstetler, 207 S. 23rd St., Goshen, Ind. 46526

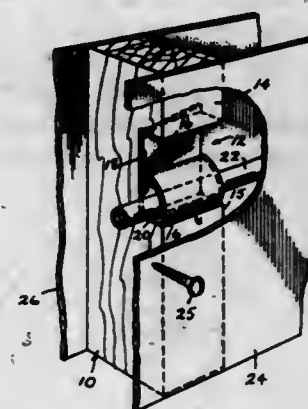
Filed July 10, 1968, Ser. No. 743,653
Int. Cl. H02g 3/26

U.S. Cl. 174-135

5 Claims

A wiring protector mountable within a transverse slot in a frame support comprising a U-shaped member having a rear flange, a shorter front flange spaced from said rear flange, and an integral web interconnecting the lower margins of said flanges. At least a portion of the upper edge of the rear flange of the protector is inclined. The distance between the web and the uppermost edge part of the rear flange of the protector is greater than the

spacing between opposed sides of the frame support slot so that the protector may be wedged lengthwise into said



frame support slot with its rear flange positioned adjacent the back of the slot.

3,515,798

ELASTIC COVER AND REMOVABLE CONE ASSEMBLY

James A. Sievert, Stillwater, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Dec. 6, 1968, Ser. No. 781,843

Int. Cl. H01r 5/00

U.S. Cl. 174-135

6 Claims



An elastic tubular cover member supported in stretched condition on an easily removable one-piece rigid spiral core having interconnected adjacent coils. Uncoiling of the spiral and removal of the core as a continuous narrow strip through the remainder of the spiral permits the cover to be shrink fit upon a workpiece disposed within the assembly.

3,515,799

ELECTRICAL BUSHING MOUNTED IN CASING WITH FOAMED RESIN

Donald J. Ristuccia and James C. Oates, Sharpville, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 11, 1969, Ser. No. 798,307

Int. Cl. H01b 17/26, 17/28, 19/00

U.S. Cl. 174-153

5 Claims

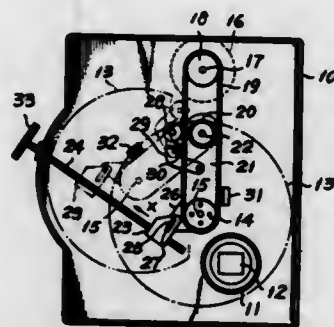
Electrical bushing structures, and methods of constructing same, having insulating body portions formed of rigid foamed resin. In one embodiment of the invention, the bushing assembly is permanently mounted through an

aperture in the enclosure of its associated apparatus, by foaming the resin system about a conductor stud disposed coaxially through a hollow weatherproof housing, which is disposed on the weather side of the enclosure, and a mold disposed on the encased side of the enclosure. If capacitor plates are required, they are formed by disposing a conductive stud in a mold and forming a first radial section of the insulating body member with foamed resin, removing the conductive stud and first radial section from



the mold and coating a predetermined portion of the first radial section with the material of which the capacitor plates are to be formed. The steps of forming radial body portions or sections and coating them are then repeated, until the desired number of capacitor plates are obtained. The built-up composite capacitor body section may then be permanently foamed into place through an aperture of an enclosure, or it may be used in any other suitable bushing structural arrangement.

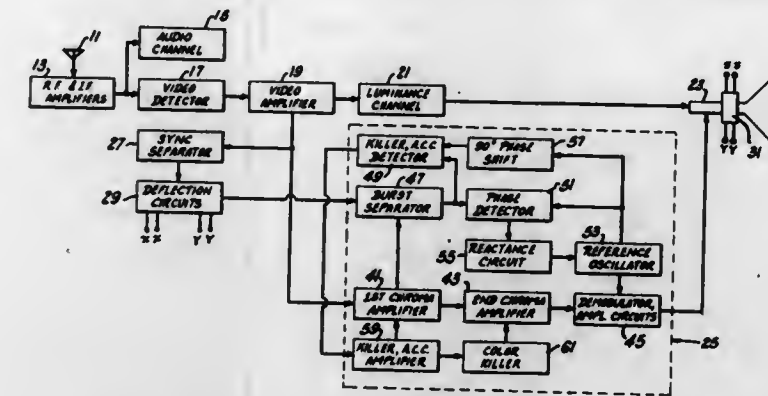
3,515,800
TELEVISION CAMERA FOR SELECTIVELY PICKING UP SCENES IN COLOR OR MONOCHROMATICALLY
Tameaki Ebihara, Yamato, and Takashi Mikami, Tokyo, Japan, assignors to Victor Company of Japan, Limited, Yokohama, Japan
Filed May 2, 1967, Ser. No. 635,511
Claims priority, application Japan, May 10, 1966, 41/29,528
Int. Cl. H04n 9/06
U.S. Cl. 178-5.4 3 Claims



A television camera for selectively picking up scenes in color or monochromatically, having an image pickup tube and a disk including a plurality of different color filters, in which the disk is connected by driven means to driving means by a belt and driven in rotation. The disk is selectively positioned to cover or uncover the front face of the image pickup tube by shifting only the driven means while keeping the connection of the belt between

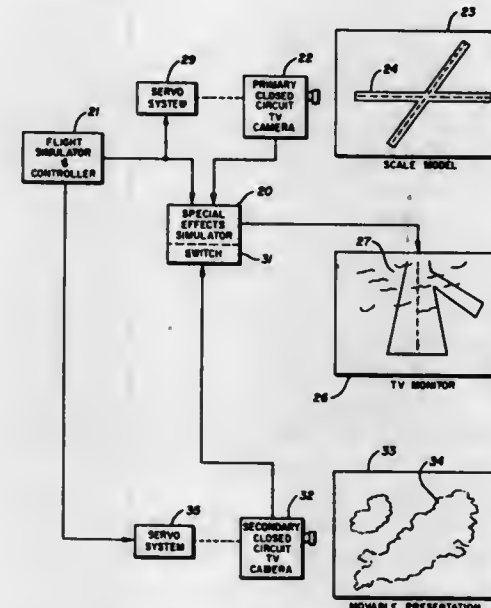
the driving means and the driven means so that switching between the color and monochromatic pickup is a simple operation.

3,515,801
CHROMINANCE CIRCUITRY FOR TELEVISION RECEIVERS
William Kelsey Hickok, Williamsville, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 6, 1967, Ser. No. 643,925
Int. Cl. H04n 9/48
U.S. Cl. 178-5.4 10 Claims



Automatic chrominance control (ACC) circuitry and color-killer circuitry for the chrominance channel of a color television receiver. The ACC circuit provides an output operative to effect forward automatic chrominance control of a first chroma amplifier in the chroma channel. The same output from the automatic chrominance control circuit is applied to the control electrode of the color-killer circuit. The color-killer circuit is connected in series with the DC path of a second chroma amplifier so that cutting off the color-killer circuit cuts off the second chroma amplifier. A special switching electron device is utilized to enhance the switching characteristics of the color-killer circuit.

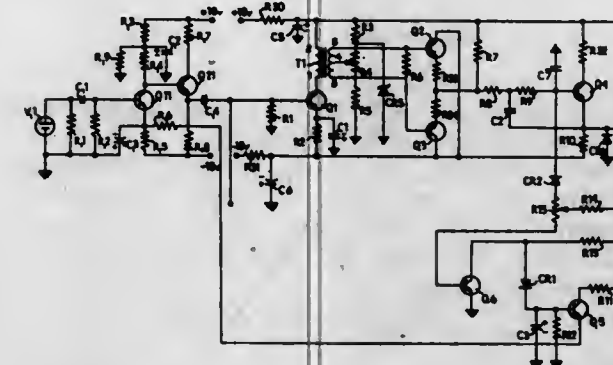
3,515,802
SPECIAL EFFECTS ELECTRONIC SIMULATOR
Richard S. Wise, Boulder, Colo., assignor to Ball Brothers Research Corporation, Boulder, Colo., a corporation of Colorado
Filed Apr. 27, 1967, Ser. No. 634,249
Int. Cl. H04n 7/08
U.S. Cl. 178-6 15 Claims



An electronic apparatus and method for simulating a condition for training purposes, especially simulation of fog and the like in a flight training simulator. Provision

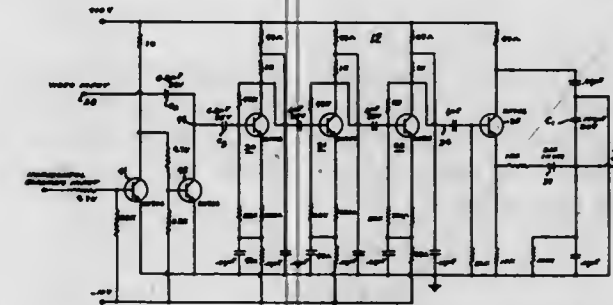
is made for adjusting the amount of fog, as well as provision for horizon tilting and curvature-ceiling control operable in conjunction with the training apparatus.

3,515,803
CONTRAST RANGE CONTROL
Malcolm M. Lorang, Garden Grove, Calif., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware
Filed June 28, 1967, Ser. No. 649,506
Int. Cl. H04n 1/40
U.S. Cl. 178-6 9 Claims



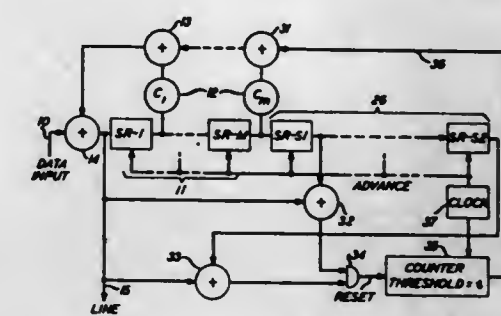
Contrast range control for video signals, wherein a background and markings on the background are reproduced, is accomplished by passing the signal through a gain-controlled amplifier, sensing the background of the amplified signal, comparing the background signal with a voltage which corresponds to a desired limit of background darkness to obtain a correction signal for the gain of the gain-controlled amplifier. If the background is lighter than the limit set, then a rapid reduction in the gain of the amplifier takes place. If the background is darker than the limit, a gain in the amplifier takes place only after a given time delay.

3,515,804
VIDEO AUTOMATIC GAIN CONTROL SYSTEM FOR MAINTAINING CONSTANT BACKGROUND NOISE LEVEL
Richard H. Foote, Fort Wayne, Ind., assignor to the United States of America as represented by the Secretary of the Air Force
Filed May 15, 1967, Ser. No. 639,931
Int. Cl. H04n 5/52
U.S. Cl. 178-7.3 5 Claims



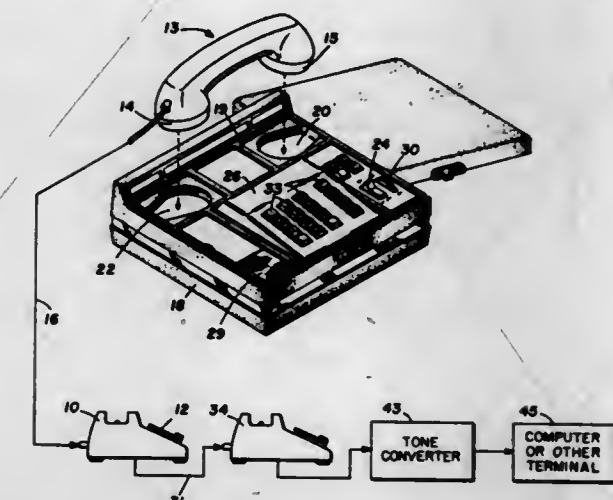
According to this invention, the signal level to be held constant is not the peak black-to-white level, but rather the background noise level. This permits the clipping level to be set so as not to eliminate faint signals which are barely above the noise level. The inverted video signal is applied to an emitter-follower which drives a half-wave detector to provide the gain control voltage. Thus only the noise components of the signal contribute to the automatic gain control voltage. During retrace the input of the amplifiers is clamped to ground.

3,515,805
DATA SCRAMBLER
Renato D. Fracassi, Middletown, and John E. Savage, Red Bank, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York
Filed Feb. 6, 1967, Ser. No. 614,226
Int. Cl. H04l 9/02
U.S. Cl. 178-22 9 Claims



Critical initial states in feedback-connected shift registers used as digital data scramblers can frustrate the attainment of intended pseudo-random line sequences of long period. Auxiliary apparatus in the form of additional shift register stages and counter-controlled monitoring logic for the basic scrambler forces short-period line sequences into the desired long pseudo-random period at all times.

3,515,806
PORTABLE INPUT-OUTPUT TERMINAL
Earl D. Spraker, Dallas, Tex., assignor to Electronic Data Systems Corporation, Dallas, Tex.
Filed Sept. 16, 1968, Ser. No. 773,680
Int. Cl. H04m 11/00
U.S. Cl. 179-2 7 Claims

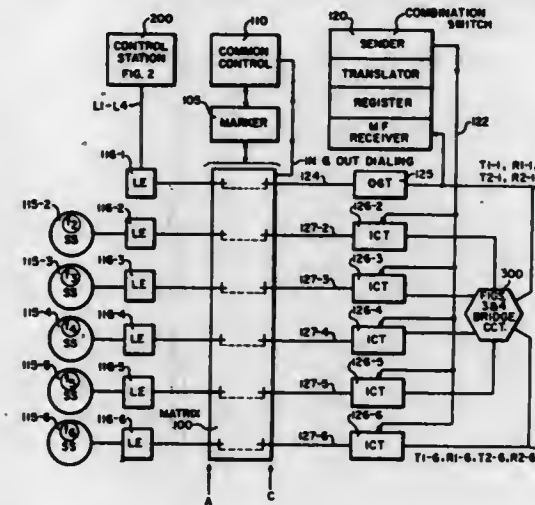


A pushbutton tone generator having a housing to receive the handpiece of conventional, dial-type telephones for converting same by means of audio-coupling to a tone transmitting station with automatic call and identification means and selectable data encoding means.

3,515,807
CONFERENCE ARRANGEMENT HAVING A PLURALITY OF TRANSMISSION MODES
Robert C. Clark, Broadview, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed May 5, 1966, Ser. No. 547,851
Int. Cl. H04m 3/56
U.S. Cl. 179-18 1 Claim

A conference bridge circuit has a full duplex mode which permits parties at all connected stations to talk to one another, and a restricted duplex mode which permits the commander at a main control station to talk to

all other stations, and parties at other stations to talk only to the commander, not to each other. A key at the control station controls a signal generator to send signals to op-



erate mode changing apparatus in the bridge circuit. The control station also has keys to control "no talk back" apparatus.

3,515,808

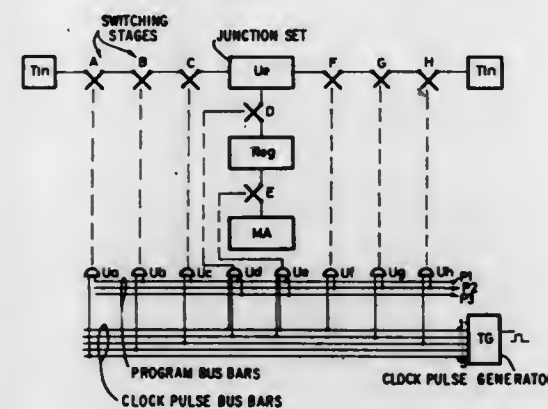
CONTROL CIRCUIT FOR MULTISTAGE CROSSPOINT NETWORK

Dieter Niedergesäss, Schwieberdingen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed July 7, 1966, Ser. No. 563,407
Claims priority, application Germany, July 21, 1965, St 24,162

Int. Cl. H04q 3/54

U.S. Cl. 179-18

7 Claims



Marking of switching stages in a control circuit is provided by signals from coincidence circuits. The coincidence circuits in turn are operated in response to coincidence between signals applied over a wire network representing a program and timing pulses from a centrally arranged clock pulse generator.

3,515,809

SUPERVISORY CIRCUIT ARRANGEMENTS

Eberhard Herter, Stuttgart, Germany, assignor to International Standard Electric Corporation
Filed Oct. 13, 1966, Ser. No. 586,526
Claims priority, application Germany, Oct. 20, 1965, St 24,536

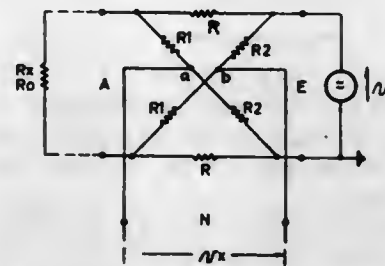
Int. Cl. H04m 3/22

U.S. Cl. 179-18

9 Claims

A system for supervising loop resistance in telephone circuits is disclosed. A hexa-pole bridge circuit is used as an interrogating element and an AC voltage is supplied across input terminals of the bridge. The bridge is balanced when the loop resistance has such a value that the voltage in the neutral branch is zero. When the bridge is unbalanced, it provides a voltage which is in phase or out of phase relative to the interrogating AC voltage as the

loop resistance rises or falls short. Suitable means are provided to measure the phase difference and either to indicate the difference or to provide a signal capable of use in control functions such as turning off ringing current.



3,515,810

MULTISTAGE END MARKED FOLDED FERREED SWITCHING NETWORK

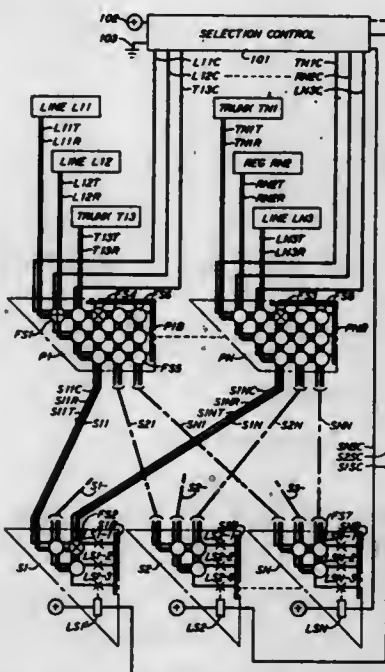
Frank D. Keefer, Mullica Hill, N.J., Louis E. Thelemague, Brooklyn, N.Y., and Henry J. Walsh, Somerville, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Jan. 5, 1967, Ser. No. 607,504

Int. Cl. H04q 3/42

U.S. Cl. 179-18

4 Claims



A two-stage, end-marked, folded switching network which utilizes partially folded combinations of triangular and rectangular matrices of differentially wound ferreed switches in the first stage and fully folded triangular matrices in the second stage. Selective network control is accomplished by end-marking selected first stage input terminals and by link selection at the fold of a selected second stage switch array. Inputs to the same first stage switch matrix are connectable without utilizing the remainder of the network.

3,515,811

MARKING CIRCUIT FOR A RELAY CROSSPOINT NETWORK

Charles D. Gay, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Jan. 18, 1968, Ser. No. 698,959

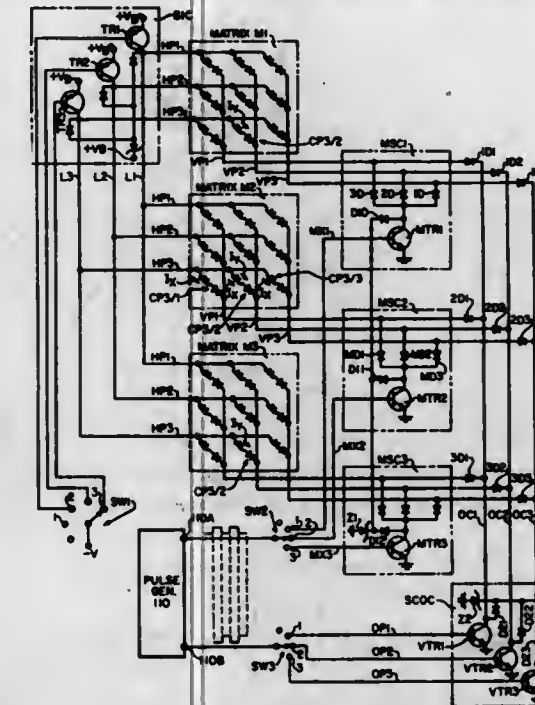
Int. Cl. H04q 3/00

U.S. Cl. 179-18

8 Claims

A marking circuit for a relay crosspoint switching system employing a two winding relay for each crosspoint wherein an inlet-select circuit common to all matrices in a stage applies a marking potential of one polarity to one inlet in each matrix, a matrix select circuit applies a marking potential of opposite polarity in the form of

pulses to all outlets of a selected matrix, and a select-outlet circuit applies a marking potential also of said opposite polarity in the form of pulses to one outlet in each



matrix. The pulses supplied by a select-outlet circuit being inverse to those pulses supplied by a matrix select circuit, only one relay in a stage is supplied with both pulses, and only that relay operates.

3,515,812

CALL FORWARDING SYSTEM

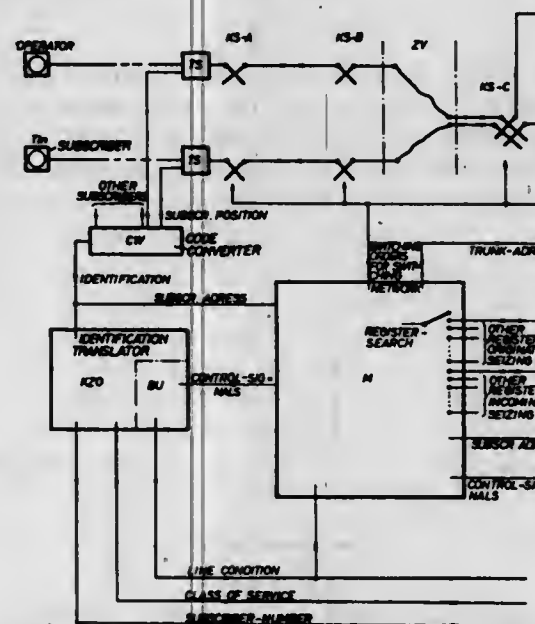
Walter Hackenberg, Hirschlanden, and Herbert Siegel, Munchingen, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 399,480, Sept. 28, 1964. This application July 18, 1968, Ser. No. 745,784
Claims priority, application Germany, Oct. 3, 1963, St 21,139

Int. Cl. H04m 3/54

U.S. Cl. 179-18

4 Claims



The invention provides special services such as call forwarding which enables a subscriber to set his line so that calls directed thereto are transferred to special service central office equipment. In order to obtain the special services, the subscriber dials a special code and his own directory number from his own telephone. Comparator equipment compares the dial directory number with information obtained from subscriber identification equipment. The subscriber is provided with the desired services only if both numbers compare.

3,515,813

TELEPHONE RINGING SIGNAL TRANSFER DEVICE

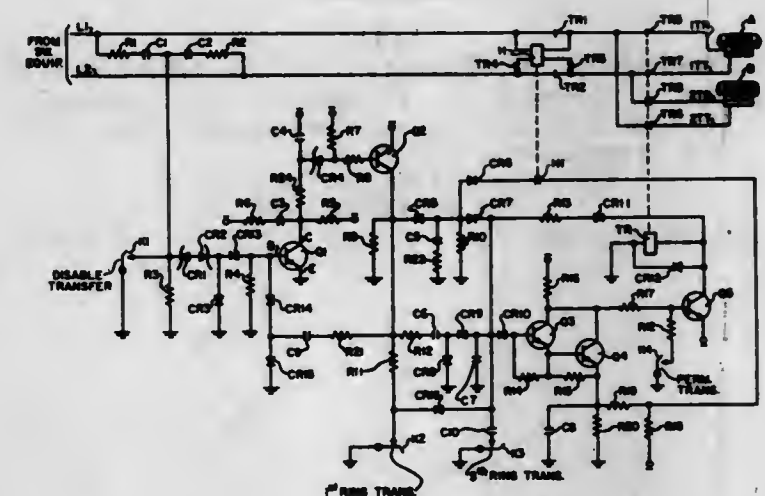
Robert T. Cleary, Lockport, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Jan. 4, 1968, Ser. No. 695,723

Int. Cl. H04m 3/58

U.S. Cl. 179-84

6 Claims



A call transfer apparatus for location at the subscriber's premises, arranged to transfer the line terminals from a first unanswered telephone to a second telephone which is then rung. It includes a first circuit to detect the ringing and another circuit to count the ringing periods; upon counting a preset number of ringing periods, a relay is operated to transfer the incoming terminals to those of the second station. The answering telephone will then operate a relay to maintain the transfer for the duration of the call.

3,515,814

SEQUENCER AND SELECTOR FOR AUTOMATIC VOICE TONE TRANSMISSION

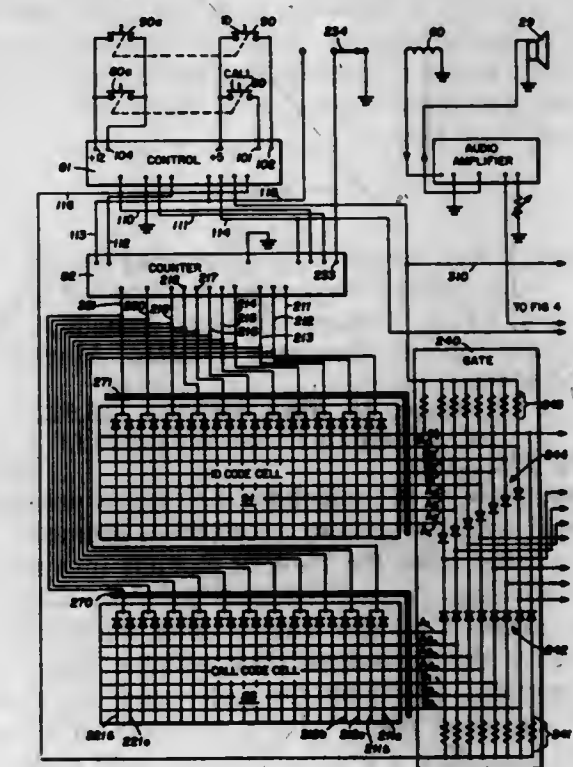
Richard E. Morgan, Dallas, Tex., assignor to Electronic Data Systems Corporation, Dallas, Tex., a corporation of Texas

Filed Sept. 16, 1968, Ser. No. 760,018

Int. Cl. H04m 11/00

U.S. Cl. 179-84

9 Claims



A touch tone terminal is adapted to communicate by way of a telephone channel with at least two sets of

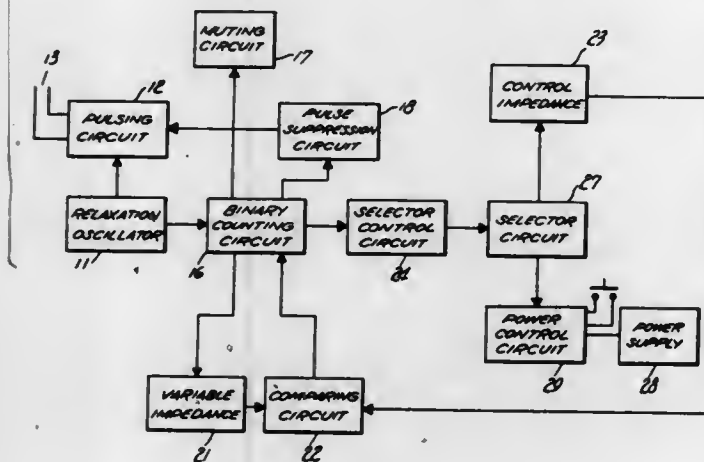
tone generators having a separate actuator for each generator. Included is a control unit having a clock which feeds a counter having at least seven stages with a last stage connected to terminate clock operation. Circuit means interconnect each state of the counter and one actuator in each set for selectively designating the actuators which respond to each of the counter stages following manual operation of a start element for the control unit.

3,515,815

RESISTANCE CONTROLLED PULSE GENERATOR
Joseph S. Baynard, Jr., Burlington, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 5, 1968, Ser. No. 703,078
Int. Cl. H04m 1/28

U.S. Cl. 179-90

7 Claims



A pulse generator includes a binary counter which is controlled by a plurality of control resistors sequentially connected to the generator. Each control resistor has a value which corresponds to one digit or letter of a sequence of digits or letters. An oscillator steps the counter which changes a variable resistance until the variable resistance establishes a predetermined relationship with the control resistor connected to the generator. The counter is reset and another control resistor connected to the generator. In one embodiment, the oscillator operates a pair of dialing contacts to produce a sequence of pulses corresponding to one digit or letter. In another embodiment, the binary counter controls the output frequencies of a dual tone generator to produce a dual tone corresponding to the digit or letter.

3,515,816

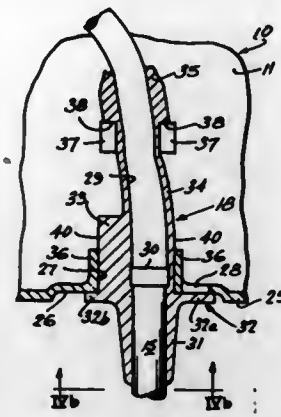
HOUSING FOR A TELEPHONE INSTRUMENT AND GROMMET FOR USE THEREWITH
Graham S. Laing, London, Ontario, Canada, assignor to Northern Electric Company Limited, Montreal, Quebec, Canada
Filed Apr. 23, 1968, Ser. No. 723,522
Int. Cl. H01b 17/26; H04m 1/15

U.S. Cl. 179-100

12 Claims

A base plate of the telephone housing is provided at its front wall with an opening receiving a grommet through which a cable from the handset extends into the interior of the housing. A hole situated laterally adjacent this opening allows a station wire to enter the housing at the same end of the instrument. The grommet has two lateral flange portions overlying the outer surface of the front wall of the base plate, with a first one of these flange portions extending a greater distance with respect to the opening than the other one. The grommet is capable of two orientations: in one orientation, a first flange portion covers the hole, for use when the station wire enters the

housing at its rear (e.g. when used as a table instrument); while in the other orientation the other flange portion



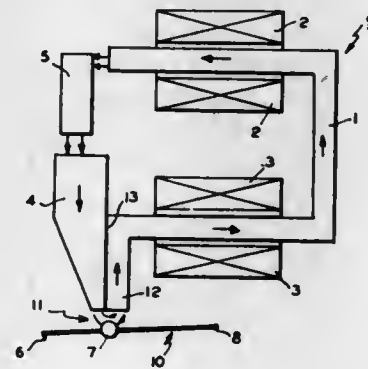
terminates short of the hole so as to leave it free for the station wire to enter when the instrument is mounted on a wall.

3,515,817

VARIABLE RELUCTANCE-TYPE PICKUP UTILIZING ANISOTROPIC POLE PIECES
Yoshio Tawara, Kadoma-shi, and Atsushi Iga, Hirakata-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan
Filed Feb. 1, 1967, Ser. No. 613,189
Int. Cl. H04r 11/12

U.S. Cl. 179-100.41

5 Claims



A transducer for use as a phonograph pickup which has a magnetic circuit including a pole piece of an anisotropic ferromagnetic material which concentrates a magnetic leakage flux in an air gap near the magnetic circuit, and a cantilever arm of non-magnetic material having the needle on one end thereof and a flux modulating member thereon positioned in the air gap near the magnetic circuit, so that the movements of the cantilever arm and flux modulating member vary the flux in the magnetic circuit. A pickup coil is provided for the magnetic circuit. Two parallel circuits can be provided with the pole pieces having end faces at right angles to each other, so that a single cantilever arm and flux modulating member can be used to pick up from a stereophonic record.

3,515,818

MAGNETIC TRANSLATING DEVICE
George C. Tibbetts, Camden, Maine, assignor to Tibbetts Industries, Inc., Camden, Maine, a corporation of Maine
Filed Jan. 23, 1962, Ser. No. 168,183
Int. Cl. H04r 11/04

U.S. Cl. 179-114

25 Claims

A magnetic transducer having a unitary armature folded to provide two parallel arms. The end of one arm is attached to the case and this arm forms a part of the case. The end of the other arm is in a magnetic air gap and free to vibrate. The casing is flux conductive and in magnetic contact with permanent magnets which form

the air gap. A drive pin is connected to the free end of the armature and extends through an aperture in the other



arm of the armature. The armature is rigidly supported only at one end and a damper contacts the armature at the region of the fold.

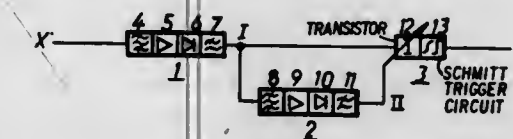
3,515,819

BREAKDOWN DETECTING ARRANGEMENT FOR TRANSMISSION SYSTEMS WITH NOISE
Gosta Ulf Eklund, Solna, and Kurt Hjalmar Johansson, Kallhall, Sweden, assignors to International Standard Electric Corporation
Filed Nov. 21, 1966, Ser. No. 595,661
Claims priority, application Sweden, Nov. 30, 1965, 15,437/65

Int. Cl. H04b 3/38

U.S. Cl. 179-170

6 Claims



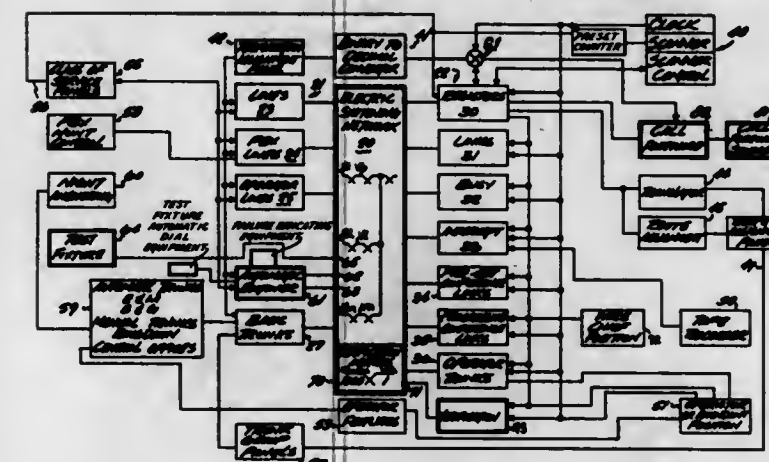
A circuit arrangement is provided for detecting breakdown in transmission lines where noise occurs. The breakdown is indicated by the cessation of a pilot signal which is normally transmitted continuously over the transmission line.

3,515,820

FEATURE EQUIPMENT FOR USE IN ELECTRONIC SWITCHING TELEPHONE SYSTEMS
John Berezna, Oaklawn, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed June 6, 1966, Ser. No. 555,518
Int. Cl. H04m 3/22

U.S. Cl. 179-175.2

3 Claims

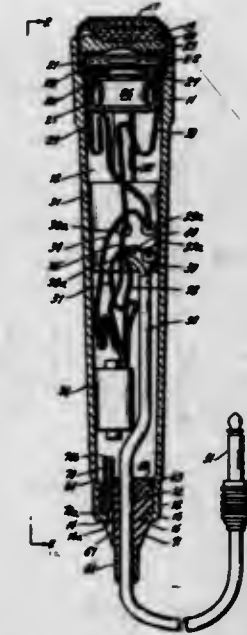


An automatically actuated circuit repeatedly places test calls to a designated directory number location. Thus, equipment is seized and exercised at random. If the call goes through, there are no further problems, and the connection is released. However, if troubles are encountered, a fault is indicated. Since many circuits in the system are mounted on printed circuit cards, the routiner may be made to function as a card tester by substituting new cards for the cards which are exercised during a test call. Still other features may be provided by this arrangement.

MULTIPURPOSE TRANSDUCER HOUSING PLUG WITH ACOUSTICAL VENT
Mario De Nardi, Yorktown Heights, and William F. Knauert, Yonkers, N.Y., assignors to Sonotone Corporation, Elmsford, N.Y., a corporation of New York
Filed Nov. 17, 1966, Ser. No. 595,136
Int. Cl. H04r 1/06, 1/28

U.S. Cl. 179-179

3 Claims



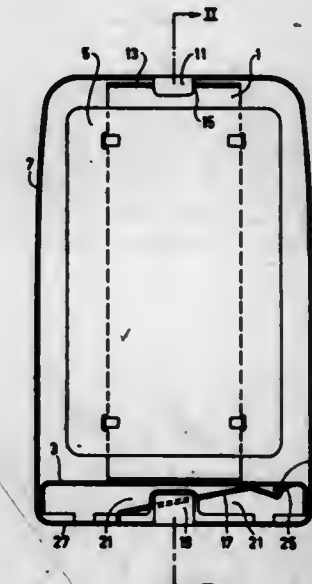
An electro-acoustic transducer assembly including a novel multipurpose plug which is so located as to provide the maximum acoustic cavity for a given housing, which at the same time acoustically seals the transducer assembly housing, is designed to provide cable bend relief and strain relief, and which includes a vent means for the above-mentioned cavity.

3,515,822

QUICK RELEASE SPRING LATCH FOR HEARING AID CASING
Martinus Marinus van der Pas, Emmasingel, Eindhoven, Netherlands, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed July 6, 1966, Ser. No. 563,208
Claims priority, application Netherlands, July 6, 1965, 6508636

U.S. Cl. 179-179

3 Claims



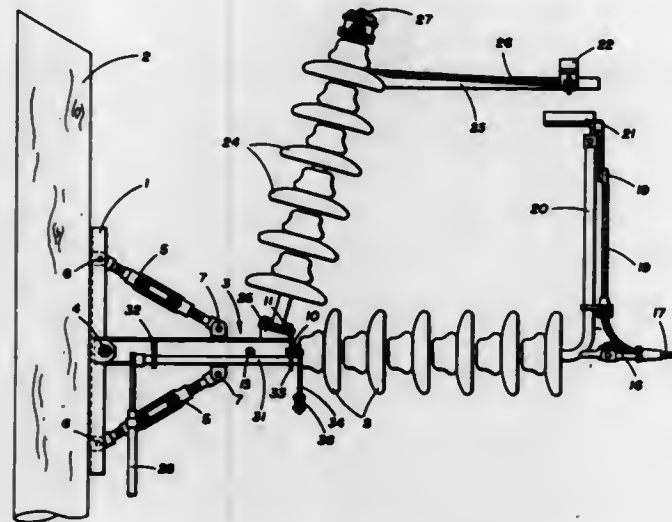
A hearing aid casing having two complementary shaped enveloping lids for containing therebetween the component parts of the hearing aid. The lids are held together in a closed position by a wire spring within the casing which can be released from without through an aperture formed in the bottom by the lids.

3,515,823 POLE-MOUNTED AIR-BREAK DISCONNECT SWITCH

John G. Pahl, 1624 E. Alpine Ave.,
Stockton, Calif. 95205
Filed Apr. 17, 1969, Ser. No. 817,060
Int. Cl. H01h 31/00

U.S. Cl. 200—48

5 Claims



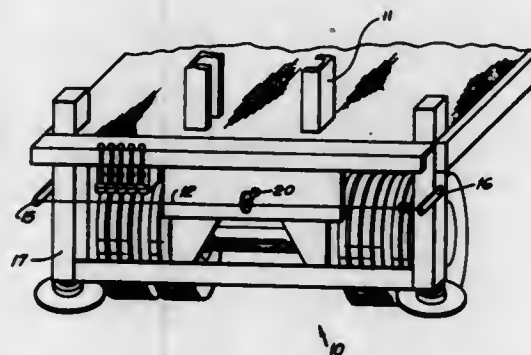
An air-break disconnect switch, adapted to be pole-mounted, comprising a supporting bar projecting generally radially from the pole, a longitudinal insulator coupled in axially rotatable relation to the supporting bar and extending from the outer end thereof to connection with the near portion of a lengthwise circuit cable, manually controlled mechanism associated with the supporting bar and longitudinal insulator operative to reversibly rotate the latter, an upstanding insulator fixed on the supporting bar, and switch parts mounted in connection with the insulators and arranged to make or break upon rotation of the longitudinal insulator in one direction or the other; the switch part corresponding to the longitudinal insulator being electrically connected to said lengthwise circuit cable and the switch part corresponding to the upstanding insulator being electrically connected to another circuit cable, and there being means (preferably including a turn-buckle assembly) mounting the supporting bar for up or down adjustment, about a transverse pivotal axis located adjacent the pole, whereby to axially align the longitudinal insulator with said near portion of said lengthwise circuit cable.

3,515,824 SAFETY SWITCH

William P. Henson, Indianapolis, and Ross S. Woods, Greenfield, Ind., assignors to Mobile Drilling Company, Inc., Indianapolis, Ind., a corporation of Indiana
Filed June 20, 1968, Ser. No. 738,614
Int. Cl. H01h 3/14

U.S. Cl. 200—52

3 Claims



A safety switch for shutting off machinery and including a tensioned electrical conductor extending through a

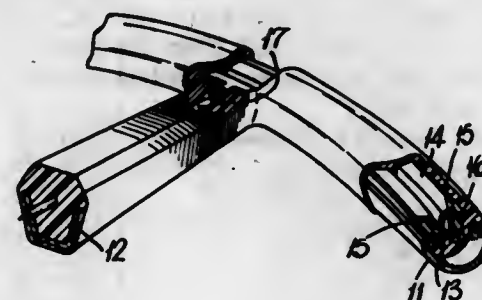
ring shaped electrical conductor and movable against the ring shaped electrical conductor to make a circuit and shut off the machinery.

3,515,825 STEERING WHEELS FOR ROAD VEHICLES INCORPORATING ELECTRICAL SWITCHES

Harold William Burton and Nigel Long, Birmingham, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Dec. 11, 1968, Ser. No. 783,013
Claims priority, application Great Britain, Dec. 20, 1967, 57,866/67

Int. Cl. H01h 9/00
U.S. Cl. 200—61.57

3 Claims



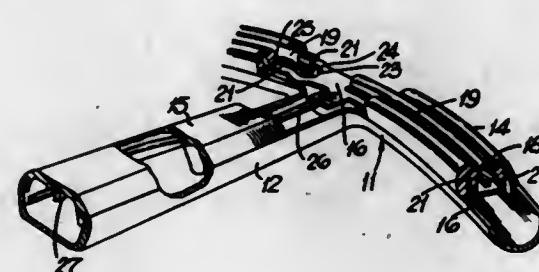
A steering wheel for a road vehicle includes a rigid annular member and at least one inwardly directed radial spoke secured to the annular member. The annular member carries an annular moulding, and the annular member and the annular moulding together constitute the rim of the steering wheel. An annular contact unit is housed within the rim of the steering wheel and includes a relatively movable contact part which is resiliently urged away from a relatively fixed contact part, the movable contact part being movable into engagement with the fixed contact part to complete an electrical circuit through an auxiliary of the vehicle in use.

3,515,826 STEERING WHEELS FOR ROAD VEHICLES INCORPORATING ELECTRICAL SWITCHES

Harold William Burton and Nigel Long, Birmingham, England, assignors to Joseph Lucas Industries Limited, Birmingham, England, a British company
Filed Dec. 3, 1968, Ser. No. 780,748
Claims priority, application Great Britain, Dec. 20, 1967, 57,865/67

Int. Cl. H01h 9/00
U.S. Cl. 200—61.57

3 Claims



A steering wheel for a road vehicle, comprises a conductive annular member having secured thereto at least one inwardly directed radial spoke, through which the wheel is mounted in use. Secured to the conductive annular member is an annular insulating moulding, and fixed to said moulding is a contact strip, the contact strip being insulated from the conductive annular member by said moulding. Slidably mounted in the moulding is a contact piece which is movable into engagement with the

contact strip. Resilient means acts on the contact piece to urge the contact piece away from the contact strip, and the contact piece is electrically connected to the conductive annular member, which is intended for connection to earth. Thus, the contact piece forms with the contact strip, a switch which can be closed by moving the contact piece into engagement with the contact strip.

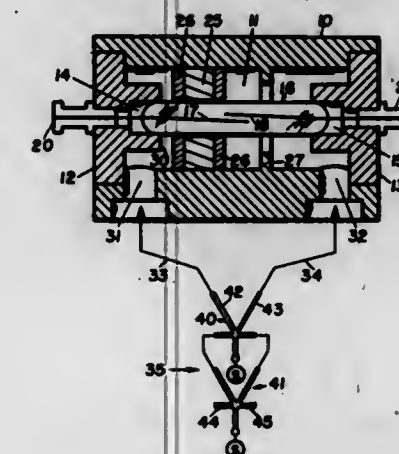
paratus is facilitated by channels through the sandwiched arrangement. Electrical contacts are disposed on each side of the diaphragm and are supported in spaced relationship with respect to it in its undeflected condition. In response to pressure differentials of sufficient magnitude across the diaphragm, it deflects to establish electrical contact between the diaphragm and one of the contacts.

3,515,827 FLUID TO ELECTRIC TRANSDUCER

Basil B. Beeken, New Haven, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Mar. 20, 1968, Ser. No. 721,541
Int. Cl. H01h 35/24, 35/28, 35/40

U.S. Cl. 200—81.9

4 Claims



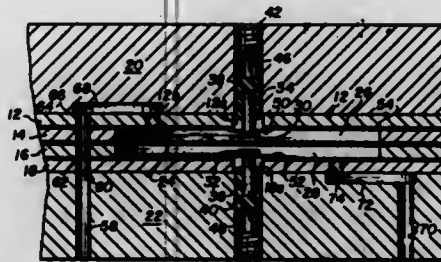
A fluid to electric transducer including a glass-enclosed reed-type switch that has a pair of magnetically sensitive contacts. An annular permanent magnet is mounted for sliding movement over a cylindrical outer surface of the glass enclosure and is arranged so as to be displaced in one axial direction by a first fluid-operated means, and to be displaced in the other axial direction by a second fluid-operated means.

3,515,828 FLUIDIC TO ELECTRONIC CONVERTER

Donald R. Boerner, Wayne, N.J., assignor to Singer-General Precision, Inc., a corporation of Delaware
Filed Mar. 1, 1968, Ser. No. 709,572
Int. Cl. H01h 35/40

U.S. Cl. 200—83

2 Claims



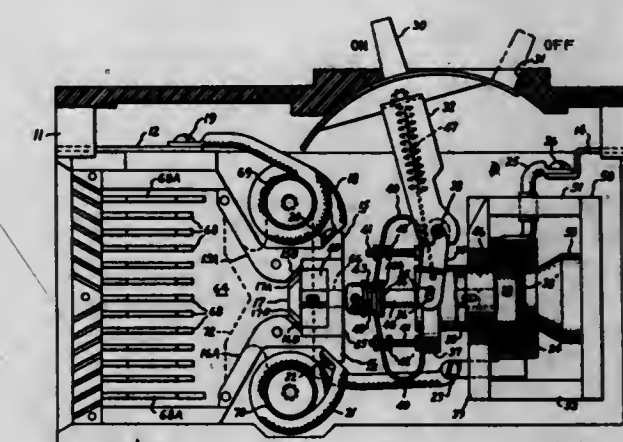
A fluidic to electronic converter switch responsive to pressure signals as from a fluidic flip-flop amplifier, to produce corresponding electronic signals. A pair of chambers separated by a resilient diaphragm are formed by a simple, compact arrangement of sandwiched components including circuit boards, the diaphragm and an insulator board, wherein the circuit boards and the insulator board have holes to form the chambers. Fluidic communication between the chambers and exterior apertures is provided.

3,515,829 CURRENT-LIMITING CIRCUIT BREAKER WITH NOVEL ARC INITIATING AND EXTINGUISHING MEANS

Ralph L. Hurtle, West Hartford, and Henry G. Willard, Wethersfield, Conn., assignors to General Electric Company, a corporation of New York
Continuation of application Ser. No. 457,557, May 21, 1965. This application Oct. 10, 1968, Ser. No. 763,963
Int. Cl. H01h 33/00, 33/18

U.S. Cl. 200—144

6 Claims



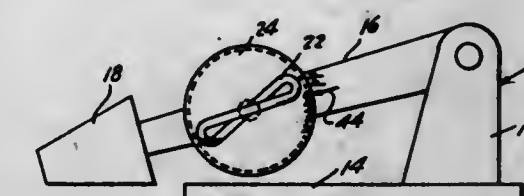
A current-limiting type circuit breaker including a wedge-shaped bridging movable contact which is drawn from closed position into a generally cup-shaped chamber by a high-speed solenoid. This, together with use of an ablating non-tracking insulation material (e.g. acetal resins) adjacent the closed contacts assists the transformation of the initial two arcs into a single arc which is elongated and moved out onto diverging arc runners into a chamber which has controlled venting, where the arc is extinguished.

3,515,830 ADJUSTABLE MERCURY SWITCH

George H. Johnson, Levittown, N.Y.
(321 NW. 39 St., Pompano Beach, Fla. 33064)
Filed Oct. 4, 1968, Ser. No. 765,046
Int. Cl. H01h 29/00, 35/18

U.S. Cl. 200—152

11 Claims



An adjustable mercury type switch attached to a float arm which is pivotally connected to a support member and the float switch is disposed on an adjustable rotatable disc, so that the switch can be set for predetermined levels of operation. The switch is further provided with flexible portions so that the contour or configuration of the float switch can be further adjusted to provide operation of the switch at varying adjustable levels.

3,515,831

TIMING SWITCH WITH MEANS FOR URGING A PAIR OF CONTACT ARMS INTO PRESSURE ENGAGEMENT WITH A PIVOTAL SHAFT AND ROTATABLE CAM

Charles Church, Whitewater, Wis., Henry J. Flajole, Menominee, Mich., and Harold Kerber, Janesville, Wis., assignors to The Bunker-Ramo Corporation, a corporation of Delaware

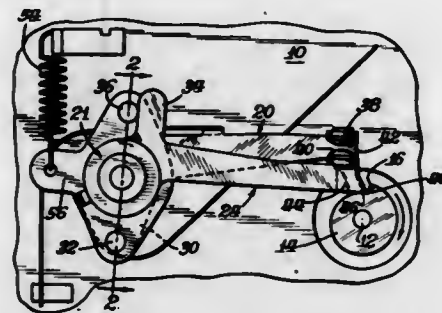
Filed June 1, 1966, Ser. No. 554,517

The portion of the term of the patent subsequent to Nov. 17, 1985, has been disclaimed

Int. Cl. H01h 19/62

U.S. Cl. 200—153

9 Claims



A cam-operated mechanical switching device employing only a single cam but capable of generating a short, accurately timed electrical pulse by a mechanism which is relatively insensitive to vibration and which is adapted to mass production manufacture without requiring manual adjustment. The contacts for the switching device are attached to a pair of contact arms, which overlie each other, and are mounted on the same shaft. Cam follower means are on the ends opposite the shaft of the contact arms.

3,515,832

THRUST WASHERS FOR USE WITH HELICALLY WOUND SPRINGS AND IMPROVED IGNITION SWITCHES UTILISING SUCH THRUST WASHERS

Rex Martin, Blackburn, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

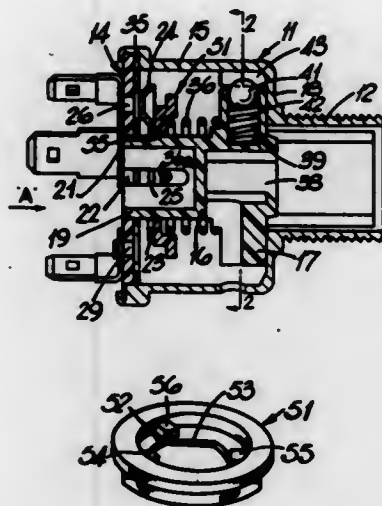
Filed May 8, 1968, Ser. No. 727,580

Claims priority, application Great Britain, May 26, 1967, 24,609/67

Int. Cl. H01h 27/06

U.S. Cl. 200—166

4 Claims



An improved thrust washer, for use with a helical spring, comprises a body having a peripheral stiffening flange which defines a recess in the body. One end of the helical spring with which the washer is used is engaged in said recess, and upstanding from the base of the recess are three angularly spaced projections. The three projections lie on the circumference of an imaginary

circle having its centre on the axis of the spring in use, so that the major segment defined by any two projections contains the third projection. The heights of the projections are such that when the imaginary circle containing the projections lies in a plane at right angles to the axis of the spring then the free ends of the projections lie substantially in the helical path of the end convolution of the spring presented to the body. An improved ignition switch includes the improved washer between the movable contact plate of the switch and the contact pressure spring.

3,515,833

CONTACT BREAKER ASSEMBLIES

William Lawrence Fry, Birmingham, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England, a British company

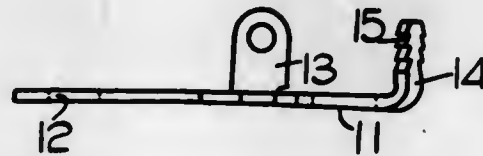
Filed June 21, 1968, Ser. No. 739,081

Claims priority, application Great Britain, Aug. 25, 1967, 39,248/67

Int. Cl. H01h 1/58; H01r 9/18

U.S. Cl. 200—166

8 Claims



Contact breaker assembly comprises a plate adapted to be supported within a casing of an ignition distributor and carrying a fixed contact. A movable contact is movable into and out of engagement with the fixed contact, and a spring urges the movable contact into engagement with the fixed contact. Means are provided for anchoring one end of the spring to the plate, and said means includes a tag upstanding from the plate, an insulating member engageable with the tag, and a conductive member engageable with the insulating member, the conductive member being shaped to receive said one end of the spring.

3,515,834

CONTACT BREAKER ASSEMBLIES

William Lawrence Fry, Birmingham, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England, a British company

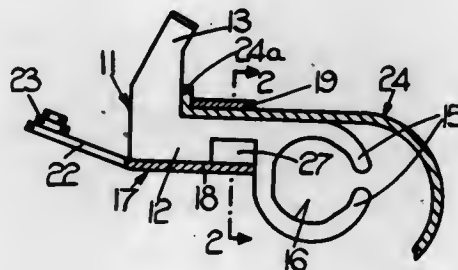
Filed Aug. 6, 1968, Ser. No. 750,536

Claims priority, application Great Britain, Aug. 29, 1967, 39,424/67

Int. Cl. H01h 1/00, 19/00

U.S. Cl. 200—166

5 Claims



A contact breaker assembly for use in an ignition distributor includes a plate carrying a fixed contact. An insulating heel member is mounted for pivotal movement relative to the plate and a conductive shell is engaged with the heel member. The conductive shell carries the movable contact of the assembly and a spring urges the heel member to pivot relative to the plate in a direction to engage the movable contact with the fixed contact.

3,515,835

ILLUMINATED PUSHBUTTON SWITCH

Robert Debras, Palaiseau, France, assignor to Societe de Fabrication d'Instruments de Mesure (S.F.I.M.), Massy (Esson), France, a company of France

Filed May 27, 1968, Ser. No. 732,342

Claims priority, application France, May 29, 1967, 108,194

Int. Cl. H01h 9/18

U.S. Cl. 200—167

8 Claims



A pushbutton of the type which comprises, in a casing, switch means which can be actuated by being pressed in order to act on the functioning of an electric circuit, and which comprises lamps mounted on a support and adapted to indicate this functioning. A pushbutton, such that the lamp support of the button is easily accessible and can be extracted through the front face of the casing, and which supplies the maximum amount of visual information with a maximum safety.

3,515,836

ELEVATOR MEANS FOR A HEAT SCANNER DEVICE

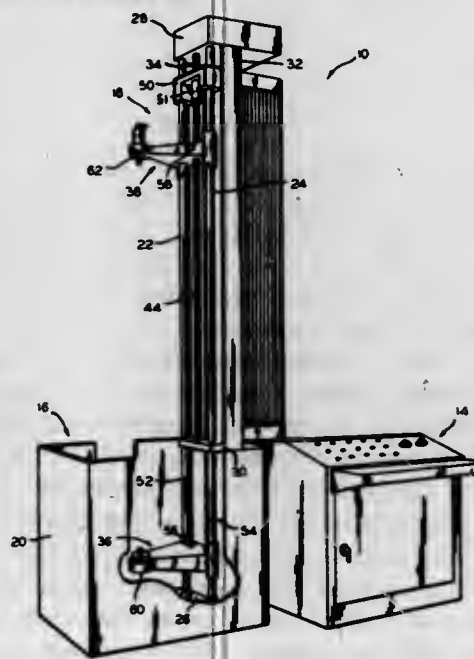
William C. Kallas, Park Ridge, Ill., assignor to Business Assets Corporation, Chicago, Ill., a corporation of Illinois

Filed June 24, 1968, Ser. No. 739,567

Int. Cl. H05b 5/02, 5/16

U.S. Cl. 219—10.43

9 Claims



A heat scanner device having an elevator means comprising a screw member secured in a fixed position. By

rotating the screw member the workpiece or a part thereof is positioned in a heating means or moved through the heating means at a controlled rate of speed.

3,515,837

HEAT GENERATING PIPE

Massao Ando, Yokohamashi, Japan, assignor to Chisso Corporation, Osaka, Japan

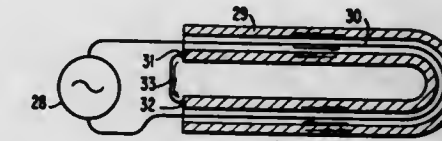
Continuation-in-part of application Ser. No. 538,040, Mar. 28, 1966. This application Mar. 30, 1967, Ser. No. 627,086

The portion of the term of the patent subsequent to Nov. 12, 1985, has been disclaimed

Claims priority, application Japan, Apr. 1, 1966, 41/20,427

U.S. Cl. 219—10.49

10 Claims



A heat generating pipe comprising an arrangement including at least one pipe of ferromagnetic metal, the ends of which are electrically connected to form a secondary current circuit and an electric conductor line connected to a source of A.C. supply, inserted within said pipe throughout the entire length of said pipe in electrically insulated relation from said pipe and a method for heating various objects by use of said heat generating pipe which generates heat by the induction current concentrated solely on the inner wall portion of said pipe and causing substantially no electric potential to appear on the outer wall portion of said pipe.

3,515,838

ELECTRICAL DISCHARGE MACHINING PULSE DURATION CONTROL APPARATUS AND METHOD

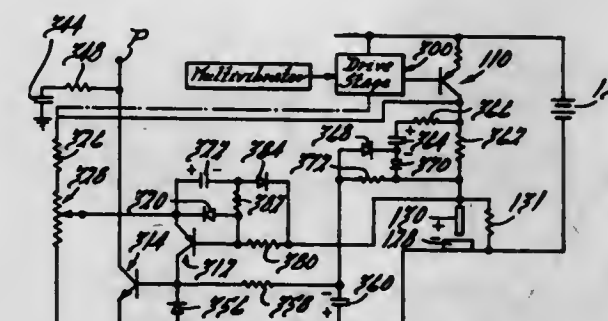
Walter Lobur, Clawson, Mich., assignor, by mesne assignments, to Elox Inc., Troy, Mich., a corporation of Michigan

Continuation-in-part of application Ser. No. 565,510, July 15, 1966. This application Feb. 21, 1967, Ser. No. 617,700

Int. Cl. B23p 1/08

U.S. Cl. 219—69

16 Claims



A circuit for providing machining power pulse on-off time control responsive to gap short circuit condition and responsive to gap open circuit condition. On gap open circuit such as occurs on initial down-feed, pulses are narrowed to reduce power to the gap until normal cutting and gap discharges occur. On gap short circuit condition, pulses are continued across the gap but are narrowed until that condition is terminated.

3,515,839

PLASMA TORCH

Tetuo Gejo, Tokyo, Tosikatu Manabe, Hachioji-shi, Yasuzi Hamura, Tokyo, and Kotaro Uchimura, Kofu-shi, Japan, assignors to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan

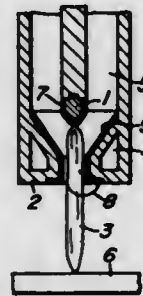
Filed Apr. 1, 1968, Ser. No. 717,731

Claims priority, application Japan, Apr. 7, 1967, 42/21,826

Int. Cl. B23k 9/24, 9/16

U.S. Cl. 219—75

7 Claims



A plasma jet torch provided with a cathode made of tungsten or an alloy including tungsten as a principal component and whose surfaces are covered with tungsten silicide coating. According to said plasma jet torch, the rate of oxidation of the cathode when a plasma jet flame is generated with oxidizing arc gas can be reduced remarkably.

3,515,840

DIODE SEALER

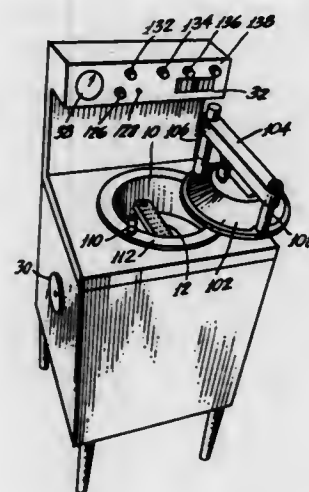
Sydney Dix, Costa Mesa, Calif., assignor, by mesne assignments, to GTI Corporation, Providence, R.I., a corporation of Rhode Island

Continuation-in-part of application Ser. No. 454,850, May 11, 1965. This application Oct. 20, 1965, Ser. No. 506,428

Int. Cl. B23k 1/02, 1/12

U.S. Cl. 219—85

24 Claims



The present invention is directed to a means for sealing a plurality of individual devices at the same time and where each one of the individual devices includes at least portions to be sealed and specifically including a source of electrical energy which is coupled to a unitary heating element. The plurality of individual devices are arranged in a predetermined spatial pattern and the unitary heating element has a plurality of preformed openings arranged in the predetermined spatial pattern so that each device is at least partially surrounded by an opening. The electrical energy is then supplied to the heating element to produce heating energy at each preformed opening.

3,515,841

APPARATUS FOR PRODUCING A WELDMENT OF THIN METAL

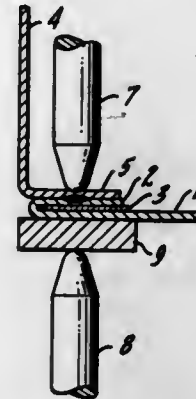
Jack C. King, Muskegon, Mich., assignor to The Shaw-Walker Company, Muskegon, Mich., a corporation of Michigan

Filed Aug. 29, 1967, Ser. No. 663,999

Int. Cl. B23k 11/10

U.S. Cl. 219—91

1 Claim



Apparatus and method for producing weldments of thin metal in such way as to avoid the usual shrinkage marks on the outer face of the thin panel of the material. This is accomplished by folding back into general parallelism with the panel an edge portion thereof with a sheet of insulating material between the panel and the edge portion holding the folded back portion into contact with the base to which it is to be welded and applying the welding heat through the base to the folded back portion only while maintaining the temperature of the panel in the area of the insulating sheet above the welding temperature.

3,515,842

BOND TESTING APPARATUS

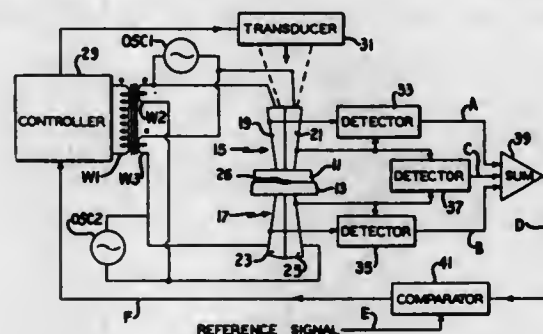
James M. Niemeyer, Richardson, and John D. Helms, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Aug. 1, 1966, Ser. No. 569,385

Int. Cl. B23k 11/24

U.S. Cl. 219—109

11 Claims



A weld testing apparatus consisting of at least one electrode adapted to engage one of the workpieces to be welded, the electrode having at least two current carrying members which are insulated from each other. A voltage is applied between the two current carrying members for developing a component signal which varies as a function of the pressure between the electrode and the workpiece with which it is in contact. Means are provided for passing a biasing current through the electrode and both the workpieces in order to cyclically vary the pressure exerted on the workpieces by the electrode to generate a composite signal at the electrode, the amplitude of which varies as a function of the resistance between the electrode and the workpiece with which it is in contact and also as a function of the character of the bond between the workpieces. Circuit means are provided for combining the component signal and the composite signal to provide a signal which varies as a function of the character of the weld independently of the

resistance between the electrode and the workpiece with which it is in contact. This combined signal can then be compared to a reference signal in order to determine the character of the weld being made.

3,515,843

AUTOMATIC WELDING DEVICE FOR JOINTING CONCRETE PILE SECTIONS WITH STEEL END PLATES

Hisashi Arivasu, Chisato Okada, Yasushi Ishihara, Kenzo Momota, Mutsuo Yoshikawa, and Koji Nunokawa, Tokyo, Japan, assignors to Nippon Concrete Kogyo Kabushiki Kaisha, Tokyo, Japan

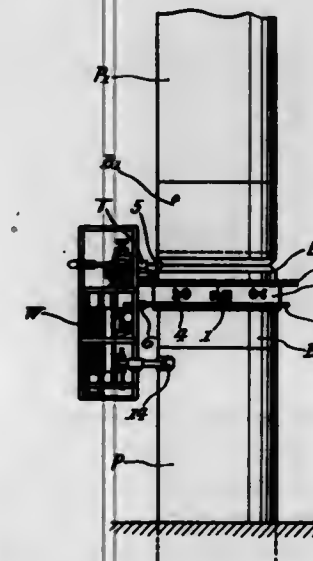
Filed Oct. 9, 1968, Ser. No. 766,125

Claims priority, application Japan, Feb. 16, 1968, 43/9,403

Int. Cl. B23k 9/12

U.S. Cl. 219—125

7 Claims



A full-automatic welding device for jointing concrete pile sections with steel end plates in the forming of piles at a work site. It comprises a hinged annular frame fittable to the pile being formed and a welder unit mounted on the frame and adapted to travel along its periphery while welding together the adjacent end plates of concrete pile sections. The device is featured by its different functional parts and their arrangements.

3,515,844

PORTABLE WELDING APPARATUS

Lawrence A. Colarossi, Alliquippa, Gebhart J. Reiling, Jr., Pittsburgh, Anthony V. Tarquinio, Coraopolis, Pa., Thomas S. James, deceased, late of Pittsburgh, Pa., by Joanne Elizabeth Willis, executrix, Pittsburgh, Pa., assignors to Pittsburgh-Des Moines Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania

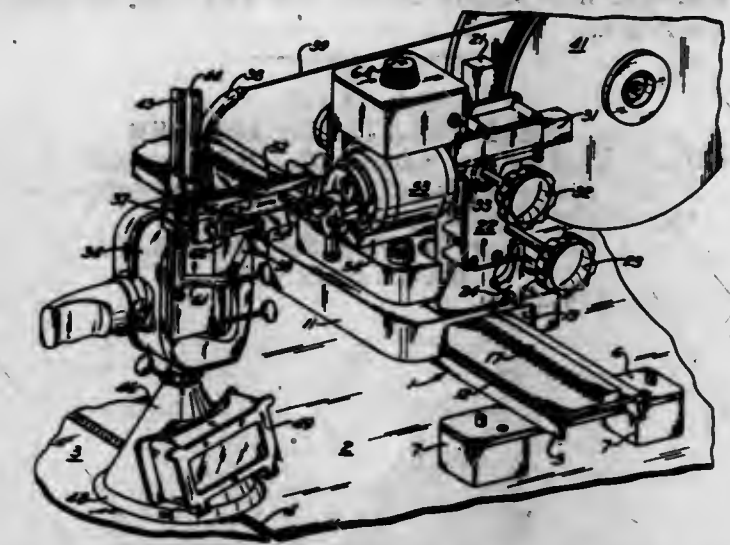
Continuation-in-part of application Ser. No. 474,067, July 22, 1965. This application Jan. 22, 1969, Ser. No. 795,402

Int. Cl. B23k 9/12

U.S. Cl. 219—125

25 Claims

A main carriage is movably driven along a base means secured to a workpiece and extending substantially parallel with a seam to be welded. A rack post extends perpendicularly from the main carriage and carries a second carriage. Means is provided for manually and continuously adjusting the position of this second carriage. A rack arm is carried by the second carriage and extends substantially perpendicular to the direction of movement of the second carriage as well as also extending substantially perpendicular with said seam. Means is provided for continuously manually adjusting the position of said rack arm with respect to the second carriage. A welding head is pivotally carried by the outer end of the rack arm and means is provided for oscillating the welding head with respect to the rack arm. The welding head is oscillated



riage which is mounted on the rack arm. Means is provided for continuously manually adjusting the position of the third carriage with respect to the rack arm.

3,515,845

ELECTRIC ARC WELDING GUN

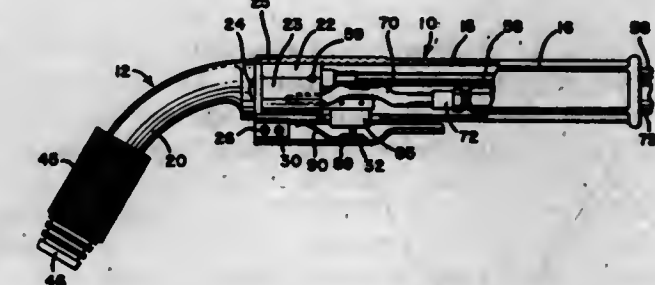
Leo E. Wildenthaler, Troy, Ohio, assignor to Hobart Brothers Company, Troy, Ohio, a corporation of Ohio

Filed Dec. 6, 1968, Ser. No. 781,915

Int. Cl. B23k 9/00

U.S. Cl. 219—130

6 Claims



An electric arc welding gun includes a head section with sleeve covered by electrical insulation and surrounding a guide passage formed by a tube. Longitudinal slots within the sleeve provide passages for shielding gas. The handle section incorporates a replaceable plug-in control switch and a removable control handle for access to the switch. The handle is fully electrically insulated from the current carrying parts of the gun.

3,515,846

ARC-WELDING ELECTRODES AND WELDING METHOD USING THE SAME

Takeshi Nakamura, Osaka, Japan, assignor to Bankoh Denkyokubo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

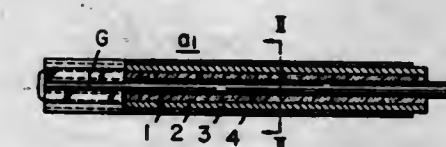
Filed Sept. 8, 1967, Ser. No. 666,255

Claims priority, application Japan, Mar. 22, 1967, 42/17,814

Int. Cl. B23k 9/00

U.S. Cl. 219—137

8 Claims



An arc welding electrode having a wire core of conventional welding metal and a coating of conventional electrical insulating material around the wire core. The insulating coating is covered by a tube of material capable of being magnetized when an electric current is

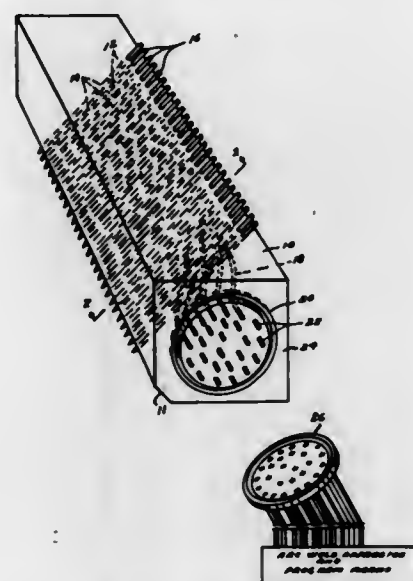
passed through the wire core, and this tube has a continuous narrow longitudinal opening for varying the magnetic flux density around the wire core to bias the welding arc.

3,515,847

WELD ELECTRODE HOLDER

Gilbert E. Flowers, Cincinnati, Ohio, assignor to the United States of America as represented by the Secretary of the United States Air Force
Filed Apr. 30, 1968, Ser. No. 725,373
Int. Cl. B23k 9/28

U.S. Cl. 219—138



A holder for a plurality of electrodes used in a programmed sequence of are welding. The electrodes are fitted into a plurality of corresponding holes in a molded block of insulating material to which is attached a multiple pin plug. Spring contacts coaxial with the welding electrode are molded in the block and frictionally engage the electrodes. Leads are also molded in the insulating material of the block and extend from the contacts to the multiple pin plug for electrical connection.

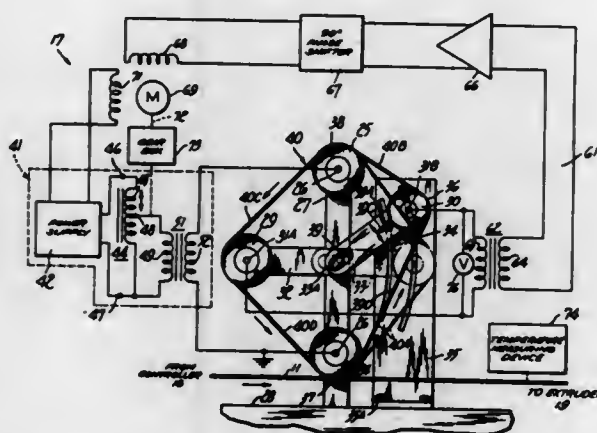
3,515,848

TEMPERATURE CONTROLLABLE STRAND ANNEALER

Alfred Heinz, Flemington, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 18, 1968, Ser. No. 713,790
Int. Cl. C21d 9/62; H05b 1/00

U.S. Cl. 219—155

16 Claims



A moving wire having a temperature-variable resistance is routed around a fixed pair and a movable pair of electrically conductive sheaves that are alternately arranged to define a closed loop. An adjustable source of heating current is connected across the fixed pair of

sheaves for effecting a desired temperature rise through the loop. A null voltage is obtained across the movable pair of sheaves by varying the position of at least one of the latter sheaves within the loop. A feedback path responsive to the voltage across the movable pair adjusts the magnitude of the heating current to thereafter maintain the null condition and thus the predetermined temperature rise through the loop.

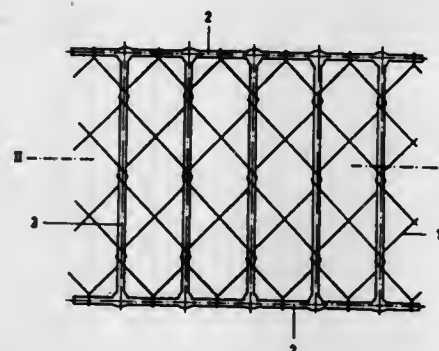
3,515,849

ELECTRICAL HEATING SYSTEM

Friedrich Chr. Math, Kronberg, Taunus, Germany, assignor to Kauffer & Co. G.m.b.H., Mainz, Germany
Filed May 1, 1967, Ser. No. 635,966
Claims priority, application Germany, Apr. 29, 1966, M 69,332
Int. Cl. H05b 1/00

U.S. Cl. 219—213

6 Claims



An electrical heating system adapted to be embedded in a floor or the like and mainly comprising electrical heating means distributed over a given area and a metal grid extending over the electrical heating means electrically insulated therefrom for protecting the latter and for dissipating the heat developed thereby. The electrical heating system is installed by applying a pretension to the heating means and the metal grid, whereafter the heating system is embedded in hardenable material forming a floor or the like and the pretension applied to the heating system is maintained until the metal hardens.

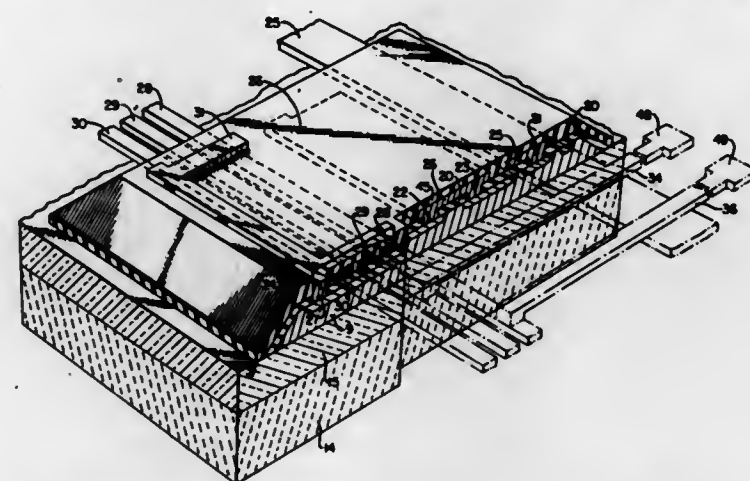
3,515,850

THERMAL PRINTING HEAD WITH DIFFUSED PRINTING ELEMENTS

Richard C. Cady, Jr., Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Oct. 2, 1967, Ser. No. 672,319
Int. Cl. G01d 15/10; H05b 3/02; H04l 15/34

U.S. Cl. 219—216

4 Claims



A thermal printing head which includes a number of semi-conductor printing elements diffused into a semi-conductor body for marking a thermally-sensitive record material is disclosed. The diffused thermal printing elements are arranged into a matrix, and matrix selection

is provided by an interconnection network consisting of first level electrodes which pass through a dielectric insulating layer to a second level electrical selection conductor. Isolation elements which are also diffused into the semi-conductor body are interconnected with the diffused printing elements. The isolation elements may be a semi-conductor diode, a silicon controlled rectifier, or a semi-conductor threshold device.

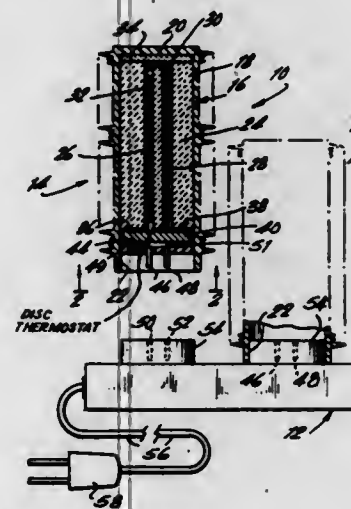
3,515,851

ROLLER CURLER

Anthony N. D'Elia, 3555 Netherlands Ave., Riverdale, N.Y. 10471, and Edward M. Stolarz, R.F.D. 2, Horton Drive, Yorktown Heights, N.Y. 10598
Filed Sept. 22, 1966, Ser. No. 581,336
Int. Cl. A45d 2/36; H05b 1/02

U.S. Cl. 219—222

3 Claims



This invention relates to a hair curler comprising an outer electrically non-conductive housing including a sleeve portion disposed at its lower end, an insert of refractory material disposed in the housing, a heating coil in the insert, connection means for connecting the heating coil to a source of power electrically operatively connected to the heating coil, a portion of the connection means being disposed within the sleeve portion, and thermostatic control means disposed in the housing and electrically operatively connected to the heating coil for controlling the amount of electrical power passing to the heating coil.

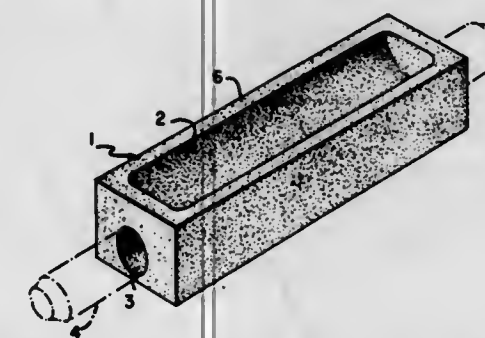
3,515,852

METAL-EVAPORATING SOURCE

Wilfrid G. Matheson, Marblehead, Mass., Robert Steinitz, Harrison, N.Y., and Lester W. Strock, Salem, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 10, 1967, Ser. No. 659,747
Int. Cl. C23c 13/00

U.S. Cl. 219—275

9 Claims



An improved evaporation source for vacuum deposition of metals has a resistance heater element of inter-twisted helical coils of refractory metal wire. An elongated refractory vessel, having a cavity to contain the metal being evaporated, is supported and heated by the heater element.

gated refractory vessel, having a cavity to contain the metal being evaporated, is supported and heated by the heater element.

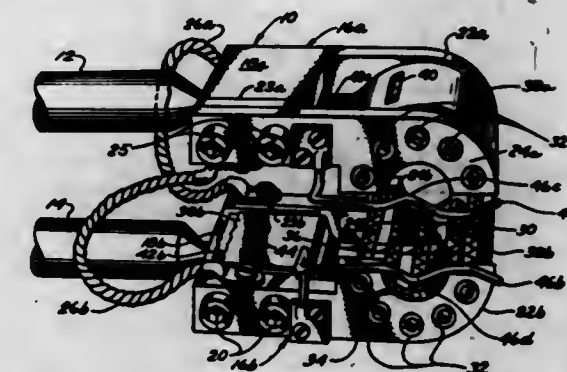
3,515,853

HEATING APPARATUS

Charles O. McAdams, Los Angeles, Calif., assignor to North American Rockwell Corporation
Filed Sept. 15, 1967, Ser. No. 667,917
Int. Cl. H05b 1/02, 3/02

U.S. Cl. 219—346

6 Claims



A heating tool has a pair of aligned, semicylindrical sub-heads, each supported at one end of a handle and each sub-head containing a plurality of elongated heating elements arranged parallel to the axis of the sub-heads. The handles are interconnected in a pincer-type or sugar-tong type arrangement whereby the sub-heads can be moved from an open position to a closed position encircling a workpiece to be heated. The sub-heads may be provided with reflectors to reflect radiation toward the workpiece. The reflector may be apertured to permit viewing the workpiece while heating. A voltage-control circuit controls the amount of power applied to the filaments. A timing circuit controls the heating interval.

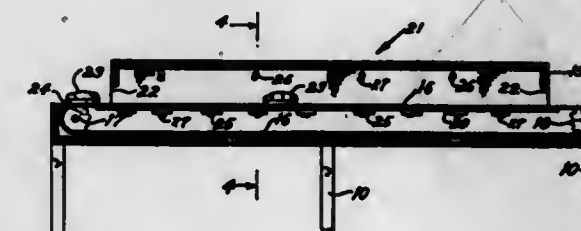
3,515,854

CONDUCTIVE BAKING OVEN

Robert W. Williams, Brookville Road, Brookville, N.Y. 12026
Continuation-in-part of application Ser. No. 471,653, July 13, 1965. This application Nov. 5, 1968, Ser. No. 773,502
Int. Cl. A21b 1/22, 1/40; F27b 9/06

U.S. Cl. 219—388

1 Claim



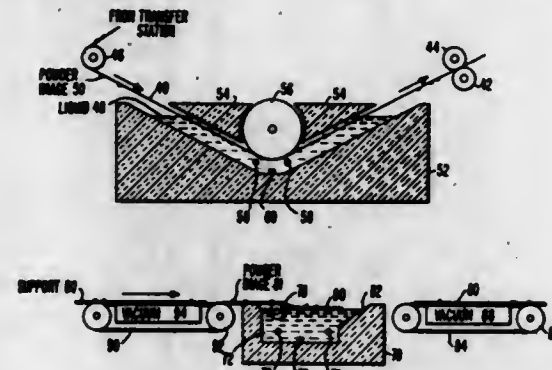
This invention relates to a novel conveyor method and apparatus for conductively baking food products such as frozen pastry products, meat products and the like. The baking is done by the application of conductive heat to the bottom area of the products disposed on a heated chain mesh conveyor in rubbing contact with a longitudinal heat sink plate, thereby fully baking the products upwardly. The plate is of suitable bulk thickness and is divided into a plurality of thermostatically and separately controlled heat zones by supplying localized heat centrally to each zone by securing electrical heat resistant means thereto. A tunnel oven is disposed over said moving conveyor with said plate therebeneath and is provided with a plurality of spaced-apart, zoned, thermostatically and separately controlled radiant heaters for producing merely a top coloration on the baking products.

3,515,855 XEROGRAPHIC FUSING APPARATUS

Arthur L. Mix, Jr., Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Nov. 14, 1968, Ser. No. 775,615
Int. Cl. F27b 9/06

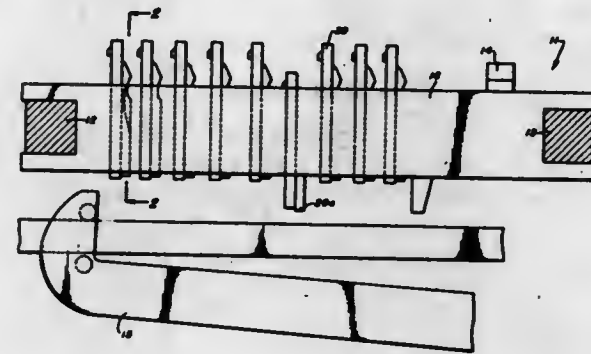
U.S. Cl. 219—388

12 Claims



A fusing apparatus for fixing a xerographic powder image on a support member. The support member is passed through a heated, low melting point liquid which is nonwetting to the image and its support member. The nonwetting liquid is maintained at a temperature sufficient to fix the powder image, but less than that which would cause damage to the support member.

ings, each stop pin being closely fitted in its opening at its lower end and rockable at its upper end. A spring detent finger integral with each stop pin normally holds the same against one side of its opening and also detents the pin in upper and lower positions. Upper and lower



limit stops are formed on each pin, the upper limit stop being located on the side of the pin opposite the spring detent whereby the pin can be rocked to permit such stop to pass through the opening.

ERRATA

For Class 235—61.7 see:
Patent Nos. 3,515,339 and 3,515,340

3,515,858 FLUIDIC TAPE READER

Paul J. Weaver, 2790 Gainsborough Drive, San Marino, Calif. 91108
Filed Apr. 1, 1969, Ser. No. 811,889
Int. Cl. G06k 7/02

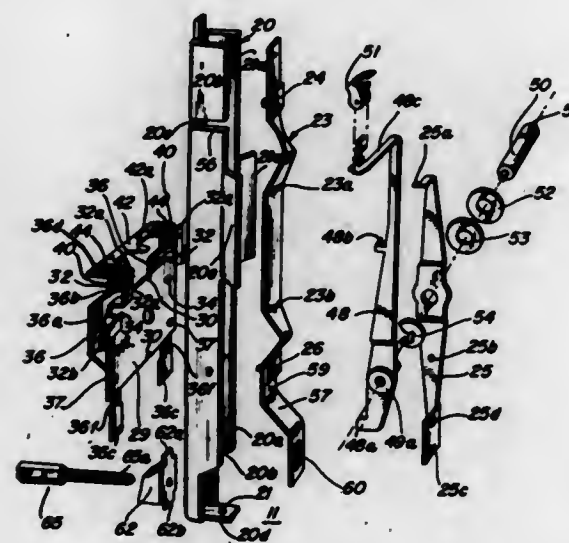
3,515,856
TEMPERATURE RESPONSIVE CONTROL MEANS
Sophocles J. Dokos, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 7, 1965, Ser. No. 485,479
Int. Cl. H05b 1/02

U.S. Cl. 219—493

9 Claims

U.S. Cl. 235—61.11

7 Claims



A bimetallic toaster control means characterized by a unitary elongated channel shaped main supporting member formed of good heat conducting material.

A bimetallic thermostatic strip mounted in the channel shaped support in a snap acting mode with two stable control positions, wherein the inactive position is in direct contact with the channel shaped support to promote rapid cooling.

A fluidic tape reader for use with tapes or cards which are perforated with blocks of information, which is adapted to be stepped from block to block, and automatically returned to its start condition. The mechanism is fluidically actuated so as to operate the motor which drives the elongated information bearing member in either of its two directions.

ERRATA

For Classes 235—92 and 235—150.2 see:
Patent Nos. 3,515,341 and 3,515,342

3,515,859
DIGITAL FILTERING OF ANALOG SIGNALS
Hermann Schmid, Binghamton, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 27, 1965, Ser. No. 516,515
Int. Cl. G06j

U.S. Cl. 235—150.5

7 Claims

A filter for pulse-width signals for bringing about a smooth transition of output pulse-width signal for a step function change in input pulse-width signal. In a modified form, the filter passes a rapid transition in input pulse-width signal but returns to original value.

3,515,857 STOP PIN CARRIAGE

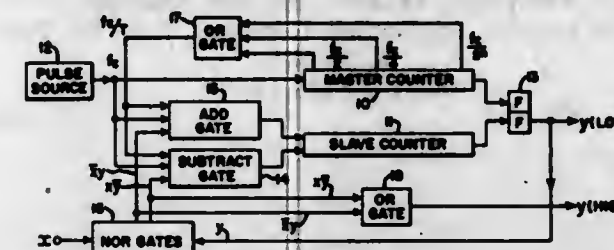
Richard E. Busch, La Puente, Calif., assignor to Addmaster Corporation, San Gabriel, Calif., a corporation of California
Filed Mar. 26, 1969, Ser. No. 810,447
Int. Cl. G06c 7/10

U.S. Cl. 235—60

1 Claim

A pin box of solid construction having rows and columns of openings therein, stop pins slideable in said open-

Digital components are used to desynchronize a slave from a master counter by adding or subtracting counts



reflecting a change in pulse-width incoming signal as modified in accord with a selected filter time constant.

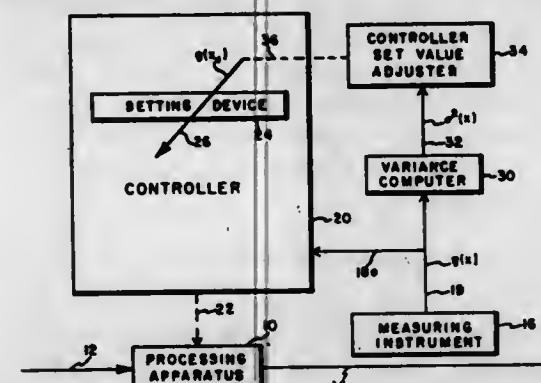
ERRATUM

For Class 235—151.3 see:
Patent No. 3,515,343

3,515,860 PROCESS CONTROLLER WITH DYNAMIC SET-POINT ADJUSTMENT RESPONSIVE TO THE STATISTICAL VARIANCE OF THE CONTROLLED PROPERTY

Charles T. Fitzgerald, Jr., Orange Park, Fla., assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Nov. 6, 1967, Ser. No. 680,695
Int. Cl. G06f 15/46; G05b 13/02, 21/02
U.S. Cl. 235—151.13

22 Claims



Disclosed herein is an apparatus for automatically controlling a continuous material forming process with a controller whose set point is periodically changed or updated in response to a feedback signal from an automatic statistical variance computer, so that when the process variance decreases the controller set-point value approaches a selected limiting value and when the variance increases the set-point value recedes from the limiting value. During the time interval required to carry out an actual variance computation, an auxiliary computer maintains a continually updated running estimate of the next variance value to be expected. When the computed estimate exceeds the previous variance value by a predetermined amount, an alarm is sounded and the set-point value is automatically retracted from the limiting value.

3,515,861 DATA REDUCTION SYSTEM FOR RADIATION COUNTING EQUIPMENT

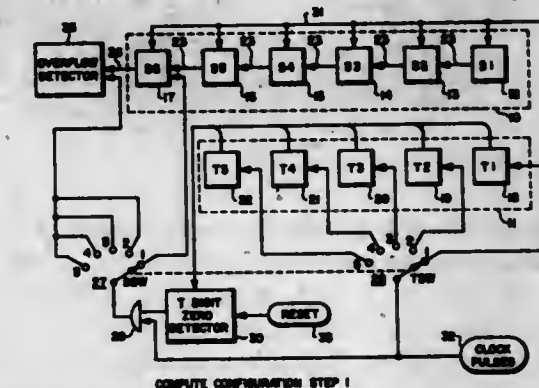
Roy E. Nather, Solana Beach, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Oct. 10, 1966, Ser. No. 585,333
Int. Cl. G06f 7/38

U.S. Cl. 235—159

9 Claims

Apparatus is disclosed for performing addition, subtraction and division in which a first coded decimal register having a plurality of decades and carry lines between decades is aligned by an entry point selector with a second coded decimal register having a plurality of

decades and carry lines between decades so that the contents of the second register can be added to the first register as aligned without destroying the contents of the second register. A metered pulse source is connected to the second register and ten pulses sequentially metered into each decade of the second register with carry lines of the second register disconnected. A zero detector is connected in turn to each decade of the second register and when the contents of the decade pass through zero in response to the metered pulses, the corresponding aligned first register decade is also connected to the source of metered pulses to receive the remaining ones of the ten pulses thereby completing the addition of the contents of the



second register to the first register as aligned. Complementing circuitry is connected to the first register to perform subtraction by the same apparatus. To perform division an overflow detector is connected to the first register to indicate when the complemented first register plus the pulses metered thereto exceed the registry capacity and to further advance the entry point selector to establish a new decade alignment between the registers. Control and recording apparatus is connected to the registers to indicate the number of times the second register can be subtracted from the first register without overflow for each decade alignment. The total number thus determined is the quotient.

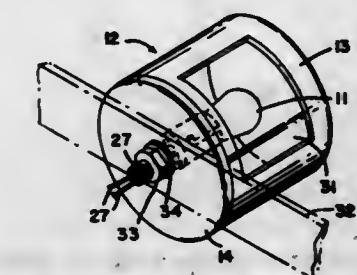
ERRATUM

For Class 235—175 see:
Patent No. 3,515,344

3,515,862
WATERPROOF LIGHT ASSEMBLY
Jack B. Spivey, Olathe, Mo., Wash. 98841
Filed Sept. 22, 1967, Ser. No. 669,874
Int. Cl. B63b 45/04

U.S. Cl. 240—7.5

9 Claims



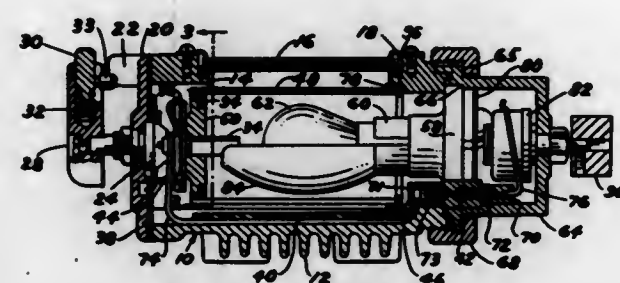
A waterproof light assembly in which a domical lens has a dielectric base closure through which an electrically conductive bulb socket member extends having a center sealing plug integrally connected with the base closure through an opening in the socket. Mounting means extend from the base plate and take the form of a hollow stud extension of the socket member or a spring clip, and together with the socket member may serve as the ground for the bulb.

3,515,863

DOME LIGHT ASSEMBLY

Robert L. Jungwirth, Detroit, Mich., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
 Filed Oct. 11, 1967, Ser. No. 674,685
 Int. Cl. B60q 3/02; F21s 11/18
 U.S. Cl. 240—7.35

6 Claims



A waterproof dome light assembly having a housing with a switch mounted on one end and a variable rheostat mounted on the other end. A lamp is centrally located within the housing to emit either a normal white light or a colored light output through a combination white and colored movable lens and an outer translucent lens mounted in the housing.

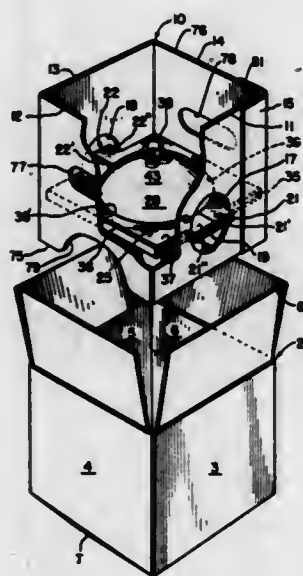
3,515,864

COMBINATION PACKAGING STRUCTURE, TROUBLE LIGHT AND REPLACEMENT HEAD LAMP

Harold F. Levy, 8111 N. Keating Ave., Skokie, Ill. 60076, and Leonard D. Levy, 6555 W. Addison St., Chicago, Ill. 60634
 Filed June 27, 1967, Ser. No. 649,332
 Int. Cl. F21v 19/02

U.S. Cl. 240—44.2

9 Claims



A packaging structure comprising an outer carton with a snug fitting insert, the insert having a pair of axially aligned openings in opposite walls. A deformable headlight-embracing holder is positioned within the insert and has oppositely extending lugs tightly fitting into the respective openings in the insert to secure the headlight to prevent damage in shipment. They further serve as a pivot for the headlamp which may be focused by tilting on the intended work area. The holder is removable from the insert to release the headlamp which may be used as a replacement for a burned out headlight.

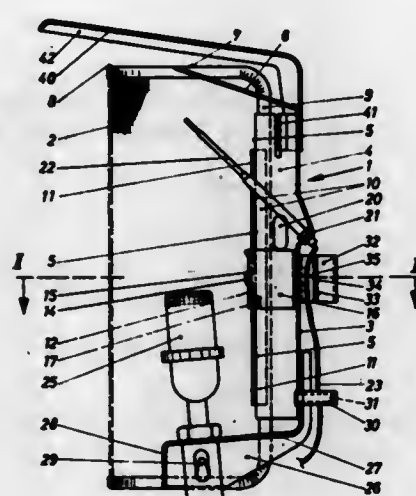
3,515,865

COWL FOR GAS LAMPS

Philipp Kreiss, 34-36 Neumarkter Str., Munich, Germany
 Filed Aug. 21, 1967, Ser. No. 662,058
 Claims priority, application Germany, Aug. 23, 1966, K 60,085
 Int. Cl. F21s 13/02

U.S. Cl. 240—74

8 Claims



A cowl for a wall gas lamp having a cover bowl removably supported by the back wall. The back wall includes a pair of laterally outwardly inclined faces with parallel vertical flanged margins for vertical sliding frictional engagement between the beaded margins of the faces and spring members attached to the back wall. The back wall has a support for a burner and has a deflecting tongue over the burner.

3,515,866

TRIFLUOROMETHYL BENZIMIDAZOLES

Harry Goldsmith, Brea, and Robert F. Crawford, La Mirada, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
 No Drawing. Continuation-in-part of application Ser. No. 366,141, May 8, 1964. This application Apr. 11, 1967, Ser. No. 629,930

Int. Cl. C07d 49/38

U.S. Cl. 260—309.2

3 Claims

Trifluoromethyl-benzimidazole compounds having at least one trifluoromethyl substituent on a carbon atom of the benzimidazole molecule are provided. The benzimidazoles can also be substituted with other groups such as alkyl, halogen and alkoxy. The compounds are especially useful as herbicides for controlling weed growth.

3,515,867

METHOD AND APPARATUS FOR CONTROLLING THE SPEED OF A MOVING BODY

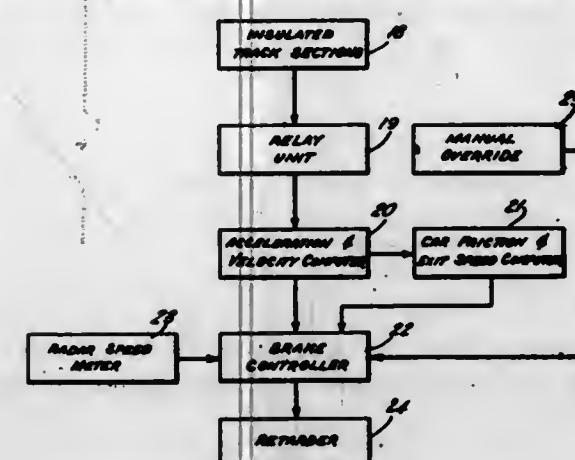
Perry A. Seay, Flushing, N.Y., assignor, by mesne assignments, to Dynamics Corporation of America, New York, N.Y., a corporation of New York
 Continuation of application Ser. No. 476,278, Dec. 20, 1954. This application Oct. 30, 1968, Ser. No. 800,014
 Int. Cl. B61k 7/08

U.S. Cl. 246—182

14 Claims

A system for the control of the speed of a railway freight car while passing through the retarder of a railway freight classification yard. The retarder is positioned along the track and is automatically controlled in accordance with the acceleration and the speed of the car entering the retarder, the distance and slope over which

the car is to travel upon leaving the retarder, and a selected coupling speed. The braking force of the retarder is so controlled that for substantially all cars the full



length of, or most of the length of, the retarder is employed in slowing the car down to the desired computed exit speed.

3,515,868

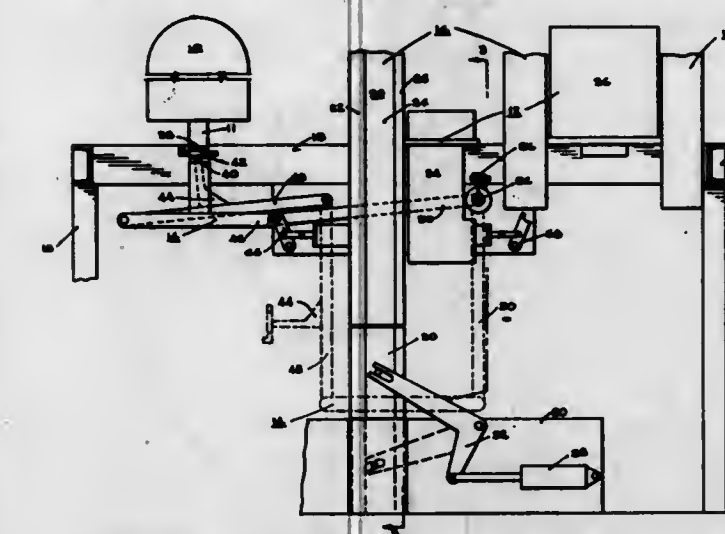
AUTOMATIC NEUTRON ACTIVATOR ANALYZER

Robert E. Jones, Jr., Colorado Springs, Colo., and Harold J. Price, Albuquerque, N. Mex., assignors, by mesne assignments, to Kaman Sciences Corporation, Colorado Springs, Colo., a corporation of Delaware
 Continuation-in-part of application Ser. No. 302,182, Aug. 14, 1963. This application Mar. 23, 1967, Ser. No. 625,468

Int. Cl. G21h 5/00

U.S. Cl. 250—106

9 Claims



Combination of a source of radiation, a sole radiation detector and a transfer mechanism separately supporting a known and an unknown sample in predetermined proximity to the source of radiation and designed to transfer the known and unknown samples in timed sequence to a detection position of predetermined proximity to the radiation detector in a manner to permit uniform repeatability with respect to time and proximity.

3,515,869

MASS SPECTROMETER EXPONENTIAL ELECTROMAGNETIC SCANNING ARRANGEMENT PROVIDING FOR AUTOMATIC DISCHARGE OF THE SCANNING MAGNET COIL

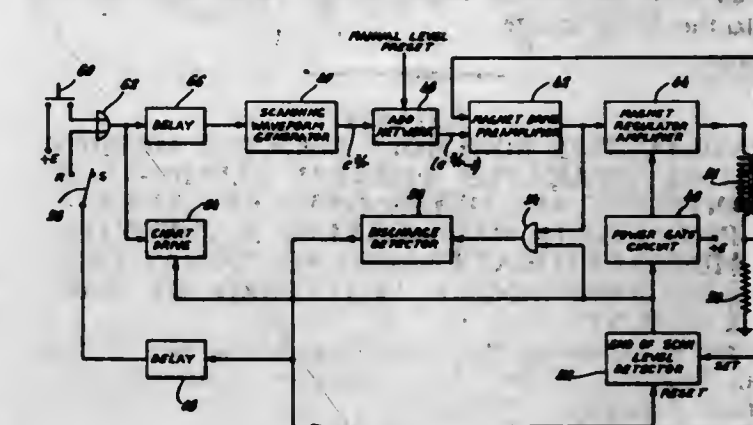
Stanley Allen Sherman, Danbury, and Edward Bernard Delany, Ridgefield, Conn., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
 Filed May 2, 1967, Ser. No. 635,987
 Int. Cl. B01d 59/44; H01j 39/36

U.S. Cl. 250—41.9

9 Claims

A magnetic field scanning arrangement for a mass spectrometer includes an operational integrating amplifier

circuit means for generating a scanning voltage having a waveform of the function $e^{kt}-1$. Circuit means couple the waveform generating means to a magnet coil driver circuit arrangement for causing the flow of a scanning current in accordance with this function. The magnet coil



driver circuit is additionally adapted for functioning as a rapid energy discharge network during the discharge interval of the magnet scan cycle. A power gate functions in response to a predetermined scan current level for interrupting current to the driver circuit during a retrace interval.

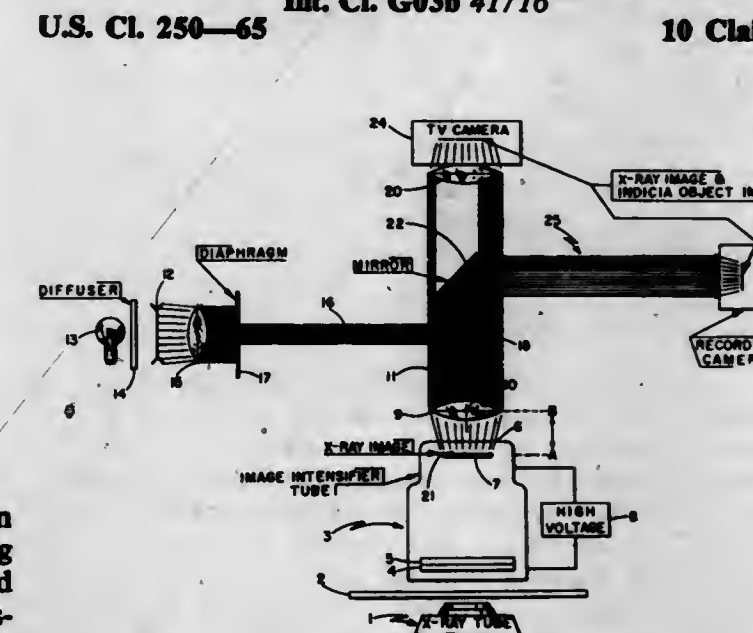
3,515,870

X-RAY SYSTEM FOR SUPERIMPOSING THE IMAGE OF A REFERENCE OBJECT AND AN X-RAY IMAGE

Roger A. Marquis, Natick, Mass., assignor, by mesne assignments, to Keleket CGR, Waltham, Mass., a corporation of Delaware
 Filed Feb. 3, 1967, Ser. No. 613,961
 Int. Cl. G03b 41/16

U.S. Cl. 250—65

10 Claims



This invention relates to the superimposition of an image of an object, which bears reference indicia, onto an X-ray image in an X-ray system. An objective lens having an infinite focus characteristic is positioned to receive light associated with a fluorescent X-ray image and transform the light into a first beam of substantially parallel light rays. An indicia object, such as a reticle display, is illuminated by means of a light source. A projecting lens, also having an infinite focus characteristic, acts to transform the light emerging from the indicia object into a second beam of substantially parallel light rays and to project this beam in a path toward the first beam. A reflecting means, which may be a right angle prism or mirror, is disposed within the first beam of parallel light rays a short distance from the objective lens. The reflecting means is orientated in such a manner that the second beam of light rays falls upon a highly reflective surface

thereof. This redirects the second beam into a path which is along the same path as that of the first beam. A further lens is disposed downstream from the reflecting means to simultaneously form real images of both the indicia object and the fluorescent X-ray image in a common focal plane with the indicia object image being superimposed onto the X-ray image.

3,515,871

RADIOACTIVE BOREHOLE LOGGING METHOD AND APPARATUS WHEREBY ELEMENTS OF INTEREST ARE DETERMINED BY GENERATING GAMMA RAYS HAVING A PREDETERMINED CRITICAL ENERGY SUCH THAT THEY ARE RESONANTLY SCATTERED BY SAID ELEMENTS

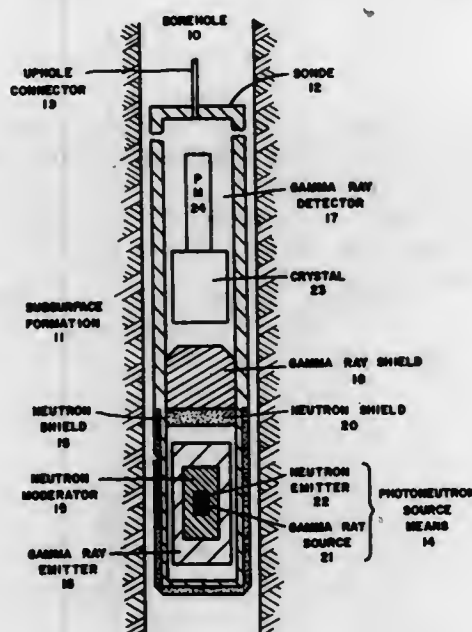
Walter H. Johnson, Jr., Cambridge, Mass., and William C. Pritchett, Dallas, Tex., assignors to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 591,543, Nov. 2, 1966. This application Dec. 21, 1966, Ser. No. 603,493

Int. Cl. G01t 1/202; G01j 5/00

U.S. Cl. 250-71.5

5 Claims



A radioactive logging method and apparatus for quantitatively determining an element of interest in sub-surface formations traversed by a borehole. Earth formations are bombarded with gamma rays having a predetermined critical energy such that they are capable of being resonantly scattered by said element of interest. These gamma rays are produced by generating a flux of low energy neutrons, moderating the neutrons to thermal energies, and bombarding special neutron capture material.

3,515,872

PHOTOMULTIPLIER WITH INWARDLY CONVEX PHOTOCATHODE FOR LOW-LEVEL SCINTILLATION COUNTING

Rupert Patzelt, Vienna, and Horst Halling, Wiener Neustadt, Austria, assignors, by mesne assignments, to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 613,141, Feb. 1, 1967. This application Apr. 29, 1968, Ser. No. 725,229 Claims priority, application Austria, Feb. 8, 1966, A 1,144/66

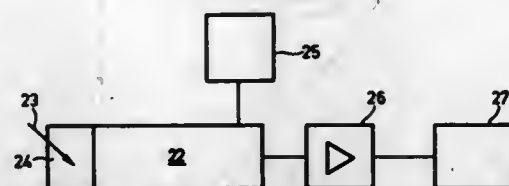
Int. Cl. G01t 1/204

U.S. Cl. 250-71.5

1 Claim

A photomultiplier tube for low-level scintillation counting with discrimination against noise pulses in which a transparent photocathode is spaced from a first dynode in

such manner that there is a systematic spread in the time of flight between the photocathode and the first dynode for electrons originating from different points of the



photocathode, the time differences in the arrival of electrons at the first dynode determining the pulses to be counted.

3,515,873

METHOD AND APPARATUS FOR ANALYZING AND CALIBRATING RADIATION BEAMS OF X-RAY GENERATORS

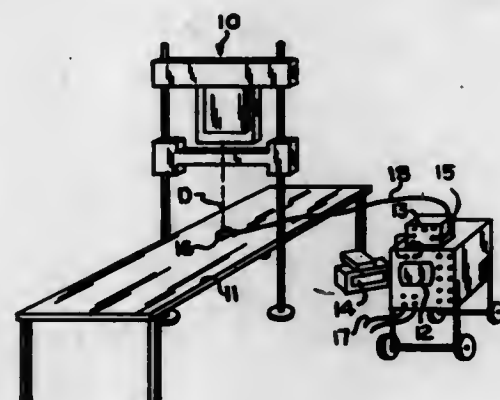
Edward M. Higgins, Harold D. Rosenbaum, and Waldo D. De Vore, Lexington, Ky., assignors to The University of Kentucky Research Foundation, Lexington, Ky., a corporation of Kentucky

Filed Jan. 11, 1968, Ser. No. 697,233

Int. Cl. G01t 1/24

U.S. Cl. 250-83.3

4 Claims



A method for calibrating an X-ray generator by passing its radiation beam through two semi-conductor detector elements, one of which is partially shielded to the beam and the other of which is unshielded, the outputs of the detector elements being depicted simultaneously as separate traces on an oscilloscope. The generator is adjusted until the traces substantially coincide with standard traces taken on a suitably calibrated generator whose beam has previously passed through the same detector elements. An apparatus for use in carrying out the method is disclosed.

3,515,874

METHOD AND APPARATUS EMPLOYING AN ELECTRON TARGET AND X-RAY FILTER OF THE SAME CHEMICAL ELEMENT FOR GENERATING X-RAYS OF PRESCRIBED ENERGY

Jean Raymond Bens, Malakoff, and Jean-Claude Delarue, Argenteuil, France, assignors to Compagnie Generale de Radiologie, Paris, France, a corporation of France

Filed June 13, 1967, Ser. No. 645,682

Claims priority, application France, June 28, 1966, 67,206

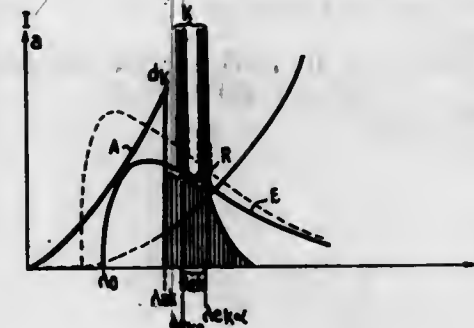
Int. Cl. H01j 5/18, 35/08

U.S. Cl. 250-86

13 Claims

In producing a frequency-selective X-ray beam, there is used a target made of an element having a characteristic radiation line series within the selected frequency range,

the X-ray tube is energized with a voltage somewhat higher than the critical voltage required to excite said characteristic radiation, and the resulting X-ray beam is then passed through a filter made of the same element as the target in order to filter off unwanted frequencies. The common element from which the target and filter are



made may be selected to have an atomic number exceeding by a very few units that of a chemical element of which a more heavily-absorbing part of the object to be X-rayed consists. In a preferred application, an X-ray diagnostic tube for mammography, the common element in the target and filter is molybdenum, and the energizing voltage is about 30 kv.

3,515,875

ALPHA-PARTICLE-EMITTING RADIOISOTOPE GENERATOR

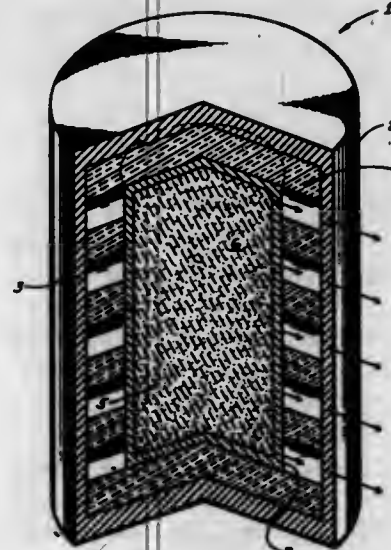
Vahe Keshishian, Sherman Oaks, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 17, 1965, Ser. No. 464,702

Int. Cl. G21h 5/00

U.S. Cl. 250-106

5 Claims



1. A radioisotope generator including a fuel capsule and a radiation shield in cooperative relation therewith wherein the neutron shielding requirement for said shield is substantially reduced by preselecting as radioisotope fuel material in said capsule an alpha-particle-emitting radioactive isotope combined with components which essentially have a threshold for the alpha-neutron reaction greater than the maximum energy of the alpha particles emitted by said radioactive isotope whereby secondary neutron generation by an alpha-neutron reaction is substantially reduced.

3,515,876

METHOD AND APPARATUS FOR POSITIONING A RADIOACTIVE STANDARD IN A RADIOACTIVE SAMPLE COUNTING APPARATUS

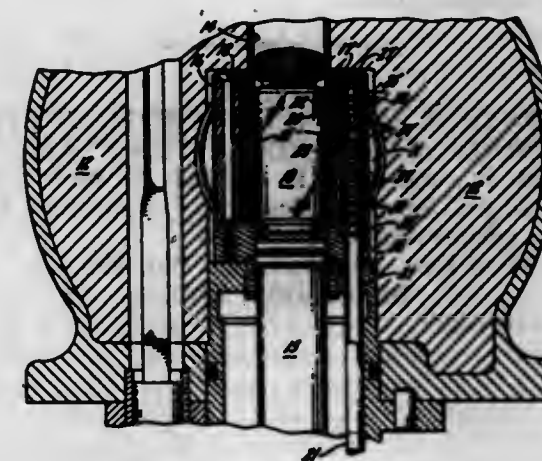
Roy E. Smith, Villa Park, and Robert E. Olson, Glen Ellyn, Ill., assignors to Packard Instrument Company, Inc., Downers Grove, Ill., a corporation of Illinois

Filed Apr. 10, 1967, Ser. No. 629,516

Int. Cl. G21h 5/00; G01t 1/20

U.S. Cl. 250-106

6 Claims



A pneumatic system is described for shifting a radioactive standard source from a remote location into a scintillation counting chamber in which the standard source is located and retained within the counting chamber by magnetic attraction.

3,515,877

ELECTRO-OPTICAL POSITIONER

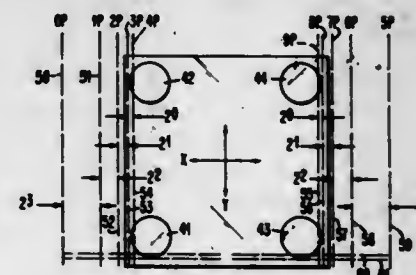
Duane W. Baxter, Rochester, Minn., Paul F. Heldrich, Mahopac, N.Y., and John M. Massing, deceased, late of Lake Mohogan, Yorktown, N.Y., by John W. Massing, administrator, Mount Hope, W. Va., and Claude B. Smoyer, Webster, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 13, 1965, Ser. No. 513,618

Int. Cl. G05b 1/01

U.S. Cl. 250-202

14 Claims



An optical positioner is described employing scanners for developing signals which are used to control the position of an object with respect to a frame of reference. The object, which in the embodiment is a microminiaturized electronic circuit chip, is placed on a support table. The support table can be moved in the X and Y directions and can be rotated by suitable positioning motors. The chip is illuminated and the reflected illumination is directed onto the face of a vidicon tube. The vidicon tube includes X and Y deflection coils and generates a plurality of X and Y scanning lines across the image of the chip. The image of the chip on the face of the vidicon tube contains four terminal pads which serve as reference points. A first X scan line is repeatedly generated and the support table containing the chip is incremented downward in the Y direction until the first scan encounters one or both of two terminal pads in the image. When this occurs, a second X scan is generated slightly below the first

X scan to determine if the chip had been moved too far downward. If only one of the two terminal pads is scanned, the support table is rotated until both terminal pads in the chip image are encountered by the scan. A somewhat similar arrangement of vertical scanning lines is employed to position the chip in the X direction, however, no rotation is performed. A feedback path including suitable logic circuits is provided between the vidicon tube and the three positioning motors to position the support table and the chip in accordance with the information derived from the scanning lines.

3,515,878

GAIN CONTROL SYSTEM FOR PHOTOMULTIPLIER USING STANDARDIZATION PULSES

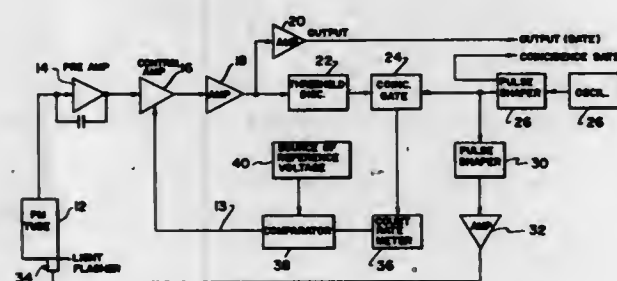
Louis Ried, Jr., and Jerry R. Gilland, Boulder, Colo., assignors to Ball Brothers Research Corporation, Boulder, Colo., a corporation of Colorado

Filed Dec. 28, 1967, Ser. No. 694,131

Int. Cl. H01J 39/12

U.S. Cl. 250-207

8 Claims



A gain control for a photomultiplier tube system is disclosed for automatically stabilizing the gain of the system and compensating for gain variation in the photomultiplier tube.

3,515,879

OPTICAL SENSOR SYSTEM

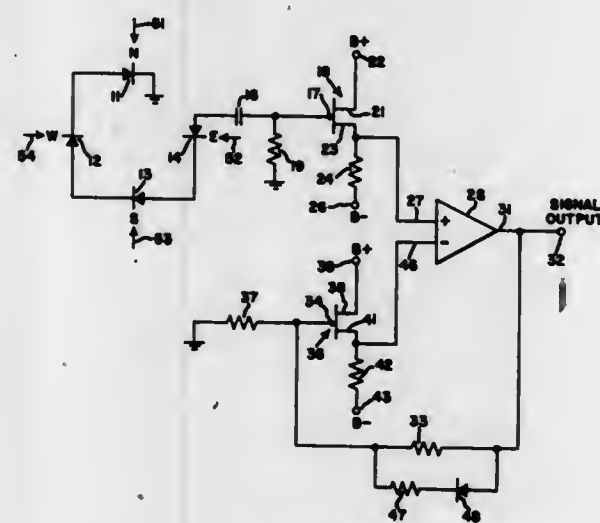
Richard C. Welschedel, Camillus, N.Y., and Philip S. Book, Devon, Pa., assignors to General Electric Company, a corporation of New York

Filed Dec. 27, 1967, Ser. No. 693,861

Int. Cl. H01L 15/00

U.S. Cl. 250-211

4 Claims



An optical sensor system is disclosed, comprising a plurality of photodiodes or other photosensitive devices electrically connected in series and physically arranged so that the combination is photosensitive in all directions. This photosensitive arrangement is capacitively coupled

to an amplifier having nonlinear gain so as to achieve a wide dynamic operational range. The system is useful, for example, for detecting the occurrence of nuclear detonations.

3,515,880

RADIATION SENSITIVE RECORDING SYSTEM USING SOLID STATE ELECTROLYTIC LAYER

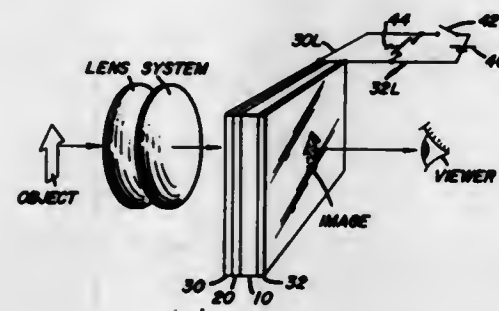
Eugene C. Letter, Penfield, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Mar. 20, 1967, Ser. No. 624,330

Int. Cl. H01L 17/00

U.S. Cl. 250-213

18 Claims



A solid state multi-layer optical device having a photoconductive layer in contact with an electrolytic layer containing reducible metal ions in a solid matrix. Transparent electrodes apply electromotive force to the electrolytic layer through radiation sensitized areas of the photoconductive layer whereupon valence changes in the metal ions result in reversible changes in the optical density of the device.

3,515,881

PANNING CONTROL CIRCUIT FOR ELECTRONIC IMAGE MOTION STABILIZATION SYSTEMS

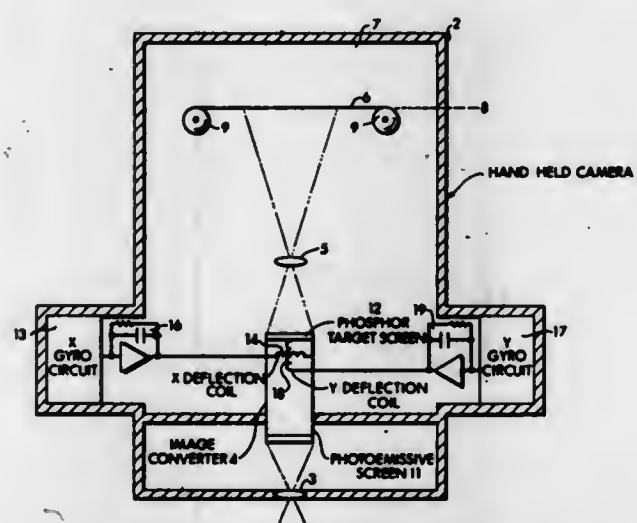
Richard W. Philbrick, Concord, and Efraim R. Arazi, Cambridge, Mass., assignors to Itel Corporation, Lexington, Mass., a corporation of Delaware

Filed June 8, 1965, Ser. No. 462,322

Int. Cl. H01J 31/50, 39/12

U.S. Cl. 250-213

4 Claims



An image motion stabilization system mounted on a support including transducer means to sense motions of the support and deflection means to deflect the image in a direction tending to cancel such motions. Panning control means are provided to prevent image deflection in response to transducer indications of less than two cycles per second so that the system may be panned.

3,515,882

DEVICE FOR PROTECTING THE HUMAN EYE AGAINST LASER RADIATION

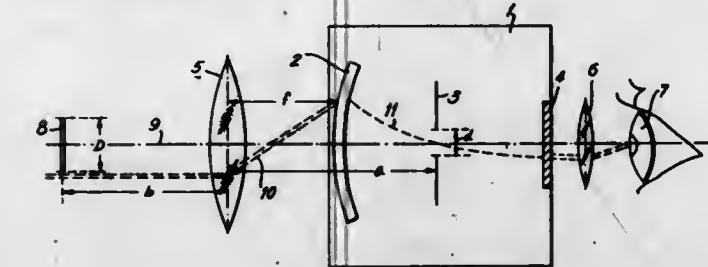
Walther Hess, Dilsberg-Neuhof, Germany, assignor to Eltro G.m.b.H. & Co., Heidelberg, Germany

Filed Dec. 19, 1967, Ser. No. 691,733

Int. Cl. H01J 31/50

U.S. Cl. 250-213

5 Claims



To permit viewing of laser beam while preventing injury to the eye, a conventional image converter is interposed between beam and eye. The converter generates a visible image in response to infra-red radiation. A laser beam intercepting device is so positioned relative to the converter as to cooperate with the latter to prevent the beam from passing directly to the viewer.

3,515,883

PHOTOELECTRIC INSPECTION SYSTEM IN WHICH A PLURALITY OF PHOTOCELLS HAS AN AMPLIFIER AND ANALOG-TO-DIGITAL CONVERTER ASSOCIATED WITH EACH PHOTOCELL IMMEDIATELY ADJACENT A MOVING SHEET FOR THE PURPOSE OF ACHIEVING NOISE IMMUNITY

Hiroo Akamatsu, Takatsuki, and Takanobu Morita, Kyoto, Japan, assignors to Tateisi Electronics Co., Ukyo-ku, Kyoto, Japan

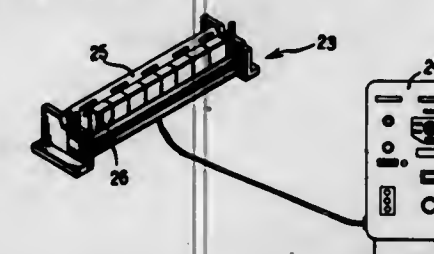
Filed Jan. 15, 1968, Ser. No. 697,996

Claims priority, application Japan, Jan. 16, 1967, 42/2,987

Int. Cl. H01J 39/12; G01n 21/16, 21/30

U.S. Cl. 250-214

8 Claims



A defect detecting system comprises an examining section having a light projecting means and light receiving means, and control circuit means. The light receiving means primarily consists of photoelectric elements for receiving light reflected by a moving sheet or transmitted therethrough, amplifiers for amplifying electrical signals from said photoelectric elements, and analog-digital converters for converting the analog output of said amplifiers into digital signals by which defects are indicated. The digital signals are further sent to the control circuit means.

3,515,884

DETECTING AND COUNTING APPARATUS FOR PARTICLES SUSPENDED IN A LIQUID

Hiroshi Imadate, Kobe, Japan, assignor to Toa Electric Company Limited, Kobe, Japan, a company of Japan

Filed Apr. 26, 1968, Ser. No. 724,569

Claims priority, application Japan, May 17, 1967, 42/41,200

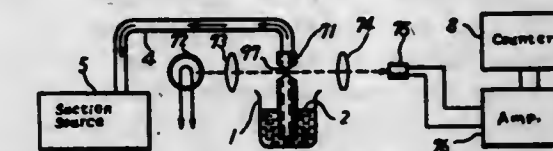
Int. Cl. G01n 21/26

U.S. Cl. 250-218

10 Claims

An improved device for the detecting and measurement of particles suspended in a liquid which includes a narrow channel or orifice having detecting means for detection of

the particles passing therethrough, a chamber communicating with said detecting orifice and a perforated member having a multiplicity of openings not greater than the size of the opening in said orifice through which the liquid



containing the particles is fed to said chamber and orifice, the openings in the perforated member breaking up particle clusters and producing turbulence and agitation in the chamber so that the particles will pass individually through the orifice.

3,515,885

APPARATUS FOR MEASURING SWEEP OF CONTINUOUS STRIP MATERIAL

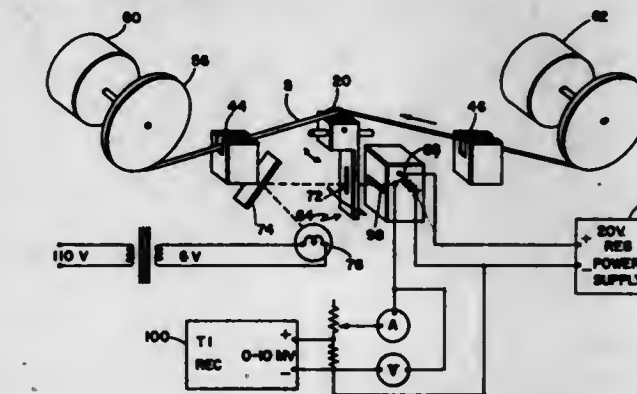
Henry Behrens, Topsfield, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware

Filed Oct. 14, 1966, Ser. No. 586,852

Int. Cl. G01n 21/18, 21/30

U.S. Cl. 250-219

3 Claims



Apparatus for measuring the curvature in its own plane (sweep) of continuous strip material includes two spaced strip guides that define a predetermined path. Each strip guide has a pair of spaced walls for limiting the lateral movement of the strip material along the strip path. A frame structure is mounted between the two strip guides for pivotal movement about an axis parallel to the path and supports a roller which is mounted for rotation about an axis perpendicular to the pivot axis of the frame structure and contacts the lower surface of the strip at a point above the support surface of either strip guide. A photopotentiometer is mounted on one side of the frame structure and a light source is disposed on the opposite side. The frame structure includes a depending baffle that includes a narrow light transmitting window. The strip to be measured is passed under tension between the strip guides and over the roller. Sweep in the strip causes the roller to tilt about the pivot axis of the frame structure, moving the baffle to change the position of impingement of light on the photopotentiometer, thus providing a measurement of sweep in the strip.

3,515,886

MICROFICHE RETRIEVAL UNIT WITH SOLENOID FILM FILTER

Harold B. Thompson, 8901 Wicklow Ave., Cincinnati, Ohio 45236

Filed Nov. 29, 1967, Ser. No. 686,597

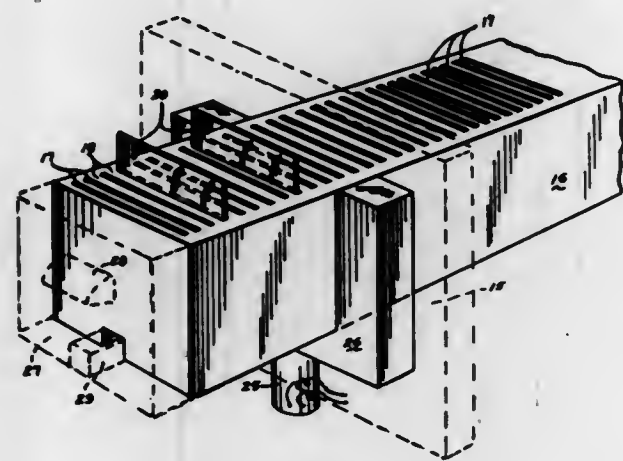
Int. Cl. G06k 7/10

U.S. Cl. 250-219

8 Claims

A storage and retrieval unit and system for "microfiche" and thin films of uniform size, shape, and thickness having a drawer like container partitioned uniformly throughout its length for storing "microfiche" films in

closely spaced identical parallel relation. A solenoid film lifter is fixedly disposed below the center line of the container with a "push up" blade which elevates a selected film sheet for removal or inspection in its storage slot as the container is moved longitudinally thereover. The lower edge of each "microfiche" (film) is beveled, with one end corner angularly cut which engages camming means in the side of the container to move all of the film endwise during insertion to identical positions and orientation in the partitions in the container. The lower beveled edge of each film is interrupted with "coated" short non-beveled flat reflective portions located at different predetermined longitudinal positions along the beveled edges. These "coded" portions are flat and normal to the plane of the film and preferably made highly reflective. A "reading head" contains a light source relatively fixed below the container to project a upwardly inclined light beam toward the beveled edge of each film successively as the container



is moved outwardly over the "reading head" normal to the planes of the films. A plurality of photocells in the "reading head" are disposed to selectively receive the reflected light beam from the reflective flat edge portions on the beveled bottom edge of the films to selectively energize the photocells. Selector switch means are provided which connect a selected photocell or group of photocells (when energized by the reflected light beam or beams) which operates the film lifter solenoid to actuate the "lifter" blade to raise the selected "microfiche" film in its slot for inspection, or for removal from its storage slot as the selected short flat reflective portions on the beveled bottom edges of the films pass through the projected light beam or beams. Spring means quickly withdraw the plunger after projection, as the light beam passes off of the short reflective flat "coded" portion on the bottom edge of the film as the container is pulled outwardly past the "reading head," for instance, like a drawer in a card filing cabinet.

3,515,887
OPTICAL SCANNER INCLUDING AT LEAST ONE GUNN-EFFECT OSCILLATOR ELEMENT
Robert Rosenberg and Harry J. Schulte, Jr., Fair Haven, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Nov. 20, 1967, Ser. No. 684,363

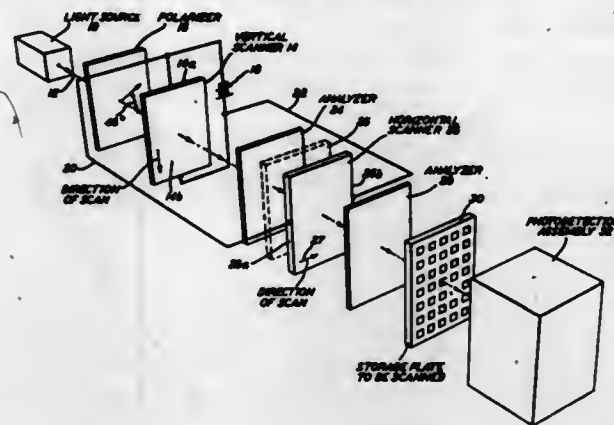
Int. Cl. G02F 1/18; H01J 39/12

U.S. Cl. 250-225

6 Claims

A high speed optical scanning apparatus is described. The apparatus includes a Gunn-effect oscillator element and is based on the recognition that the dipole layers propagated within such an element are characterized by unique indices of refraction. A substantial portion of

the element is illuminated with incident light of a particular polarization, and an analyzer is positioned on the output side of the wafer to pass only the light whose polarization condition is selectively altered by the layer.



As a result, the analyzer transmits a line of light that sweeps or scans an output plane at a constant velocity. By disposing another Gunn-effect element in the path of the line, the apparatus is adapted to interrogate a multicell storage plate in an ordered cell-by-cell manner.

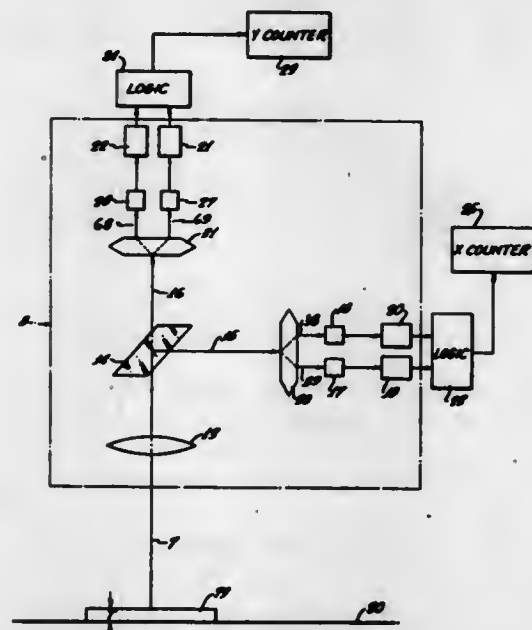
3,515,888
MANUAL OPTICAL DIGITIZER
Edward V. Lewis, Newport Beach, Calif., assignor to California Computer Products, Inc., Anaheim, Calif., a corporation of California

Filed Oct. 27, 1967, Ser. No. 678,661

Int. Cl. G01p 13/00; G02f 7/00

U.S. Cl. 250-237

5 Claims



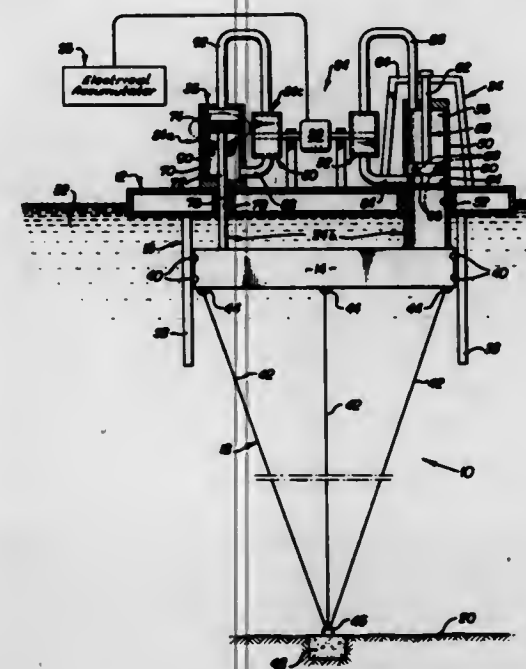
The digitizing of graphically displayed information may be accomplished using a reticle assembly having as a modus operandi for locating its position a self-contained means for generating a narrow beam of infrared energy. The instantaneous position of the reticle relative to a known origin may be determined by monitoring the positional changes of the beam using transmitting optical gratings which act to chop the beam as it is moved relative thereto. The gratings may be coded so as to provide directional information as to the movement of the beam. The number of times the light beam is chopped by the gradient as it is moved from one position to another can be totalled in an electronic counter to provide a digital representation of the distance traveled.

3,515,889
POWER GENERATION APPARATUS
Archer W. Kammerer, Fullerton, Calif., assignor of one-fifth each to Jean K. Lamphere and Archer W. Kammerer, Jr., both of Fullerton, Calif.
Continuation-in-part of application Ser. No. 627,948, Apr. 3, 1967. This application Aug. 14, 1967, Ser. No. 662,842

Int. Cl. F03b 13/10, 13/12

U.S. Cl. 290-53

23 Claims



A floating wave-driven power generating station having a buoyant structure or platform to float at the surface of a body of water, a float to be anchored in a generally stationary submerged position below the platform in such a way that surface waves cause the platform to rise and fall in a vertical reciprocating motion relative to the float, and power generating means connected to and operated by the wave-induced relative reciprocating motion of the platform and float for transforming the kinetic energy of the rising and falling platform into useful energy, such as electrical power.

3,515,890
POWER SUPPLY UNIT
Tadao Kohashi, Yokohama, and Kazumobu Tanaka and Norio Suzuki, Kawasaki-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

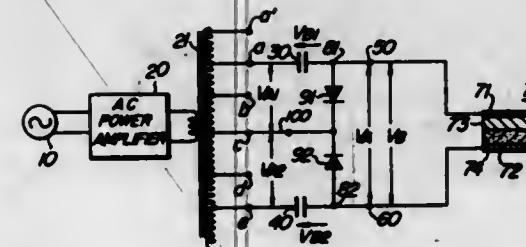
Filed Oct. 18, 1968, Ser. No. 768,822

Claims priority, application Japan, Oct. 26, 1967, 42/70,056

Int. Cl. H02j 3/02; H02m 7/00; G05f

U.S. Cl. 307-2

3 Claims



A power supply unit having an output transformer for an A.C. power source, capacitors connected between a load and the opposite terminals of the output transformer, a common arm selective connectable with one of intermediate terminals of the output transformer, and rectifier

elements connected between the common arm and the load-side terminals of the capacitors in the same polarity with respect to the common arm. The device can apply both an A.C. voltage and a D.C. voltage to a solid-state image intensifier or the like and the magnitude and polarity of the D.C. voltage can freely be adjusted without varying the amplitude of the A.C. voltage.

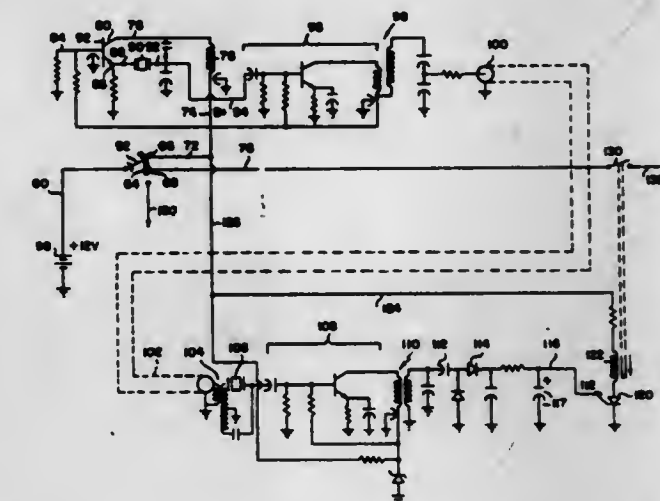
3,515,891
ELECTRIC SELECTIVE CONTROL CIRCUIT
Theodore M. Margeson, 3121 Piedmont Road NE., Atlanta, Ga. 30305, and Hugh W. Denny, Denny, Atlanta, Ga.; said Hugh W. Denny assignor to said Theodore Margeson, Atlanta, Ga.

Filed Aug. 15, 1968, Ser. No. 752,971

Int. Cl. B60r 25/00

U.S. Cl. 307-10

13 Claims



An electric control circuit has a readily removable essential element which can be plugged in or out of the circuit as desired. The missing element is a small rugged piece which can be mounted on a key or other small support piece easily carried by the user.

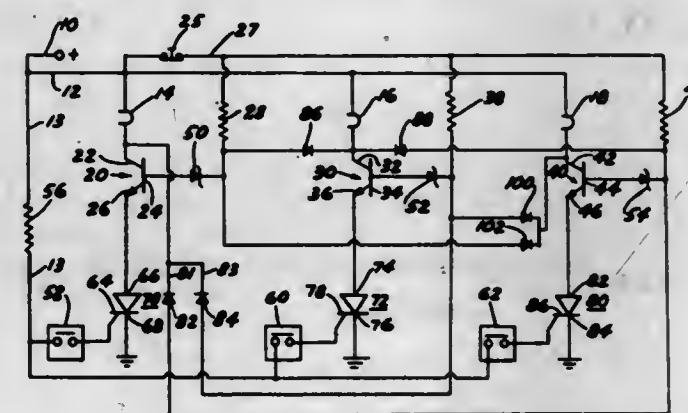
3,515,892
LOAD DISABLING CIRCUIT
Donald R. Whitbrodt, Warren, Mich., assignor to the United States of America as represented by the Secretary of the Army

Filed Apr. 26, 1968, Ser. No. 724,353

Int. Cl. H02j 3/00

U.S. Cl. 307-38

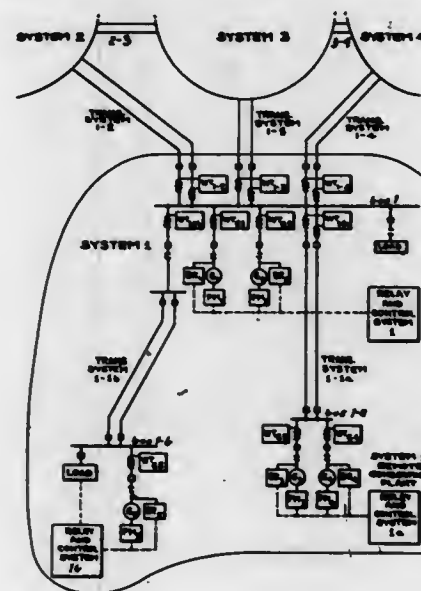
9 Claims



A load disabling circuit for preventing the simultaneous flow of current in more than one load of a multi-load circuit. An electronic valve means is connected to each of the loads. A switch means is connected to each of the valve means for controlling the conductive state of the valve means. Potential coupling means are connected between the valve means so that when one valve means is

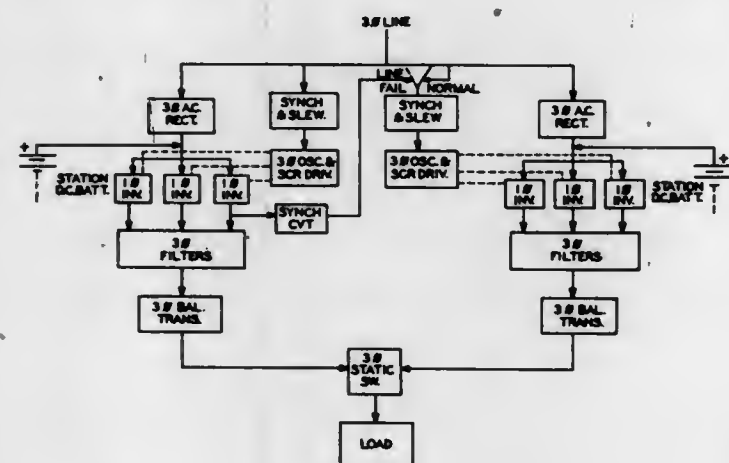
rendered conductive and current flows to one load, all other valve means are prevented from conducting, thereby precluding current flow to all other loads.

3,515,893
METHOD OF IMPROVING THE STABILITY OF INTERCONNECTED POWER SYSTEMS
Robert H. Park, Dennis, Mass., assignor to Fast Load Control, Inc., a corporation of Massachusetts
Filed Feb. 7, 1966, Ser. No. 525,615
Int. Cl. H02j 3/06
U.S. Cl. 307—52 2 Claims



Control systems for changing the distribution of power flow within an interconnected power system, through the execution of changes in the driving power of prime movers, and changes in connected electrical loads, wherein initiation of control action is responsive to suddenly occurring events adapted to cause, or which could cause, system instability, and the power flow changes take place in such a way and with sufficient speed as to prevent or oppose development of instability.

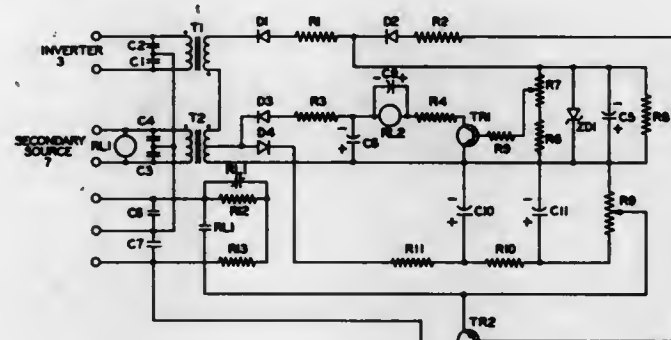
3,515,894
STANDBY CONTROL SYSTEM
Dennis M. Swing, Laguna Hills, Calif., and Lloyd A. Drake and Harlan W. Bates, Columbus, Ohio, assignors to Solidstate Controls, Inc., a corporation of Ohio
Filed Mar. 12, 1969, Ser. No. 806,614
Int. Cl. H02j 7/00, 3/00
U.S. Cl. 307—64 11 Claims



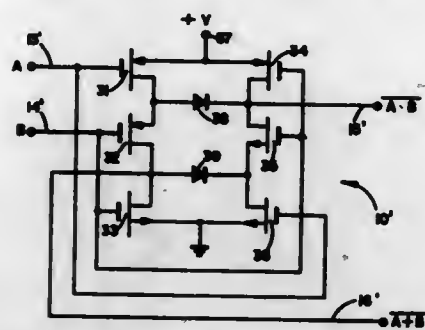
A system for maintaining continuous power to a critical load. Specifically, there is disclosed circuitry which

will provide a power source whose frequency remains within predetermined acceleration and phase limits. Reference is made to the claims for a legal definition of the invention.

3,515,895
SYNCHRONIZATION CIRCUIT
David R. Bratton, Columbus, Ohio, assignor to Solidstate Controls, Inc., a corporation of Ohio
Filed Mar. 13, 1969, Ser. No. 806,896
Int. Cl. H02j 7/00, 1/04
U.S. Cl. 307—64 7 Claims



The transistors, each of which has low source to drain resistance, are either completely OFF or saturated, there-



by allowing operation at speeds significantly greater than obtainable in the prior art.

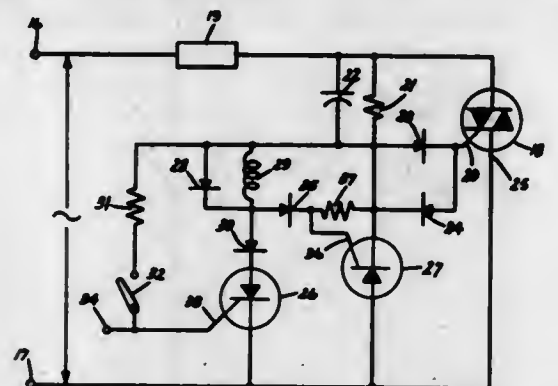
3,515,902

SYNCHRONOUS SWITCHING CIRCUIT

Edward K. Howell, Skaneateles, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 18, 1965, Ser. No. 497,056
Int. Cl. H03k 17/00

U.S. Cl. 307-252

4 Claims



A circuit for controlling current flow from an alternating-current source through a load includes a first gate controlled conducting device connected to the load and the source. The gate electrode of the first gate controlled device is connected in the circuit normally to receive a gating signal. A second gate controlled connecting device is connected to shunt the gating signal from the first gate electrode when the second gate controlled device conducts. The gate electrode of the second gate controlled device is connected in the circuit to begin and thus continue conducting during one half-cycles of the source voltage, so that the first gate controlled device can begin to conduct only at the beginning of a half-cycle of the source voltage.

3,515,903

LOAD MONITOR MODULE

Lewis G. Strigow, 1115 Marlon Drive, Holly, Mich. 48442

Filed June 8, 1966, Ser. No. 556,204

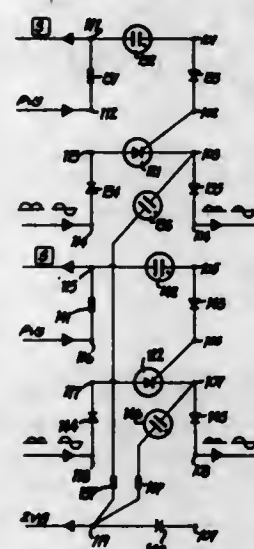
Int. Cl. H03k 17/00; G08b 19/00

U.S. Cl. 307-252

5 Claims

A circuit for monitoring a continuous industrial process by initiating an alarm at a predetermined threshold of a signal received from a transducer responsive to a process condition. The circuit includes a source of a full wave rectified signal, a terminal at zero potential, a silicon controlled rectifier, a diode, a load, and means connecting the source, the diode, the silicon controlled rectifier, the load and the zero terminal in a series circuit path for conducting current flowing from the source to the zero terminal when the silicon controlled rectifier is fired. A second source supplying positive voltage is connected by a resistor and a diode to the gate of the silicon controlled rectifier, and a third resistor connects the gate of the silicon controlled rectifier to its cathode. A neon tube and a resistor are connected in series with each other and in parallel with

the load for indicating the condition of conduction of the silicon controlled rectifier. Means is provided for applying a blocking signal between the first resistor and the second diode to prevent conduction of the silicon con-



3,515,904

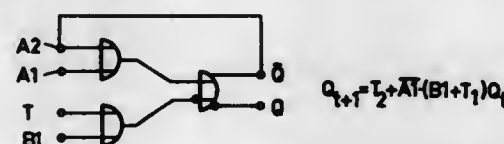
ELECTRONIC CIRCUITS UTILIZING EMITTER-COUPLED TRANSISTORS

Herbert Stopper, Litzelstetten, Germany, assignor to Telefunken Patentverwertungsgesellschaft m.b.H., Ulm (Danube), Germany
Continuation-in-part of application Ser. No. 650,300, June 30, 1967. This application July 25, 1968, Ser. No. 747,734

Claims priority, application Germany, July 30, 1966, T 31,738; July 29, 1967, 1,537,462
Int. Cl. H03k 3/15

U.S. Cl. 307-290

8 Claims



An electronic circuit composed of two emitter-coupled transistors each having a separate output and two inputs, the transistor receiving the larger input signal being rendered conductive while the other transistor becomes non-conductive, the circuit being formed by connecting the output of one transistor to control one input of the other transistor, by applying a constant signal to the other input of the other transistor for establishing the mode of operation of the circuit, and by applying a control input signal to at least one input of the one transistor for controlling the output of the other transistor in a predetermined manner.

3,515,905

MULTIPLEXER SWITCHING NETWORK USING A CURRENT SWITCH AND FLOATING POWER SUPPLY

Hubert L. Raper, La Habra, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Mar. 20, 1967, Ser. No. 624,506

Int. Cl. H03k 17/00

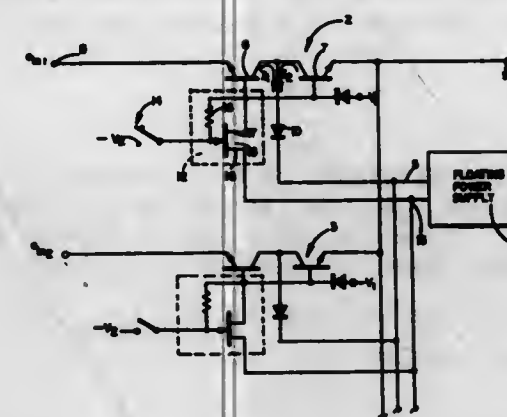
U.S. Cl. 307-254

4 Claims

A multiplexer transistorized switching network in which each transistor switch of the network uses a current control switch for turning the transistorized switch on and a floating power supply for eliminating error current conduction

paths between inputs to the network and ground and for holding individual ones of said transistorized switches on

third terminal. A D.C. power source is connected to the first terminal. The capacitor is connected between the first and third series circuits to be charged via the second



for an unlimited time. The current control switches are interposed between each transistorized switch and the supply.

3,515,906

BILATERAL ANALOG SWITCH

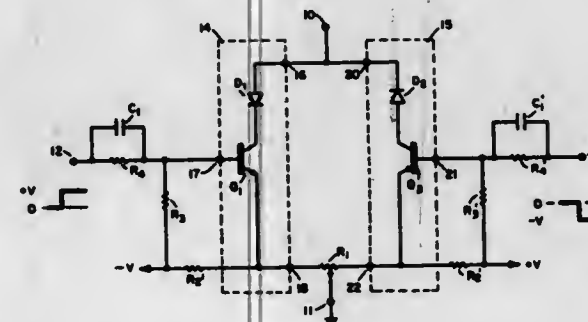
William Geller, Plainville, N.Y., assignor to General Telephone & Electronics Laboratories Incorporated, a corporation of Delaware

Filed July 1, 1966, Ser. No. 562,280

Int. Cl. H03k 17/00

U.S. Cl. 307-255

3 Claims



A bilateral switch which provides sustained operation in both open and closed states. Elimination of offset voltages is accomplished by providing a voltage divider in conjunction with a pair of voltage sources which establish a voltage gradient across the voltage divider.

3,515,907

ELECTRONIC LATCHING NETWORKS

John Szabo, Breslau, Ontario, Canada, assignor to Electrohome Limited, North Kitchener, Ontario, Canada

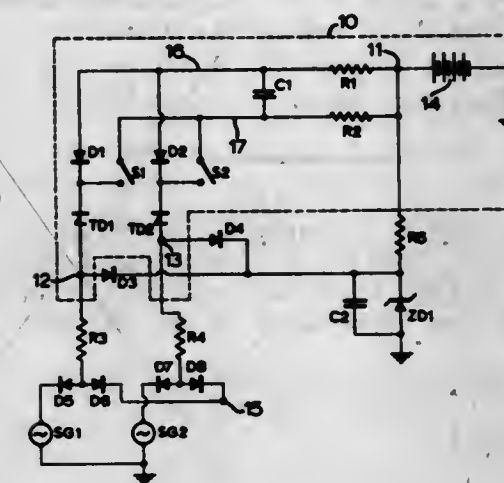
Filed Nov. 9, 1967, Ser. No. 681,747

Int. Cl. H03k 3/31

U.S. Cl. 307-286

10 Claims

An electronic latching network is constructed using two resistors, a capacitor, and at least two unidirectional conducting devices, trigger devices and switches. The simplest form of the network is when only two switches are employed. In this case, the network has first, second and third terminals. The aforementioned components, except the capacitor, are arranged in four series circuits as follows and with the components being in the order named: (a) the first terminal, a first resistor, a first unidirectional conducting device, a first trigger device and the second terminal; (b) the first terminal, the first resistor, a second unidirectional conducting device, a second trigger device and the third terminal; (c) the first terminal, a second resistor, a first switch, the first trigger device and the second terminal; and (d) the first terminal, the second resistor, a second switch, the second trigger device and the



resistor from the power source and to discharge via either of the trigger devices when the switch in circuit therewith is closed.

3,515,908

THERMIONIC ENERGY CONVERTER

French Caldwell, 1507 N. Brookwood Drive, Pascagoula, Miss. 39567

Filed Sept. 14, 1966, Ser. No. 579,257

Int. Cl. H01j 45/00

U.S. Cl. 310-4

9 Claims



A thermionic energy converter comprises supports for the anode and the cathode, the supports being of electrical insulating material and being hermetically sealed together about the margins of the anode support remote from the heated surface of the cathode support so as to cool the hermetic seal. The cathode support electrically insulates the seal from the cathode, and preferably the anode support insulates the seal also from the anode.

3,515,909

DIELECTRIC-COVERED ELECTRODES

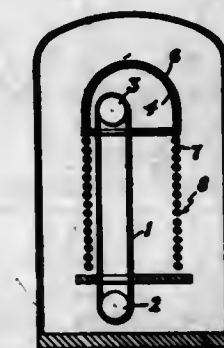
John George Trump, 9 Cambridge St., Winchester, Mass. 01890

Continuation-in-part of application Ser. No. 601,945, Dec. 15, 1966. This application Aug. 14, 1968, Ser. No. 767,877

Int. Cl. H02n 1/00; H01b 9/04

U.S. Cl. 310-6

15 Claims



A multi-electrode gas-insulated system for generation and for transmission of D.C. or low frequency, high voltage electric power which has one electrode surrounded

over substantially all of its surface by a solid dielectric having a resistivity lower than that of the insulating gas. The solid dielectric thickness, although small in comparison to the gas gap, damps the ability of the electrode to transfer electric charge from transient disturbances in the gas-insulating medium, reduces the electric field intensity on the electrode surface and increases the electrical strength of the system under normal and transient voltage conditions.

3,515,910

ACOUSTIC ABSORBING MATERIAL

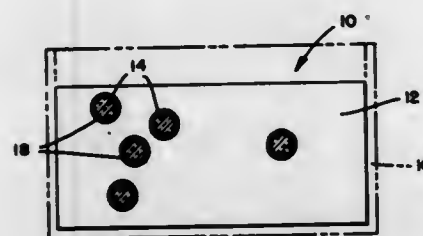
Richard D. Fritz, West Covina, and Harper J. Whitehouse, Hacienda Heights, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Nov. 12, 1968, Ser. No. 775,077

Int. Cl. H01v 7/00

U.S. Cl. 310—8

12 Claims



This invention relates to an acoustic energy-absorbing material which will absorb sound energy under water, and which will retain its properties essentially independently of depth. Piezoelectric or ferroelectric material is either coated with an electrically-conductive material and distributed in a nonconductive base material or distributed uncoated in a conductive base material. The resultant matrix consists of a material having the density and sound propagation velocity of seawater. The material is able to convert incident soundwave energy into electrical energy through the agency of the piezoelectric or ferroelectric material, the electrical energy then being dissipated in the conductive coating.

3,515,911

SURFACE WAVE TRANSDUCER

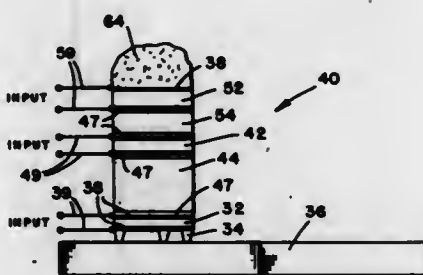
George W. Byram, Pasadena, and Harper John Whitehouse, Hacienda Heights, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 28, 1968, Ser. No. 771,373

Int. Cl. H01v 7/00

U.S. Cl. 310—8.1

9 Claims



A transducer for launching a surface wave signal along the surface of a solid substrate which need not be piezoelectric. The transducer includes a stack comprising transducer elements separated by spacing elements, or spacers, and surface driving feet attached to the lowermost transducer element and placed upon the surface of a substrate

upon which the acoustic surface wave is to be launched. Generally, both the vertical spacing of the transducer elements and the horizontal spacing of the driving feet are a function of the specific code sequence corresponding to the desired transducer transfer function.

3,515,912

MAGNETOHYDRODYNAMIC APPARATUS

Terence Sidwell Wilkinson, Heaton Works, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England, a British company

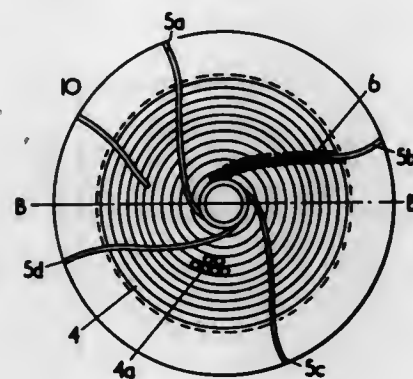
Filed July 17, 1967, Ser. No. 653,937

Claims priority, application Great Britain, July 28, 1966, 33,932/66

Int. Cl. H02n 4/02

U.S. Cl. 310—11

2 Claims



Magnetohydrodynamic apparatus in which acceleration of an electrically conductive gas is effected along a plurality of flow paths extending in a generally radial direction from an inlet near the axis of a magnet formed as a hollow cylinder to an outlet at the periphery of the magnet.

3,515,913

ELECTRICALLY AND THERMALLY INSULATING ELEMENTS FOR MAGNETOHYDRODYNAMIC ENERGY-CONVERSION DUCT

David Yerouchalmi, Le Mesnil-St-Denis, France, assignor to Commissariat a l'Energie Atomique, Paris, France

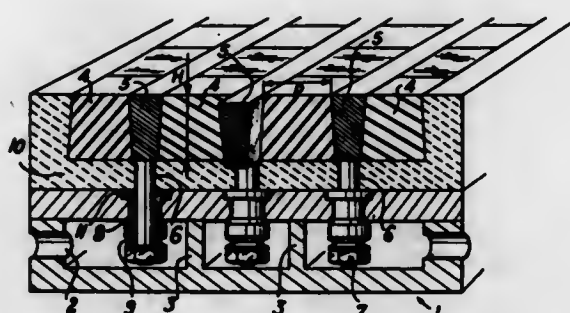
Filed Nov. 28, 1967, Ser. No. 686,245

Claims priority, application France, Dec. 16, 1966, 87,889

Int. Cl. H02n 4/02

U.S. Cl. 310—11

2 Claims



Electrically and thermally insulating elements for walls and spacers of a MHD energy-conversion duct and comprising a casing of heat-conducting material which is equipped with cooling passages and provided on one face with metallic partitions between which are fitted bricks of ceramic insulating material, the partitions being

adapted to extend into the cooling passages. The elements additionally comprise a plate of ceramic insulating material which is subjacent to the bricks and provides a separation between the bricks and the casing, as well as sleeves of ceramic insulating material which provide a separation between the partitions and the casing.

3,515,914

MECHANICAL OSCILLATOR INCLUDING A TORSION BAR

Samuel Steinemann, Waldenburg, Switzerland, assignor to Institut Dr. Ing. Reinhard Straumann A.G., Waldenburg, Switzerland

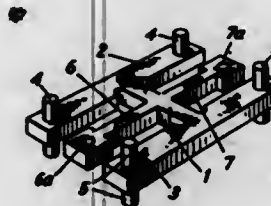
Filed June 29, 1967, Ser. No. 649,892

Claims priority, application Switzerland, Sept. 26, 1966, 13,854/66

Int. Cl. H02k 33/02

U.S. Cl. 310—37

9 Claims



A mechanical oscillator includes a torsion bar provided at both ends with inertia masses, the torsion bar being mounted at the location of the node of oscillatory movement. The oscillator has a generally H-shaped configuration, with the web or cross bar portion of the H-shaped configuration comprising the torsion bar and the legs of the H-shaped configuration constituting the inertia masses. Additional masses may be disposed at the four ends of the arms or legs of the H-shaped configuration, and at least one of these masses, or more than one of the masses, form part of an electro-mechanical transducer.

3,515,915

TURNING PENDULUM MECHANISM

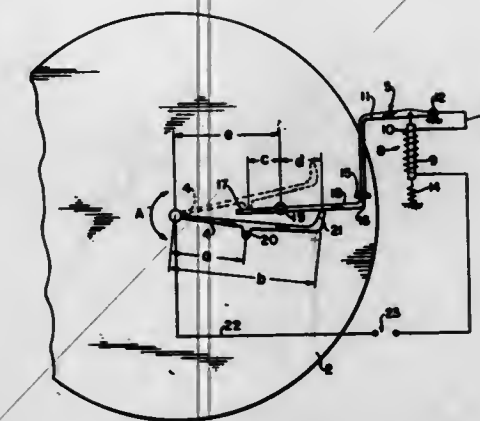
Gustav Stein and Margerit Stein, both of 620 Fort Washington Ave., New York, N.Y. 10040

Filed Apr. 8, 1969, Ser. No. 814,355

Int. Cl. H02k 33/10

U.S. Cl. 310—39

10 Claims



A turning pendulum mechanism which is operated by electrical energy in which an energy impulse is given to the turning pendulum approximately once every revolution of its rotation to turn it in opposite directions on alternate rotations.

3,515,916

ARRANGEMENT FOR COOLING THE LAMINATED BODY OF ROTATING ELECTRIC MACHINES

Janos Kovacs, Budapest, Hungary, assignor to Ganz Villamosagi Muvek, Budapest, Hungary, a corporation of Hungary

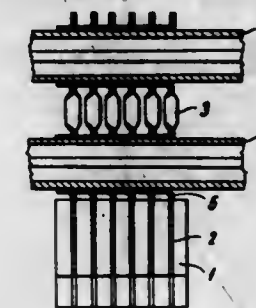
Filed July 8, 1968, Ser. No. 743,120

Int. Cl. H02k 9/22

U.S. Cl. 310—65

6 Claims

The laminated bodies of rotating electric machines are cooled by disposing cooling plates between the laminae. The cooling plates extend beyond a contour of the laminae, radially outwardly of or else within holes through the laminae, and have cooling fins stamped out of the plane of the plates and bent about their central line



and disposed substantially perpendicular to the plane of the plate. Cooling tubes extend through the plates outside the laminae.

3,515,917

THERMOSTAT DEVICE HOUSING

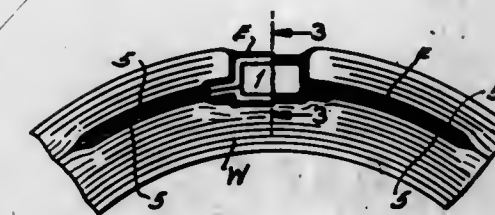
Russell H. Kolb, Florissant, Mo., assignor to Bachman Machine Company, Inc., St. Louis, Mo., a corporation of Missouri

Filed Apr. 16, 1968, Ser. No. 721,786

Int. Cl. H02k 11/00

U.S. Cl. 310—71

7 Claims



A structure for receiving a thermostat or its sensor, if spaced from the thermostat, including two or more thin sheets of heat-conducting material having portions of substantial area in contact with each other and other portions spaced apart to form the walls of a box-like housing. At least one of the sheets has an integral extrusion, in its area of contact with another sheet, resembling a rivet. Extrusions on one or more additional sheets may be interested and all the interested extrusions comprise interlocking rivet-like elements securing the respective sheets tightly together so that the portions of substantial area may be in contact with wound strands of an electric motor coil or similar apparatus. The elements block the crevice or crevices between the sheets and prevent admission of oil, water or fluid insulating material.

3,515,918

PLURAL ROTOR OIL SLINGER

Charles W. Otto, De Kalb, Ill., assignor to General Electric Company, a corporation of New York

Filed June 9, 1969, Ser. No. 831,591

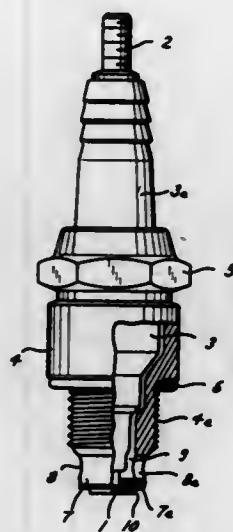
Int. Cl. H02k 5/16

U.S. Cl. 310—90

8 Claims

The flange of the outer concentric rotor of a dual rotor electric motor carries in the vicinity of its hub a floating

electrode includes a sleeve having a portion surrounding the bare front portion of the center electrode and being provided with an inner circumferential face which defines with this bare front end portion an open-ended annular



gap. An annulus of electrically conductive metallic material resistant to heat and spark erosion is located in the gap and surrounds the bare front end portion with clearance.

3,515,926

ARC LAMP WITH FUSE WIRE AND BIASING SUPPORT MEANS THEREFOR

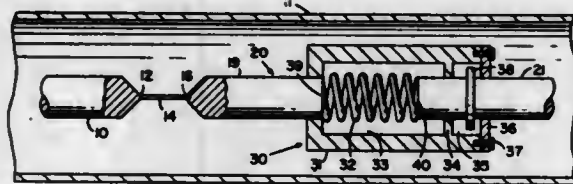
Charles E. Rich, Gainesville, Fla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Feb. 12, 1968, Ser. No. 704,666

Int. Cl. H01j 1/18, 17/04

U.S. Cl. 313-146

9 Claims



An arc lamp structure for short-arc gas lamps with reduced susceptibility to shock and vibration damage. The structure includes an envelope enclosing a pair of coaxially aligned electrodes. A fuse wire extends across the space separating the electrodes for engagement between the electrodes. An arc between the electrodes is established when the fuse wire disintegrates. The fuse wire is supported in a small indentation in either or both electrodes. One of the electrodes is spring loaded and exerts a pressure to hold the fuse in place.

3,515,927

CAMERA TUBE INCLUDING MEANS FOR REGENERATION OF LEAD MONOXIDE TARGET LAYER

Edward Fokko de Haan and Paulus Philippus Maria Schampers, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

Filed June 21, 1968, Ser. No. 738,958

Claims priority, application Netherlands, July 22, 1967, 6710185

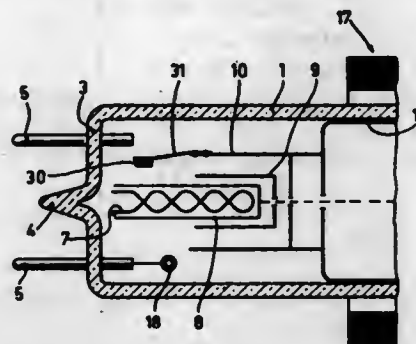
Int. Cl. H01k 1/52; H01j 61/28

U.S. Cl. 313-179

3 Claims

A camera tube having a lead monoxide target layer has a substance which upon heating evolves at least one

of the gases oxygen and water vapor, the substance being mounted in heat-receiving proximity to the tube cathode



to evolve at least one of the gases in such quantity as to compensate for its loss from the target.

3,515,928

ONE-SHOT ARC LAMP WITH MASS OF VAPORIZABLE WIRE BETWEEN ELECTRODES

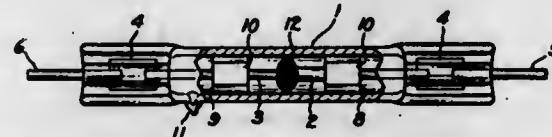
Delmar D. Kershaw, Kirtland, Ohio, assignor to General Electric Company, a corporation of New York

Filed July 15, 1966, Ser. No. 565,586

Int. Cl. H01j 61/12

U.S. Cl. 313-184

6 Claims



A one-shot short arc gap discharge lamp intended to be discarded after a single use. To assure reliable starting at normal voltage and current, a wad of fine refractory wire is provided between the electrodes and resiliently engages their tips. Upon current flow, the wad or fuzzball vaporizes creating a very high temperature in the gas filling which starts the arc.

3,515,929

SHORT ARC LAMP SEAL

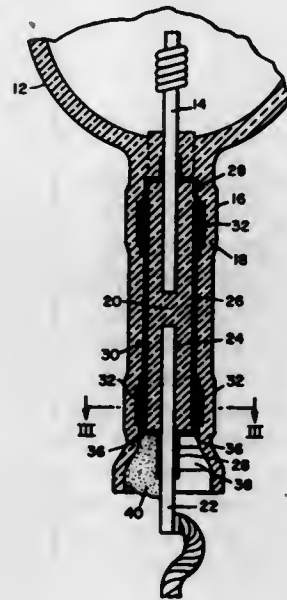
Joseph P. Kearney, Teaneck, and Eugene F. Murphy, Pompton Plains, N.J., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 24, 1968, Ser. No. 700,195

Int. Cl. H01j 17/18

U.S. Cl. 313-219

6 Claims



A quartz short-arc lamp having a central bulbous envelope portion and a pair of oppositely disposed arm portions extending from the central envelope portion

through which electrical current is carried to a pair of spaced electrodes. An electrode is mounted within one end of each arm and extends into the envelope portion. A lead-in conductor extends into the other end of each of the arms and is connected to the electrode mounted in that arm by a plurality of ribbon conductors. The juncture of the ribbon conductors with each lead-in conductor is encapsulated in a sealing composition having a coefficient of thermal expansion less than that of quartz and preferably of lithium-aluminum-silicate powder and a suitable binder such as platinum paint.

3,515,930

COMPACT BENT END ELECTRIC LAMP

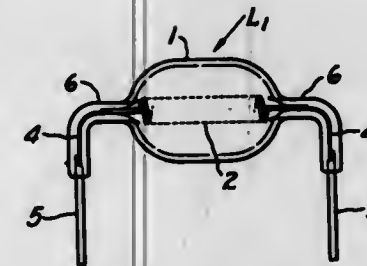
La Verne E. Walsh, South Euclid, and Gerald W. Keimer, Eastlake, Ohio, assignors to General Electric Company, a corporation of New York

Filed July 31, 1968, Ser. No. 749,197

Int. Cl. H01j 61/30; H01k 1/28

U.S. Cl. 313-220

7 Claims



In compact double-ended incandescent lamps, especially those of the halogen cycle type, having a pinch seal at each end of a quartz envelope and lead-in conductors extending through the pinch seals and including thin foil portions hermetically sealed in the pinch seals, especially wherein the pinch seals constitute a large proportion of the overall length of the envelope, the lamps are appreciably shortened by bending the pinch seals at the area of the foils so that the terminal end portions extend laterally of the envelope.

3,515,931

PINCH SEAL PORTION OF DISCHARGE LAMPS OR THE LIKE

Shohei Takakuwa, Yokohama, Japan, assignor to Ushio Electric Inc., Tokyo, Japan

Filed Dec. 5, 1968, Ser. No. 781,500

Claims priority, application Japan, Nov. 6, 1968, 43/80,615

Int. Cl. H01j 5/48, 5/50

U.S. Cl. 313-318

2 Claims



An electric lamp comprising a sealed envelope of quartz containing electric energy translation means and having an external pinch seal portion at opposite ends thereof and a lead-in conductor extending therethrough from said energy translation means.

Said seal portions have a Z-shape or J-shape in section.

3,515,932

HOLLOW CATHODE PLASMA GENERATOR

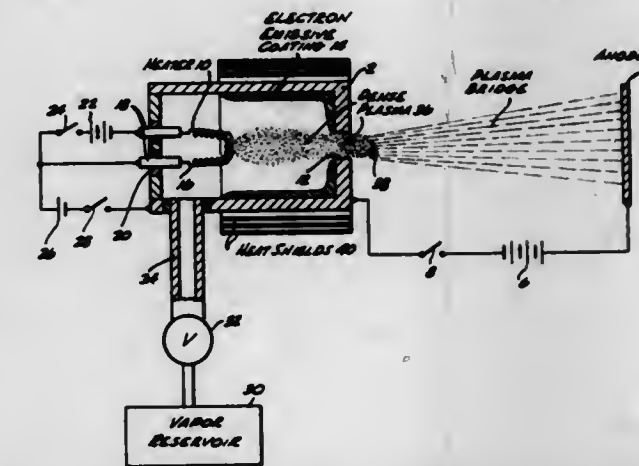
Harry J. King, Canoga Park, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 27, 1967, Ser. No. 634,229

Int. Cl. H01j 1/20

U.S. Cl. 313-339

4 Claims



A hollow cathode body defines an enclosed chamber having an orifice. The chamber wall adjacent the orifice is coated with a layer of nickel encapsulated cathode oxide mix. A heater in the chamber causes the coating to emit electrons while a vapor is introduced into the chamber thus generating a plasma which protrudes through the orifice. The plasma protrusion provides a high current density electron source for an adjacent anode. The vapor escaping through the orifice forms a column of gas between the cathode and anode which is ionized by the electrons to produce a so-called plasma bridge therebetween which allows much more current to flow than would be expected in a normal vacuum diode in the same cathode-anode spacing. The preferred cathode uses are as a neutralizer for an ion beam emanating from an ion thruster and as the primary electron source in a Kaufman type ion thruster (see U.S. 3,262,262).

3,515,933

CATHODE RAY TUBE MAGNETIC DEFLECTION CIRCUIT

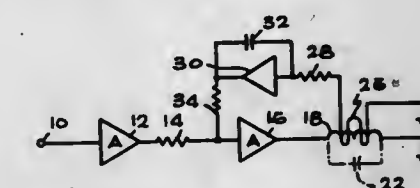
John L. Myers, Panorama City, Calif., assignor to Tasker Industries, Van Nuys, Calif., a corporation of California

Filed May 10, 1968, Ser. No. 728,209

Int. Cl. H01j 29/76

U.S. Cl. 315-27

9 Claims



The circuit improves high-frequency feedback by sensing the magnetic flux produced in the yoke due to inductive current independently of the capacitive component of the yoke current due to distributed capacitance. The flux sensor senses only rate of change of flux which is integrated to provide a measure of total flux. The total flux signal is used as a feedback signal to provide proportionality between signals having frequencies near and higher than the yoke resonant frequency, and the CRT beam deflection.

3,515,934

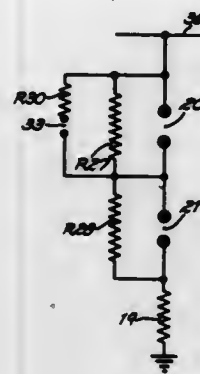
LIGHTNING ARRESTER SPARKOVER CONTROL
Stanley S. Kershaw, Jr., Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Jan. 17, 1968, Ser. No. 698,470

Int. Cl. H02h 1/04

U.S. Cl. 315—36

14 Claims



A lightning arrester including first and second main gap means, shunted by substantially equal nonlinear resistance means and auxiliary gap operable to reduce the shunt resistance of one main gap means. The sparkover voltage of the auxiliary gap is less than that of the main gap so that, when a low frequency voltage impulse is applied to the arrester, the auxiliary gap will spark over to place a greater proportion of the applied voltage across the second spark gap to produce a cascading breakover effect in the main gaps.

3,515,935

TRIGGERED SPARK TRANSMITTER DEVICE

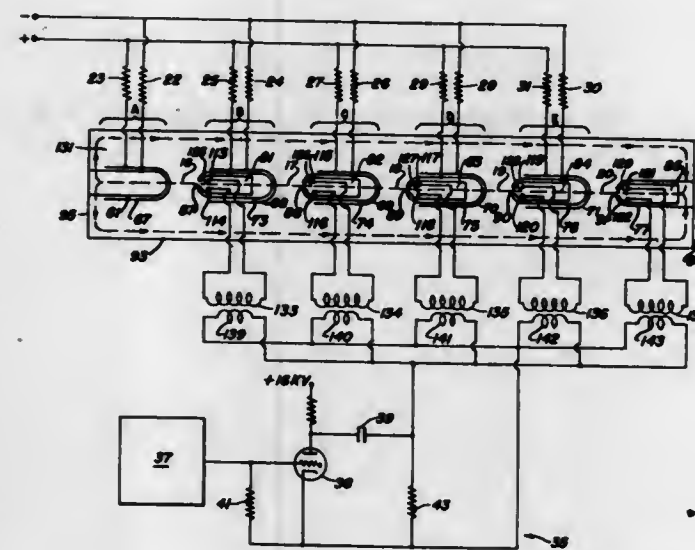
Arthur F. Wickersham, Jr., Atherton, and Lambert T. Dolphin, Jr., Palo Alto, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed May 31, 1967, Ser. No. 643,327

Int. Cl. H01j 7/24; H01b 31/26

U.S. Cl. 315—111

4 Claims



A spark transmitter having a plurality of storage capacitors and spark gaps arranged in series where the spark gaps are simultaneously rendered conducting by a trigger device. The trigger device comprises a plurality of pairs of trigger electrodes where each pair is positioned adjacent the respective spark gap and in a pressurized gaseous atmosphere capable of being ionized. The trigger electrodes are simultaneously energized and thereby ionize the gaseous atmosphere in the spark gaps and permit electric discharge of the storage capacitors.

3,515,936

HEAT SINK AND ELECTRICAL CONNECTION MEANS FOR AN IGNITRON FIRING DEVICE

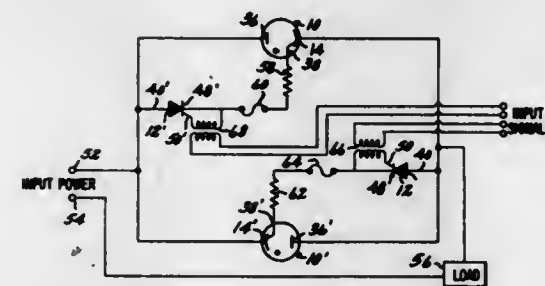
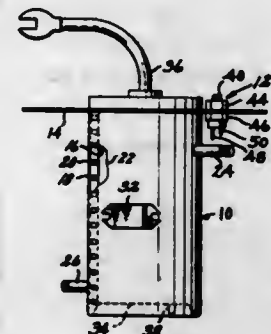
Charles R. Wetter, Bloomington, Ill., assignor to General Electric Company, a corporation of New York

Filed Nov. 9, 1967, Ser. No. 681,676

Int. Cl. G45f 1/00; H05b 37/02

U.S. Cl. 315—196

15 Claims



A water cooled ignitron having a mounting bracket upon which is mounted a semiconductor firing device such that an electrode of the device is electrically connected to the cathode of the ignitron, and the device is cooled by transfer of heat to the bracket which is thermally connected to the ignitron cooling system and electrically connected to the ignitron cathode.

3,515,937

SPARK IGNITION APPARATUS

Keith Douglas Collins, Watford, England, assignor to Rotax Limited, London, England, a British company

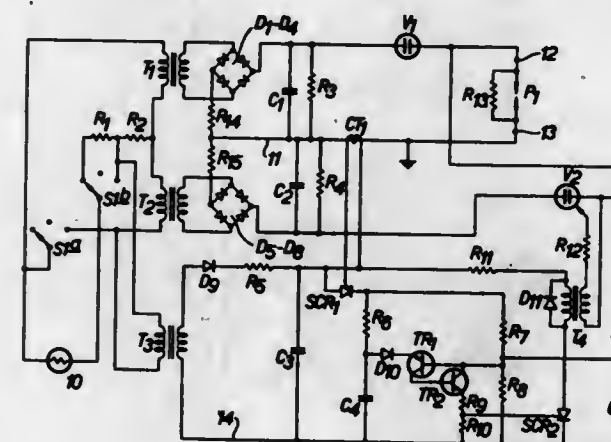
Filed Nov. 5, 1968, Ser. No. 773,568

Claims priority, application Great Britain, Nov. 21, 1967, 52,855/67

Int. Cl. H05b 37/02, 39/04

U.S. Cl. 315—209

7 Claims



A spark ignition apparatus for supplying high voltage pulses to an ignition plug and comprising capacitors, a pair of rectifiers, through which said capacitors are charged respectively, a pair of transformers for supplying alternating current to the rectifiers, a resistor through which the primary windings of the transformers can be

connected to a source of A.C. supply, means for connecting said first capacitor to a pair of output terminals, triggerable means for connecting said second capacitor to said terminals and means for supplying a triggering pulse to said triggerable means at a predetermined time after capacitor has been connected to said output terminals.

3,515,938

CONTROL CIRCUIT FOR A MULTIPLE PULSE LASER MACHINING DEVICE

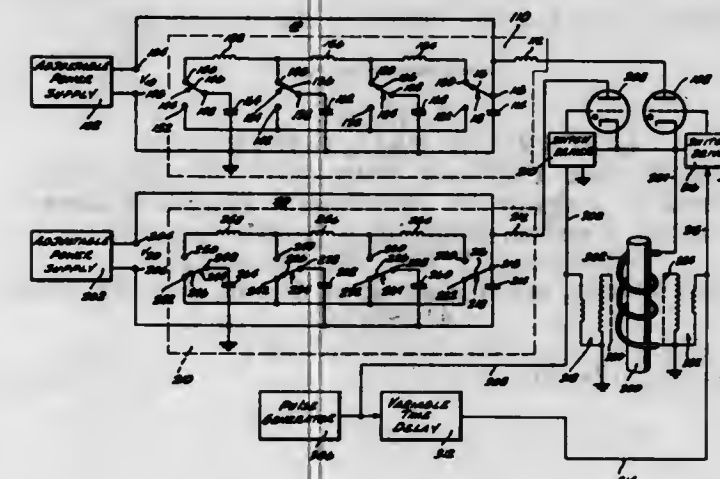
James H. Morse, Malibu, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 5, 1968, Ser. No. 719,202

Int. Cl. H05b 37/00

U.S. Cl. 315—240

9 Claims



In the disclosed laser control circuit a plurality of electrical LC pulse-forming networks are respectively coupled via a like plurality of ignitron devices to a laser pumping flash lamp. Each pulse-forming network is driven from an adjustable power supply and includes manually operable switches to selectively adjust the time constant of the associated pulse-forming network to a desired value. Pulse generating and delay circuitry sequentially triggers the ignitrons into conduction while simultaneously triggering the flash lamp.

3,515,939

DUST PRECIPITATOR

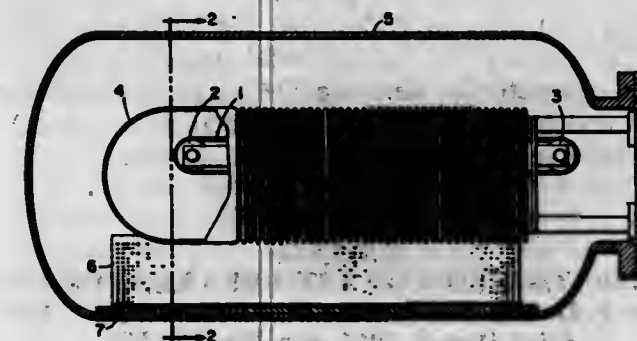
John G. Trump, Winchester, Mass., assignor to High Voltage Engineering Corporation, Burlington, Ill., a corporation of Massachusetts

Filed July 13, 1967, Ser. No. 653,152

Int. Cl. H03c 3/00

U.S. Cl. 317—3

13 Claims



This invention relates to compressed-gas-insulated systems, such as belt-type electrostatic generators, and in particular to increasing the insulating capability and reliability

of such systems. My invention comprehends a belt-type electrostatic generator or other high-voltage compressed-gas-insulated system wherein a region of reduced electric field is provided along the surface of at least one of the pair of electrodes between which the high voltage is applied for the entrapment of solid particulates. My invention is not limited to electrostatic generators, but includes any two or multi-electrode system insulated in compressed gases, such as compressed-gas-insulated transmission lines. For example, one such embodiment of my invention comprehends a high voltage transmission line for the transport of electric power whether A-C or D-C, of the type in which a gas or a mixture of gases (such as N₂, CO₂, or SF₆) at several to many times atmospheric pressure is used as the principal voltage-insulating medium, in which the central conductor is at high potential and supported at spaced intervals along its length by a solid insulator or by several such solid insulators, in which the outer cylindrical container is of aluminum or other metal to withstand internal gas pressure and is grounded and may serve as the grounded return line, and in which an electric field exists between the central conductor or conductors and the grounded shell; and, in accordance with the invention, means are provided for systematically reducing the electric field at regions near the surface of said shell or said conductor. For example, means may be provided for producing at frequent intervals along the bottom envelope of said shell regions a substantially lower electric field for the collection of particles of matter. For this purpose, a perforated metallic plate may be mounted in the lower portion of the shell to produce regions of low electric field between plate and shell into which solid particulates may become lodged and inactivated. In this way the electric field of the energized transmission line is employed to accelerate loose fragments of matter into regions of such low electric field intensity that they are permanently trapped (inactivated).

3,515,940

PARALLEL-ASSISTED CIRCUIT INTERRUPTING DEVICE

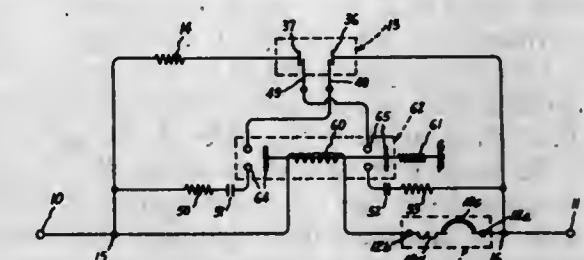
Charles F. Hobson, Jr., Southington, Conn., assignor to General Electric Company, a corporation of New York

Filed Feb. 21, 1968, Ser. No. 707,081

Int. Cl. H02h 3/02

U.S. Cl. 317—11

4 Claims



A parallel-assisted circuit interrupting device including a circuit breaker having a controlled-breakdown gap device connected electrically in parallel therewith; the gap device includes a control electrode which is connected through normally-open contacts of a current-responsive relay which is in series with the circuit breaker; upon occurrence of an abnormally high current, the contacts of the current-sensitive relay close, "firing" the gap device; at the same time, the same current actuates the current-responsive trip device of the circuit breaker, tripping it; since the gap device is turned on, it bypasses most of the current around the breaker, permitting the breaker to open without serious arcing; when the current goes to the zero point in the A-C cycle, the gap device becomes non-

conductive; by this time the contacts of the current-responsive relay have re-opened because of the decrease of current through it, thereby removing the triggering voltage and establishing a permanent "off" condition.

3,515,941

ELECTRICAL LEAKAGE DETECTOR

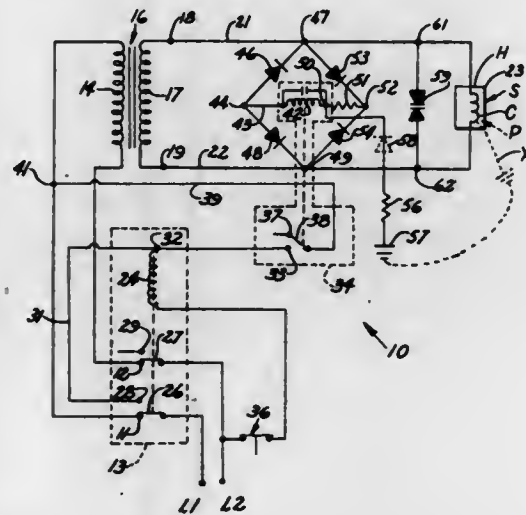
Aston L. Moore, 220 Hammond Place, South Bend, Ind. 46601, and Charles R. Moore, 1615 N. Merrifield, Mishawaka, Ind. 46544

Filed Oct. 24, 1967, Ser. No. 677,580

Int. Cl. H021 7/26

U.S. Cl. 317-18

9 Claims



An automatic protective circuit for de-energizing an electric power circuit upon the appearance of a leakage therefrom to a return path, said power circuit including a transformer, the secondary winding of said transformer having two output terminals, wherein the power relay has contacts in series with the power circuit for de-energizing the power circuit when the winding of the power relay is energized. Furthermore, a sensing relay has contacts in series with the power relay winding so that it can be energized in response to energization of the sensing relay winding. A conductor is provided connecting one end of the sensing relay winding to a pair of rectifiers which are connected, respectively, to the output terminals of the secondary transformer winding. A further pair of rectifiers is connected to the other end of the sensing relay winding and whose other ends are connected, respectively, to the output terminals of the secondary winding of the transformer. A third rectifier connects at least one of the ends of the sensing relay to ground so that an incomplete path is provided from at least one side of the power circuit through the sensing relay and including the return path so that leakage from one side of the power circuit to the return path will complete the incomplete path, thus energize the sensing relay for deenergizing the power circuit.

3,515,942

ELECTRICAL CIRCUIT ARRANGEMENTS PROVIDING EARTH LEAKAGE PROTECTION

George Andrew Douglas Gordon, Friston House, 25 Church Road, Richmond, Surrey, England

Filed Nov. 17, 1967, Ser. No. 683,845

Claims priority, application Great Britain, Oct. 25, 1967, 48,394/67

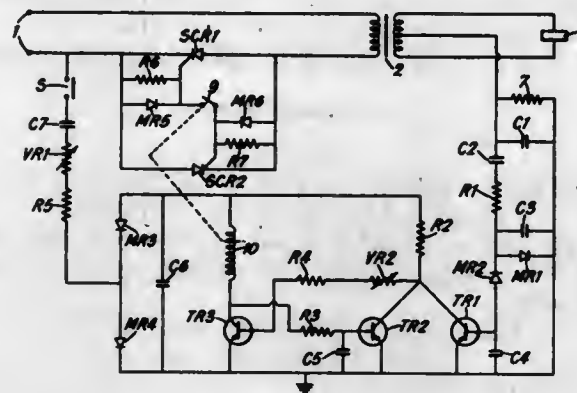
Int. Cl. H02h 1/02

U.S. Cl. 317-18

21 Claims

A protective circuit for interrupting the supply to the primary circuit of a transformer when earth leakage occurs on the secondary side. When earth leakage occurs, the voltage developed across an impedance connected between earth and the secondary winding of the transformer is

rectified and used to control the current through a relay. The relay may be controlled by a transistor bi-stable de-



vice, and the relay may control a pair of silicon controlled rectifiers in the primary circuit of the transformer.

3,515,943

ELECTRICAL FAULT DETECTOR

Albert R. van Cortlandt Warrington, Bexhill, Sussex, England, assignor to The English Electric Company Limited, London, England, a British company

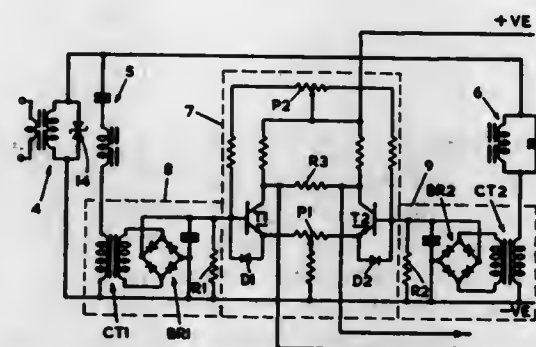
Filed Sept. 29, 1967, Ser. No. 671,824

Claims priority, application Great Britain, Sept. 29, 1966, 43,495/66

Int. Cl. H02h 3/28

U.S. Cl. 317-27

1 Claim



This invention utilizes the phenomenon that under certain fault conditions the waveform of the supply signal is distorted. For example, a sinusoidal voltage source causes a sinusoidal current to flow along a normal good conductive path but, should this current pass through a non-linear resistance, e.g. an arc (sparking) path, faulty insulation, dry soil in the earth, etc. or even the human body (since this exhibits a non-linear resistance), then harmonics appear in the waveform and the sinusoidal characteristic is distorted.

Thus, by determining the ratio or percentage of harmonic to fundamental components in the waveform an indication is made of the presence of a fault, and this is effected in this invention by the provision of two filters for passing the fundamental and harmonic components, respectively, deriving D.C. signals proportional to each and effecting a protective function in dependence on the relative amplitudes of the two signals.

3,515,944

TRANSISTORIZED CIRCUIT BREAKER (OR FUSE)

Frank P. Defina, 556 N. Vine St., Hazleton, Pa. 18201

Filed Dec. 9, 1966, Ser. No. 600,590

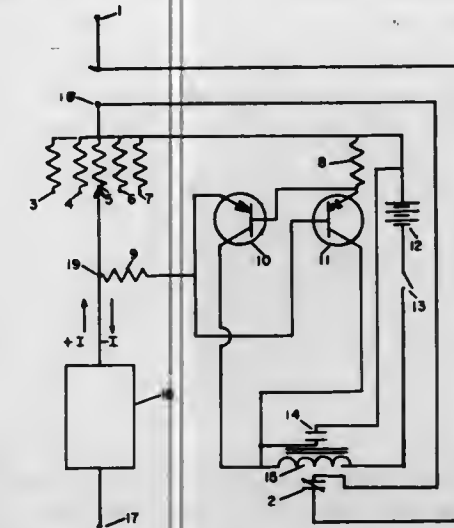
Int. Cl. H02h 3/08

U.S. Cl. 317-33

4 Claims

An electrical load is protected against excessive current flow by interrupting its series circuit through a selected resistor by opening of a normally closed relay switch

upon energization of a transistor controlled relay coil. an air leak which in turn will cause the filament to burn. The relay coil once energized, remains energized from a out. The burned out filament will cause an open circuit



D.C. source of current which is adapted to be temporarily interrupted for reset purposes.

3,515,945

SURGE PROTECTION DEVICE

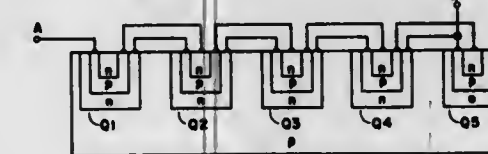
John Bohm, Montreal, Quebec, Canada, assignor to Northern Electric Company Limited, Montreal, Quebec, Canada

Filed Apr. 15, 1968, Ser. No. 721,495

Int. Cl. H02h 1/00, 3/22, 3/335

U.S. Cl. 317-50

8 Claims



This invention relates to a surge protection device which uses transistors in place of the usual chain of varistors. The surge protection device, in accordance with the invention, comprises a first circuit connecting in series with identical polarities the base-collector junctions of a predetermined number of transistors and a second circuit connecting in series with identical polarities the base-emitter junctions of the same transistors. Output terminals are then connected to the base of the first and last transistors in the series.

3,515,946

HIGH POWER RF WINDOW PROTECTIVE DEVICE

Arthur I. Wachtenheim, Lakewood, N.J., assignor to the United States of America as represented by the Secretary of the Army

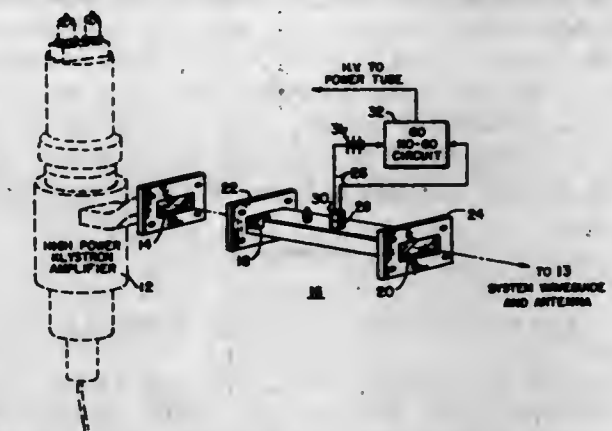
Filed Sept. 7, 1967, Ser. No. 666,569

Int. Cl. H02h 7/20; H01j 23/00

U.S. Cl. 317-51

3 Claims

An electronic-vacuum high power RF window protective device which includes an evacuated section of waveguide terminated at each end by a vacuum tight window one of which is coupled to a high power tube. Brazed to the top surface of the waveguide is a capped cylindrical container through which there is extended a filament wire which is connected in series with a go-no-go circuit that controls the operative voltages of the high power tube. A high intensity arc will first destroy the window in the electronic vacuum device thereby causing



thereby turning off the high power in the line and squelching the arc.

3,515,947

INCLINED ARC CHAMBER FOR A SPARK GAP

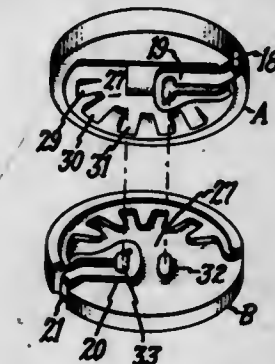
Earl W. Stetson, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Filed Feb. 29, 1968, Ser. No. 709,284

Int. Cl. H02h 1/00, 9/06

U.S. Cl. 317-61

16 Claims



An arcing chamber for a spark gap, such as those utilized in current limiting lightning arresters, characterized by having an inclined or curvilinear arc-lengthening passageway that functions to maintain the path of movement of an arc forced into the arcing chamber substantially perpendicular to the curvilinear lines of flux of a magnetic field established in the chamber for driving an arc from the spark gap into the chamber. Thus, maximum arc moving efficiency and maximum arc voltage is attained in utilizing the magnetic field.

3,515,948

LIGHTNING ARRESTOR ASSEMBLY

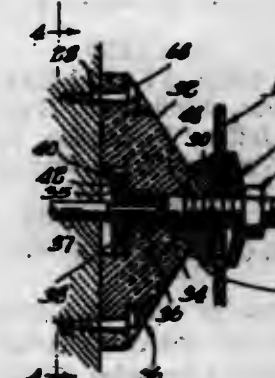
Charles Edward Gutshall, Roselle, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed June 20, 1968, Ser. No. 738,673

Int. Cl. H02h 1/04, 3/22

U.S. Cl. 317-61

11 Claims



A lightning arrestor assembly comprising a base of insulating material, a grounded, threaded terminal stud

mounted in the base, a first terminal nut member of electrically conductive material mounted on the terminal, the terminal nut including a plurality of ribs extending from one surface thereof and a retaining nut also mounted on the terminal. An antenna lead-in wire is sandwiched between the nuts with the ribs penetrating the insulation of the wire without making contact with the conductors thereof. In the event the antenna is struck by lightning, the weakened insulation burns through, grounding the antenna.

3,515,949

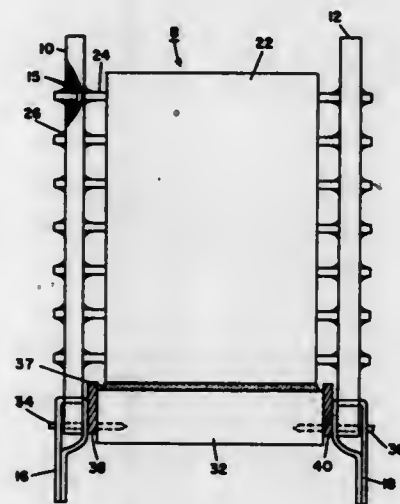
3-D FLATPACK MODULE PACKAGING TECHNIQUE

Leonard A. Michaels, Baltimore, and Albert Manley Sullivan, Jr., Ellicott City, Md., assignors, by mesne assignments, to The Bunker Ramo Corporation, Oak Brook, Ill., a corporation of Delaware
Filed Nov. 22, 1967, Ser. No. 685,022

Int. Cl. H05k 7/04

U.S. Cl. 317-101

15 Claims



A module for packaging flat electronic circuit elements such as flatpacks which includes two circuit boards each of which has a matrix of plated-through holes which boards are positioned parallel to each other and are spaced apart by a predetermined distance. Printed circuit wiring interconnecting selected holes appears on at least one side of each of the boards. A plurality of flatpacks or similar wafer-like circuit elements are arranged in an array between the boards with each lead of a flatpack projecting through a corresponding hole on a circuit board. The leads are physically and electrically secured to the plated-through material of the boards by soldering or a similar technique. Passive or other flat circuit elements may be interspersed between the flatpacks and the entire module may be encapsulated and/or covered with a layer of shielding material. The individual modules may be arranged as building blocks to form a larger circuit.

3,515,950

SOLDERABLE STAINLESS STEEL

Edwin Russell Koons, Whiteland, Ralph G. Parker, Jr., Shelbyville, and Jeffrey P. Rupley, Lawrence, Ind., assignors to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Feb. 14, 1968, Ser. No. 705,372

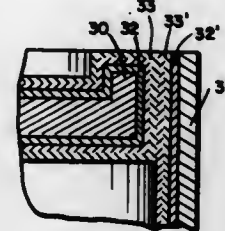
Int. Cl. H01g 1/02, 9/00

U.S. Cl. 317-230

7 Claims

Means and method for rendering solderable a stainless steel body resistant to corrosive attack from common electrolytes. The method includes the steps of covering at least one surface of a stainless steel body with layers of metal including a first metal layer selected from the group consisting of nickel, cobalt and chromium which

serves as a barrier layer to the diffusion of a subsequent metal layer or layers therethrough to the stainless steel body. The subsequent metal layer is resistant to corrosive attack from common electrolytes and is solderable. The subsequent metal layer consists of silver alloyed with a noble metal selected from the group consisting of gold, palladium, platinum, rhenium and osmium. The alloy layer may be formed by covering the barrier layer with a



layer of silver and then a layer of gold or one of the other metals. The layered stainless steel body is heated to a temperature below the melting point temperature of the metal layer having the lowest melting point so that the layers, with the exception of the barrier layer, diffuse into one another, thereby forming the alloy layer overlying the barrier layer which is resistant to corrosive attack from common electrolytes and is solderable. The stainless steel body is rendered solderable.

3,515,951

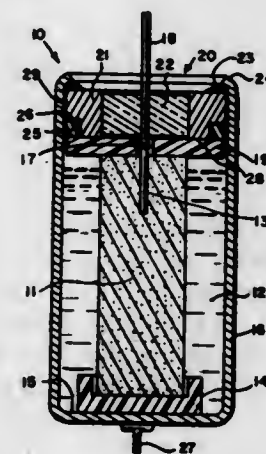
HERMETICALLY SEALED ELECTROLYTIC CAPACITOR

Stanley L. Krasienko, Indianapolis, Ind., and John D. Howell, Lake Park, Fla., assignors to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Apr. 15, 1968, Ser. No. 721,234

Int. Cl. H01g 9/05, 9/10

U.S. Cl. 317-230

15 Claims



Means and methods for substantially preventing materials contained within a capacitor can having an open end closed by a glass-to-metal seal for forming a reaction product with the surface or surfaces of the glass-to-metal seal and the surface or surfaces of the can which are to be connected together by soldering, welding or the like. The means may be a resilient means cooperatively associated with the glass-to-metal seal and the side wall of the can.

3,515,952

MOUNTING STRUCTURE FOR HIGH POWER TRANSISTORS

Peter T. Robinson, Scottsdale, Ariz., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Feb. 17, 1965, Ser. No. 433,422

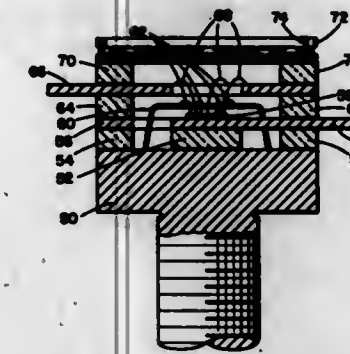
Int. Cl. H01l 1/12, 1/14

U.S. Cl. 317-234

10 Claims

A mounting structure for high power transistors to be operated in the VHF-UHF region. The major portion of

the mounting structure is used as a low impedance path for making electrical connection to the emitter region of the transistor, and also as a highly conductive thermal path for removing heat from the collector region. A thin



spacer element consisting of a thermally conductive and electrically non-conductive material such as beryllia or alumina, for example, is positioned between the major mounting structure and the collector electrode.

3,515,953

ADAPTIVE DIODE HAVING MOBILE DOPING IMPURITIES

Ronald B. Schilling, East Brunswick, and Charlotte Dobin, Trenton, N.J., assignors to RCA Corporation, a corporation of Delaware
Filed Mar. 21, 1967, Ser. No. 624,923

Int. Cl. H01l 5/00

U.S. Cl. 317-234

3 Claims



An adaptive diode capable of being repeatedly switched between a resistive state and a rectifying state. The device comprises a body of semiconducting germanium having an N-type region doped to saturation with a mobile impurity, such as lithium. Part of the lithium is present as a separate phase in the form of discrete inclusions capable of migrating in the body under the influence of an applied electric field. The device also includes an alloyed P-type region composed of indium and either lead or tin. The device is switched from the resistive state to the diode state by application of a heavy current forward bias on the P-N junction. Switching from the diode to the resistive state is accomplished by a heavy current reverse bias.

3,515,954

OHMIC CONTACT TO SEMICONDUCTOR

Elchi Maruyama, Hachioji-shi, and Ikue Uchino, Tachikawa-shi, Japan, assignors to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan
Filed May 5, 1967, Ser. No. 636,348

Int. Cl. H01l 1/10, 7/10

U.S. Cl. 317-234

9 Claims



An ohmic contact to a semiconductor is maintained not only at room temperature but also very low temperatures by providing a layer of degenerate carriers in the

surface of the semiconductor crystal at which the contact is made by introducing an impurity into the semiconductor crystal to a concentration of $10^{17}/\text{cm}^3$ or more.

3,515,955

SEMICONDUCTOR ARRANGEMENT

Claus Butenschön, Nuremberg, Germany, assignor to Semikron Gesellschaft für Gleichrichterbau und Elektronik m.b.H.

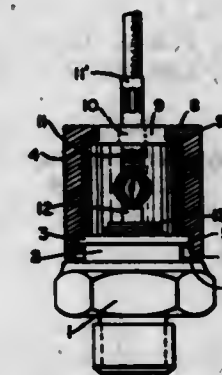
Filed Oct. 10, 1967, Ser. No. 674,255

Claims priority, application Germany, Oct. 27, 1966, S 106,742; Dec. 15, 1966, S 107,421

Int. Cl. H01l 1/12, 1/14

U.S. Cl. 317-234

30 Claims



A semiconductor arrangement, having a prepared semiconductor wafer with at least one pn-junction mounted on a metal base and encapsulated by a cup-shaped top which is joined to the base. The side of the wafer facing away from the base is in contact with an additional current conductor which, in turn, is connected to a lead-in that passes through a plate that forms part of the top. A casing, which forms the other part of the top and which is preferably made of plastic or plastic covered wire lattice, is attached at its lower edge to the base and at its upper edge to the plate so as to form, at both places a mechanically strong and hermetically sealed bond. Both the base and the plate are provided with attachment means which engage attachment means on the lower and upper edges of the casing, respectively, to form the bond.

3,515,956

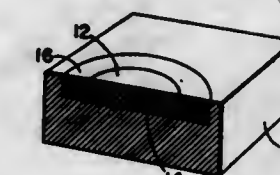
HIGH-VOLTAGE SEMICONDUCTOR DEVICE HAVING A GUARD RING CONTAINING SUBSTITUTIONALLY ACTIVE IONS IN INTERSTITIAL POSITIONS

Frederick W. Martin, Braband, Denmark, and Stanley Harrison, Bedford, Mass., assignors to Ion Physics Corporation, Burlington, Mass., a corporation of Delaware
Filed Oct. 16, 1967, Ser. No. 675,519

Int. Cl. H01l 7/54, 9/00

U.S. Cl. 317-234

1 Claim



A process for treating a semiconductor device to control the surface charge on semiconductor bodies thereby reducing the leakage current and increasing the effective breakdown voltage of the device which comprises the

irradiation of the device with a sufficient number of ions of a selected type and energy to implant the substitutionally active ions beneath the surface of the device in interstitial positions and create carrier trapping centers and thereby change the surface resistance of the device. This irradiation is concentrated in a small area surrounding the active P-N junction of the device to create a guard ring around the junction and to prevent the creation of inversion states or accumulation layers on the surface of the device thereby controlling the amount of mobile carriers in the semiconductor surface layers and to reduce the leakage current and increase the effective breakdown voltage of the device.

3,515,957

SEMICONDUCTOR DEVICE HAVING LOW CAPACITANCE JUNCTION

Noriyoshi Kitagawa, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed May 15, 1968, Ser. No. 729,294

Claims priority, application Japan, May 19, 1967, 42/31,825

Int. Cl. H011 11/00

U.S. Cl. 317—235

9 Claims



A semiconductor device having a very low junction capacitance and a method for making same is described wherein a pair of junction forming semiconductor materials are placed on a surface of an insulating substrate with the junction extending substantially transverse to the substrate surface. A specific circular configuration is described.

3,515,958

ELECTRICAL COMPONENT WITH ATTACHED LEADS

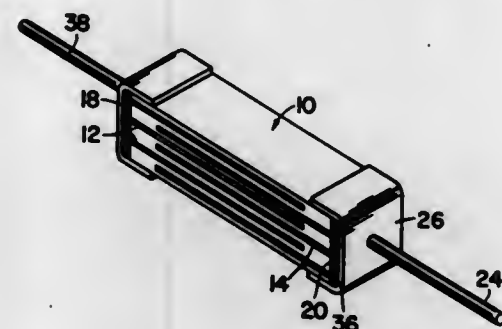
Stewart A. Claypoole, Painted Post, and Martin M. Mertsoc, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Original application Nov. 5, 1965, Ser. No. 506,510, now Patent No. 3,439,395, dated Apr. 22, 1969. Divided and this application Nov. 4, 1968, Ser. No. 773,177

Int. Cl. H01g 1/14

U.S. Cl. 317—242

4 Claims



An electrical element to which a lead assembly having a wire lead and a U-shaped terminal is attached. A bond between the terminal and the end of the element comprises a metallic coating fired onto the end of the lead and a bonding medium fused to the coating and the terminal.

3,515,959 PLURAL MOTOR PROPORTIONAL SPEED CONTROL USING PULSE RESPONSIVE SPEED CONTROLS

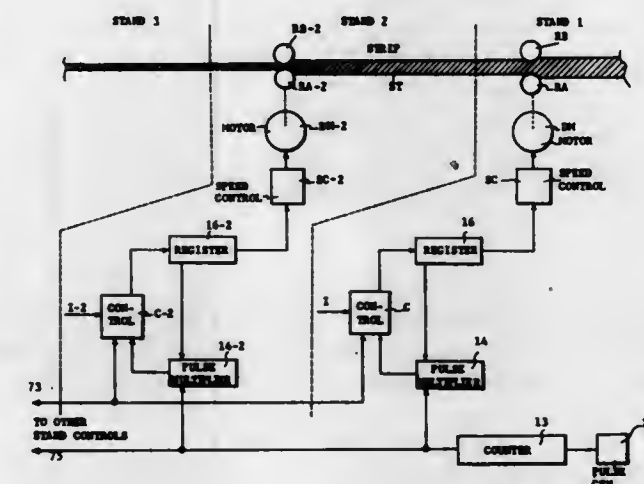
Dale H. Jackson, Salem, Va., assignor to General Electric Company, a corporation of New York

Filed Apr. 19, 1967, Ser. No. 632,053

Int. Cl. H02p 5/46

U.S. Cl. 318—7

8 Claims



A control for regulating the speeds of the rolls of the stands of a multi-stand rolling mill proportionately from stand to stand using pulse responsive speed controls for each stand including a common pulse generator, a pulse frequency converter, pulse multiplier units for each of the stands, and a shift register control for governing the magnitude of the pulse frequency fed to each speed control via the multiplier units.

3,515,960

AUTOMATIC MOTOR SHUT-OFF NETWORKS FOR SIGNAL SEEKING RECEIVERS

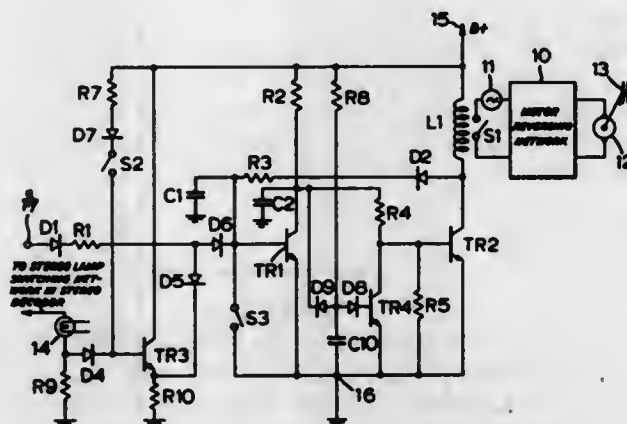
Jacob Buhr, Kitchener, Ontario, Canada, assignor to Electrohome Limited, Kitchener, Ontario, Canada

Filed Dec. 19, 1966, Ser. No. 602,941

Int. Cl. H04b 1/32

U.S. Cl. 318—16

8 Claims



The motor which drives the tuning condenser of a signal seeking receiver is stopped automatically (a) in response to the tuning of the receiver to a signal of sufficient strength and (b) after the motor has been operating for a predetermined period of time without the receiver being tuned to such a signal, the latter being accomplished by the charging of a capacitor while the motor is operating and the automatic stopping of the motor when the capacitor charges to a predetermined voltage, this being followed by discharging of the capacitor while the motor is stopped.

3,515,961 SYNCHRONIZING APPARATUS FOR A CLOSED LOOP SERVO SYSTEM

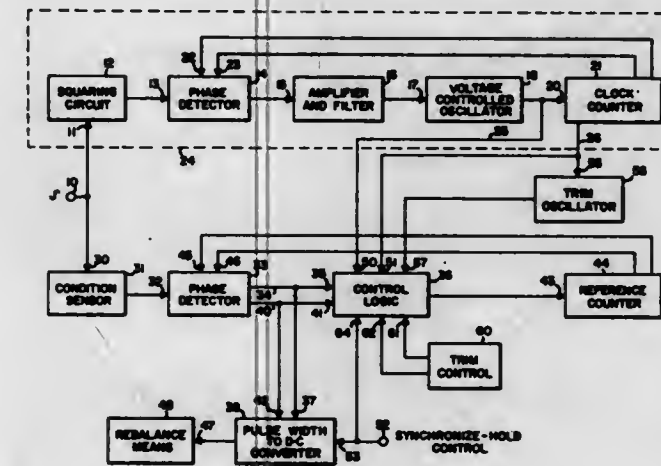
Rufus Allen, Jr., Richardson, Tex., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Jan. 21, 1966, Ser. No. 522,103

Int. Cl. G05b 11/14

U.S. Cl. 318—18

10 Claims



A synchronizer is disclosed which accepts an input signal and phase modulates it. The phase modulated signal is compared to an output signal of a counter and a phase error signal is generated. During the synchronize mode of operation the phase error signal is used to advance or retard the counter to synchronize the phase of the counter output signal to the input signal. During the hold mode of operation, the phase error signal is used to rebalance a system.

3,515,962

POSITION CONTROL DEVICE FOR MACHINE TOOLS AND SIMILAR EQUIPMENTS

Joseph Elbling, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy

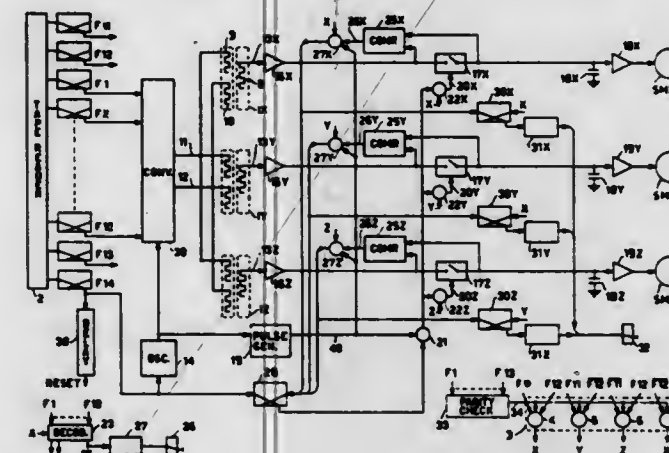
Filed Oct. 2, 1964, Ser. No. 400,986

Claims priority, application Italy, Oct. 7, 1963, 20,853/63

Int. Cl. G05b 19/18, 19/24

U.S. Cl. 318—18

8 Claims



In a control device for moving a member of a machine-tool along a predetermined trajectory, a servosystem is responsive to positional orders applied thereto for moving said member and supplied by a program tape having recorded thereon successive orders, each one associated to an address identifying said order as pertaining to a particular displacement axis or auxiliary function means, and the bits of each order being recorded in parallel on a single transverse row of said tape along with the associated address bits.

3,515,963

OUTLINE FOLLOWING APPARATUS

Brian Yoxall Moss, Thornton Heath, England, assignor to Morfax Limited, Mitcham, Surrey, England, a corporation

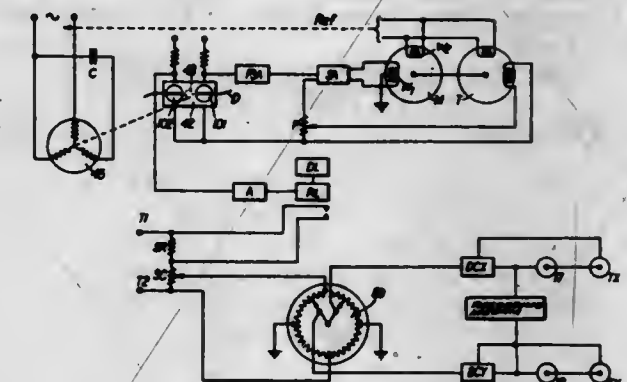
Continuation-in-part of application Ser. No. 594,768, Nov. 16, 1966. This application Sept. 29, 1967, Ser. No. 671,682

Claims priority, application Great Britain, Sept. 5, 1967, 40,465/67

Int. Cl. G05b 11/06

U.S. Cl. 318—18

11 Claims



An outline following device for controlling machining operations directly or for producing recordings for machine tool control comprises a rotatable member forming part of a follower head assembly and incorporating at least one light-sensitive device driven with an oscillatory motion by a synchronous rotary motor and in which the rotatable member is steered by means of a servo motor operated responsively to signals derived from the light-sensitive device or devices so as to maintain a constant relation between the oscillatory motion of the light-sensitive device and the particular part of the outline being followed, such device further including means to impart a translatory co-ordinate motion to said head assembly responsively to the rotary position of said member so that the head assembly moves progressively along said outline and follows the configuration thereof.

3,515,964

NUMERICALLY CONTROLLED SERVOMECHANISM INCLUDING POSITION OFFSET

Kiyokazu Okamoto, Masahiro Yoshioka, Takeo Ando, and Masatoshi Suzuki, Tokyo, Japan, assignors to Nippon Electric Company Limited, Tokyo, Japan

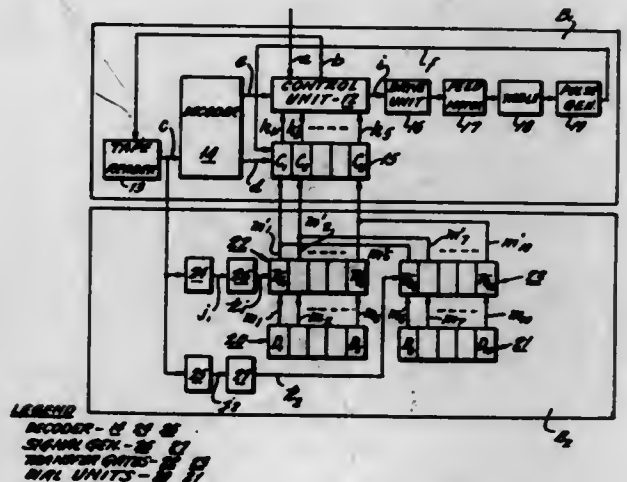
Filed Jan. 22, 1968, Ser. No. 699,423

Claims priority, application Japan, Jan. 24, 1967, 42/4,710

Int. Cl. G05b 19/22

U.S. Cl. 318—18

5 Claims



Apparatus for automatically controlling machine tools including means responsive to a pre-programmed tape containing control signals for standardized operations and

second means for pre-setting variations in machine tool operation from workpiece-to-workpiece which automatically assumes control of the first means to position the workpiece in the presence of selective signals provided in the command tape in each position in which an operation which varies from workpiece-to-workpiece is located.

3,515,965

LOW FREQUENCY MAGNETOSTRICTIVE FLEXURAL TRANSDUCER

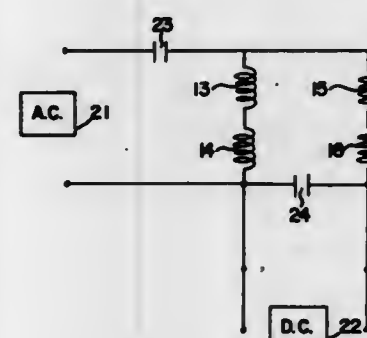
Adelbert Semmelink, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed June 30, 1969, Ser. No. 837,499

Int. Cl. H01v 9/00

U.S. Cl. 318-118

10 Claims



The transducer consists of a stack of laminations of magnetostrictive material having the shape of a parallelogram with a center leg, which may be slotted, along the major axis. The major axis of the parallelogram is considerably longer than the minor axis. The four sides or outer legs of the transducer as well as its center bar are each provided with a winding of several turns. The direction of the currents in the windings is so arranged that when the outer leg expands, the center leg contracts and vice versa. The resulting motion is a large flexural vibration of the sides coupled with a small longitudinal vibration of the center leg.

3,515,966

MOTOR AND PUMP COMBINATION FED BY A DIRECT CURRENT OR RECTIFIED CURRENT POWER SOURCE

Pierre Albert Marie de Valroger, 21 Rue Saint-Guillaume, 75 Paris 7e, France, and Marius Lavet, 36 Rue Gabrielle, 75 Paris 18e, France

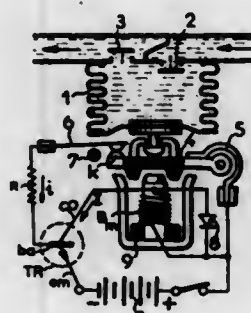
Filed Apr. 19, 1968, Ser. No. 722,585

Claims priority, application France, Apr. 21, 1967, 103,604

Int. Cl. H02k 33/10

U.S. Cl. 318-127

8 Claims



A reciprocatory electric motor comprises a transistor connected between a source of potential and a motor winding and triggering means including a mechanical

switch or a pick-up coil or the like connected to the transistor to vary the voltage on the control electrode in accordance with the position of the movable unit.

3,515,967

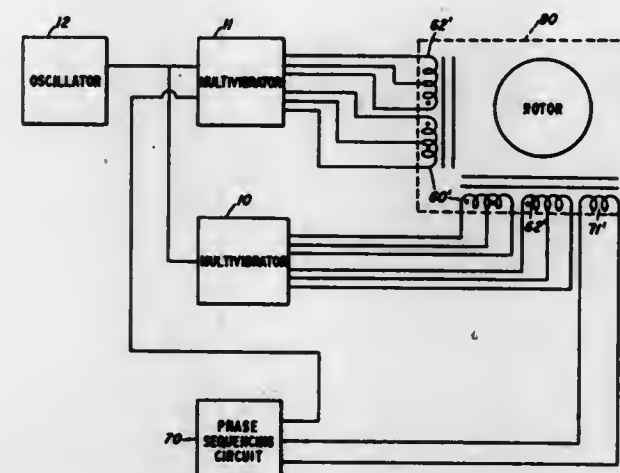
TWO-PHASE POWER SUPPLY AND MOTOR
John A. McLaughlin, St. Clair Shores, Mich., and Rudolf A. van Eck, Palos Verdes Estates, Calif., assignors to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware

Filed Dec. 27, 1967, Ser. No. 693,940

Int. Cl. H02k 27/00

U.S. Cl. 318-138

8 Claims



A static inverter and particularly a static inverter for providing two alternating current output voltages related in phase by 90° from a source of unidirectional voltage and including circuit improvements for accurately maintaining the desired displacement between the two output phases and for controlling their time sequence.

3,515,968

COMBINATION ELECTRIC AND INTERNAL COMBUSTION POWER UNIT FOR AUTOMOBILES

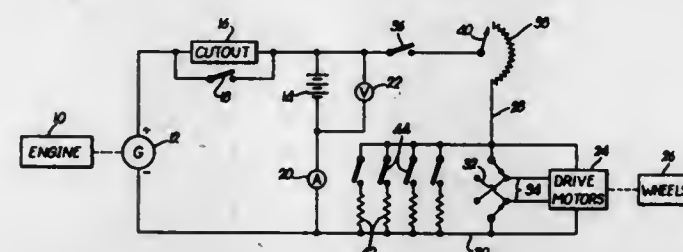
Francis W. Crawford, Manhattan, Kans., assignor to Kansas State University Research Foundation, Manhattan, Kans., a corporation of Kansas

Filed Mar. 6, 1968, Ser. No. 711,065

Int. Cl. B60l 17/12

U.S. Cl. 318-139

1 Claim



A power plant for an automotive vehicle utilizes traction motors for driving the wheels or tracks, such motors being excited by a rechargeable battery or an electric generator driven by a relatively small internal combustion engine and connected in parallel with the battery. Surge demands in excess of the power available from the generator are supplied by the battery which discharges in response to such demands. The power of the engine is purposely limited to hold the generator to a maximum output level equal to the average power requirement of the motors plus the power required to charge the battery between

surges. Thus, the engine-generator is capable of supplying the motors only under relatively low performance operating conditions such as would be encountered, for instance, in driving on a level road at moderate cruising speeds. Since the battery recharges between surges, the vehicle is provided with an extended operating range as compared with battery powered, all-electric vehicular power plants. The internal combustion engine may be operated at a relatively constant speed and designed for maximum efficiency of fuel combustion, thus pollution of the atmosphere by the exhaust from the engine is materially reduced as compared with vehicles powered solely by internal combustion engines. Electric brakes are provided by a dissipative load which is selectively connected to the drive motors for use when the latter are disconnected from the generator and battery and the vehicle is in motion.

3,515,969

TRIGGER CIRCUIT FOR INVERTER

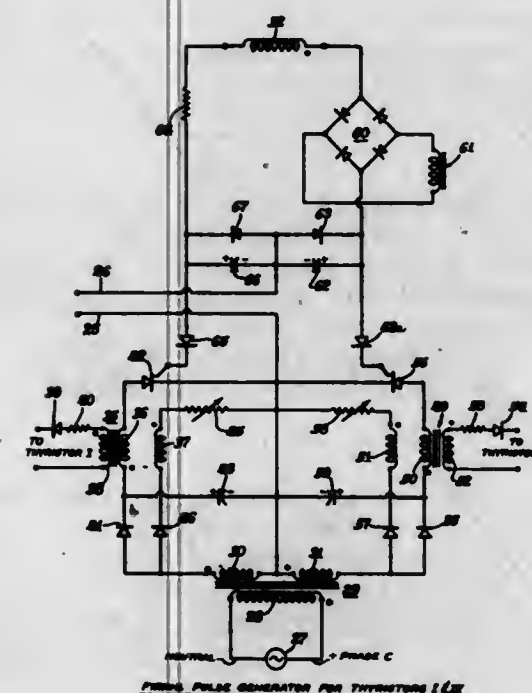
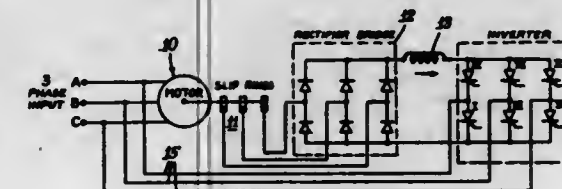
Lee T. Magnuson, Davenport, Iowa, and Alexander Knisko, Newton Center, and John C. Baker, Carlisle, Mass., assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed July 15, 1968, Ser. No. 744,726

Int. Cl. H02p 7/36

U.S. Cl. 318-195

7 Claims



A trigger circuit generates an output pulse which extends for a predetermined angular or phase duration of a sinusoidal source voltage. The relative angle for initiation of the trigger pulse is predetermined by a signal level representative of the desired firing angle; and this constant signal is fed to the trigger circuit. A controlled switch receives both the level signal and a ramp signal having a timed relation with the source for comparing them. When the ramp signal reaches a predetermined

amplitude determined by the level signal, it fires the switch which permits a capacitor, on which a charge had been stored during the previous half-cycle of the source, to discharge through a pulse transformer which had been reset on the previous half-cycle of the source. As the frequency of the source decreases, so does the amplitude of the source and the magnitude of the voltage on the storage capacitor. The setting of the pulse transformer, which generates the output pulse, is extended over the same phase displacement relative to the source for a continuous range of source frequencies; and thus the output pulse width maintains a constant phase relation with the source.

3,515,970

MOTOR CONTROL SYSTEM USING CURRENT DIVERTER

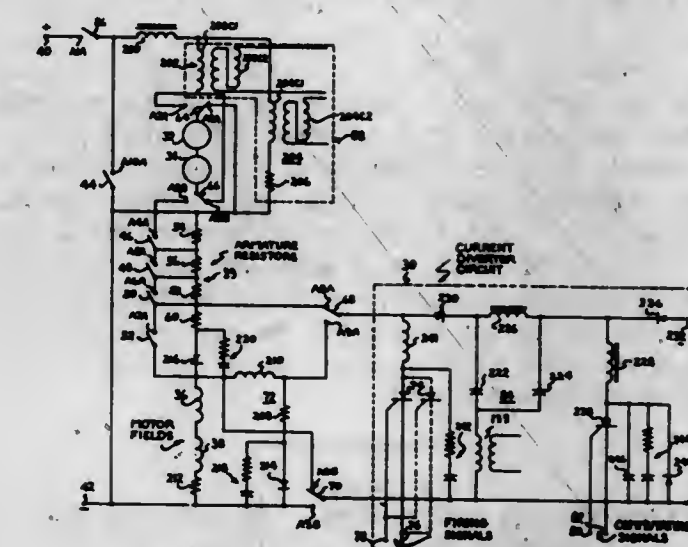
Ernest F. Weiser, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed June 13, 1967, Ser. No. 645,747

Int. Cl. H02p 1/20

U.S. Cl. 318-249

35 Claims



A motor control system for controlling tractive effort produced by direct-current traction motors wherein a current diverter or chopper circuit provides a low impedance path which shunts current away from a motor field circuit or away from one of a plurality of series armature resistors for gradually varying portions of successive timing cycles to control the field excitation and the series armature resistance, respectively. When the field excitation is controlled, the diverter is connected through an RL shunting circuit to the field circuit itself. Significantly, a single controlled diverter circuit gradually decreases the series armature resistance. When the series armature resistance is controlled, one of the armature resistors is shunted by a switch each time the effective resistance of the diverter shunted armature resistor is decreased by an amount of the switch shunted resistor. Simultaneously, the diverter shunted resistor is reinserted by defining the diverter circuit.

Various control circuits in the motor control system synchronize the firing of controlled rectifiers of the current diverter with the opening and closing of various switches in the motor power circuit and with other events, such as the charging of commutating capacitors for these controlled rectifiers. A maximum rate at which changes in tractive effort can occur is established by a regulating circuit. A phase lead or differentiating network responds to the rate of change of the regulated armature current or armature voltage to compensate for the lagging response of the system to errors in the generation of tractive effort.

3,515,971

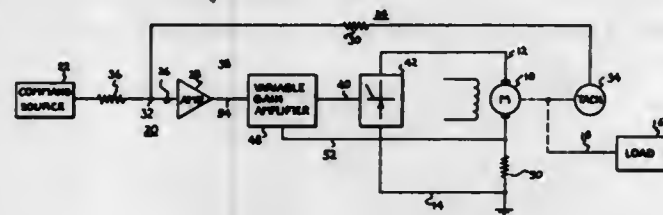
MOTOR CONTROL SYSTEM WITH FEEDBACK AND VARIABLE GAIN AMPLIFIER RESPONSIVE TO CURRENT

John A. Joslyn and William J. Lubitz, Dalton, Mass., assignors to General Electric Company, a corporation of New York

Filed Sept. 7, 1967, Ser. No. 666,061
Int. Cl. H02p 5/00, 7/24

U.S. Cl. 318—308

6 Claims



Relates to obtaining a linear response from motor control systems when controlled rectifiers contained in phase controlled power amplifiers for these systems are fired at small firing angles, that is, when their firing is in a retarded condition during any half-cycle of an alternating-current input voltage. In order to linearize the relationship between the magnitude of motor current produced for various input signal voltage levels, a voltage amplifier having a gain which, at these small firing angles, varies non-linearly with the magnitude of the motor current, is placed between a source of these input signals and the power amplifier itself. In one embodiment of this invention, the gain of this voltage amplifier is appropriately varied by allowing a signal proportional to the magnitude of the motor current to control the source-to-drain resistance of a field effect transistor in an input attenuator circuit of the voltage amplifier.

3,515,972

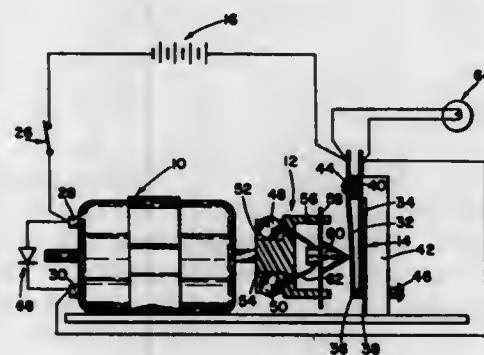
CENTRIFUGAL SWITCHING MEANS FOR D.C. MOTOR SPEED CONTROL

James E. Hurst, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Apr. 22, 1968, Ser. No. 723,093
Int. Cl. H02p 5/08

U.S. Cl. 318—325

10 Claims



This invention relates to a centrifugal switch for controlling the speed of a battery powered motor. Two weighted members are suspended by a cable-leaf spring in combination, supported in a housing mounted on the motor shaft, the arrangement being such that when a predetermined speed is exceeded, an insulating member carried by the leaf spring is axially displaced in a direction so as to reduce the pressure on a pair of resilient conductive members, permitting the contacts which they carry to open to thereby de-energize the electric circuit to the motor. As the motor slows down, the centrifugal

force on the weighted members is lessened, and under the restoring discipline of the leaf spring, the insulating member is displaced in the opposite direction so as to force the contacts into electrical union to restore the electrical continuity to the motor circuit.

3,515,973

CONSTANT POWER SOURCE PERIODICALLY ENERGIZED LOADS

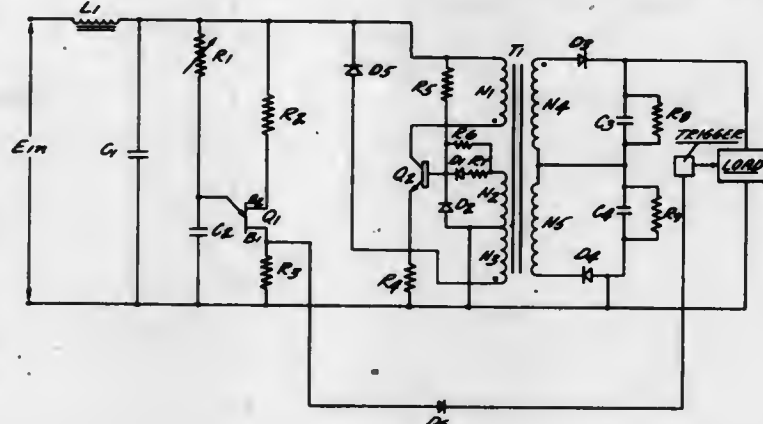
Austen V. Powell, Deep River, Conn., assignor to Austin Electronics, Inc., Deep River, Conn., a corporation of Connecticut

Filed Sept. 1, 1967, Ser. No. 665,121
Int. Cl. H02m 3/06

U.S. Cl. 320—1

14 Claims

A power source for supplying constant output power to a periodically operated load, the source employing a ring choke static inverter to provide, from a direct current supply, alternating current to the load via a diode. Operation of the inverter results in modulation of the direct current supply voltage at the frequency of conversion. A timing circuit comprising a unijunction transistor is connected across the direct current supply and the



modulation of the supply voltage aids in triggering the unijunction transistor at the proper time, triggering of the unijunction transistor causing generation of a load operation command pulse.

3,515,974

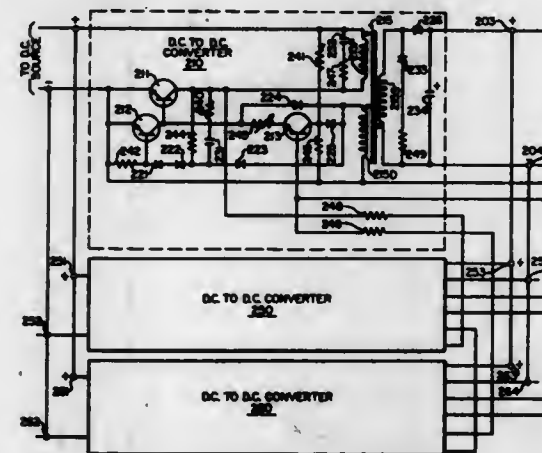
DC TO DC POWER SUPPLY WITH ISOLATED CONTROL CIRCUIT

Frederick A. Stich, Hales Corners, Wis., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed May 22, 1968, Ser. No. 731,024
Int. Cl. H02m 3/32, 7/98; H03k 3/30

U.S. Cl. 321—2

9 Claims



A transistorized power supply for converting a first DC voltage to a second DC voltage, employing a transistor as a series switching element and control circuitry including an oscillator for determining the switching rate

so as to provide a regulated output voltage, irrespective of load condition and providing a high degree of isolation between the load circuit and the series switching element.

the alternating current output signal of the cycloconverter and in particular when the output signal most nearly approaches zero current. In response to the

3,515,975

CURRENT TO VOLTAGE TRANSDUCER

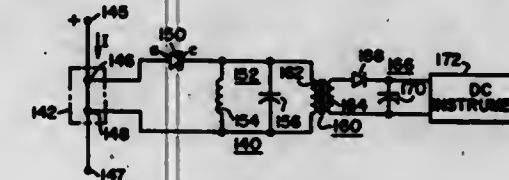
William H. South, McKeesport, and Roger A. Dworak, Natrona Heights, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 28, 1968, Ser. No. 741,072

Int. Cl. H02m 3/22; H03b 7/08; G01r 19/26

U.S. Cl. 321—2

8 Claims



A DC current to AC voltage transducer circuit which utilizes a current shunt, a tunnel diode oscillator, and a transformer, to provide an AC voltage having a magnitude which is proportional to the magnitude of the DC current flowing through the current shunt.

3,515,976

SWITCHGEAR STRUCTURE FOR HIGH D.C. VOLTAGES

Jérôme Huret and Michel Chevalier, Paris, and Raymond Rocherolles, Sceaux, France, assignors to Compagnie Generale d'Electricite, Paris, France, a French corporation

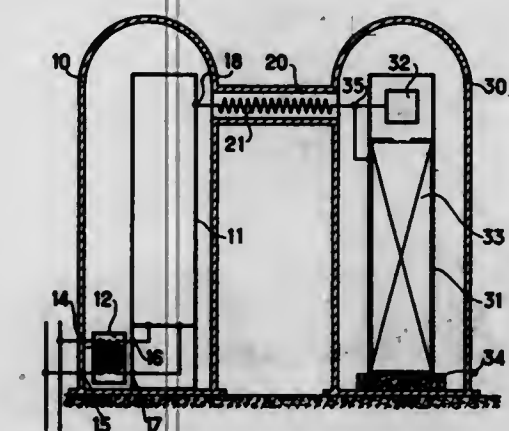
Filed June 10, 1968, Ser. No. 735,897

Claims priority, application France, June 9, 1967, 109,889; June 23, 1967, 111,776

Int. Cl. H02m 7/00; H02j 7/00

U.S. Cl. 321—8

9 Claims



HT power supply apparatus contained in a first conducting enclosure and a load apparatus to be supplied in a second conducting enclosure, both enclosures being joined together at the top by means of a tube containing a resistor of a unique design which electrically connects the load apparatus to the power supply.

3,515,977

CYCLOCONVERTER BLANKING CIRCUIT

Raymond B. Diczazy, Chagrin Falls, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

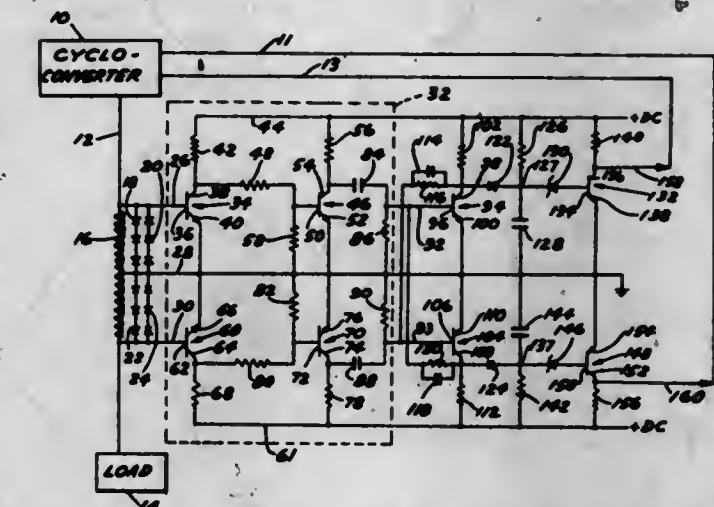
Filed July 24, 1968, Ser. No. 747,233

Int. Cl. H02m 1/08, 5/00

U.S. Cl. 321—18

1 Claim

A trigger signal generating circuit means for a cycloconverter. Circuit means are provided for generating first and second trigger signals in response to the polarity of



trigger signals, control circuit means supply switching signals for controlling the cycloconverter so that the cycloconverter output signal minimizes distortion.

3,515,978

ALTERNATOR VOLTAGE REGULATORS

Malcolm Williams, Solihull, and Duncan Barry Hodgson, Leamington Spa, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England

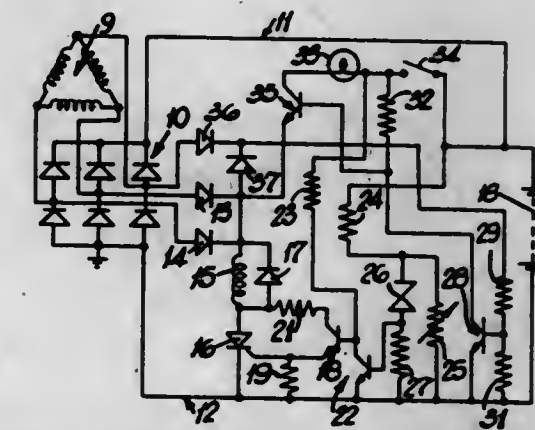
Filed May 29, 1968, Ser. No. 732,982

Claims priority, application Great Britain, June 2, 1967, 25,591/67

Int. Cl. H02p 9/30; H02j 7/24

U.S. Cl. 322—28

3 Claims



A voltage regulator for use in a battery charging system includes a thyristor in series with the field winding of the alternator, and a voltage sensing network for supplying gate current to the thyristor when the battery voltage is below a predetermined value, so that the thyristor conducts. The power for the field winding and thyristor is derived through rectifiers from a proportion only of the phases of the alternator, and so at some point during each cycle of operation of the alternator the current flow through the thyristor will be reduced to zero and it will turn off and remain off if no further gate current is supplied.

3,515,979

MAGNETIC FIELD CONTROL APPARATUS

Marcel J. E. Golay, Rumson, N.J., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Nov. 4, 1957, Ser. No. 694,427

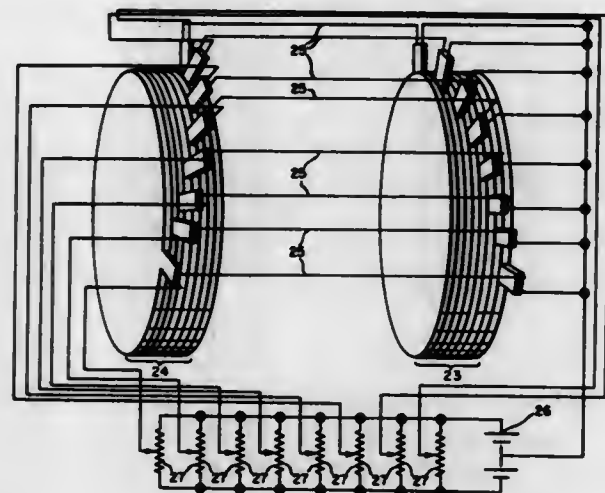
Int. Cl. G01n 27/00; H01f 5/00, 27/28

U.S. Cl. 324—5

13 Claims

16. Apparatus for improving the homogeneity of a region of magnetic field comprising a first and second separately energizable electric conductor means arranged

adjacent the region of magnetic field to be corrected, an adjustable current varying means for each said conductor means, each said conductor means being disposed to provide a corresponding homogenizing magnetic field component within said region of field that is adjustable in accordance with adjustment of said current varying means, said first and second conductor means being lo-



cated in an orthogonal relation to each other and being geometrically oriented with respect to the region of field to variously direct said components and for independent optimal adjustment of each, without materially affecting the adjustment of the other, to thereby provide a resultant magnetic field region within said region of magnetic field free of undesired inhomogeneities.

3,515,980

TAP CHANGER WITH VOLTAGE AND CURRENT RESPONSIVE PROTECTIVE MEANS

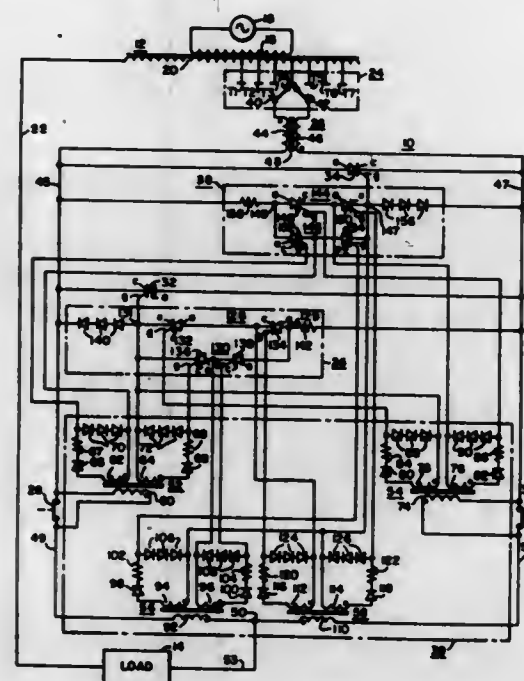
Gilbert D. Throop, West Middlesex, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 5, 1968, Ser. No. 742,576

Int. Cl. G05f 1/20

U.S. Cl. 323—43.5

12 Claims



A tap changer which protects load transfer switches from excessive arcing upon opening of the switches. Solid state logic circuitry in cooperation with voltage and current transformers provide gating signals for semiconductor switches to by-pass an opening transfer switch.

ERRATUM

For Class 324—5 see:
Patent No. 3,515,979

3,515,981

SUPER-REGENERATIVE RESONANCE SPECTROMETERS

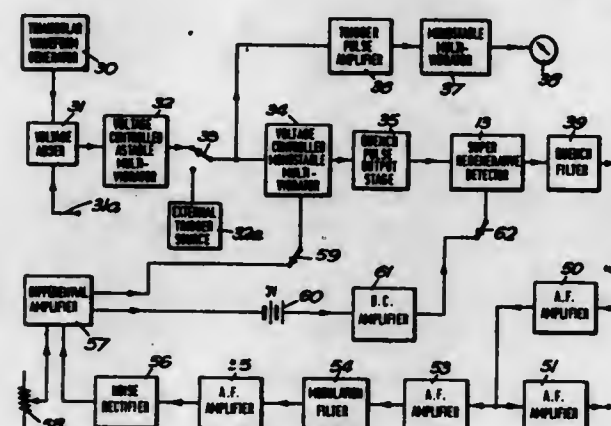
John Alec Sydney Smith, Leamington Spa, England, and David Arthur Tong, Kirkintilloch, Scotland, assignors to Decca Limited, London, England, a British company
Filed Jan. 31, 1968, Ser. No. 701,905

Claims priority, application Great Britain, Feb. 13, 1967, 6,822/67

Int. Cl. G01n 27/78

U.S. Cl. 324—5

5 Claims



A nuclear quadrupole resonance spectrometer in which the quench period is invariant with quench frequency and is varied independently of the quench frequency to provide automatic gain stabilisation of the spectrometer. A detector of random noise in the output of the spectrometer provides a control signal for varying the "on" period of a monostable multivibrator which is triggered by an astable multivibrator at a frequency that is varied to provide "sideband suppression."

3,515,982

ARRANGEMENT FOR SYNTHETIC CIRCUIT-BREAKER TESTING INCLUDING CURRENT CONTROLLED APPLICATION OF THE SIMULATED SHORT CIRCUIT CURRENT

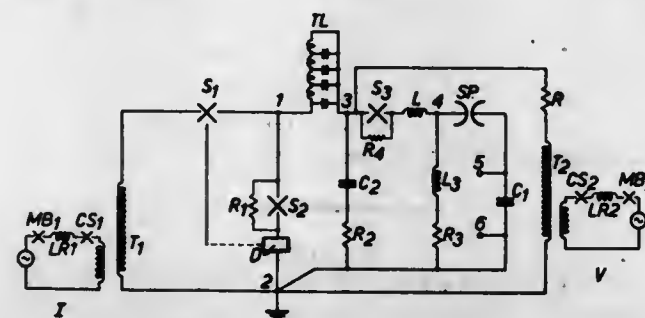
David Phillip Longworth, Lymm, Michael Alfred Sampson Hick, Stafford, and William Townsley Lugton, Hebburn, England, assignors to Associated Electrical Industries Limited and The English Electric Company Limited, both of London, England, and A. Reyrolle & Company Limited, Hebburn, England, all British companies

Filed Feb. 2, 1968, Ser. No. 702,736

Int. Cl. G01r 31/02

U.S. Cl. 324—28

11 Claims



Apparatus for make-break synthetic testing of a high power A.C. circuit breaker, comprising a voltage source for applying across the breaker the steady A.C. voltage prior to its closing and the steady A.C. recovery voltage after its opening, a separate current source for supplying the rated short-circuit current through the breaker immediately on closing thereof, and an oscillatory circuit

including pre-chargeable capacitance for applying across the breaker the transient recovery voltage resulting from its opening.

3,515,983

PHOTOCONDUCTIVE CIRCUIT FOR MEASURING CAPACITY OF ELECTRICAL CELLS

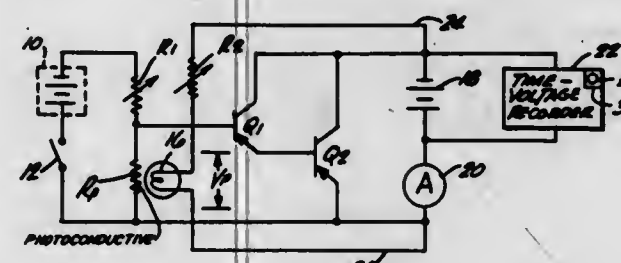
Leonhard M. Lante, Costa Mesa, Calif., assignor to McDonnell Douglas Corporation, a corporation of Maryland

Filed May 27, 1968, Ser. No. 732,380

Int. Cl. G01n 27/46; G05f 1/40

U.S. Cl. 324—29.5

9 Claims



Constant current discharge circuit for determining actual electrical capacity of battery cells. Cell is connected to discharge through transistor means which is conductively controlled in accordance with the variable resistance of a photoresistor illuminated by a lamp that is energized by the dropping output voltage of the discharging cell. Decreasing brightness of lamp inversely varies the resistance of photoresistor so that conduction through the transistor means is increased to maintain a constant discharge current. Output voltage of discharging cell is continuously recorded timewise between predetermined voltage limits to provide ampere-hour capacity of tested cell. Circuit includes sensitivity and current adjustment means.

3,515,984

APPARATUS AND METHOD FOR MEASURING DISTANCE BETWEEN SPACED MAGNETIC MEMBERS

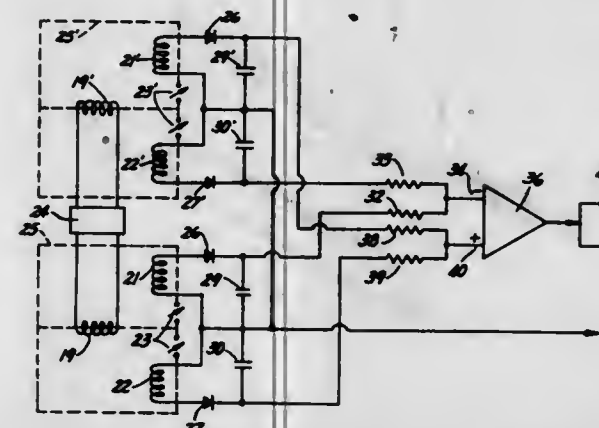
Joseph W. King, Lakewood, and Donald L. McClaren, Cleveland, Ohio, assignors to Cleveland Technical Center, Inc., Cleveland, Ohio, a corporation of Delaware

Filed Aug. 5, 1968, Ser. No. 750,063

Int. Cl. G01r 33/00; B61k 9/00

U.S. Cl. 324—34

12 Claims



Method and apparatus for continuously measuring and indicating distance between, or variations in distance between, generally parallel spaced members of substantial length such as railroad track rails. An A.C. energized primary coil and a secondary coil joined by a high permeability magnetic frame are positioned and moved adjacent each rail, constituting with it an electromagnetic

circuit including an air gap. Variations in spacing between rails and coil cores change the air gaps causing corresponding variations of the voltage induced in the secondary coils. The voltage outputs of the two magnetic circuits are compared; a change in the air gap for one magnetic circuit unaccompanied by a corresponding opposed change in the other magnetic circuit results in a comparator output indicating a change in rail spacing.

3,515,985

MAGNETOMETER INCORPORATING PROBE IN THE FORM OF A SATURABLE FERROMAGNETIC CORE SUBJECTED TO THE MAGNETIC FIELD TO BE MEASURED AND TO AN AUXILIARY EXCITING ALTERNATING FIELD

Germain Joseph Edmond Guillemin, Bagneux, France, assignor to Compagnie des Compteurs, Paris, France, a company of France

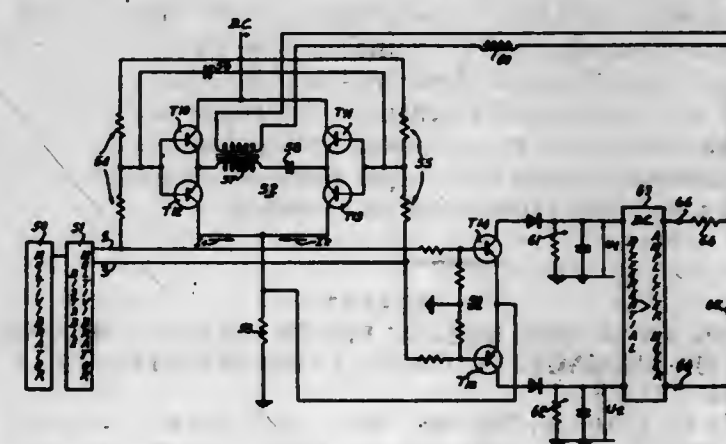
Filed Nov. 30, 1967, Ser. No. 687,932

Claims priority, application France, Dec. 28, 1966, 89,135

Int. Cl. G01r 33/02

U.S. Cl. 324—43

8 Claims



Magnetometer apparatus for detecting and measuring a magnetic field includes a probe constituted by a saturable magnetic core surrounded by an excitation winding and electrically connected to an exciting A.C. current generator by means of a symmetrical impedance matching circuit constituted by a 4-terminal bridge circuit which serves to cyclically gate a source of D.C. current connected across two non-adjacent terminals in series connection with a load resistance. A transformer provided for exciting the probe is connected between the two other non-adjacent terminals and which produces corresponding cyclic changes in the gated current in accordance with the magnitude and direction of the magnetic field actuating the probe and a measuring circuit including integrating circuits and a differential amplifier is connected to the load resistance whereby data are given in response to the magnitude and direction of the magnetic field actuating said probe as a function of the cyclic changes occurring in the gated D.C. current.

3,515,986

METHOD AND APPARATUS FOR SERIES RESONANT CORONA AND DIELECTRIC TESTING OF LONG LENGTHS OF HIGH-VOLTAGE ELECTRICAL TRANSMISSION CABLE

Stanley G. Paschel, Brewster, N.Y., assignor to Hipotronics, Inc., Brewster, N.Y.

Filed May 21, 1968, Ser. No. 730,711

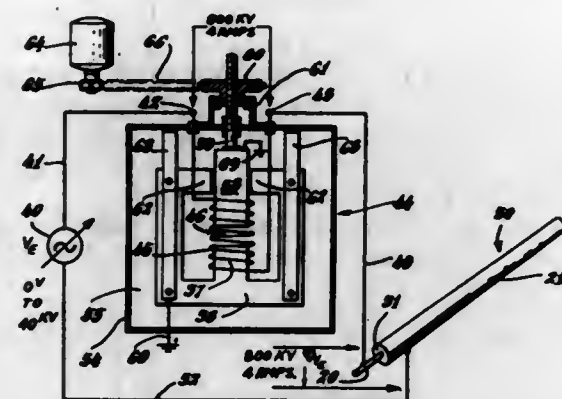
Int. Cl. G01n 31/12; H01f 21/06

U.S. Cl. 324—54

5 Claims

Method and apparatus for series-resonant corona and dielectric testing of long lengths of high voltage electrical transmission cable which enable unusually long lengths

of unusually high voltage cable to be tested conveniently and economically. The invention provides advantages when testing shorter lengths of cable at the usual voltage levels of 150,000 volts or 225,000 volts, but the advantages become greater at the higher voltages and longer lengths foreseen in the future by the inventor. A test method is disclosed in which a mechanically adjustable high-voltage



inductor is resonated directly in series with the cable capacitance of a long cable at high voltage. Three embodiments of mechanically adjustable, low flux-fringing, inductors are disclosed which are linear in inductance variation as a function of mechanical movement and are convenient and quiet to operate as well as being economical in amounts of steel and copper materials employed for a given electrical (kilovolt-ampere) rating.

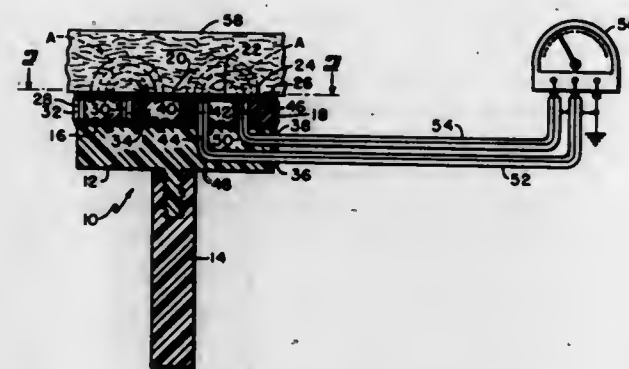
3,515,987

COPLANAR DIELECTRIC PROBE HAVING MEANS FOR MINIMIZING CAPACITANCE FROM STRAY SOURCES

John R. Zurbrick, Nashua, N.H., and Robert S. Menchel, Penfield, N.Y., assignors to Avco Corporation, Wilmington, Mass., a corporation of Delaware
Filed Oct. 20, 1967, Ser. No. 676,843
Int. Cl. H01g 7/00

U.S. Cl. 324-61

5 Claims



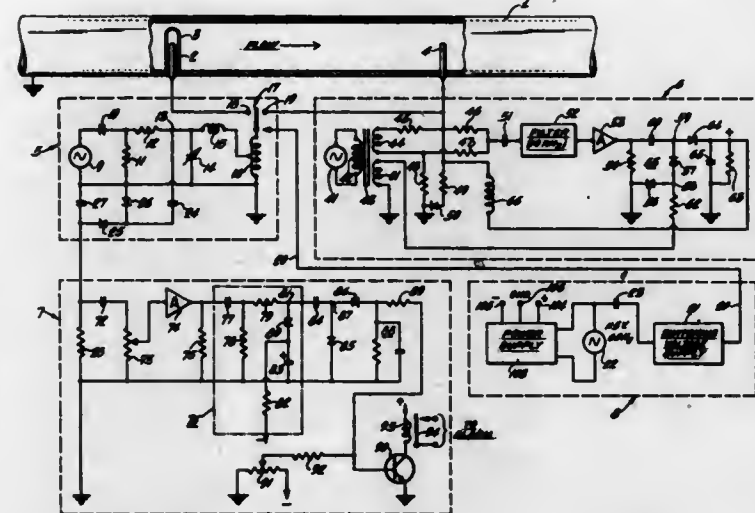
The disclosure illustrates a dielectric probe for determining material properties by measuring the material effect on an electrostatic fringe field from a pair of coplanar plate elements. The plate elements are formed on one side of a printed circuit board to provide a gap with a specific geometric pattern. A series of electrically conductive portions of the printed circuit between and surrounding the plates and on the opposite side of the board are maintained at ground potential so that the capacitance between the probe plate elements is substantially only that of the fringe field on one side of the printed circuit board. The printed circuit board is mounted on a rigid base to prevent physical deformation and change in capacitance value. The plates are connected via separate shielded cables to a remote indicating instrument.

3,515,988 STREAM ANALYZER FOR OIL-IN-WATER EMULSIONS WITH COMPENSATION FOR TEMPERATURE CHANGES AND FOR WATER CONDUCTIVITY CHANGES

Elbert N. Shawhan, West Chester, Pa., assignor to Great Canadian Oil Sands Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Sept. 12, 1968, Ser. No. 759,358
Int. Cl. G01r 27/26

U.S. Cl. 324-61

11 Claims



Apparatus utilizing a capacitive probe for continuously measuring the percentage of oil in an oil-in-water emulsion which is flowing in a stream. A reference probe compensates for capacitance changes due to variations in the temperature of the stream. An automatic compensating circuit enables the measurement of capacitance to be made independently of fortuitous and unpredictable changes which may occur in the conductivity of the water in the stream.

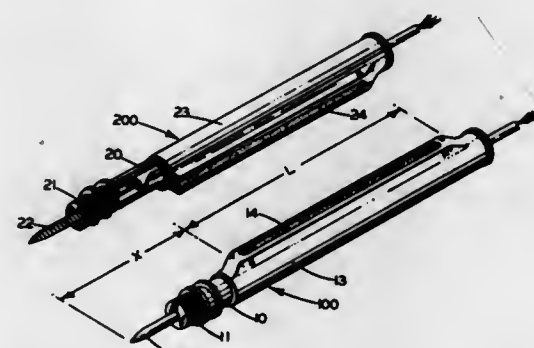
3,515,989

MAGNETIC ELECTRICAL TEST PROBES

Burtis E. Palmer, Allentown, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 2, 1968, Ser. No. 702,734
Int. Cl. G01r 31/02

U.S. Cl. 324-72.5

2 Claims



Each one of a pair of electrical test probes has an elongated magnet affixed axially along its respective handle, so oriented that the test probes are attracted to each other. The probes can be used, at the option of an operator, (1) independently, one at a time; (2) one probe in each hand; and (3) both probes in the same hand, held selectively: parallel to each other, and pivotally about a pair of unlike magnetic poles of the magnets.

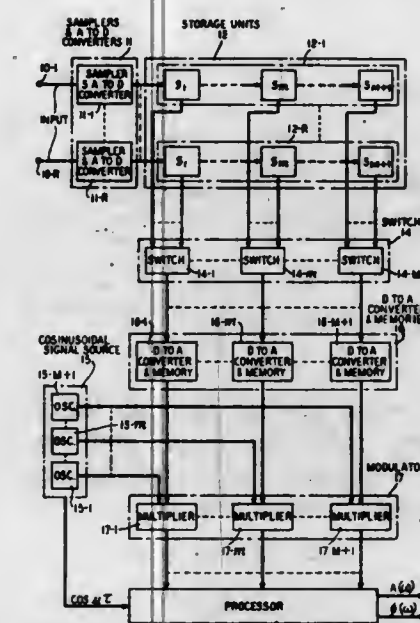
3,515,990

APPARATUS FOR OBTAINING THE AMPLITUDE AND PHASE SPECTRUMS OF A WAVEFORM

George H. Robertson, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Nov. 30, 1966, Ser. No. 597,947
Int. Cl. G01r 23/16, 27/02

U.S. Cl. 324-77

16 Claims



Samples of a waveform segment to be spectrum analyzed are stored and used to modulate the amplitudes of an equal number of sinusoids selectively spaced in frequency. The instantaneous phases of these sinusoids are such that the output signal produced by summing the modulated sinusoids contains sufficient information to yield both the amplitude and phase spectrums of the waveform segment.

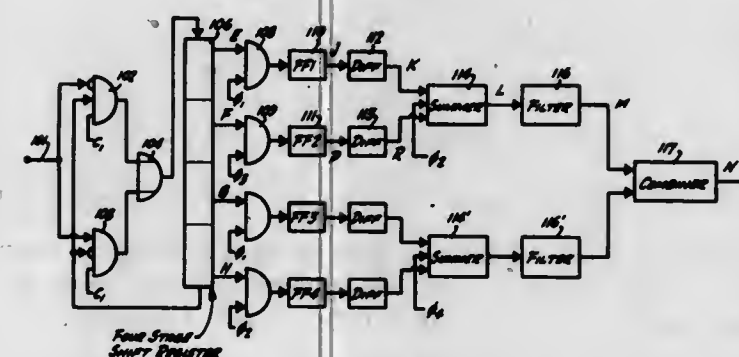
3,515,991

HIGH-SPEED CORRELATIVE DIGITAL TRANSMISSION SYSTEM WITH ORTHOGONAL COHERENT RECOVERY USING ABSOLUTE REFERENCE

Adam Lender, Palo Alto, Calif., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Oct. 31, 1966, Ser. No. 590,871
Int. Cl. H04l 27/00

U.S. Cl. 325-38

13 Claims



Method and apparatus for signal transmission by encoding input binary signals to produce level coded signals having a correlation span over three bits and dividing the level coded signals into parallel channels out-of-phase with each other. The parallel channels are combined and an out-of-phase reference signal is added thereto for achieving time orthogonality for signals and frequency orthogonality for absolute reference. There is attained four times the speed capability of binary transmission in the same bandwidth.

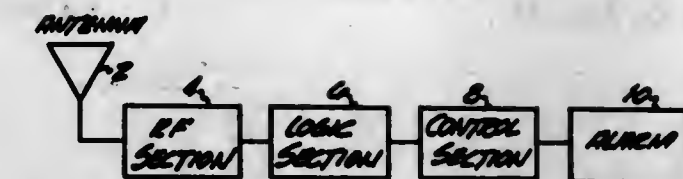
3,515,992

AUTOMATIC ALARM DETECTOR

Benjamin Rutledge Marbury, Oak Lawn, Timothy J. Keough, Rolling Meadows, and Charles James Kalensky, Chicago, Ill., assignors to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed June 9, 1967, Ser. No. 644,926
Int. Cl. H04b 1/16

U.S. Cl. 325-322

9 Claims



A system is provided for unattended monitoring of international distress signals. The system employs an RF section which responds to all signals in the frequency range of interest. The RF signals are fed to a detector which converts them to DC pulses. The pulses are fed in parallel to two threshold amplifiers. The first of these amplifiers provides an output to an automatic gain control circuit, including a constant signal generator, which adjusts the gain of the RF amplifiers so that they continue to amplify RF pulses of prescribed length, but tend to lose sensitivity to long-term RF carrier signals. The second threshold amplifier has a pad at its input terminal which introduces a 6 db loss and provides a "guard-band" between the ambient noise and the logic threshold to reduce the possibility of triggering due to noise. The second amplifier supplies DC pulses according to the intelligence in the original RF signals. The DC pulses are employed by logic circuits which provide an output signal if (1) at least 4 consecutive pulses are present, (2) the pulses have a duration between 3.5 seconds and 6 seconds, and (3) the pulses are separated by time intervals of between 10 milliseconds and 1.5 seconds duration.

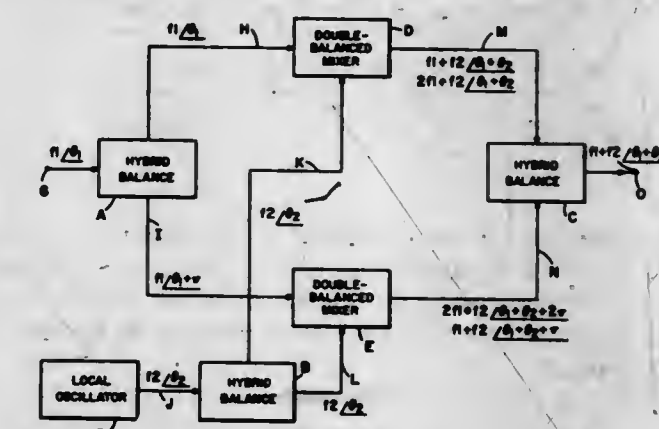
3,515,993

QUADRUPLE-BALANCE MIXER

Robert H. Merriam, North Syracuse, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Oct. 24, 1967, Ser. No. 677,800
Int. Cl. H04b 1/26

U.S. Cl. 325-446

5 Claims



A signal to be mixed is applied to a non-conjugate leg of a first hybrid balance, and a local oscillator output is applied to a non-conjugate leg of a second hybrid balance. A conjugate leg of each said balances is connected to a respective input of a first double-balanced mixer, and the other conjugate leg of each of said balances is connected to another respective input of a second double-balanced mixer. The outputs of the mixers are applied to the conjugate legs of a third hybrid, and a non-conjugate leg of the third hybrid provides the quadruple-balanced output.

3,515,994

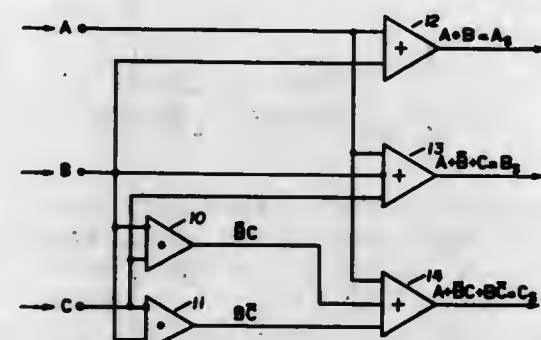
DEVICE FOR REPRODUCING BIVALENT CODE ELEMENTS REGISTERED IN A MOVING SIGNAL CARRIER

Frederik Zandveld, Beekbergen, Netherlands, assignor, by meane assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
 Filed Sept. 27, 1966, Ser. No. 582,444
 Claims priority, application Netherlands, Sept. 8, 1965, 6512524

Int. Cl. H03k 17/02

U.S. Cl. 328-92

6 Claims



Intraword synchronization in data transmission is effected by converting each information word into a sequence of inversions and permanences wherein no internal sequence in each word of more than two permanences exists, and no word begins or ends with two or more permanences.

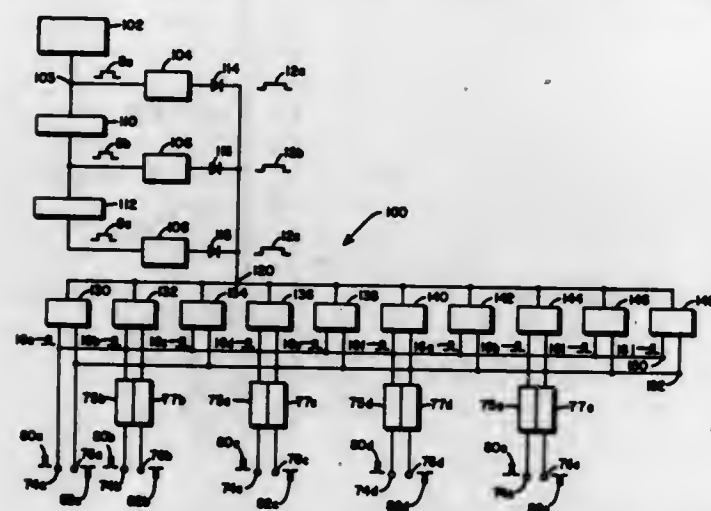
3,515,995

RADIATION HARDENED CLOCK PULSE DISTRIBUTOR

Francis J. Belcourt, Shakopee, and Karl T. Kulp, Minneapolis, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
 Filed Sept. 11, 1967, Ser. No. 666,872
 Int. Cl. H03b 27/00

U.S. Cl. 328-103

5 Claims



A generator of and a distribution system for a megahertz (MHz.) frequency clocking signal of picosecond (ps.) to nanosecond (ns.) pulse duration usable in (10^9) rads gamma and/or (10^{12}) nvt neutron radiation level environments.

3,515,996

CIRCUIT FOR DETERMINING WHEN A SWEEP FREQUENCY IS SUBSTANTIALLY EQUAL TO A STANDARD FREQUENCY

Earl Hollis Nixon and John Watson Wheeler, Greensboro, N.C., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 14, 1966, Ser. No. 601,740

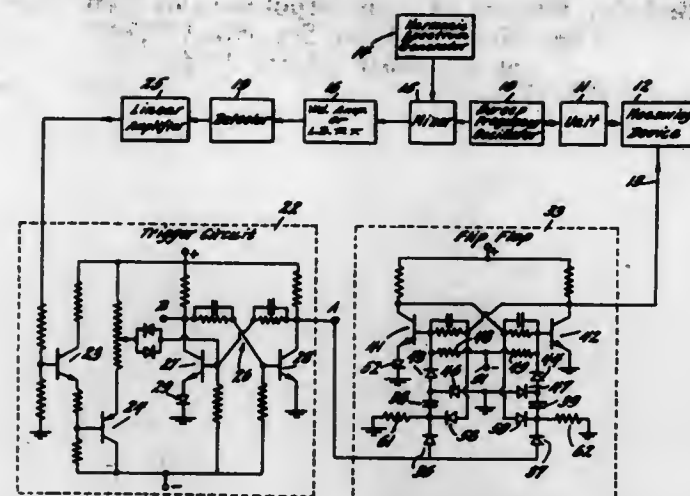
Int. Cl. H03d 13/00

U.S. Cl. 328-133

6 Claims

The modulation product of a sweep frequency and a standard frequency is passed through a low bandpass

filter circuit to a bistable circuit which produces a control pulse when the sweep frequency is substantially equal to the standard frequency. The bistable circuit is switched from a first state to a second state by a predetermined



edge of a first pulse passing through the lower bandpass filter circuit, and from the second state to the first state by a predetermined edge of a second pulse passing through the lower bandpass filter circuit.

3,515,997

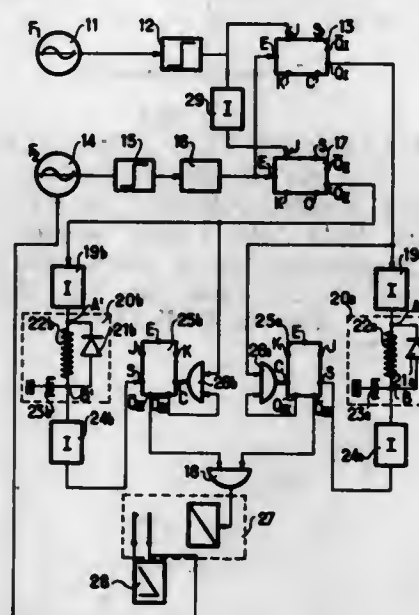
CIRCUIT SERVING FOR DETECTING THE SYNCHRONISM BETWEEN TWO FREQUENCIES

Lucien Babany, Le Blanc-Mesnil, France, assignor to C.I.T.-Compagnie Industrielle des Telecommunications, Paris, France, a corporation of France
 Filed Jan. 2, 1968, Ser. No. 695,038
 Claims priority, application France, Dec. 30, 1966, 89,590

Int. Cl. H03b 3/04

U.S. Cl. 328-134

7 Claims



Logical circuit furnishing a stable logical value in case there is synchronism, and the complementary value in case there is no synchronism between two frequencies.

3,515,998

REAL-TIME DETECTION OF LATCH RESOLUTION USING THRESHOLD MEANS

Robert L. Adams and Domenic R. Castaldo, Kingston, and Gerald W. Kurtz, Saugerties, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 8, 1967, Ser. No. 689,140

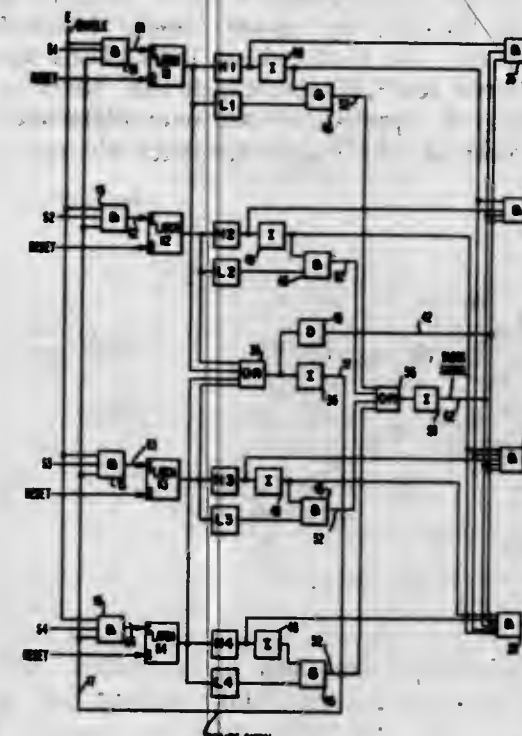
Int. Cl. H03k 3/12

U.S. Cl. 328-206

15 Claims

A logical circuit arrangement including a latch responsive to asynchronous input signals and "real-time" thresh-

old detection means associated therewith for sensing the actual resolution of the latch during operation. The "real-time" threshold means operate to permit propaga-



tion of the latch output as soon as actual resolution of the latch is obtained, whereby latch instability problems which can lead to intermittent errors are solved without degrading system operating speeds.

3,515,999

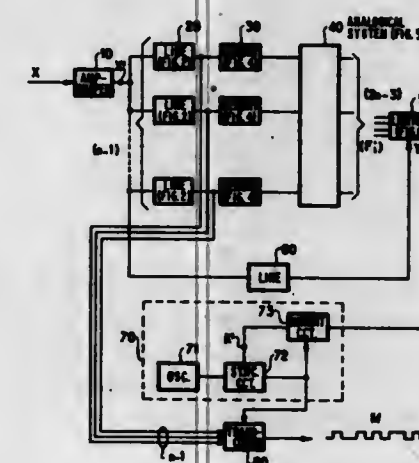
DEMODULATOR FOR A MULTIVALENT TELEGRAPHIC SIGNAL

Jean Royer, Paris, France, assignor to C.I.T.-Compagnie Industrielle des Telecommunications, Paris, France
 Filed Feb. 14, 1968, Ser. No. 705,441
 Claims priority, application France, Feb. 17, 1967, 95,512

Int. Cl. H03k 9/00

U.S. Cl. 329-104

12 Claims



Demodulation circuit comprising $(n-1)$ auto-correlation lines each of which the incident signal is multiplied by the identical signal delayed by a constant value, the corresponding dephasing having the same value in each line for one of the $(n-1)$ intermediate frequencies between the n modulation frequencies. Control signals are extracted from the $(n-1)$ lines output for a variable amplitude limiter to which is applied the wave coming from an n th auto-correlation line: from this limiter are extracted the characteristic signals which serve the purpose of synchronizing a clock which is used by a transcoder in order to restore the bivalent telegraphic signals in series.

3,516,000

REGENERATIVE FREQUENCY MODULATION DETECTOR WITH VOLTAGE-CONTROLLED REACTANCE CONTROLLED BY OUTPUT

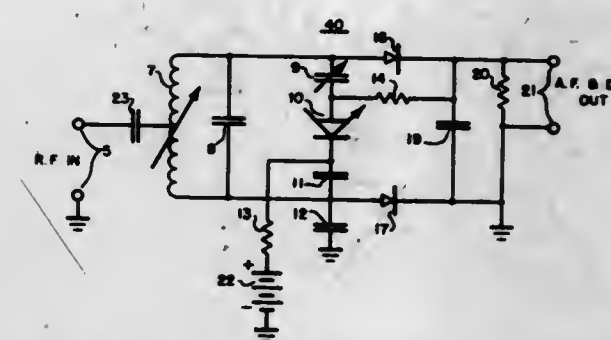
John S. Slechta, Plainfield, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed July 29, 1965, Ser. No. 475,900

Int. Cl. H03d 3/26, 1/04

U.S. Cl. 329-140

1 Claim



The tank circuit of this detector includes a voltage-controlled reactance in the form of a varactor diode. The detector output is applied to the diode in such a manner that the tank circuit is automatically tuned away from the frequency of the applied frequency modulated signal. This increases the detector output for a given frequency deviation, thus providing regeneration which increases the detector gain. The amount of regeneration is controlled by a variable capacitor in series with the varactor diode.

3,516,001

LIGHT-AMPLIFYING LASER STRUCTURES AND THE LIKE

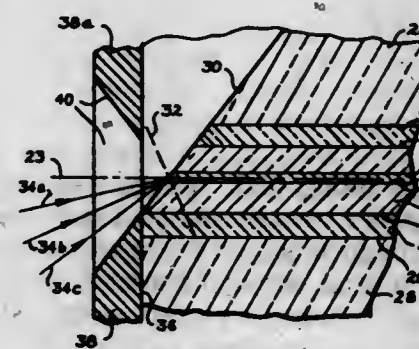
Charles J. Koester, South Woodstock, Conn., Wilfred P. Bazinet, Jr., Webster, Mass., and Clifford W. Ask, South Woodstock, Conn., assignors, by meane assignments, to American Optical Corporation, Southbridge, Mass., a corporation of Delaware

Filed Dec. 1, 1966, Ser. No. 598,414

Int. Cl. H01s 3/00

U.S. Cl. 330-4.3

4 Claims



Long thin fiber laser light-amplifying structure employing triple cladding for improved optical efficiencies in amplifying very weak optical signals from distant objects.

3,516,002

GAIN AND DRIFT COMPENSATED AMPLIFIER

Donall A. Hillis, Palos Verdes Peninsula, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed May 2, 1967, Ser. No. 637,865

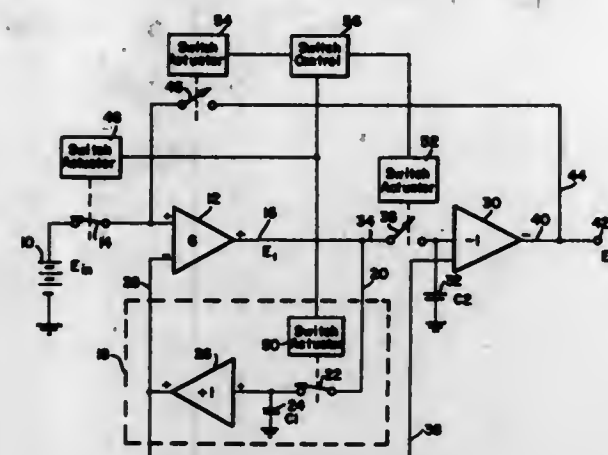
Int. Cl. H03f 1/02, 1/36

U.S. Cl. 300-51

5 Claims

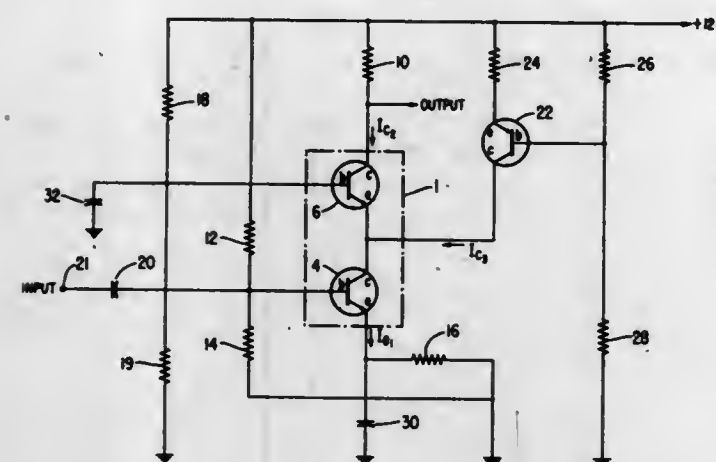
A gain and drift compensated amplifier composed from several amplifiers wherein the output of a basic amplifier is negatively fed back through a sample and hold circuit

for reamplification by the basic amplifier. The sample and hold circuit and the input to the basic amplifier from a



source of voltage is alternately opened and closed with respect to the output of the entire circuit.

3,516,003
HIGH-GAIN SINGLE-STAGE A.C. CASCODE AMPLIFIER CIRCUIT
Robert E. Boone, Euclid, Ohio, assignor to Bailey Meter Company, a corporation of Delaware
Filed July 30, 1968, Ser. No. 748,738
Int. Cl. H03f 3/16, 3/18
U.S. Cl. 330-17 6 Claims

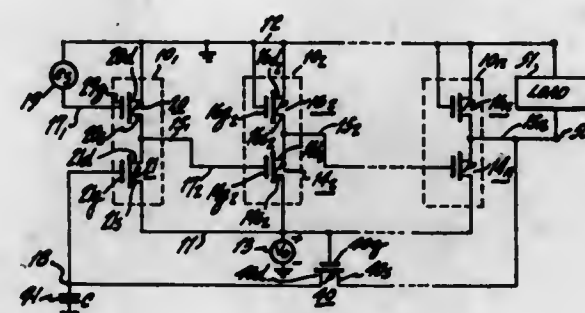


A circuit for providing high voltage gain in a solid-state, cascode amplifier wherein the gain is a direct function of the transconductance of an input transistor and the resistance of a load circuit connected to an output transistor. A circuit including a current source which supplies current to the input transistor to produce high transconductance while permitting a high-value load resistor to be inserted in the output circuit.

3,516,004
SIGNAL TRANSLATING CIRCUIT COMPRISING A PLURALITY OF IGFET AMPLIFIERS CASCADED IN DIRECT COUPLED FASHION
Joseph R. Burns, Trenton, N.J., assignor to RCA Corporation, a corporation of Delaware
Continuation-in-part of application Ser. No. 610,439, Jan. 19, 1967. This application July 23, 1968, Ser. No. 746,796
Int. Cl. H03f 3/16 16 Claims

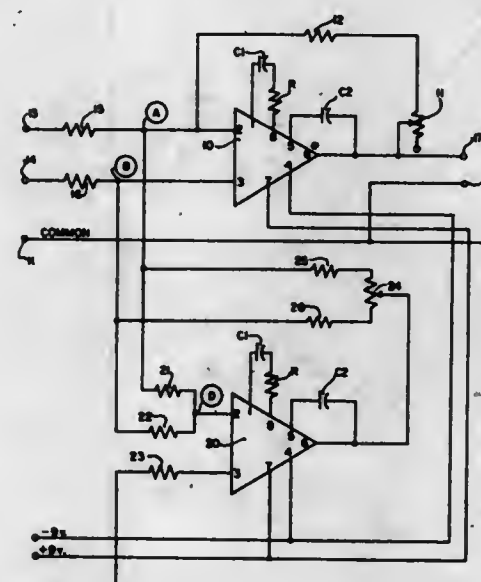
A self-biased direct coupled amplifier employing a common source-connected insulated gate field-effect transistor (IGFET) with a series drain impedance in each of

plural cascade-connected stages is disclosed, which amplifier is capable of integrated circuit fabrication. In one of the stages, illustrated as the first stage, the series impedance is the source-drain path of an input IGFET connected in the common drain (source-follower) configuration so that the source-drain path of the associated common source IGFET serves as a load therefor. Input signal voltage is applied to the gate electrode of the source-follower. A self-biasing feedback element (for ex-



ample, the source-drain path of a further IGFET) is connected between the last stage output and the gate electrode of the first stage common source IGFET, whereby the amplifier input signal source circuit is isolated from the feedback element and forms no part of the feedback stability network. Also disclosed is a difference amplifier employing two adjacent source follower stages, the second of which also serves as a common source unity gain inverter.

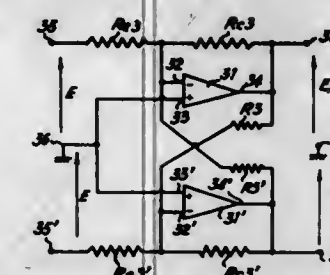
3,516,005
AMPLIFIER FOR ENHANCING DIFFERENTIAL INPUT SIGNALS
Robert F. Brown, Jr., Dallas, Tex., assignor to Teledyne Industries—Geotech Division, a corporation of Texas
Filed May 6, 1968, Ser. No. 726,715
Int. Cl. H03f 3/68 5 Claims



An amplifier system for enhancing desired differential input signals to be amplified, while repressing undesired common-mode input signals, by cancelling out the latter mode of signals at the inputs of the main differential amplifier using an inverse cancellation signal inverted in an auxiliary amplifier path and fed back to the inputs of the main differential amplifier, the auxiliary amplifier not passing signal components applied to the over-all amplifier system in push-pull.

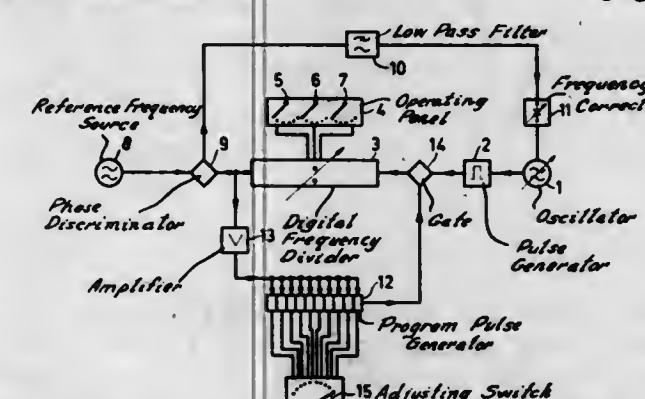
3,516,006
AMPLIFIER ARRANGEMENT HAVING LOW VOLTAGE DRIFT WITH TEMPERATURE VARIATION
Jacques Donjon, Paris, France, assignor to Societe de Fabrication d'Instruments de Mesure (S.F.I.M.), a French company
Filed July 16, 1968, Ser. No. 745,226
Claims priority, application France, July 19, 1967, 114,749; Mar. 12, 1968, 143,354
Int. Cl. H03f 3/68 6 Claims

U.S. Cl. 330-69



Arrangement includes two amplifiers, each having a first feed-back resistor connected between its output and one of its inputs, the output of each amplifier also being connected via a second, positive, feed-back resistor to the input of the other amplifier connected to the first feed-back resistor.

3,516,007
STEPWISE ADJUSTABLE PHASE CONTROLLED OSCILLATOR LOOP
Marinus Anton Bos, Johannes Noordanus, and Gerardus Rosier, Hilversum, Netherlands, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 30, 1968, Ser. No. 701,773
Claims priority, application Netherlands, Feb. 11, 1967, 6702110
Int. Cl. H03b 3/04 6 Claims

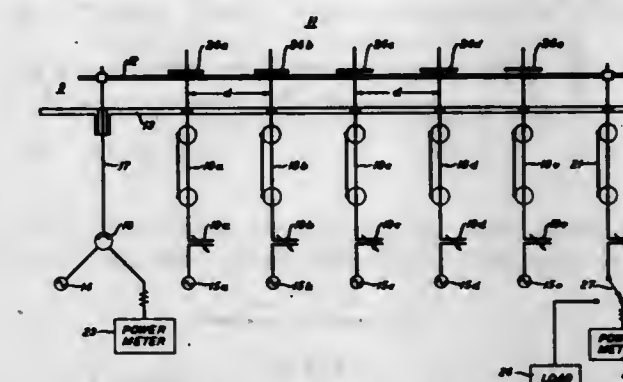


A phase controlled oscillator loop including a frequency divider, and a preprogrammed pulse generator responsive to the output of said divider for periodically producing a pulse for effectively adding or subtracting pulses from the input to the divider, thereby altering the divider ratio.

3,516,008
POWER-COMBINING CIRCUIT FOR A PLURALITY OF MICROWAVE GENERATORS
Wolfgang O. Schlosser, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed May 3, 1968, Ser. No. 726,367
Int. Cl. H03b 7/14; H03h 13/00 6 Claims

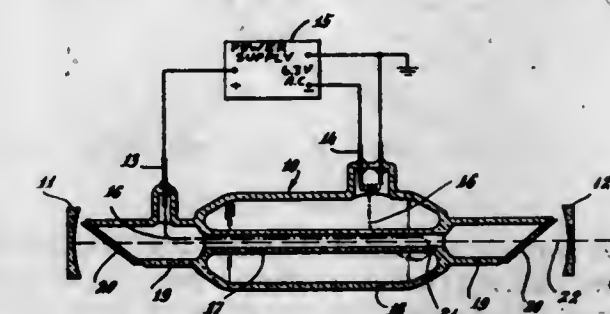
A primary oscillator is connected through a circulator to an input end of a transmission line. A plurality of secondary oscillators of approximately the same frequency as the primary oscillator are reactively coupled to the

transmission line between the input end and an output end at intervals of approximately an odd number of quarter wavelengths. Tuning stubs and the reactive couplers asso-



ciated with each of the secondary oscillators are adjusted to maximize power output from each oscillator to a load connected to the output end.

3,516,009
HIGH STABILITY LASER
Morley S. Lipsett, Norwalk, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed July 27, 1967, Ser. No. 656,588
Int. Cl. H01s 3/02 5 Claims

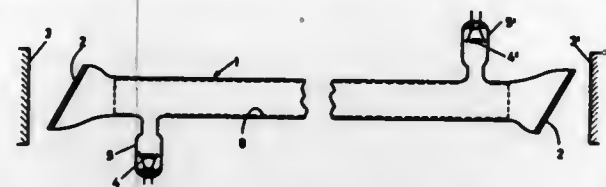


A gas laser having a small diameter discharge tube supported at both ends by a large diameter reservoir tube. A cathode and anode are provided for establishing a discharge within which stimulated emission of radiation occurs. The cathode is mounted in the wall of the reservoir tube so that the ends of the discharge tube through which the radiation passes are shielded from sputtered cathode material. The discharge passes from the cathode through a portion of the reservoir tube and into the discharge tube through an aperture. Mirrors optically aligned with the discharge tube provide a resonant cavity within which the laser beam is developed.

3,516,010
LASER HAVING A COATED DISCHARGE TUBE TO REDUCE THE EFFECTS OF CLEAN-UP
Erhard Rasch and Herbert Dzergwa, Berlin, Germany, assignors to Patent-Trennung-Gesellschaft Furelektrische Gluhlampen m.b.H., Munich, Germany
Filed Aug. 26, 1965, Ser. No. 482,842
Claims priority, application Germany, Sept. 1, 1964, P 34,985
Int. Cl. H01s 3/02 3 Claims

An optical laser comprising an elongated tube constituted as a resonator by reflectors at opposite ends and with an active gas therein and having means for maintaining electronic discharge therein, said tube having non-reflecting protective coating on the interior surface thereof comprising of a crystalline substance selected from

the group of metal oxides and their compounds with oxygen of which examples are magnesium oxide, tin oxide, zirconium oxide, aluminum oxide, beryllium oxide, and



from metal salts of phosphoric acid and silicic acid, namely phosphates and silicates and the like from those metals.

3,516,011

AIR-COOLED LASER SYSTEM

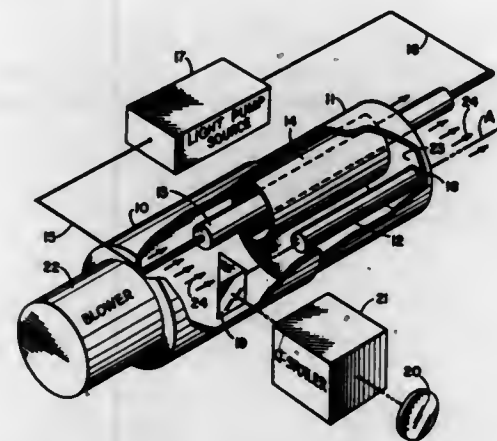
James Frederick Hadwin, Manhattan Beach, Calif., assignor to Union Carbide Corporation, a corporation of New York

Filed Mar. 14, 1968, Ser. No. 713,198

Int. Cl. H01s 3/04

U.S. Cl. 331-94.5

7 Claims



A portable air-cooled Q-spoiled laser transmitter is provided utilizing yttrium aluminum garnet as the host crystal doped with neodymium. Regenerative means in the form of a 100% reflecting end mirror and dielectric coating are provided to define the optical cavity. In accord with the invention, a Rochon right angle prism is disposed along the optical axis of the laser material between one end of the material and the end mirror. This prism diverts the stimulated emission in the optical cavity in a right angle direction to define a generally L shaped cavity. An enclosure or plenum chamber surrounds the Rochon prism, laser material, and light pump thereof such that a portion of the L shaped optical cavity in line with the optical axis of the laser material is enclosed with the one regenerative end mirror being exterior to the chamber. A Q-spoiling means is also disposed in the exterior portion of the optical cavity between the prism and the one regenerative means. With this arrangement, a blower may direct cooling air through the chamber parallel to the axis of the laser material and thereby effect optimum cooling. The prism simultaneously effects polarization of the stimulated emission diverted to the exterior of the chamber so that Q-switching can be carried out by an electro-optical Q-spoiling means and thus enable generation of giant pulses.

3,516,012

ARGON LASER

David A. Huchital, Norwalk, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Apr. 22, 1968, Ser. No. 723,073

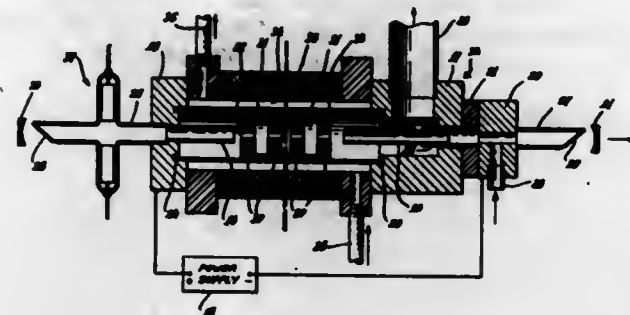
Int. Cl. H01s 3/09

U.S. Cl. 331-94.5

10 Claims

An inert gas laser including an anode and cathode between which a discharge is established. The anode and

cathode are hollow and the discharge is coaxial with an optical cavity defined by a pair of mirrors. A flow of inert gas is established through the cathode. The discharge is collimated by a magnetic field and a series of spaced



insulated discs having a central aperture. The cathode comprises a low work function material and is preferably positioned outside the region of concentrated magnetic field which collimates the discharge.

3,516,013

SCANNING LASER HAVING A CONJUGATE CONCENTRIC CAVITY SO THAT THE DIRECTION IN WHICH LIGHT IS EMITTED CAN BE CONTROLLED

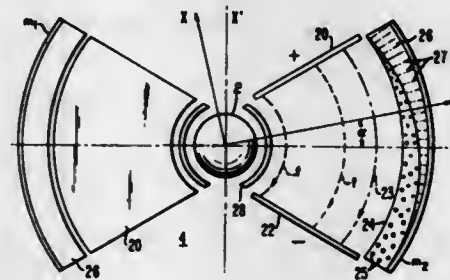
Robert V. Pole, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 332,617, Dec. 23, 1963. This application June 10, 1968, Ser. No. 742,949

Int. Cl. H01s 3/06, 3/08

U.S. Cl. 331-94.5

6 Claims



A system for scanning a laser beam is provided wherein high scanning speed, high resolution and high angular swing are obtainable. An active medium is placed in a conjugate concentric cavity, such medium being spherical or cylindrical and serving as a lens. The radius r of the spherical active medium and the radius R of the two mirrors of the cavity are related by the expression

$$R = \frac{nr}{n - n_0}$$

where n is the index of refraction of the active medium and n_0 is the index of refraction of the material surrounding the active medium and lying between the mirrors of the conjugate concentric cavity. The use of two mirror surfaces that are optically conjugate and a lasing material that is lenticular in construction permits the lasing cavity to support all modes equally well. Thus, one maximum point of energy of the laser beam serves as an object point and another maximum point of energy is the image point of the lasing beam. The ability to obtain such imaging of a point through the lenticular operation of the active medium enhances the scanning process.

3,516,014

TRANSISTOR OSCILLATOR WITH PASSIVE RESONATOR OUTPUT STAGE

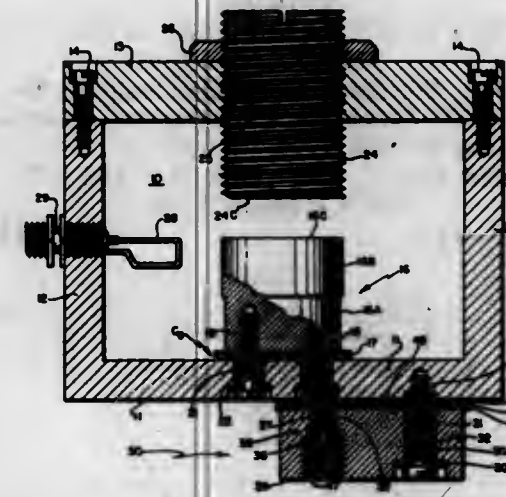
Marion E. Hines, Weston, Mass., and John George Ondria, Bethlehem, Pa., assignors to Microwave Associates, Inc., Burlington, Mass.

Filed Mar. 5, 1968, Ser. No. 710,499

Int. Cl. H03b 5/18

U.S. Cl. 331-96

18 Claims



A transistor oscillator in a common-collector circuit is coupled via its emitter to a passive resonator shunted by a coupling capacitor having capacitance substantially larger than the series-resonance capacitance of the resonator to provide a low-noise signal source.

3,516,015

TUNABLE CAVITY NEGATIVE RESISTANCE MICROWAVE AMPLIFIERS AND OSCILLATORS

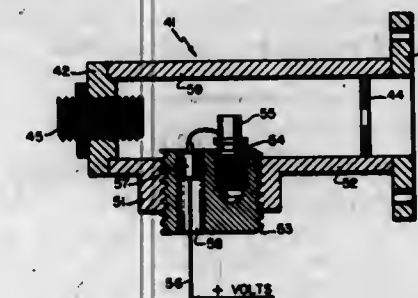
Marion E. Hines, Weston, Jean-Claude R. Collinet, North Reading, and Joseph F. White, Lexington, Mass., assignors to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts

Continuation-in-part of application Ser. No. 704,817, Feb. 12, 1968. This application Dec. 20, 1968, Ser. No. 785,322

Int. Cl. H03b 7/14; H03f 3/10

U.S. Cl. 331-96

16 Claims



A microwave circuit including an electron discharge device capable of being biased for negative resistance at frequencies in a selected band, which will provide a reduced bandwidth of electrical resonance for precise tuning at a given frequency of operation in that band and avoid other undesired modes of electrical oscillation. Undesired or "spurious" modes of oscillation for the network which occur at frequencies different from those in the desired band are in a frequency range or ranges where the negative resistance of the electron discharge device is ineffective. Appropriate network design criteria are described for eliminating spurious modes, in a network comprising at least one electron discharge device capable of being biased for negative resistance, coupled into a primary resonator loop so that the network may oscillate or amplify.

3,516,016

VOLTAGE CONTROLLABLE VARIABLE FREQUENCY GUNN OSCILLATOR OF GRADED GaAsP COMPOSITION

Masatoshi Mitsuoka, Kodaira-shi, Japan, assignor to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan

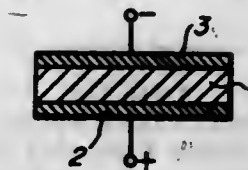
Filed May 22, 1968, Ser. No. 731,021

Claims priority, application Japan, May 26, 1967, 42/33,121

Int. Cl. H01l 3/00; H03b 7/00

U.S. Cl. 331-107

5 Claims



A variable frequency solid-state oscillator comprising a GaAsP semiconductor bulk oscillator in which the ratio of As to P increases continuously, wherein a positive electrode is provided in a part where the P concentration is small and a negative electrode is formed in a part where the P concentration is large. Said oscillator oscillates with a frequency corresponding to the applied voltage when various values of voltage are applied to said device through said electrodes with means for applying excitation voltages.

3,516,017

MICROWAVE SEMICONDUCTOR DEVICE

Yoichi Kaneko and Ryoka Sawada, Kokubunji-shi, Shinya Iida, Hino-shi, and Kazuo Kawaguchi, Yokohama, Japan, assignors to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan

Filed June 7, 1968, Ser. No. 735,358

Claims priority, application Japan, June 14, 1967, 42/37,576

Int. Cl. H03b 7/00

U.S. Cl. 331-107

9 Claims



A solid electronic device provided with a semiconductor element joined to a heat sink and generating or controlling microwaves, the central portion of the element body being substantially removed and an active region being formed only in the peripheral portion of the element body. The thermal resistance from the active region to the heat sink is lowered and the dissipation is improved and also microwaves are distributed in the active region relatively uniformly, so a high efficiency is obtained.

3,516,018

OPERATION OF SERIES CONNECTED GUNN EFFECT DEVICES

Se Puan Yu, Schenectady, Paul J. Shaver, Scotia, and Wirojana Tantraporn, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed June 13, 1968, Ser. No. 736,694

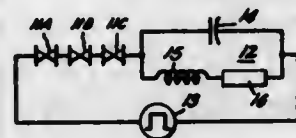
Int. Cl. H03b 7/06

U.S. Cl. 331-107

10 Claims

Series or series-parallel operation of non-identical Gunn diodes matched to within 20 percent is obtained in a miniaturizable arrangement suitable for a high power microwave source. The diodes are connected in series with a parallel resonant circuit such that the total voltage due to the superimposed RF voltage and a specified minimum

biasing voltage swings below the domain quenching value in each RF cycle. The frequency of series operation is high enough so that an inequality relation between the

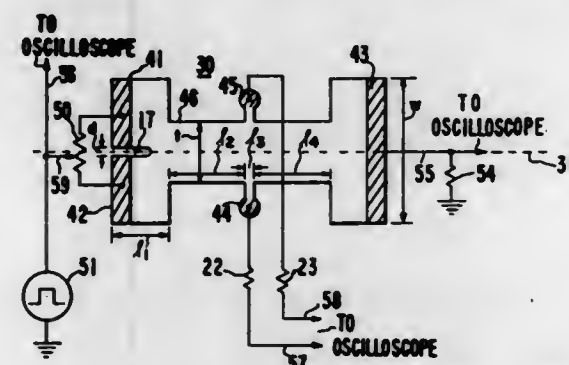


average negative dielectric relaxation time and the RF period is satisfied whereby high field domains cannot be fully formed.

3,516,019

TRANSVERSE NEGATIVE MOBILITY DEVICES
Herbert Kroemer, Menlo Park, and Megha Shyam, Los Altos, Calif., assignors to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware

Filed Sept. 6, 1968, Ser. No. 757,879
Int. Cl. H011 11/00; H03b 7/00; H03f 3/14
U.S. Cl. 331-107 17 Claims



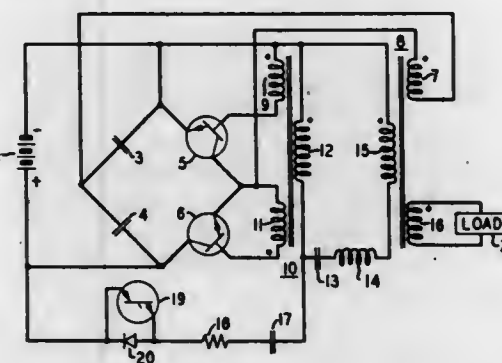
In the presence of a proper longitudinal bias field, a sample of selectively doped germanium, cut in a (110) plane with its longitudinal axis substantially coinciding with a selected [110] crystal axis, exhibits a transverse negative resistance in a direction perpendicular to the longitudinal axis. As a result, a small transverse voltage placed across one end of the sample produces a transversely polarized domain which, under the influence of the bias field, drifts along the longitudinal axis of the sample. This specially cut sample, with appropriate circuitry, can thus be used as a delay line, a shift register, an oscillator, or, because under certain conditions the domain increases in size with time, as a traveling wave amplifier.

3,516,020

INVERTER STARTING CIRCUIT

Peter P. Untamo, Branchburg Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed July 19, 1968, Ser. No. 746,014
Int. Cl. H02m 7/52
U.S. Cl. 331-113 7 Claims



In practical applications where considerable lead length with associated inductance exists between the D.C. input

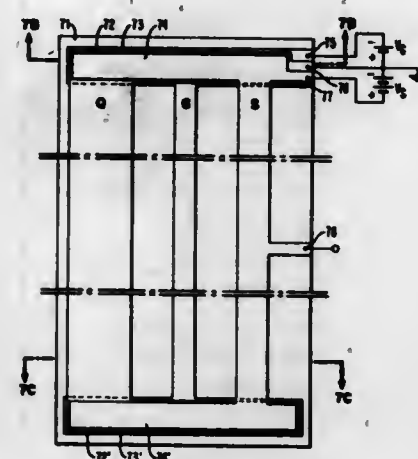
source and the inverter, it is not unusual to find a relatively slow increase in the direct voltage at the inverter which fails to start the inverter. In the present invention, a p-n-p-n device is serially connected with the starting network to prevent the application of the input D.C. to the starting network until sufficient energy is supplied from the input source to insure the initiation of oscillation in the inverter.

3,516,021

FIELD EFFECT TRANSISTOR MICROWAVE GENERATOR

Gerhard Kohn, Stuttgart, Germany, assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 5, 1967, Ser. No. 688,142
Int. Cl. H03b 5/18
U.S. Cl. 331-117 11 Claims



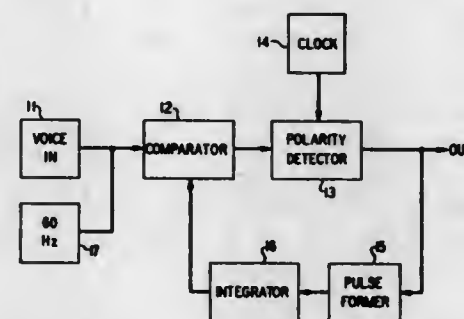
A microwave generator comprises an electric field effect transistor, source and drain electrodes being defined by ohmic contacts and the gate electrode being defined by a Schottky-barrier, or semiconductor-metal diode. A portion of the source electrode is extended to pass over the gate and drain electrodes so as to form input and output transmission lines which are shorted for higher frequencies to define gate and drain resonators, respectively. The length of the drain resonator is $\lambda/2$, where λ is the wavelength of the microwave frequency to be generated, and the length of the gate resonator can be slightly shorter, i.e., by $\lambda/8$. The drain and gate resonators are coupled by the transistor structure to support the generation of microwave oscillations.

3,516,022

DELTA MODULATION ENCODERS WITH RANDOMIZED IDLE CIRCUIT NOISE

Stephen J. Brolin, Bronx, N.Y., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Nov. 17, 1966, Ser. No. 595,232
Int. Cl. H03k 7/00; H04b 1/10
U.S. Cl. 332-11 4 Claims



The disclosed circuit is a delta modulator in which an auxiliary low frequency wave is added to the message waveform input to randomize the effective decision level

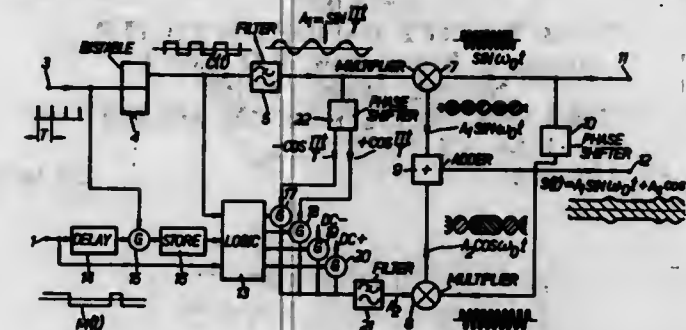
of the delta modulator polarity detector and prevent the generation of audible tones during idle circuit periods. The auxiliary wave is below the range of the message waveform in frequency and has an amplitude which uses up only a minor fraction of the available dynamic range of the delta modulator.

3,516,023

QUADRATURE MODULATORS

Ralph Bertrand Herman and William Renwick, Ilford, England, assignors to The Plessey Company Limited, Ilford, England, a British company

Filed June 19, 1967, Ser. No. 646,878
Claims priority, application Great Britain, June 21, 1966, 27,621/66
Int. Cl. H03c 1/54
U.S. Cl. 332-48 3 Claims



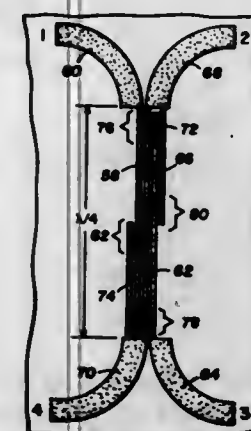
A modulation system called "Minimum Bandwidth Complementary Channel Amplitude Modulation" (M.B.C.A.M.) which is similar to F.S.K. and which gives a similar or lower error rate for a given signal-to-noise ratio, but which can be contained in a bandwidth of about $1\frac{1}{2}$ times the digit frequency. An arrangement for generating a M.B.C.A.M. signal in which the signal waveform may be considered to correspond to the sum of two amplitude modulated signals, each of minimised bandwidth, and in which the modulating waveforms correspond respectively to the message waveform and to a complementary form of the message waveform, the parameters of said system being arranged so as to minimize the overall bandwidth of the composite signal.

3,516,024

INTERDIGITATED STRIP LINE COUPLER

Julius Lange, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Dec. 30, 1968, Ser. No. 787,784
Int. Cl. H01p 5/14
U.S. Cl. 333-10 12 Claims



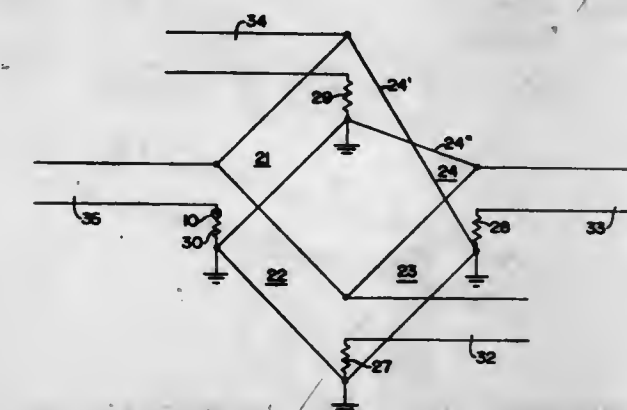
An interdigitated coupler is fabricated from several strip line sections with alternate sections interconnected by crossover wires. The interdigitated strip line sections are arranged such that each section is on the order of a quarter wavelength long.

3,516,025

WIDE BAND HYBRID COUPLER HAVING AN OPEN END TRANSMISSION LINE SECTION COUPLED TO EACH PART

Allen F. Podell, Cambridge, Mass., assignor to Adams-Russell Co., Inc., Waltham, Mass., a corporation of Massachusetts

Filed Dec. 19, 1968, Ser. No. 785,204
Int. Cl. H01p 5/12
U.S. Cl. 333-11 9 Claims



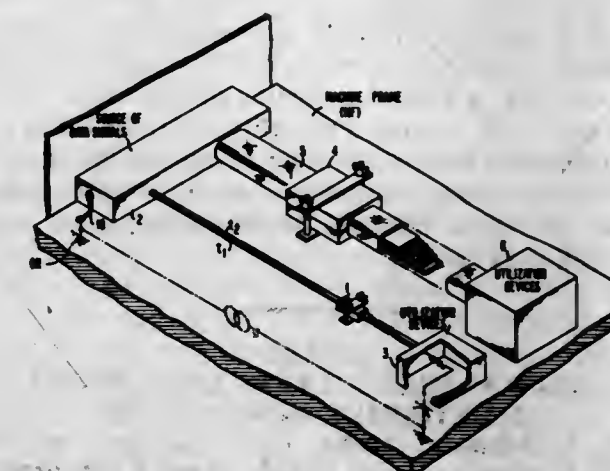
A hybrid coupler employing a ring of quarter wave length transmission lines with four ports as the terminating loads of each transmission line. The bandwidth is extended by placing a quarter wave length open end section of transmission line in series with each terminating load. By selecting transmission lines of appropriate characteristic impedances, acceptable standing wave ratios for bandwidth ratios of 4.5 to 1 may be obtained. In another embodiment, a quarter wave length of open end transmission line is placed in series with each terminating load and a quarter wave length of shorted transmission line is placed in parallel with each terminating load. Appropriate characteristic impedance choices for these transmission lines yield acceptable standing wave ratios for bandwidth ratios of 7 to 1.

3,516,026

METHOD AND MEANS FOR ATTENUATING COMMON MODE ELECTRICAL NOISE CURRENTS

John E. Curran, Endicott, and John F. O'Donnell, Apalachin, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Mar. 3, 1967, Ser. No. 620,376
Int. Cl. H04b 3/28
U.S. Cl. 333-12 1 Claim



The invention relates to the attenuation of high frequency noise currents and more particularly to a ferrite attenuator for attenuating high frequency noise signals in computer transmission cables and lines through which data representing signals are transmitted.

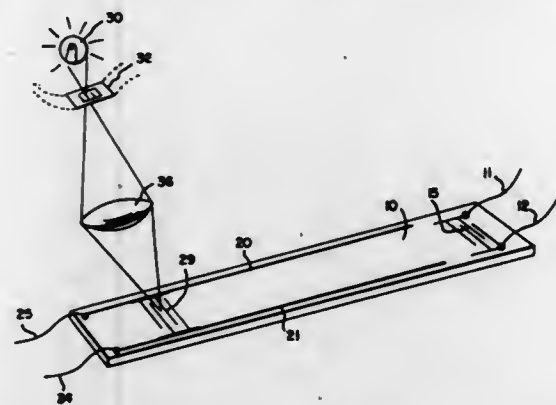
3,516,027

VARIABLE SURFACE-WAVE DELAY LINE
John H. Wasilik, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Aug. 5, 1968, Ser. No. 750,047
Int. Cl. H03h 7/36

U.S. Cl. 333—30

4 Claims



A continuously variable delay line utilizing surface wave propagation and photoconductive transducers. The surface wave originates at a driver transducer consisting of metallic electrodes deposited on a piezoelectric material. An optical image on a delay medium, which is both piezoelectric and photoconductive, generates a high conductivity pattern which functions as the electrodes of a receiving transducer. Varying the position of the optical image will vary the separation between the driver and receiver transducers and therefore vary the length of the delay.

3,516,028

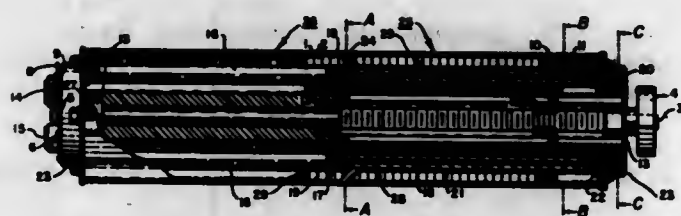
CONSTANT IMPEDANCE HIGH RESOLUTION PHASE SHIFTER

George R. Leef, Morris County, N.J., and Henry G. Nordlin, Allen County, Ind., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed June 14, 1968, Ser. No. 737,131
Int. Cl. H03h 7/30

U.S. Cl. 333—31

10 Claims



A continuously variable delay line is disclosed. The delay line features a plurality of sections of coaxial line electrically connected in series but physically arranged in parallel around a central adjusting mechanism. The delay time is varied by moving a plurality of ferrite tubes axially from a position where one tube is outside the outer conductor of each coax section to a position where one tube occupies the space between the inner and outer conductor of each coax section.

3,516,029

MECHANICAL FILTERS EMPLOYING MULTIMODE RESONATORS

Robert A. Johnson, Tustin, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

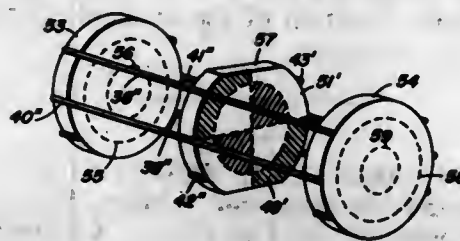
Filed Feb. 6, 1967, Ser. No. 614,185
Int. Cl. H03h 9/20

U.S. Cl. 333—71

8 Claims

This is a mechanical filter of the stacked disc type employing multi-diameter mode type discs which have two diameter mode frequencies; one lying inside the passband

and one lying just outside the passband. By proper positioning of the coupling wires there is produced an attenuation pole between the two frequencies. Two such multi-



diameter mode discs can be employed to produce an attenuation pole near the lower edge of the passband and an attenuation pole near the upper edge.

3,516,030

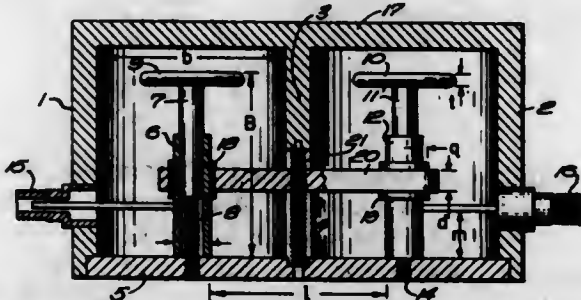
DUAL CAVITY BANDPASS FILTER

Joseph S. Brumelow, P.O. Box 63, Newton, Mass. 02160

Filed Sept. 19, 1967, Ser. No. 668,810
Int. Cl. H03h 7/10, 9/00

U.S. Cl. 333—73

2 Claims



This invention concerns apparatus for filtering electromagnetic wave energy according to the frequency of its vibrations and more particularly relates to a bandpass filter employing dual resonant cavities.

3,516,031

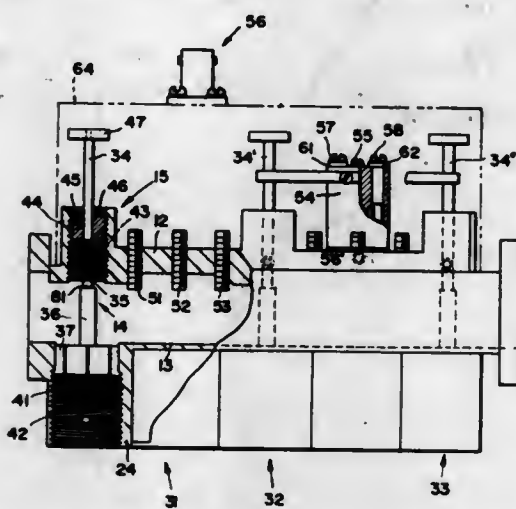
TUNABLE MICROWAVE SWITCHING

Robert T. Commerford, Norwood, Mass., assignor to Alpha Industries, Inc., Newton Upper Falls, Mass., a corporation of Delaware

Filed July 3, 1967, Ser. No. 650,965
Int. Cl. H01p 1/10; H03k 17/74

U.S. Cl. 333—98

10 Claims



A waveguide switch includes a movable inductive post having contiguous portions of different thickness which post passes through an opening in the waveguide broad wall and is an extension of the inner conductor of an adjustable coaxial transmission line stub. The other end of the inner conductor is selectively connected to a short circuiting plate by a diode. When the latter conducts, the stub presents effectively an open circuit between the inductive post and the broad wall through which it passes

to pass energy with minimum attenuation. When the diode is not conducting, the inductive post resonates with the effective capacity seen at the broad wall opening between the inner conductor and broad wall to stop energy with maximum attenuation. Adjusting the length of the stub is accompanied by movement of the inductive post to vary the ratio of thick post portion to thin post portion within the waveguide, and thereby the effective inductance, so that the center frequency of the stop band, when the diode is not conducting, tracks the center frequency of the pass band when the diode conducts.

3,516,032

APPARATUS FOR FILTERING AND DISSIPATING MICROWAVE ENERGY POSSESSING UNDESIRABLE WAVE MODES

Hans Wernli, Heldenchlen, Switzerland, assignor to Albiwerk Zurich A.G., Zurich, Switzerland, a corporation of Switzerland

Filed Feb. 19, 1968, Ser. No. 706,552
Claims priority, application Switzerland, Apr. 14, 1969, 5,346/67

Int. Cl. H01p 1/16

U.S. Cl. 333—98

8 Claims



An apparatus for filtering and dissipating undesired components of microwave energy from a waveguide. A filtering slit of predetermined length and width dimensions is provided in a waveguide wall disposed in a direction parallel to the longitudinal axis of the waveguide. A cover plate formed of microwave-absorbing material is then applied in sealing relation to the filtering slit. The cover plate contains a groove having the same width as that of the filtering slit but having length and penetration depth dimensions chosen to effect maximum absorption of the undesired microwave energy components.

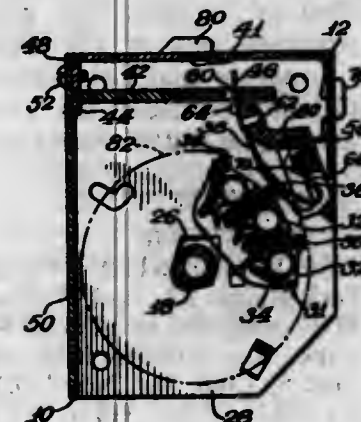
3,516,033

TUNER WITH SEPARABLE HOUSING PARTS; ONE PART CARRYING ROTOR AND ITS CONTACTS, OTHER PART CARRYING WIPER CONTACTS
Robert C. Baenziger, Cook County, Ill., assignor to Electro-Netic Steel, Inc., Schiller Park, Ill., a corporation of Illinois

Filed Jan. 10, 1966, Ser. No. 519,716
Int. Cl. H01h 9/02; H03j 5/00

U.S. Cl. 334—50

13 Claims



Electrical contact type, turret switched tuner having separable sheet metal housing parts and separative contact portions. More specifically, the housing comprises exter-

3,516,034

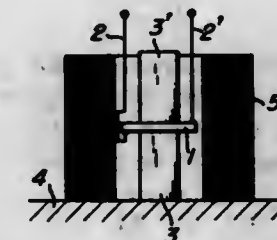
ELECTROMAGNETIC RELAY UTILIZING A SEMICONDUCTOR ELEMENT

Tadashi Yamada, Suita-shi, Akio Yamashita, Ikeda-shi, Masaru Tanaka, Toyonaka-shi, Takehiro Tuzaki, Osaka, and Takashi Fujita, Toyonaka-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

Filed July 31, 1968, Ser. No. 749,021
Int. Cl. H01h

U.S. Cl. 335—2

3 Claims



An electromagnetic relay utilizing a semiconductor element which is switched between a conductive state and a non-conductive state without any physical motion, according to the signal current flowing through the electromagnetic coil of the relay.

ERRATUM

For Class 335—16 see:
Patent No. 3,516,090

3,516,035

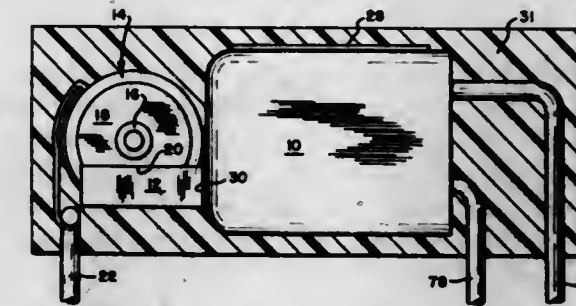
MINIATURE FLAT PACK LATCHING RELAY

Roland K. Josephson, Torrance, Calif., assignor to Deutsch Filter Relay Division, East Northport, N.Y., a division of the Deutsch Company, a corporation of California

Filed Dec. 27, 1968, Ser. No. 787,495
Int. Cl. H01h 45/02

U.S. Cl. 335—202

16 Claims



The disclosed relay comprises a hermetically sealed housing, one end of which includes a header carrying terminals, switches and contacts located within the housing. The housing also contains an armature assembly associated with a pair of spaced pole pieces extending through the opposite end of the housing and hermetically sealed thereto. A core bobbin assembly is mounted outside the housing, the core having core blocks as its opposite ends resting on the respective pole pieces. The bobbin carries latch and reset coils, each connected to a pair of terminals. The armature is mounted on a pivot midway between the pole pieces in a manner to provide a frictionless arrangement. The respective ends of the armature are provided with actuating means for actuating the switches inside the header, and all of the components are embedded in a molding resin with the terminals projecting therefrom.

3,516,036

MAGNETIC SHUNT SWITCHES AND THE LIKE

Lawrence N. Lea, 1683 University Ave.,

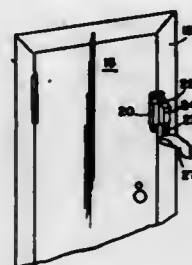
New York, N.Y. 10453

Filed Jan. 3, 1969, Ser. No. 788,794

Int. Cl. H01h 3/16

U.S. Cl. 335—207

5 Claims



A magnetic switch construction for protecting a door in a burglar alarm system, which permits one opening of the door without actuating the alarm circuit, includes an auxiliary bar magnet to be moved from a normal rest position on the jamb to a second position whereat the armature of the switch on the jamb is within the influence of the auxiliary magnet, and also whereat the main bar magnet on the door which acts on said armature while the door is closed, to hold the switch in a predetermined condition, subjects the auxiliary magnet to a repelling force biasing it to return to its normal rest position whereat the auxiliary magnet has no effect on the armature. When the auxiliary magnet is brought by hand to said second position and held thereat while the door is being opened, it may then be let go. The switch condition is immobilized until the door is closed again, whereupon the main magnet takes over and repels the auxiliary magnet back to normal rest position.

3,516,037

NONDISPERSIVE MAGNETIC DEFLECTION METHOD

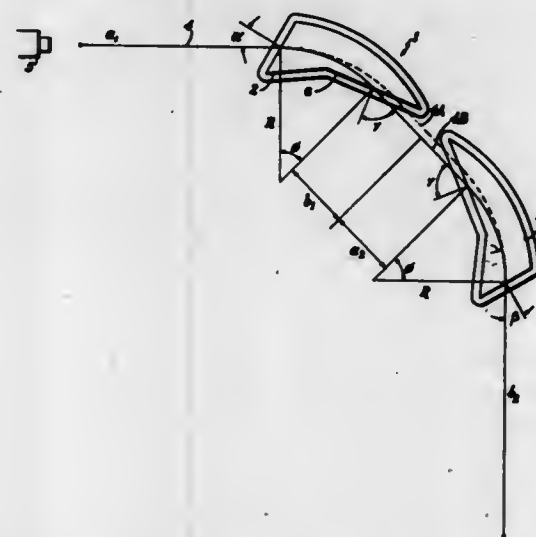
Harald A. Enge, Winchester, Mass., assignor to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts

Filed Dec. 5, 1967, Ser. No. 688,152

Int. Cl. H01f 7/00

U.S. Cl. 335—210

1 Claim



A method of deflecting beams of charged particles without substantial dispersion of the beam and to novel magnetic apparatus for carrying out the method. Briefly summarized, a two-magnet, nondispersive system particularly adapted to deflection by 90 degrees or more of linear accelerator beams, or any ion or electron beam with an energy spread of up to several percent. For the 90-degree case, each magnet deflects the beam 45 degrees, the exit shim angle of the first magnet and the entrance

angle of the second magnet are both 67½ degrees, and in accordance with the invention one can determine the other shim angles and the magnet separation for any reasonable object and image distances which will be encountered in practice.

3,516,038

CONVERGENCE DEVICE

Hironori Hisamoto and Munao Nishimura, Hirakata-shi, and Kanji Machida, Moriguchi-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan

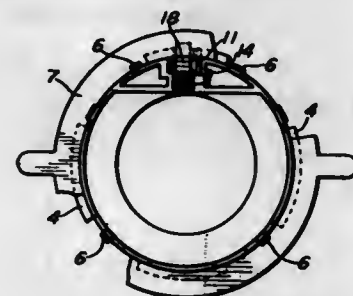
Filed May 20, 1968, Ser. No. 730,291

Claims priority, application Japan, May 22, 1967, 42/43,777, 42/43,778

Int. Cl. H01f 7/00

U.S. Cl. 335—212

1 Claim



A frame constituting the convergence device is provided with a large-diameter portion, a recess is formed in said large-diameter portion, and a disk-like blue-lateral convergence magnet is supported in said recess so that the adjustment of blue-lateral convergence can be satisfactorily effected by the rotation of said magnet.

3,516,039

RELAY CONSTRUCTION

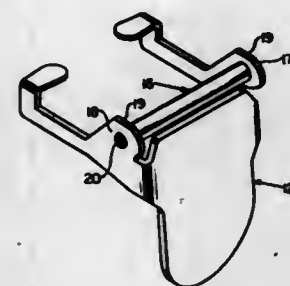
William A. Depner, Naperville, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Aug. 21, 1968, Ser. No. 754,372

Int. Cl. H01f 7/08

U.S. Cl. 335—270

2 Claims



The bearing pin on which the armature of a relay is pivotally mounted to the relay heel piece is secured in apertures in upturned ears of the armature by deforming the soft armature material around and above the apertures sufficiently to cause the bearing pin and the apertures to assume an out of round shape.

3,516,040

TRANSFORMER STRUCTURE

John F. Ripley, Park Ridge, Ill., and Wallace W. Menke, Lake Geneva, Wis., assignors to Micron Sealing Corporation, Stone Park, Ill., a corporation of Illinois

Filed Aug. 5, 1968, Ser. No. 750,150

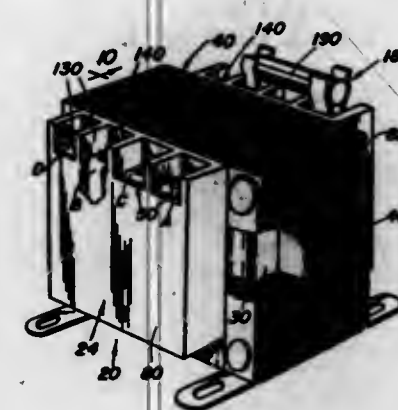
Int. Cl. H01f 27/04; H02h 7/04

U.S. Cl. 336—96

10 Claims

A compact machine tool transformer having an encapsulated coil with L-shaped terminal lugs embedded in the encapsulant; one leg portion of the terminal lug is secured in the encapsulant while the other leg extends

over the encapsulant and is tapped to accommodate terminal screws which also extend into screw-receiving sockets under the tapped portion of the lug. Flanges extend from the encapsulated coil between the lugs to provide



vide corona barriers. A fuse clip carrying adapter is provided with legs to extend into the cavity formed by the flanges of the encapsulated coil. A laminated core extends into the window of the coil.

3,516,041

VARIABLE RESISTANCE DEVICE

Raymond J. Estlick, Winchester, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Dec. 24, 1968, Ser. No. 786,692

Int. Cl. H01c 9/00

U.S. Cl. 338—154

13 Claims



A variable resistance device comprising a resistive element having at least one end attached to an electrical terminal, a resilient band of conductive material disposed in spaced relationship with the resistive element and having a portion thereof connected to another electrical terminal, and an intervening dielectric member having a movable opening through which a selected portion of the resilient band is pressed against an adjacent portion of the resistive element.

3,516,042

BASE-REFERENCING LAMP-HOLDER AND PROJECTION LAMP

Donald M. Wagner, Warrensville Heights, Ohio, assignor to General Electric Company, a corporation of New York

Filed Jan. 8, 1968, Ser. No. 696,188

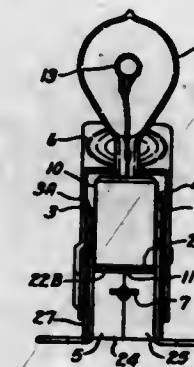
Int. Cl. H01r 13/62, 13/54

U.S. Cl. 339—45

10 Claims

A lamp-holder is provided for use in combination with a prefocused bipin lamp which has a specially designed base. The lamp-holder fixes the position of the lamp with reference to the base by clamping the base against a reference bracket by means of a resilient bracket, each of which brackets is essentially perpendicular to the face of

the socket of the lamp-holder. Suitable electrical contacts for the two pins of the lamp are provided within the socket, and access openings to such contacts are provided in the face of the socket. A lever permits ready removal of the lamp from the lamp-holder without the necessity of firmly grasping the lamp by hand. The base of the lamp



of the invention is provided with a locator pad and a positioning pad which spring load the lamp into position in the lamp-holder. The present invention is particularly useful in overhead projectors, slide projectors and motion picture projectors.

3,516,043

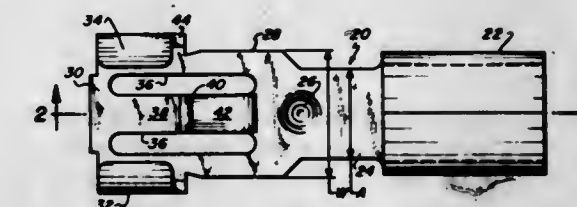
HERMAPHRODITIC DISCONNECT TERMINAL
Thomas G. Spofford, Union Township, Union County, N.J., assignor to Thomas & Betts Corporation, a corporation of New Jersey

Filed Apr. 11, 1968, Ser. No. 720,661

Int. Cl. H01r 13/28

U.S. Cl. 339—47

9 Claims



The disclosure is directed to an hermaphroditic wrist-lock disconnect terminal adapted to mate with a duplicate member to form a complete, disengageably connectable, spring-loaded, detent-locking wire coupling. Each terminal includes a set of intumed finger-type flanges overhanging a palm-like member which emanates from a wrist portion extending from the wire receiving barrel thereof. A detent located on a recessed, flexible spring-type center strip formed from a section within the wrist-palm portion of the terminal provides disengageable locking means between a pair of such assembled terminals. Misassembly is prevented by the inclusion of a boss within the wrist portion of the respective connectors.

3,516,044

CARRIER FOR TRANSISTOR OUTLINE SEMICONDUCTOR DEVICE

James W. Barnes, Drexel Hill, and Rexford W. Van De Boe, Broomall, Pa., assignors to Barnes Corporation, Lansdowne, Pa., a corporation of Pennsylvania

Filed July 23, 1968, Ser. No. 746,897

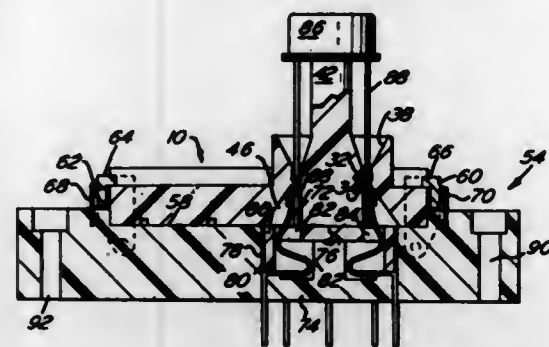
Int. Cl. H01r 13/62

U.S. Cl. 339—65

11 Claims

A carrier for a transistor outline semiconductor device has a carrier base structure supporting funnel-like lead entrances adjacent the several openings extending

through the base structure. The walls of at least some of the openings are provided with a constriction to frictionally engage a lead and retain the same therein. A central standoff post is provided. The device may include funnel-like entrances opposed to the lead entrances for contacts.



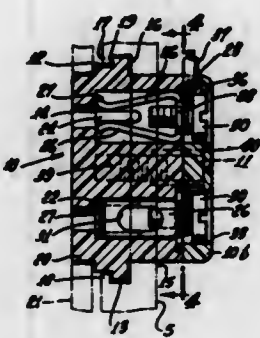
3,516,045

TELEPHONE JACK RECEPTACLE

Jack H. Gaines, Seal Beach, and Francis K. Bourhenne, Lawndale, Calif., assignors to Sierra Electric Corporation, Gardena, Calif., a corporation of California
Filed Oct. 10, 1966, Ser. No. 585,611
Int. Cl. H01r 23/04

U.S. Cl. 339-125

2 Claims



A telephone jack receptacle body contains two pairs of differentially spaced plug prong-passing openings and cavities aligned with the opening and containing spaced prong contacts and associated binder screws to which wire leads pass between the body and its cover. The body may be integrated with a wall plate.

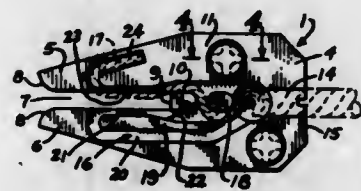
3,516,046

EDGE CONNECTOR FOR PRINTED CIRCUIT BOARD

William A. Gettig, Centre City, Pa.
(Box 85, Spring Mills, Pa. 16875)
Filed Feb. 27, 1968, Ser. No. 708,577
Int. Cl. H01r 23/02; H05k 1/04

U.S. Cl. 339-176

15 Claims



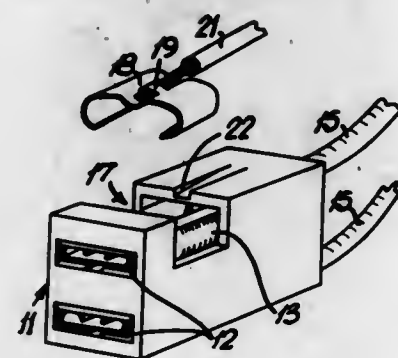
A connector member for joining an electrical lead wire to a printed circuit board. An integral housing is provided with a throat and a continuous recess for supporting a stripped solid, fused or stranded conductor with a pure tin overlay in an exposed position within the throat whereby this conductor provides a direct contact adapted to engage circuitry on a printed circuit board.

3,516,047
ELECTRICAL CONNECTORS
Donald Allan Young, Sutton Coldfield, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

Filed Sept. 12, 1967, Ser. No. 667,217
Claims priority, application Great Britain, Sept. 21, 1966, 42,132/66
Int. Cl. H01r 11/32

U.S. Cl. 339-213

1 Claim



An electrical connector comprising an insulating moulding having therein at least one conductive member which is adapted for engagement with a lead, the housing defining an aperture through which part of the conductive member is exposed to facilitate the connection thereto of an additional lead.

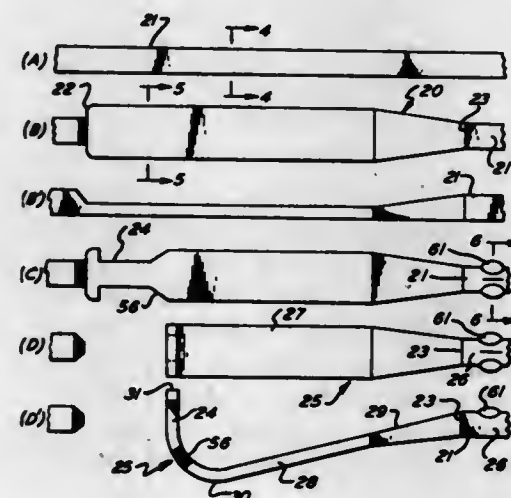
3,516,048

WIRE-FORMED CONTACT

William Scheingold, Treviso, and Donald Rossman, Jenkintown, Pa., assignors to Elco Corporation, Willow Grove, Pa., a corporation of Delaware
Filed Mar. 24, 1967, Ser. No. 625,854
Int. Cl. H01r 9/16

U.S. Cl. 339-221

3 Claims

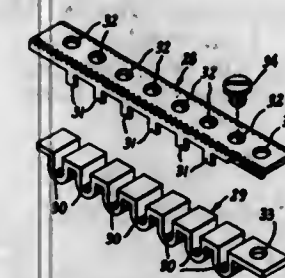


A contact for a card-edge connector has a hook-shaped nose-section that is work-hardened by swaging a section of a non-round wire. The nose section is in the form of a wiping finger whose free end has a uniform section-modulus smaller than the section-modulus of the tail. A transition portion integrally connects the wiping finger to the tail section and has a section modulus that uniformly increases in a direction toward the tail. The cross-section areas of both the wiping finger and the transition portion are substantially the same as the cross-sectional area of the wire. At the free end of the wiping finger, a dynamic stop is provided in the form of a pair of width-wise notches that engage a projection on an insulated housing.

3,516,049
MULTIPLE ELECTRICAL TERMINAL CONNECTOR
FOR PANELBOARDS AND/OR LOAD CENTERS
Lawrence C. Goodridge, Bristol, Conn., assignor to General Electric Company, a corporation of New York
Filed June 12, 1968, Ser. No. 736,472
Int. Cl. H01r 7/12

U.S. Cl. 339-242

8 Claims



A multiple electrical terminal connector for electrical panelboards and/or load centers comprising a strip of conductive material having a plurality of spaced semi-loops formed therein, an elongated support member of a high mechanical strength low cost metal such as steel having a plurality of spaced projecting portions engaging the strip and holding it in juxtaposed relation to the support member, and a plurality of clamping screws threaded into the support member for retaining in place wire conductors positioned in the aforesaid semi-loops.

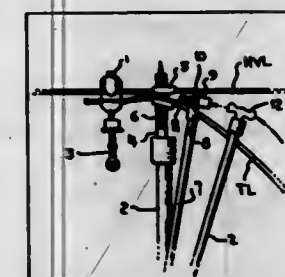
3,516,050

TOOL AND EQUIPMENT TO CONNECT A LINE ONTO A HIGH VOLTAGE LINE

James Lenhart Mixon, Jr., Harrisburg, and Frederick William Wahl, Middletown, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Original application Oct. 29, 1964, Ser. No. 407,510, now Patent No. 3,349,167, dated Oct. 24, 1967. Divided and this application May 24, 1967, Ser. No. 640,901
Int. Cl. H01r 7/06

U.S. Cl. 339-247

4 Claims



A method of applying an electrical connection assembly of a connector body and a wedge member to an existing energized utility line to connect a tap line thereto which includes clamping the tap line to the utility line, applying the connector body to the utility line and tap line, introducing the wedge member into the connector body between the utility line and tap line, and forcefully driving the wedge member into the connector body thereby effecting the electrical connection between the utility line and tap line. Apparatus is also disclosed to effect the connection.

3,516,051

PROPORTIONAL WIDTH ECHO RANGE GATING SYSTEM

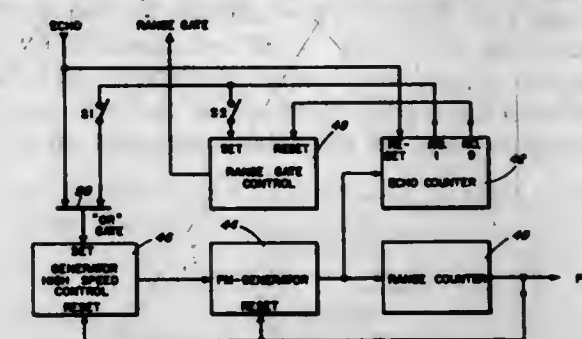
Jerome Arberman, Cleveland Heights, and Gunther Nietzel, Wickliffe, Ohio, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 28, 1969, Ser. No. 794,513
Int. Cl. G01s 9/68

U.S. Cl. 340-3

5 Claims

A proportional width echo range gating system which includes a range counter, an echo counter, an FM generator, a generator high-speed control and a range gate

control for automatically controlling the listening time of an echo receiver in proportion to the distance of a potential target. By controlling the speed of the FM generator the ping repetition rate of the system can be varied to



increase or decrease receiver listening time between echoes. An output from the echo counter maintains the ping repetition interval for a range at which the echo may be lost.

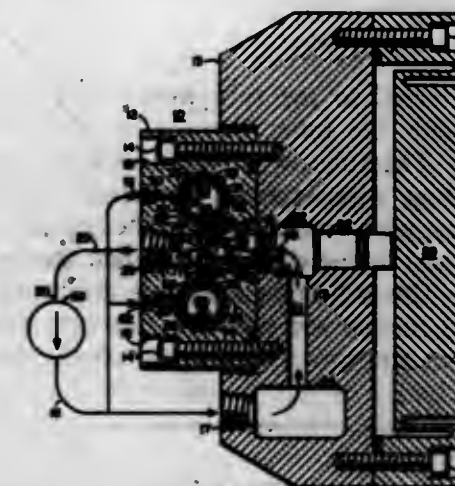
3,516,052

ACOUSTIC APPARATUS

John V. Bonyoucos, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Jan. 27, 1965, Ser. No. 428,398
Int. Cl. H04r 23/02; G01v 1/14

U.S. Cl. 340-12

14 Claims



A hydroacoustic amplifier is described having a housing including a path for the flow of pressurized hydraulic fluid through a valving orifice. A lever valve has an end of one of its arms disposed to sweep across the orifice, thereby modulating the flow of hydraulic fluid. The valve is actuated by a hydraulic transformer including a cylinder of electrostrictive material disposed in a hydraulic fluid filled cylindrical cavity. A movable button is disposed between the cylindrical cavity and the opposite end of the valve from the orifice and is actuated in response to variations in pressure in the cavity to operate the lever valve so that it sweeps across the valving orifice. An electric signal applied to the electrostrictive cylinder is translated into hydroacoustic energy which is coupled to a diaphragm for radiation outwardly from the housing.

3,516,053

SPARK GENERATOR

Jacques Cholet, Ruell-Malmaison, and Jean Claude Dubois, Royan, France, assignors to Institut Francais du Pétrole des Carburants et Lubrifiants, Ruell-Malmaison, Hauts-de-Seine, France
Filed July 3, 1967, Ser. No. 650,677
Claims priority, application France, July 6, 1966, 68,499

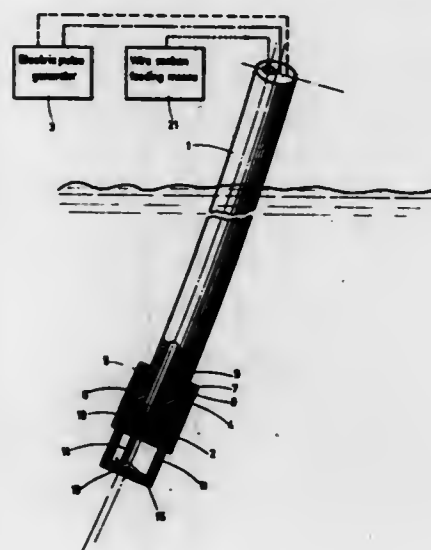
Int. Cl. G01v 1/28

U.S. Cl. 340-12

7 Claims

A spark generator is described for use in underwater seismic prospecting. The spark generator comprises one

pair of electrodes insulated from each other and respectively connected to the two terminals of a high energy source of electric current. A metallic exploding wire section having two ends which are respectively in contact with the ends of the pair of electrodes is also provided. A first electrode of the pair is secured substantially at the immersed end of a tube of insulating material dipping into the water, and the second electrode of the pair, also fixed at the immersed end of the tube, comprises an element



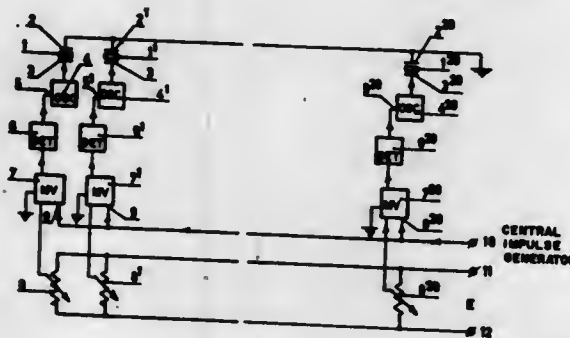
which is external to the tube and forms in abutment in alignment with the inner passage of the tube at its immersed end. The tube is provided at its unimmersed end with exploding wire sections associated with means for stiffening the wire section along the length thereof substantially equal to the distance between the two electrodes of the pair. The stiffening means is destructible upon explosion, and means are provided for conveying the wire sections from the unimmersed end to the immersed end of the tube.

3,516,054 ULTRASONIC TRANSMITTER

Jan C. Somer, Odijk, Netherlands, assignor to Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek ten Behoeve van de Volksgezondheid, The Hague, Netherlands, a corporation of the Netherlands
Filed Mar. 1, 1968, Ser. No. 709,721
Claims priority, application Netherlands, Mar. 7, 1967, 6703603

U.S. Cl. 340-15 Int. Cl. H04b 11/00

3 Claims



The invention relates to an ultrasonic transmitter for material investigation provided with an antenna consisting of an array of electro-mechanical transducer elements and means for exciting each of the elements of the array which means include a plurality of multivibrators triggered simultaneously from a central generator source.

Each multivibrator provides an impulse output which is detected by a detector to excite an oscillator driving each of the transducer elements.

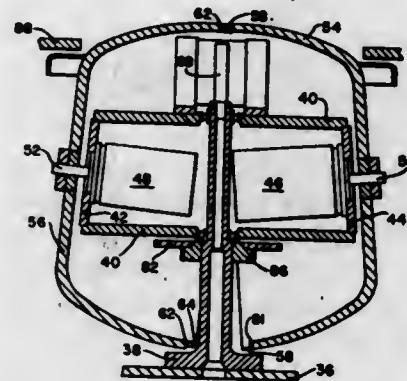
3,516,055 INTERNALLY GIMBALED ATTITUDE INDICATOR

Gerald L. Snider, Grand Rapids, Mich., assignor to Lear Siegler, Inc.

Filed May 20, 1968, Ser. No. 730,233
Int. Cl. G01c 19/44; G08c 21/00

U.S. Cl. 340-27

18 Claims



An aircraft attitude indicator including a pair of generally hemispheric shape display surfaces which are rotatably mounted on a pair of canted shafts secured to a support housing for providing a pitch indication. The support housing itself is rotatably supported by a shaft which extends between the display surfaces for providing a roll indication. The display surfaces are operably connected; e.g., by gear teeth or friction drive means so that movement of one display surface will effect the movement of the other. The positions of the display surfaces in pitch and roll are controlled by conventional servo loops, with the pitch position servo loop being closed by the meshing of the display surfaces.

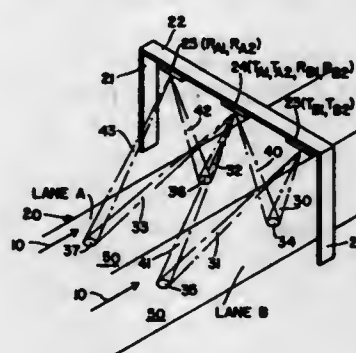
3,516,056 TRAFFIC CONTROL SYSTEM

David R. Matthews, Ann Arbor, Mich., assignor to Lear Siegler, Inc.

Filed Nov. 10, 1966, Ser. No. 593,480
Int. Cl. G08g 1/04

U.S. Cl. 340-38

10 Claims



The present invention relates to an optical system for surveying traffic conditions along a roadway. Light transmitting and receiving means are positioned above the roadway such that the respective emission and acceptance of predetermined volumes of light energy intercept at a given distance above the surface of the roadway. The interruptions of either the emission, the acceptance or of both volumes of light energy by passing vehicles will be sensed by the receiving means and will thereby provide information regarding the passing vehicles. Specific information obtainable from this system relates to vehicle count, stream acceleration, density, space between vehicles and lane occupancy.

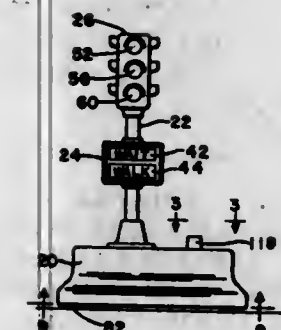
3,516,057 TOY TRAFFIC SIGNAL

Mel Appel, Livingston, N.J., assignor to Buddy L. Corp., East Moline, Ill., a corporation of Delaware

Filed Sept. 5, 1967, Ser. No. 665,557

U.S. Cl. 340-44

4 Claims



A toy traffic signal incorporating signalling indicia for controlling both pedestrian and vehicular traffic and including electrical means and a selective switch for illuminating the pedestrian and vehicular signs in a predetermined pattern.

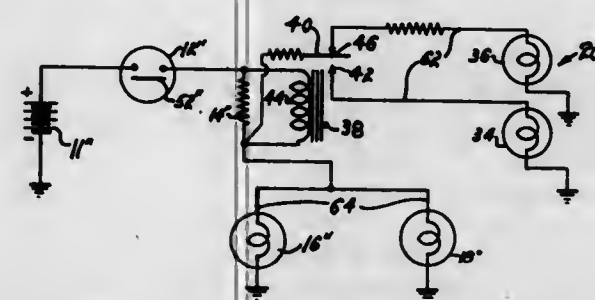
3,516,058 DUAL WARNING INDICATOR DEVICE

Venancio Sanchez, Miami, Fla. (P.O. Box 711, Marathon, Fla. 33050), and Candido I. Sanchez, 10890 SW. 34th St., Miami, Fla. 33165

Filed June 24, 1966, Ser. No. 560,185

U.S. Cl. 340-52

2 Claims



A brake warning voltage divider circuit electrically connected between one terminal of the electrical source of a vehicle and the other pole of the source, the voltage divider circuit being arranged to indicate the condition of the brake system, the circuit including a normally open switch, a plurality of indicator lights including a main indicator light adapted to be mounted on the driving instrument panel of the vehicle and a pair of secondary indicator lights to be arranged exteriorly of the vehicle and electrical means to connect the light means so that when current flows through the main indicator means it will cause a visible indication as to the amount of current flow through the secondary indicator means and thereby indicate the operability of the vehicle brake system and brake lights.

3,516,059 CONTROL SYSTEM

Daniel T. Hindman, Kenmore, and Robert V. Morris, Tonawanda, N.Y., assignors to Finger Keys, Inc., Buffalo, N.Y.

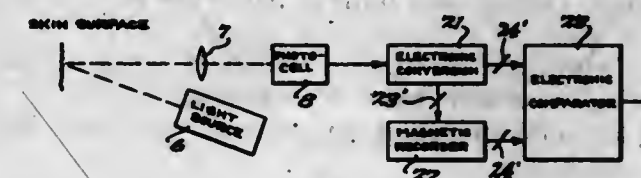
Filed Apr. 11, 1967, Ser. No. 630,019

U.S. Cl. 340-149

11 Claims

The skin surface presented for control purposes is optically scanned by a photocell and converted to an electric signal corresponding to the pattern of the skin surface. This signal is electronically compared to an electric signal corresponding to a reference pattern stored on a magnetic

record. If there is sufficient identity between the two signals the desired control is accomplished. The photocell scanning and signal converting unit can be used to magnetically record the reference pattern.



ning and signal converting unit can be used to magnetically record the reference pattern.

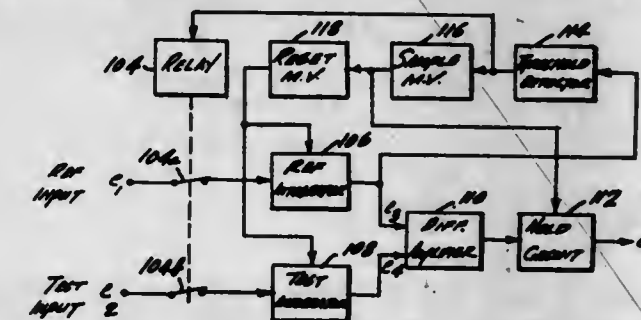
3,516,060 ANALOG COMPARATOR

William C. Hutton and Robert C. Reibold, Garden Grove, Calif., assignors, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed Oct. 21, 1965, Ser. No. 499,857

U.S. Cl. 340-149

10 Claims



An analog comparator including a first integrator for producing a first integrated output signal from a first input signal, a second integrator for producing a second integrated output signal from a second input signal, a differential amplifier for producing a differential output signal from the first and second output signals, a threshold detector responsive to a predetermined level of the first output signal and producing a sample signal therefrom, and means responsive to the sample signal for sampling the differential output signal and comparing it with a tolerance signal. A modified, economical version of the analog comparator is also disclosed.

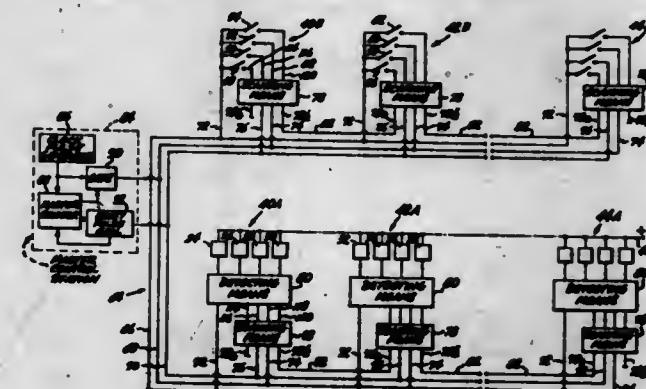
3,516,061 ELECTRICAL SIGNALING APPARATUS

Henri B. Joyaux, Beaverton, Oreg., assignor to Ford Industries, Inc., Portland, Oreg., a corporation of Washington

Filed Dec. 4, 1967, Ser. No. 687,719

U.S. Cl. 340-150

9 Claims



An electrical signaling system including plural communication devices arranged in pairs of corresponding groups with each device in a group associated with a device in the corresponding group, and a common transmission conductor for carrying information between associated devices. Included also is a pulse source producing a pulse signal.

successive trains of pulses, and a scanner for each group interconnected with the source and with the scanners for the groups. During each train of pulses the pairs of scanners for pairs of corresponding groups operate in succession, with each such pair of scanners, when actuated, connecting successive pairs of associated devices in the groups for communication, on a mutually exclusive basis, via the conductor.

3,516,062

UNIQUELY CODED IDENTIFICATION AND ENABLING OF A DATA TERMINAL

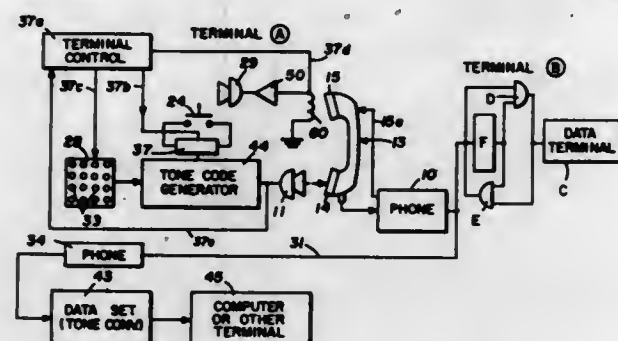
Earl D. Spraker, Dallas, Tex., assignor to Electronic Data Systems Corporation, Dallas, Tex., a corporation of Texas

Filed Dec. 18, 1968, Ser. No. 784,580

Int. Cl. H04q 9/00

U.S. Cl. 340-152

12 Claims



Control is provided for transmission of data signals over a communication channel from a data terminal. Identification means connected to the channel is responsive to a call signal thereon for transmitting to the channel a signal uniquely identifying the terminal. A transmission enable means connects the terminal to the channel and means responsive to transmission of the identifying signal arms the enable means for response to an enable signal on the channel whereby the terminal may then be enabled to transmit signals to the channel.

3,516,063

SUPERVISORY AND CONTROL SYSTEM HAVING BUFFER STORAGE INPUT TO DATA LOGGER

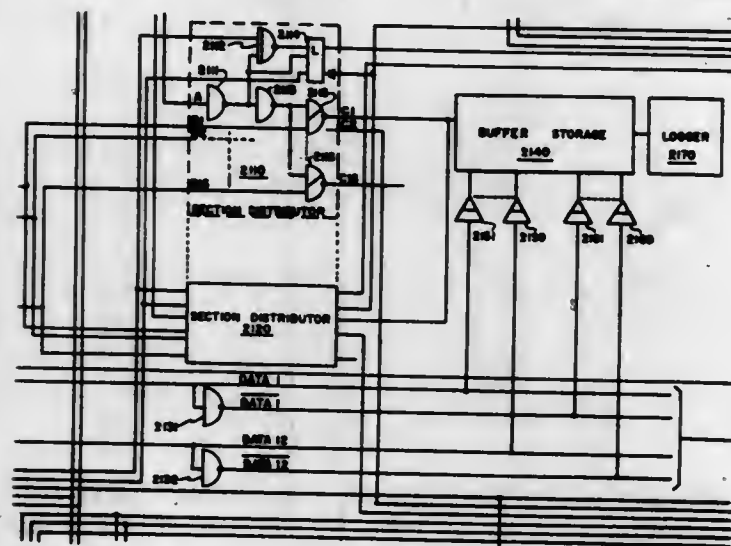
David M. Arkin, Chicago, Bruno A. Mattedi, Addison, Richard P. Sanders, Lisle, and Joseph F. Sullivan, Lombard, Ill., assignors, by mesne assignments, to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 9, 1966, Ser. No. 548,745

Int. Cl. H04q 9/14

U.S. Cl. 340-163

6 Claims



A supervisory control system, having master and remote stations with automatic scanning and reporting of the status of devices located at the remote stations, to the

master station. Selection and control of the equipment located at remote stations by the master station interrupts the automatic scan. After transmission of control messages the automatic scan is resumed. Single addresses may be associated with either one or a plurality of remotely located status devices. Selective interrogation of individual status devices may be accomplished in a manner similar to that for exercising control of remotely located devices. Facilities for checking the accuracy of the selection of a point to be controlled, before operating are further included.

3,516,064

SWITCHING GRID MATRIX WITH CROSSPOINT ELEMENTS, CONTROLLED BY MARKING PULSES BEING VERY SHORT COMPARED TO THEIR RESPONDING PERIOD

Wolfgang Grobe, Ludwigsburg, Wurttemberg, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 16, 1966, Ser. No. 572,825

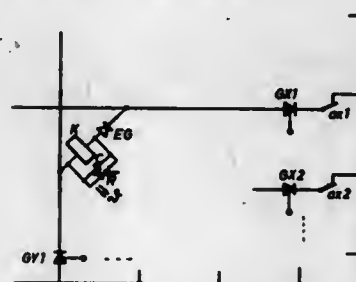
St 24,369

Claims priority, application Germany, Sept. 8, 1965,

Int. Cl. H04q 3/00, 3/64

U.S. Cl. 340-166

9 Claims



A storage switch is provided for each row and for each column of a switching matrix. The storage switches are controllable by relatively shorter pulses than are needed to operate crosspoint elements of the matrix. Resistors are placed in parallel with the crosspoint elements to provide a current path over which the storage switches can be kept operative until the crosspoint elements have had time to react and complete a circuit.

3,516,065

DIGITAL TRANSMISSION SYSTEM

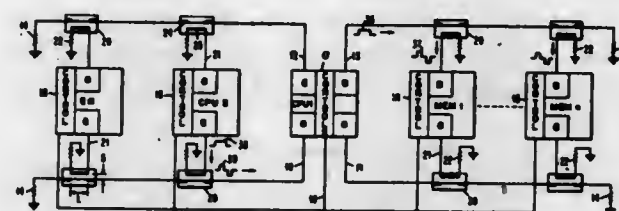
Murray H. Bolt, Poughkeepsie, and Howard H. Nick, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Jan. 13, 1967, Ser. No. 609,083

Int. Cl. H04q 5/00

U.S. Cl. 340-170

8 Claims



Data processing devices, such as memory units, channels, central processing units, etc., are interconnected by a transmission system for the transfer of information between such devices. Each information or data path has a transmission line connected to a plurality of strip line directional couplers each of which has an impedance match with the transmission line independent of any stub line length. One or more drivers and one or more receivers, each housed in one of the devices, are connected to the transmission line and to the couplers,

the connection to the couplers being through stub lines. The directional couplers may be connected so as to be responsive to pulses propagating in only one direction or in both directions along the lines.

3,516,066

READBACK CIRCUIT FOR INFORMATION STORAGE SYSTEMS

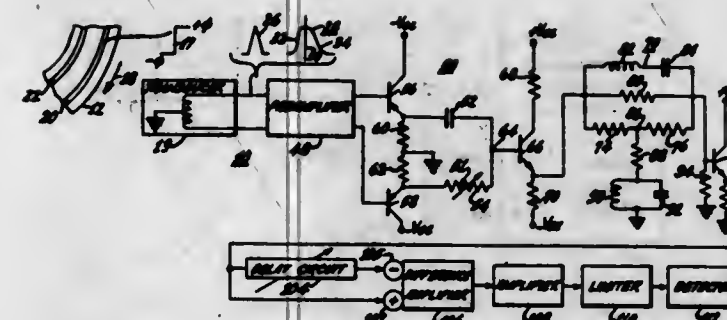
George V. Jacoby, Bala-Cynwyd, Pa., assignor to RCA Corporation, a corporation of Delaware

Filed Mar. 15, 1968, Ser. No. 713,387

Int. Cl. G11b 5/00, 5/44; H04b 15/04

U.S. Cl. 340-174.1

8 Claims



A readback circuit is provided which employs phase and amplitude compensation to reduce distortion in a readback signal. The readback circuit also processes the readback signal to simulate the waveshape of the initial recording signal to permit the extraction of accurate data therefrom.

3,516,067

MULTISTATION GRAPHICAL TERMINAL SYSTEM

Scott H. Cameron, Northfield, Ill., assignor to IIT Research Institute, Chicago, Ill., a corporation of Illinois

Continuation-in-part of application Ser. No. 562,646,

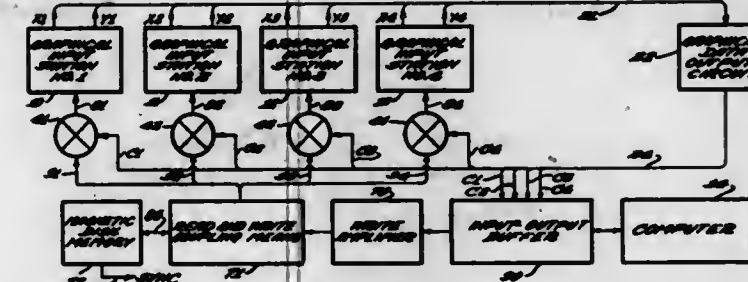
July 5, 1966. This application Oct. 26, 1966, Ser.

No. 589,589

Int. Cl. G06f 3/04, 3/14

U.S. Cl. 340-172.5

12 Claims



The disclosure shows a multistation terminal system comprising a plurality of graphical input stations for shared communication with a digital computer. In the specific embodiment shown each graphical input device comprises a hand held stylus coupled through flexible cables to potentiometers or digital shaft encoders. Square law cam configurations may be utilized in the coupling so that the output is a linear function of stylus position. The instantaneous stylus position is shown as an intensified spot on a display raster. A magnetic disk memory carries unitary weighted display signals for the pictorial display units so that the displays are refreshed independently of the computer. The computer updates the magnetic disk by transmitting groups of unitary weighted display signals, for example 16-bit words. The display signals and element rate clock signals are recorded on the disk as square waves which change in polarity of saturation to represent one

binary value (or to indicate a clock pulse position) but do not change polarity to represent the other binary value. A single magnetic head may serve to refresh two displays with minimum disturbance during the time when the head receives updating signals from the computer. Preferably, the display units are conventional low cost broadcast television receivers.

3,516,068

CASH FLOW COMPUTER

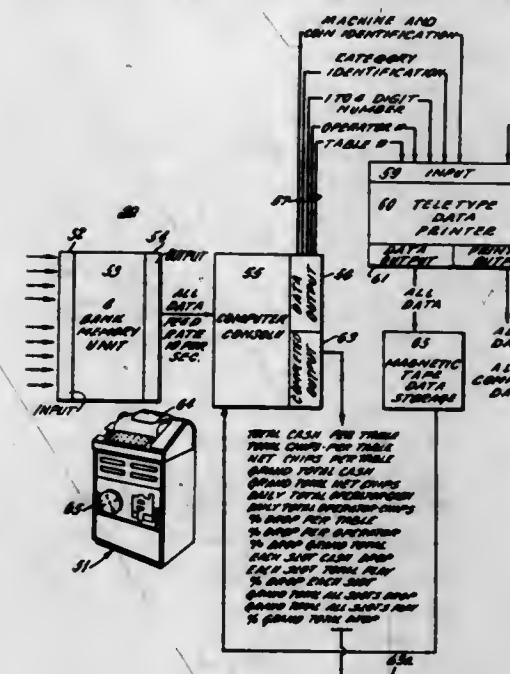
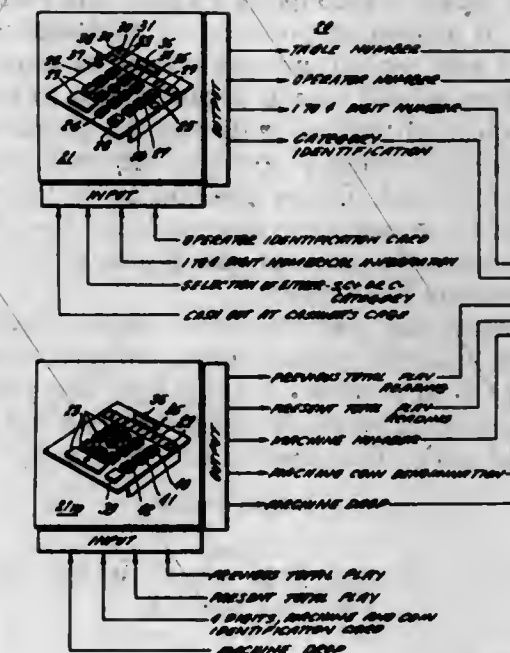
Robert Howard, Roslyn, N.Y., and An Wang, Lincoln, Mass., assignors, by direct and mesne assignments, to Centronics Data Computer Corporation, Framingham, N.Y., a corporation of Delaware

Filed May 29, 1967, Ser. No. 641,888

Int. Cl. G06 7/06, 9/00

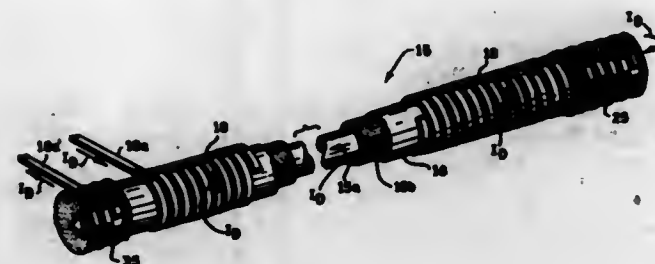
U.S. Cl. 340-172.5

17 Claims



This invention teaches a transaction recording and processing system comprising terminals provided at a plurality of remote locations continuously coupled to scanning and processing equipment provided at a central location for display operational purposes and selectively coupled to said central scanning and processing equipment for data transfer purposes, each of said terminals comprising first memory means for storing function information; second memory means for storing decimal

conductive overcoating uniformly deposited over the magnetic material. A helical solenoid winding having an insulating coating thereon is provided over the conductive overcoating along the rod memory. The conductive overcoating, having a thickness of less than 5,000 angstroms,



permits a rapid and simple connection to be made between the substrate and the solenoid winding by the simple expedient of dip soldering. The conductive overcoating additionally provides an improvement in the square-loop hysteresis characteristics of the magnetic film.

3,516,076

MEMORY ELEMENT EMPLOYING STACKED MAGNETIC LAYERS

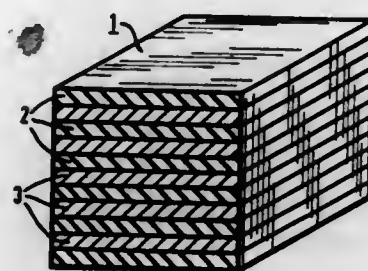
Karl-Ulrich Stein, Munich, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed Mar. 29, 1967, Ser. No. 626,733

Int. Cl. G11c 11/14

U.S. Cl. 340—174

6 Claims



A memory element comprising at least two stack-like superposed magnetic layers, separated from one another by nonmagnetic interlayers, in which the thickness of the interlayers is so selected that the memory element exhibits an increased wallmotion field strength in comparison with a comparable element free of such interlayer.

3,516,077

MAGNETIC PROPAGATION DEVICE WHEREIN POLE PATTERNS MOVE ALONG THE PERIPHERY OF MAGNETIC DISKS

Andrew H. Bobeck, Chatham, Edward Della Torre, Plainfield, and Henry E. D. Scovil, New Vernon, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed May 28, 1968, Ser. No. 732,644

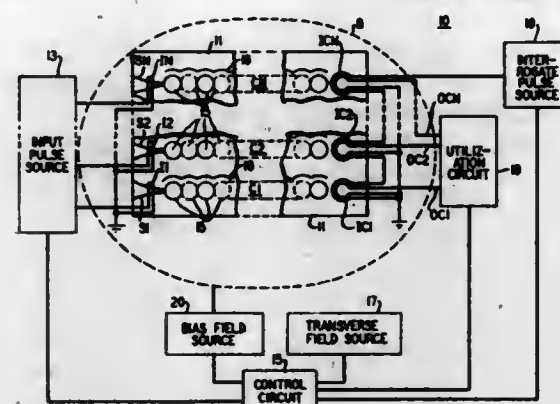
Int. Cl. G11c 11/14, 19/00

U.S. Cl. 340—174

6 Claims

Patterns of magnetic material contiguous the surface of a sheet of material in which single wall domains can be propagated have been found to provide magnetic pole patterns which change in response to a field rotating in the plane of the sheet. The changing pole patterns provide attracting propagation fields for moving single wall domains in the sheet from input to output positions thus permitting shift register operation in the absence of discrete propagation conductors. An arrangement wherein the pole patterns move along the periphery

of magnetic disks is described. Next adjacent disks are disposed on opposite surfaces of the sheet and domains are guided for movement along the periphery of the disks by a magnetic guide line. Domain propagation in



3,516,078

APPARATUS FOR SELECTION OF MEMORY WORD LOCATION

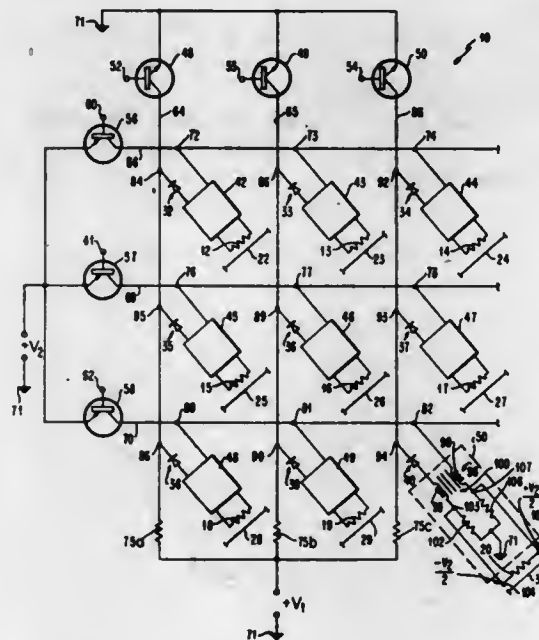
Richard E. Matick and Jacob R. Mayfield, Peekskill, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 17, 1964, Ser. No. 375,839

Int. Cl. G11c 7/02

U.S. Cl. 340—174

13 Claims



This invention provides a logic circuit for memory location selection. Broadly, the circuit includes a transmission line transformer for each memory location to obtain high frequency response for the selected location and voltage isolation for unselected locations. In one embodiment of the invention, the logic circuit includes a selection matrix, e.g., diode selection matrix, with a transmission line transformer for each memory location to obtain high frequency response for the selected location and voltage isolation of unselected locations. In another embodiment of the invention, a pulse transformer with a grounded center tap on its secondary winding is used with a diode selection matrix for obtaining a balanced drive of a selected memory location.

3,516,079

MAGNETIC STORAGE DEVICE WHICH EXHIBITS PSEUDO-BIAXIAL MAGNETIC PROPERTIES

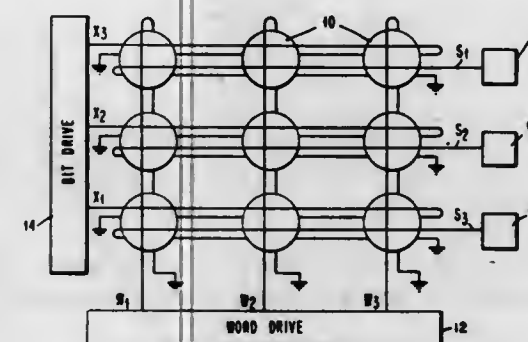
Emerson W. Fugh, Hughsonville, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 29, 1966, Ser. No. 561,572

Int. Cl. G11c 7/00, 11/14

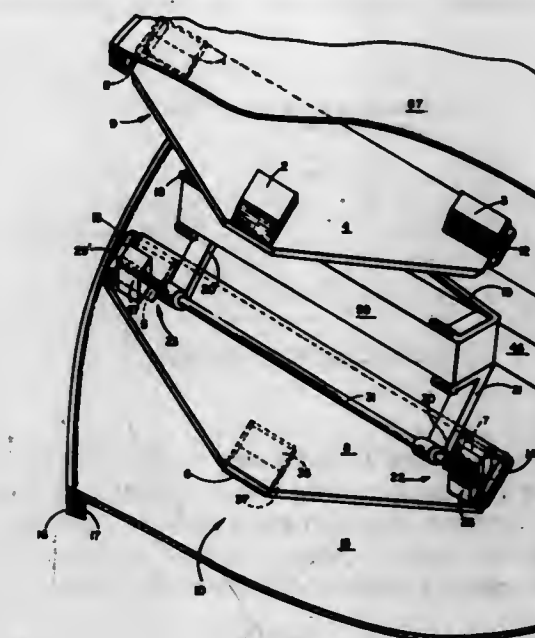
U.S. Cl. 340—174

1 Claim



A storage device having a magnetic element exhibiting an easy axis of magnetization and a hard axis in quadrature thereto is operative in a non-coincident current selection mode by utilizing magnetic elements having a selected amount of dispersion therein.

bearings for maintaining the transducers at a required spacing from a moving surface and include means for



permitting self-alignment of the pads with respect to the surface.

3,516,082

TEMPERATURE SENSING DEVICES

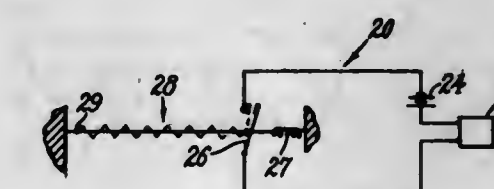
Roy G. Cooper, Glastonbury, Conn. (P.O. Box 286, Rancho Santa Fe, Calif. 92067)

Filed June 9, 1967, Ser. No. 644,888

Int. Cl. G08b 17/06; H01h 37/46

U.S. Cl. 340—227.1

6 Claims



A temperature detecting alarm system having temperature sensor comprising an intermetallic alloy containing from about 52 to 56 weight percent nickel and the remainder titanium which upon being exposed to a predetermined temperature, changes shape dimensionally and actuates an audio-visual signalling device.

3,516,083

ELECTRIC ALARM SYSTEM, PREFERABLY FOR A FIRE ALARM

Svend Scheel Meyer, Herlev, near Copenhagen, Denmark, assignor to Danske Securitas A/S, Copenhagen, Denmark

Filed Dec. 2, 1965, Ser. No. 511,081

Int. Cl. G08b 17/10

U.S. Cl. 340—237

6 Claims

An area monitoring smoke detecting electric alarm system having two ionizing chambers connected in series by a connecting conductor and subjected to radiation with one chamber being open to its surrounding environment and the other chamber being closed with a source of direct voltage being connected across the chambers and a voltage divider being connected by its outer terminals across said series connected chamber and by its tap to said connecting conductor and to one input terminal of an amplifier with the other input terminal of the amplifier being connected to the midpoint of the secondary coil of a

3,516,081

FLUID BEARING PADS FOR SUPPORTING TRANSDUCERS

Robert B. Horsfall, Placentia, William A. Farrand, Fullerton, and Warner D. Williams, Buena Park, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

Continuation of application Ser. No. 606,204, Dec. 30, 1966. This application July 31, 1969, Ser. No. 847,824

Int. Cl. G11b 5/60, 21/20

U.S. Cl. 340—174.1

2 Claims

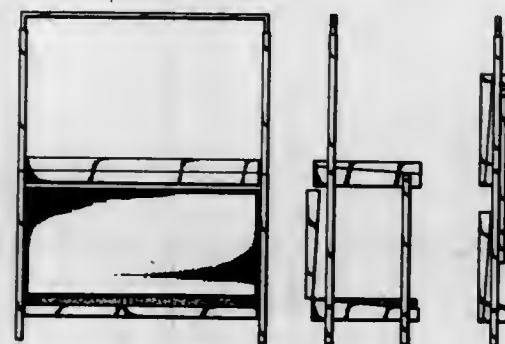
A plurality of interconnected hydrodynamic bearing pads to which transducers are mounted. The pads form

DESIGNS

JUNE 2, 1970

217,704
FOLDABLE BUNK BED
James Ruben, 11008 Childs St.,
Silver Spring, Md. 20901
Filed Sept. 8, 1969, Ser. No. 19,050
Term of patent 14 years
Int. Cl. D6—01

U.S. Cl. D5—4



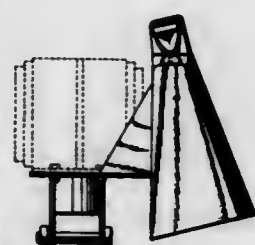
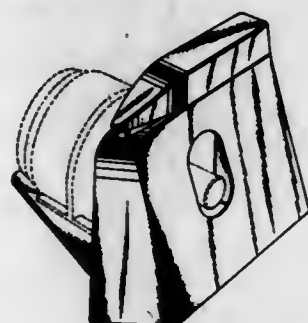
217,705
ELECTRICAL SCISSORS
Heinrich Glaus, Niederwangen, Switzerland, assignor to
Styner & Bienz AG, Bern, Switzerland
Filed July 22, 1969, Ser. No. 18,304
Claims priority, application Switzerland Mar. 19, 1969
Term of patent 14 years
Int. Cl. D8—02

U.S. Cl. D8—61



217,706
FEATHER CUTTING HEAD
Earl A. Miller, Orem, Utah 84057
Filed Feb. 5, 1969, Ser. No. 15,647
Term of patent 14 years
Int. Cl. D8—02

U.S. Cl. D8—98



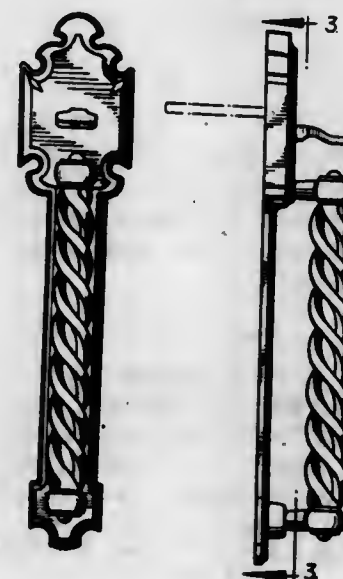
217,707
**COMBINED LETTER OPENER AND SCISSORS
OR SIMILAR DESK TOOL**
Clayton A. Laughlin, Minneapolis, Minn., assignor to
Arthur Salm Inc., Chicago, Ill., a corporation of
Illinois
Filed May 20, 1968, Ser. No. 12,017
Term of patent 14 years
Int. Cl. D8—02

U.S. Cl. D8—104



217,708
ENTRANCE HANDLE OR THE LIKE
George R. Sonnenleiter, Rockford, Ill., assignor to Key-
stone Consolidated Industries, Inc., Peoria, Ill., a cor-
poration of Delaware
Filed Feb. 10, 1969, Ser. No. 15,719
Term of patent 14 years
Int. Cl. D8—03

U.S. Cl. D8—167



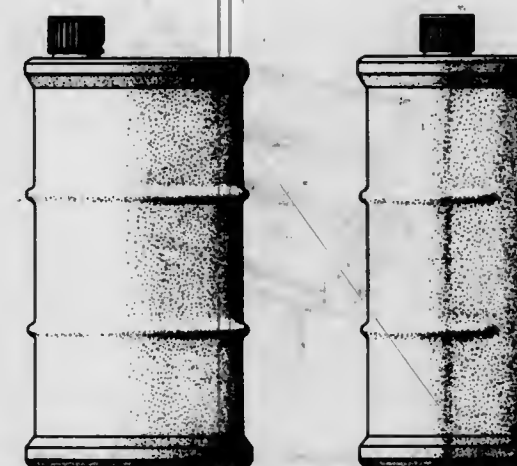
JUNE 2, 1970

U. S. PATENT OFFICE

817

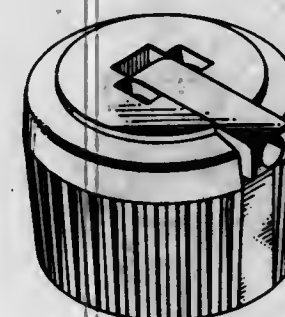
217,709
BOTTLE
James C. McKinney and William D. West, Greenville
County, S.C., assignors to Textze Chemicals, Inc., a
corporation of Delaware
Filed Nov. 21, 1968, Ser. No. 14,673
Term of patent 14 years
Int. Cl. D9—01

U.S. Cl. D9—63



217,710
DISPENSING CLOSURE
Robert E. Hazard, North Kingstown, R.I., assignor to
Polytop Corporation, Slatersville, R.I., a corporation
of Massachusetts
Filed Oct. 23, 1968, Ser. No. 14,127
Term of patent 14 years
Int. Cl. D9—02

U.S. Cl. D9—275



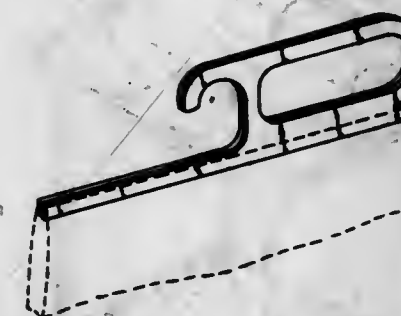
217,711
DISPENSING CLOSURE
Robert E. Hazard, North Kingstown, R.I., assignor to
Polytop Corporation, Slatersville, R.I., a corporation
of Massachusetts
Filed July 24, 1969, Ser. No. 18,390
Term of patent 14 years
Int. Cl. D9—02

U.S. Cl. D9—275



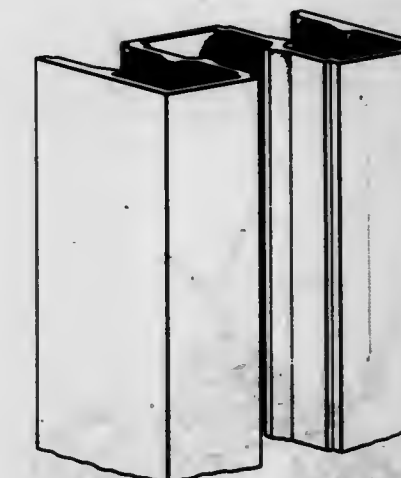
217,712
**COMBINED CLOSURE AND HANDLE FOR A
CARRIER BAG**
Seymour Kamins, Oceanside, Daniel Gelles, Kerbouken,
and Jerry Horodecky, Jackson Heights, N.Y., assignors
to CTP Industries Inc., Brooklyn, N.Y., a corporation
of New York
Filed Mar. 19, 1969, Ser. No. 16,328
Term of patent 14 years
Int. Cl. D9—99

U.S. Cl. D9—291



217,713
**COMBINED DOOR JAMB AND PANEL FRAME
MEMBER**
Robert A. Miller, Plainville, Conn., assignor to The
Stanley Works, New Britain, Conn., a corporation
of Connecticut
Filed Apr. 22, 1968, Ser. No. 11,540
Term of patent 14 years
Int. Cl. D25—03

U.S. Cl. D13—6



217,714 CART FOR GAS TANKS

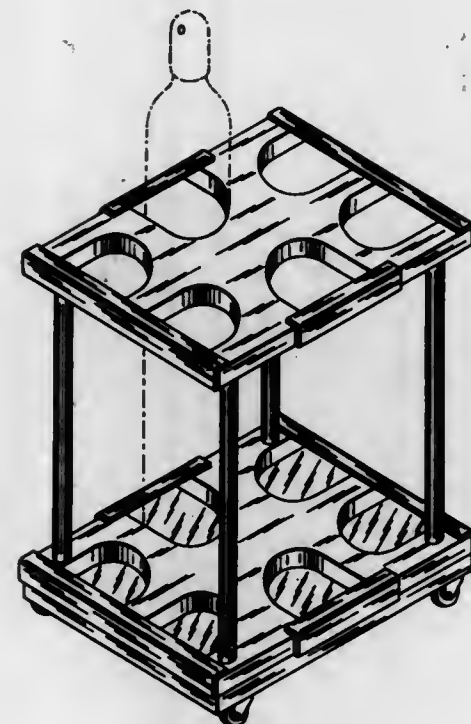
John P. Salsgiver, West Acton, Mass., assignor to United Technical Corporation, West Concord, Mass., a corporation of Massachusetts

Filed Mar. 21, 1969, Ser. No. 16,372

Term of patent 14 years

Int. Cl. D12-02

U.S. Cl. D14-3



217,715 ELECTRIC GOLF CART

Ian Vernon Tuson, Christchurch, England, assignor to Harlequin Manufacturing Limited, Christchurch, Hampshire, England, a British company

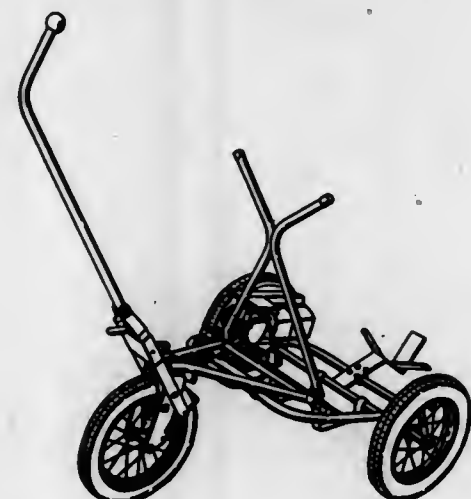
Filed Apr. 14, 1969, Ser. No. 16,728

Claims priority, application Great Britain Oct. 18, 1968

Term of patent 14 years

Int. Cl. D12-02

U.S. Cl. D14-3



217,716 ARMCHAIR

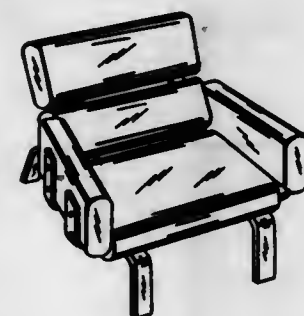
Michael D. Tatum, Kirkwood, Mo., assignor to Hellmuth, Obata and Kassabaum, Inc., St. Louis, Mo., a corporation of Missouri

Continuation-in-part of design applications Ser. No. 84,926, Apr. 22, 1965, and Ser. No. 4,587, July 15, 1966. This application Nov. 25, 1966, Ser. No. 5,551

Term of patent 14 years

Int. Cl. D6-01

U.S. Cl. D15-1



217,717 APPARATUS FOR THE PROCESSING AND GROWTH OF CRYSTALLINE MATERIAL UNDER PRESSURE

Charles Harry Holliday, John Brian Mullin, and Barrie Wingfield Straughan, Malvern, England, assignors to National Research Development Corporation, London, England

Filed Oct. 25, 1968, Ser. No. 14,173

Claims priority, application Great Britain Apr. 26, 1968

Term of patent 14 years

Int. Cl. D24-99; D31

U.S. Cl. D16-2



217,718 DISCHARGE HEAD FOR HAND PUMPS

Wallace F. Magers, Leawood, Kans., assignor to Cook Chemical Company, Kansas City, Mo., a corporation of Missouri

Filed June 26, 1969, Ser. No. 17,888

Term of patent 14 years

Int. Cl. D23-01; D8-03

U.S. Cl. D23-14



217,719 STEAM GENERATOR FOR COMPLEXION CARE

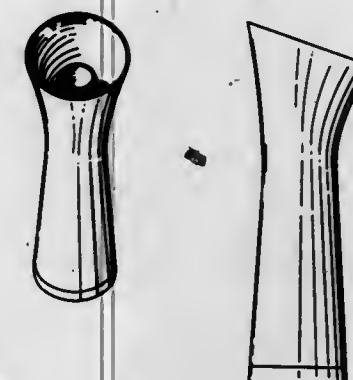
Samuel L. McNair, Overland Park, Kans., and Thomas W. Kellogg, Newport Beach, Calif., assignors to The Songrand Corporation, a corporation of Missouri

Filed Feb. 19, 1969, Ser. No. 15,837

Term of patent 14 years

Int. Cl. D23-04

U.S. Cl. D23-148



217,720 AEROSOL DISPENSER

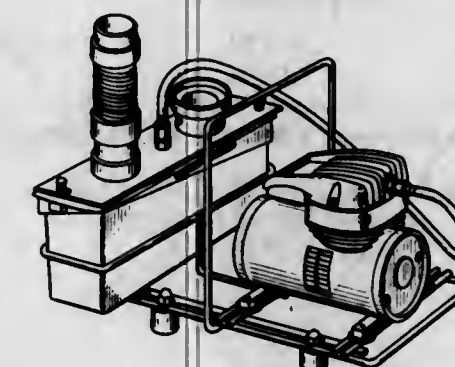
Robert M. Montague, Winston-Salem, N.C., assignor to Paramedical Research and Development Corporation, Winston-Salem, N.C., a corporation of North Carolina

Filed Mar. 28, 1969, Ser. No. 16,513

Term of patent 14 years

Int. Cl. D23-04; D15-02

U.S. Cl. D23-148



217,721 HOUSING FOR VENTILATOR OR THE LIKE

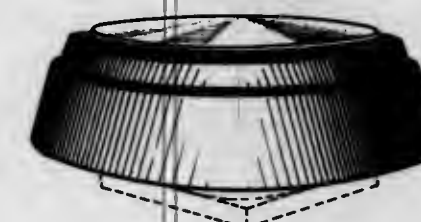
Robert Guernsey, Chicago, Ill., assignor to ILG Industries Inc., Chicago, Ill., a corporation of Delaware

Filed Aug. 28, 1968, Ser. No. 13,298

Term of patent 14 years

Int. Cl. D23-04

U.S. Cl. D23-153



217,722 SORTER FOR DOCUMENT CARDS

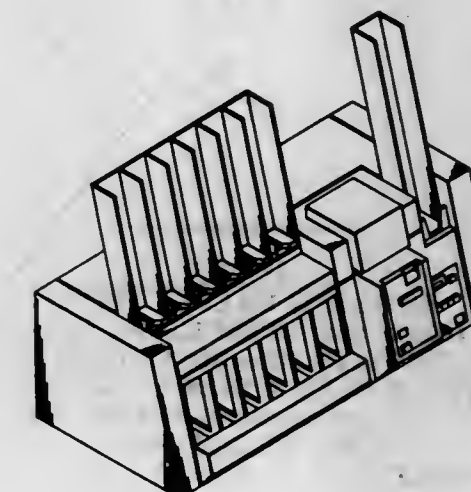
Wayne L. Aderman, Zumbro Falls, Beryl D. Bergschneider, Rochester, Theodore F. Dunnington, Oronoco, and James T. Engh and Clarence J. Kellerman, Rochester, Minn., and Edward R. Wiener, Vestal, N.Y., and Frank Wilkey, Jr., Rochester, Minn., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed July 1, 1969, Ser. No. 17,999

Term of patent 14 years

Int. Cl. D14-02

U.S. Cl. D26-5



217,723 DOCUMENT READER

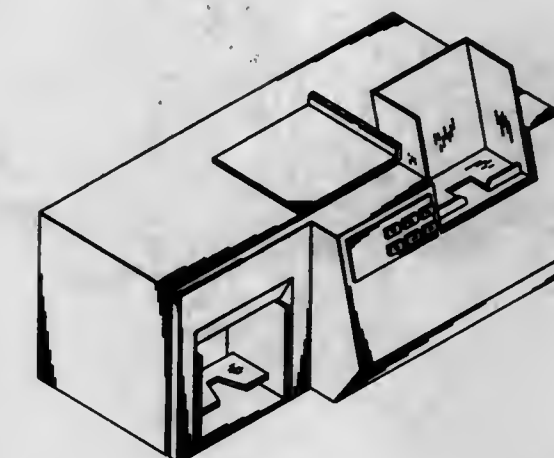
Wayne L. Aderman, Frank Wilkey, Jr., and Philip C. Yenerich, Rochester, Minn., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Nov. 19, 1968, Ser. No. 14,526

Term of patent 14 years

Int. Cl. D14-02

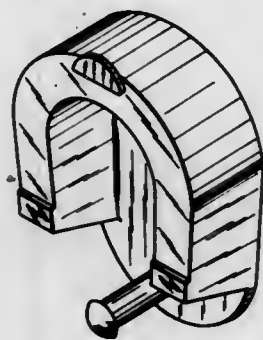
U.S. Cl. D26-5



217,724

COMBINED HALTER AND BRIDLE HANGER
Woodrow W. Pearce, 1200 Riverside Drive,
Burbank, Calif. 91506
Filed Mar. 10, 1969, Ser. No. 16,152
Term of patent 14 years
Int. Cl. D30—09

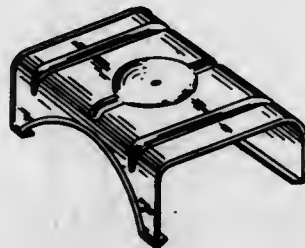
U.S. Cl. D30—45



217,725

BOWLING BALL SUPPORT
Samuel N. Glantz and Milton Glantz, Lincolnwood, Ill.,
(both of 1127 W. Division St., Chicago, Ill. 60622)
Filed Nov. 29, 1968, Ser. No. 14,719
Term of patent 14 years
Int. Cl. D21—03

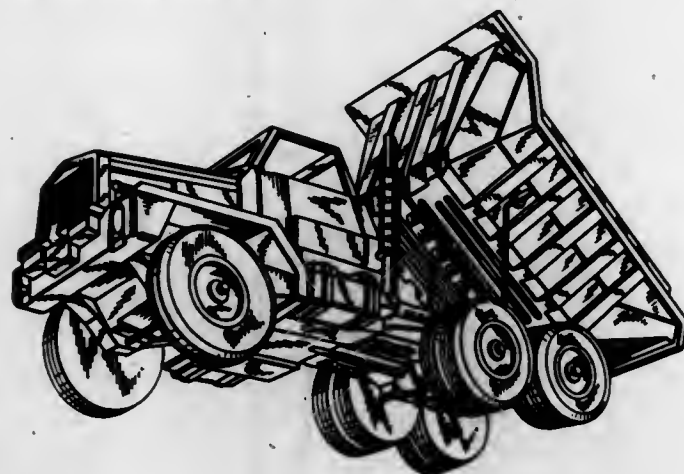
U.S. Cl. D34—5



217,726

TOY TRUCK OR SIMILAR ARTICLE
Irwin Cohn, 746 West St., Leominster, Mass. 01453
Filed Nov. 12, 1968, Ser. No. 14,405
Term of patent 14 years
Int. Cl. D21—02

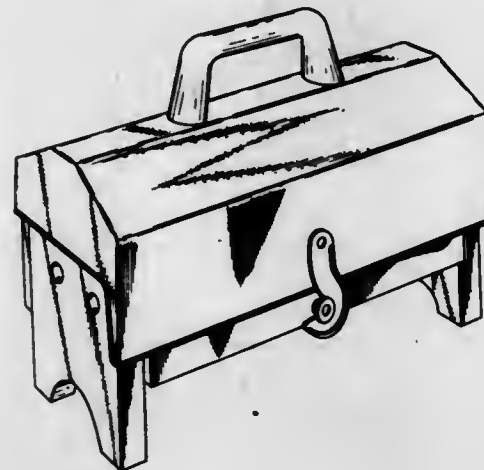
U.S. Cl. D34—15



217,727

COMBINED TOY TOOLBOX AND WORK BENCH
Duane E. Spengler, West Falls, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y., a corporation of New York
Filed Mar. 6, 1969, Ser. No. 16,095
Term of patent 14 years
Int. Cl. D21—02

U.S. Cl. D34—15

217,728
CLOCK

Lawrence H. Wilson, Grosse Pointe, Mich., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Delaware
Filed June 3, 1969, Ser. No. 17,493
Term of patent 14 years
Int. Cl. D10—01

U.S. Cl. D42—7



217,729

CLOCK HOUSING
Lawrence H. Wilson, Grosse Pointe, Mich., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 3, 1969, Ser. No. 17,496
Term of patent 14 years
Int. Cl. D10—01

U.S. Cl. D42—7

217,730
CLOCK

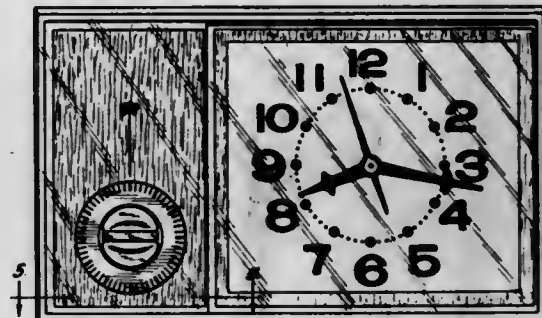
John R. Wilson, Royal Oak, Mich., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 3, 1969, Ser. No. 17,504
Term of patent 14 years
Int. Cl. D10—01

U.S. Cl. D42—7

217,731
CLOCK

Robert O. Ernest, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 30, 1969, Ser. No. 17,980
Term of patent 14 years
Int. Cl. D10—01

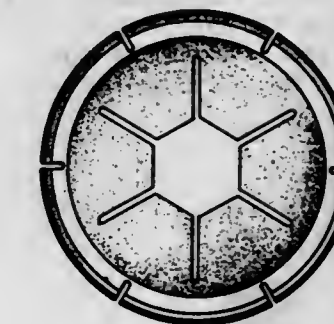
U.S. Cl. D42—7



217,732

COMBINED COVER AND UTENSIL HOLDER FOR A COOKING DISH OR THE LIKE
Walter K. Chlystun, 327 St. James Drive, Spartanburg, S.C. 29301
Filed Nov. 15, 1968, Ser. No. 14,475
Term of patent 14 years
Int. Cl. D7—02

U.S. Cl. D44—15



217,733

COMBINED COOKING AND SERVING UNIT
Hans S. Singer, 29 Wadsworth Hills, and Walter K. Chlystun, 327 St. James Drive, both of Spartanburg, S.C. 29301
Filed Nov. 15, 1968, Ser. No. 14,495
Term of patent 14 years
Int. Cl. D7—02

U.S. Cl. D44—15

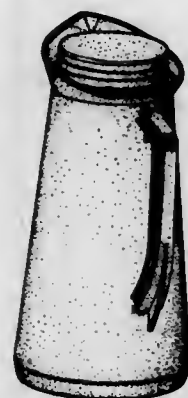


217,734
PITCHER

Lee Abramson, Northridge, Harry Mark Shackelford, Jr., Encino, and Robert J. David, Sherman Oaks, Calif., assignors to Carnation Company, Los Angeles, Calif., a corporation of Delaware

Filed Feb. 3, 1969, Ser. No. 15,592
Term of patent 14 years
Int. Cl. D7-01

U.S. Cl. D44-21



217,735
LIGHT FIXTURE

Buell Moore, Houston, Tex., assignor to Esquire, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 10, 1969, Ser. No. 16,675
Term of patent 14 years
Int. Cl. D26-02

U.S. Cl. D48-20

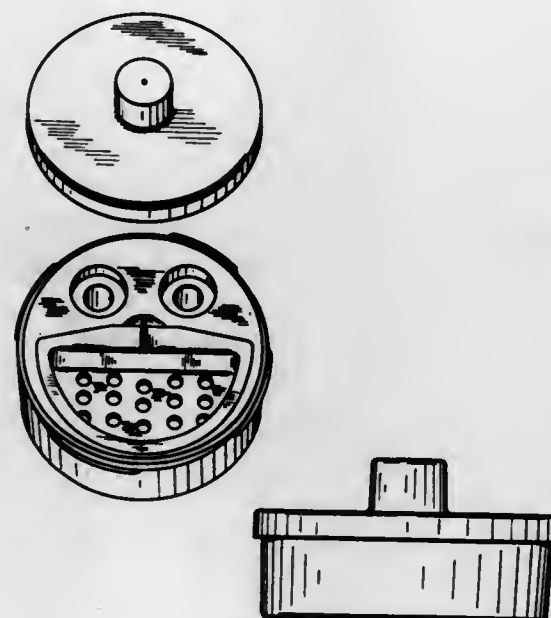


217,736
APPLICATOR TIP CLEANING UNIT

Arnold R. Marsee, Allen, Ohio, assignor to Artex Hobby Products, Inc., Lima, Ohio, a corporation of Ohio

Filed Jan. 6, 1969, Ser. No. 15,207
Term of patent 14 years
Int. Cl. D15-06

U.S. Cl. D49-1

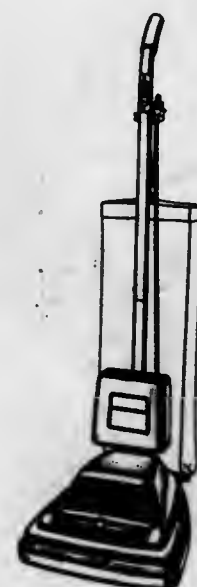


217,737
SUCTION CLEANER

Robert C. Lagerstrom, Normal, and Samuel E. Hobulin, Bloomington, Ill., assignors to National Union Electric Corporation, Stamford, Conn., a corporation of Delaware

Filed May 27, 1969, Ser. No. 17,384
Term of patent 14 years
Int. Cl. D15-07

U.S. Cl. D49-14

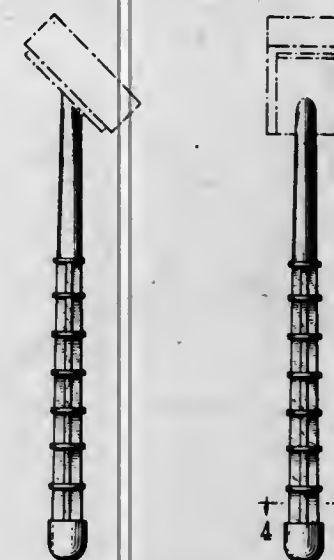


217,738
HANDLE FOR A SPONGE SWAB AND THE LIKE

Leonard F. Goyke, Chicago, Ill., assignor to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware

Filed Mar. 14, 1969, Ser. No. 16,251
Term of patent 14 years
Int. Cl. D7-99; D24-99

U.S. Cl. D49-22

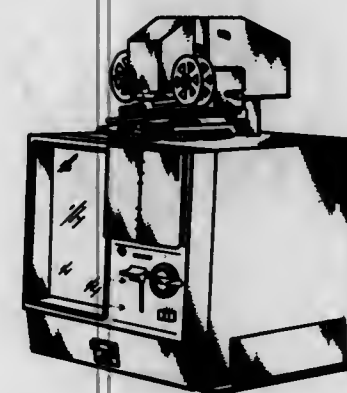


217,739
COMBINED MICROFILM VIEWER AND REPRODUCING MACHINE ACCESSORY

William F. Dalton, Pittsford, and Leonard Schachner, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Feb. 3, 1969, Ser. No. 15,598
Term of patent 14 years
Int. Cl. D16-05

U.S. Cl. D61-1

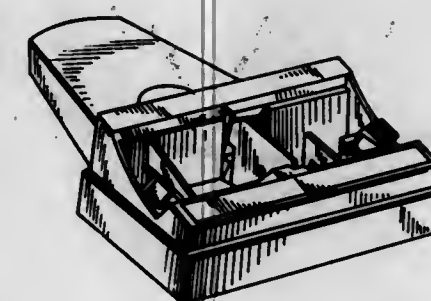


217,740
SLIDE LOADER ACCESSORY FOR A SLIDE PROJECTOR

Robert M. Simonelli, Palatine, Ill., assignor to GAF Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 14, 1969, Ser. No. 16,736
Term of patent 14 years
Int. Cl. D16-07

U.S. Cl. D61-1

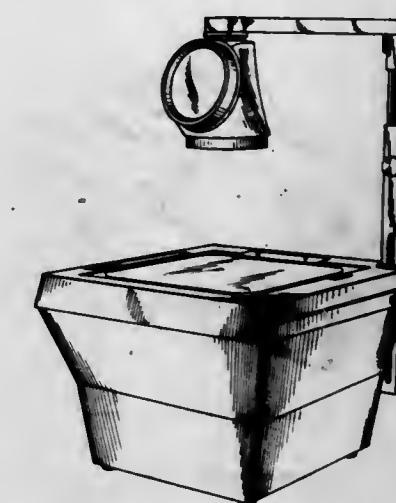


217,741
OVERHEAD PROJECTOR

Robert M. Simonelli, Palatine, Ill., assignor to GAF Corporation, New York, N.Y., a corporation of Delaware

Filed May 26, 1969, Ser. No. 17,343
Term of patent 14 years
Int. Cl. D16-03

U.S. Cl. D61-1

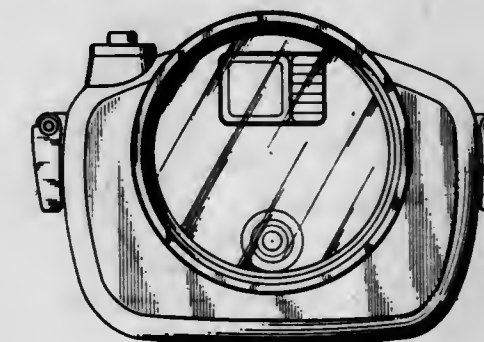


217,742
UNDERWATER CAMERA HOUSING OR SIMILAR ARTICLE

Kazuo Masuyama, Osaka-fu, Japan, assignor to Minolta Camera Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

Filed Sept. 10, 1969, Ser. No. 19,094
Claims priority, application Japan May 8, 1969
Term of patent 14 years
Int. Cl. D16-99

U.S. Cl. D61-1

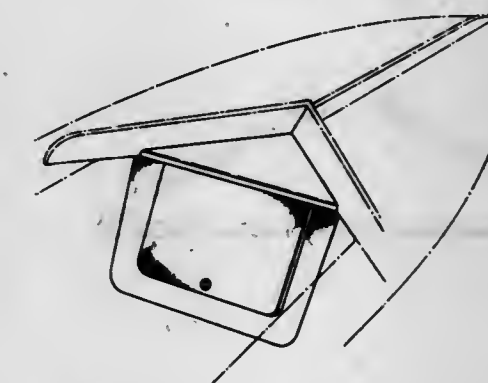


217,743
BOAT BULKHEAD

Frank W. Butler, 10354 Vanalden, Northridge, Calif. 91324

Filed Jan. 6, 1969, Ser. No. 15,217
Term of patent 14 years
Int. Cl. D12-99

U.S. Cl. D71-1



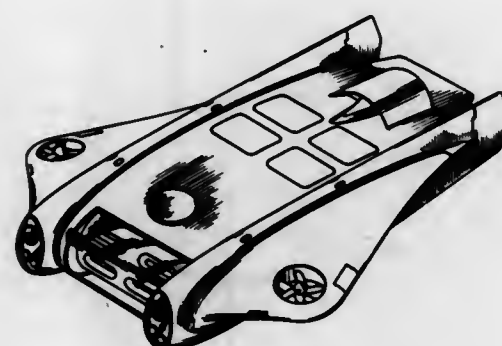
217,744

UNDERWATER CRAFT

Samuel R. Peterson, 2008 State St. 93105, and Ernest H. Brooks II, 2190 Alston 93103, both of Santa Barbara, Calif.

Filed Apr. 28, 1969, Ser. No. 16,914
Term of patent 14 years
Int. Cl. D12-06

U.S. Cl. D71-1



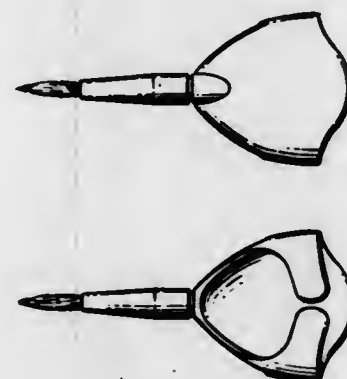
217,745

FINGERTIP BRUSH

Victor Silson, New York, N.Y., assignor to Helena Rubinstein Inc., New York, N.Y., a corporation of New York

Filed Mar. 24, 1969, Ser. No. 16,391
Term of patent 14 years
Int. Cl. D28-03

U.S. Cl. D86-13



217,746

GARMENT HANGER

John H. Batts, Grand Rapids, Mich., assignor to John Thomas Batts, Inc., Zeeland, Mich., a corporation of Michigan

Continuation-in-part of design application Ser. No. 10,140, Jan. 12, 1968. This application Sept. 13, 1968, Ser. No. 13,527

Term of patent 14 years

The portion of the term of the patent subsequent to Mar. 5, 1982, has been disclaimed

Int. Cl. D6-07

U.S. Cl. D80-8



217,747

GARMENT HANGER

John H. Batts, Grand Rapids, Mich., assignor to John Thomas Batts, Inc., Zeeland, Mich., a corporation of Michigan

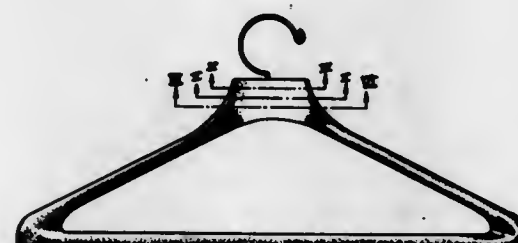
Continuation-in-part of design application Ser. No. 10,140, Jan. 12, 1968. This application Sept. 13, 1968, Ser. No. 13,528

Term of patent 14 years

The portion of the term of the patent subsequent to Mar. 5, 1982, has been disclaimed

Int. Cl. D6-07

U.S. Cl. D80-8



217,748

DISPLAY RACK FOR EARRINGS

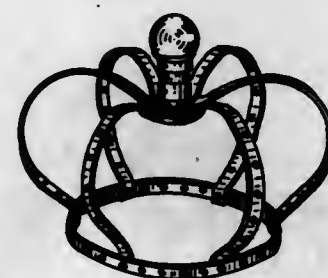
Donald C. Parke, 3605 Nelson St., Wheat Ridge, Colo. 80033

Filed June 11, 1968, Ser. No. 12,301

Term of patent 14 years

Int. Cl. D20-02

U.S. Cl. D80-9



217,749

ATTACHMENT FOR A HAIR DRYER

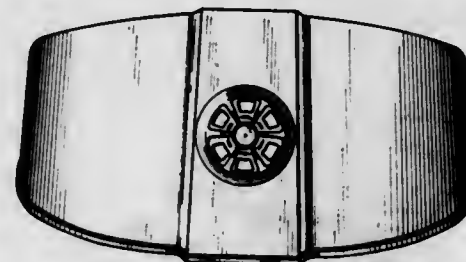
Edward A. Irelan, Lombard, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed Feb. 19, 1969, Ser. No. 15,842

Term of patent 14 years

Int. Cl. D28-03

U.S. Cl. D86-10



217,750

MASONRY SAW

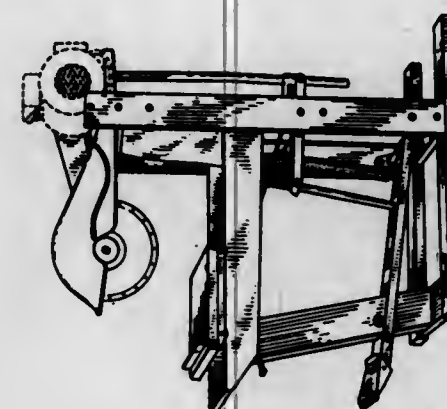
Richard E. Ten Eyck, Wichita, Kans., assignor, by mesne assignments, to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Mar. 20, 1969, Ser. No. 16,350

Term of patent 14 years

Int. Cl. D15-05

U.S. Cl. D93-3



217,751

MASONRY SAW

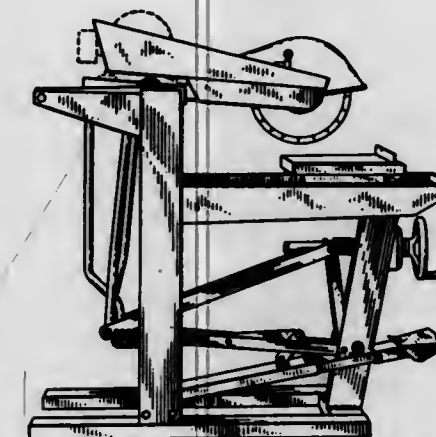
Richard E. Ten Eyck, Wichita, Kans., assignor, by mesne assignments, to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Mar. 21, 1969, Ser. No. 16,376

Term of patent 14 years

Int. Cl. D15-05

U.S. Cl. D93-3



217,752

RAZOR

James L. Barry, Bloomington, Terrance R. Mitchell, Minneapolis, and Robert O. Vaa, Bloomington, Minn., assignors to The Barbers Hairstyling for Men, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 8, 1969, Ser. No. 19,064

Term of patent 14 years

Int. Cl. D28-03

U.S. Cl. D95-3



217,753

GARMENT HANGER

John H. Batts, Grand Rapids, Mich., assignor to John Thomas Batts Inc., Zeeland, Mich., a corporation of Michigan

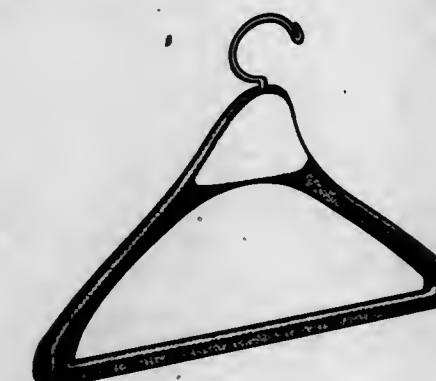
Filed Jan. 21, 1969, Ser. No. 15,427

Term of patent 14 years

The portion of the term of the patent subsequent to Mar. 5, 1982, has been disclaimed

Int. Cl. D6-07

U.S. Cl. D80-8



LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26 DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AB Industrifadjar: See—
Saxmark, Olov Pontus, 3,514,821.
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Danford, Tiras J., Abbott, Phillip E., and Mitchell, John D. 3,515,234.
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Powell, Richard Gordon, 3,515,286.
- Pulcrano, Frank C., 3,515,051.
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Hirst, Donald, and Carhart, John L., 3,515,194.
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Keane, Raymond A., Jr., and Adams, James N., 3,514,940.
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- Adams, Robert L., Castaldo, Domenic R., and Kurtz, Gerald W., to International Business Machines Corporation. Real-time detection of latch resolution using threshold means. 3,515,998, Cl. 328-206.
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Podell, Allen F., 3,516,025.
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Busch, Richard E., 3,515,857.
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Riegelman, Harry M., 3,514,904.
- AEG-Elotherm G.m.b.H.: See—
von Starck, Axel, 3,515,898.
- Aerojet-General Corporation: See—
Beer, Rudolf E., Klessig, Clarence E., and LaBotz, Richard J., 3,515,499.
- Davidson, Frederick H., Curtis, Albert B., Jr., and Cayocca, Iver D., 3,514,864.
- Knuth, William H., and Shiflet, William F., 3,515,238.
- LaBotz, Richard J., 3,515,605.
- Agfa Aktiengesellschaft: See—
Winkler, Alfred, 3,515,558.
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Frick, Hans-Dieter, Knapp, Walter, and Osegowitsch, Victor, 3,515,311.
- Theer, Anton, and Zanner, Johann, 3,515,473.
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Kruse, Frederick V., and Behrends, Deane O., 3,515,350.
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Obergefell, Ronald F., and Ahinok, Robert A., 3,515,245.
- Aiken, William Ross. Electrostatically controlled hinged pivot display device. 3,516,086, Cl. 340-378.
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Reynolds, George E., Gedemer, Fred J., and Ainsworth, Howard K., 3,515,637.
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Robertson, James Strang Terrace, and Hannah, William James, 3,515,303.
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Flank, William H., 3,515,511.
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- McEvoy, James E., 3,515,684.
- Air Reduction Company, Incorporated: See—
Haffner, Mark P., and Spies, George R., 3,515,155.
- Airetron Engineering Corporation: See—
Werner, Hermann C., 3,514,923.
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Hill, William Charles, Green, William Hickman, and Hunt, Herbert James, 3,514,819.
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Kogel, Wilhelm Georg, 3,514,972.
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Thulin, Lars Gustav, 3,515,088.
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Wernli, Hans, 3,516,032.
- Albright, Alto O. Pivotal display panel installation. 3,514,883, Cl. 40-67.
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- Alexander, David D. Hand operated friction type exercising device. 3,515,384, Cl. 272-79.
- Alexander, Gerald: See—
Kingsbury, Albert W., Miller, Durando, and Alexander, Gerald 3,515,277.
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Lytle, Josiah C., 3,515,242.
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Pitler, Richard K., 3,514,840.
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De Smidt, Woodrow A., 3,515,423.
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Reimschuessel, Herbert K., Kubanek, George R., and Mountford, George A., 3,514,963.
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- Allied Research Products, Inc.: See—
Mallory, Glenn O., Jr., and Baudrand, Donald W., 3,515,564.
- Allis-Chalmers Manufacturing Company: See—
Baron, Anthony V., Drewry, Hugh S., and Lees, John N., Jr., 3,515,379.
- Curtis, Donald R., 3,515,635.
- Reynolds, George E., and Loughran, Lee R., 3,515,636.
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- Allport, Maurice James, to Lucas, Joseph, (Industries) Limited. Electromagnetic horns. 3,516,088, Cl. 340-388.
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Commerford, Robert T., 3,516,031.
- Altman, Richard M., and Korones, Herbert D., to Bausch & Lomb Incorporated. Opto-electronic radiant energy beam range finder. 3,515,480, Cl. 356-4.
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- American Cyanamid Company: See—
Hulliger, Fritz, 3,515,508.
- Nolan, Kenneth Gordon, 3,515,782.
- American Home Products Corporation: See—
Wendt, Gerhard R., and Ledig, Kurt W., 3,515,784.
- American Hospital Supply Corporation: See—
Bollinger, Howard N., 3,515,429.
- American Nucleonics Corporation: See—
Nielsen, Robert N., Jr., 3,515,418.
- American Optical Corporation: See—
Koester, Charles J., Bazinet, Wilfred P., Jr., and Ask, Clifford W., 3,516,001.
- American Tractor Equipment Corporation: See—
Kant, Alvin W., 3,515,222.
- Amering, Charles F.: See—
Russell, Harold D., and Amering, Charles F., 3,515,556.
- AMP Incorporated: See—
Beinhaur, Ernest Lloyd, and Wahl, Frederick William, 3,515,794.
- Evans, William Robert, 3,514,815.
- Mixon, James Lenhart, Jr., and Wahl, Frederick William, 3,516,050.
- Rueger, Harman, 3,516,087.
- Amsted Industries Incorporated: See—
Zimmerman, Philip D., 3,515,201.
- Anderson Bros. Mfg., Co.: See—
Jacobson, William P., 3,515,334.

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- Anderson, Orin M. Top door mechanism for top loading refuse vehicle. 3,514,902, Cl. 49-213.
- Ando, Masao, to Chisso Corporation. Heat generating pipe. 3,515,837, Cl. 219-10.49
- Ando, Satoshi: See—
Ueda, Keizo, Ohkawahara, Tsuneo, Mats, Masao, and Ando, Satoshi 3,515,703.
- Ando, Takeo: See—
Okamoto, Kiyokazu, Yoshioka, Masahiro, Ando, Takeo, and Suzuki, Masatoshi 3,515,964.
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- Appel, Mel, to Buddy L Corporation. Toy traffic signal. 3,516,057, Cl. 340-44.
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Stein, Gary, 3,515,441.
- Aquino, Herman A., to Pullman Incorporated. Manual or trackway cam hopper car door operating mechanism. 3,515,076, Cl. 105-251.
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- Araki, Hiroaki: See—
Miwa, Teruo, Shibata, Zenzaburo, Araki, Hiroaki, Tanaka, Tadamoto, and Sakaguchi, Hiroshi 3,515,697.
- Aratani, Shozo: See—
Nakamura, Takahiro, Yabuno, Yoshio, Kameda, Akiyoshi, and Aratani, Shozo 3,515,391.
- Arazi, Efraim R.: See—
Philbrick, Richard W., and Arazi, Efraim R. 3,515,881.
- Arberman, Jerome, and Nietzel, Gunther, to United States of America, Navy, mesne. Proportional width echo range gating system. 3,516,051, Cl. 340-3.
- Archer, Bill, and Low, John L., III. Method of pre-stressing a column. 3,514,918, Cl. 52-741.
- Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji, to Nippon Concrete Kogyo Kabushiki Kaisha. Automatic welding device for jointing concrete pile sections with steel end plates. 3,515,843, Cl. 219-125.
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- Armour and Company: See—
Richards, John P., and Shanta, Peter L., 3,515,711.
- Arnold, Roger F., to Grace, W. R., & Co. Process of deactivating and collecting paints with a water curtain. 3,515,575, Cl. 117-102.
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Tomita, Akira, 3,515,498.
- Asahi Kogyo Kogyo Kabushiki Kaisha: See—
Kazamaki, Tomokazu, and Takahashi, Yasuo, 3,515,462.
- Uno, Naoyuki, 3,515,045.
- Ashland Oil & Refining Company: See—
Heidecker, Stephen C., Taft, David D., and Wallman, Walter A., 3,515,550.
- Ashton, Thomas Richard, Cottle, Victor Claude Herbert, and Jackson, David, to Express Dairy Company (London) Limited. Packaging fluids. 3,514,919, Cl. 53-21.
- Ask, Clifford W.: See—
Koester, Charles J., Bazinet, Wilfred P., Jr., and Ask, Clifford W., 3,516,001.
- Associated Electrical Industries Limited: See—
Longworth, David Phillip, Hick, Michael Alfred Sampson, and Lugton, William Townsley, 3,515,982.
- A&T Development Corporation: See—
Avril, Arthur C., 3,514,870.
- Ateliers Heuze, Malevez et Simon Reunis Societe Anonyme: See—
Dryon, Jacques Max Charles, 3,515,020.
- Atkinson, William G., to Somerville Industries Limited. Folded blank carton with handle bodily shiftable vertically. 3,515,335, Cl. 229-52.
- Atlantic Design & Development Corporation: See—
Waterman, Neil S., 3,515,314.
- Atlantic Richfield Company: See—
Deeter, Wendell F., and Daigh, Harold D., 3,515,108.
- Johnson, Walter H., Jr., and Pritchett, William C., 3,515,871.
- Schuh, Frank J., 3,515,156.
- Atomic Power Development Associates, Inc.: See—
Nims, John B., Jr., 3,515,638.
- Attridge, Curtis C., and Wright, Malor. Automatic film processing device. 3,515,050, Cl. 95-89.
- Aubert, Jean. Water-slope system for a movable retention barrier. 3,514,958, Cl. 61-9.
- Auge, Peter, to Ce De Candy Inc. Spring actuated projectile projecting device. 3,515,111, Cl. 124-16.
- Aupoix, Marcel, and Moisson-Franckhauser, Francois, to Compagnie Generale d'Electricite. Cryogenic polyphase cable. 3,515,793, Cl. 174-13.
- Austen Europa, Inc.: See—
Keller, Arnold, 3,515,100.
- Austin Electronics, Inc.: See—
Powell, Austen V., 3,515,973.
- Austin, Harold J. Concrete vibrating and finishing machine. 3,515,042, Cl. 94-48.
- Austin, Harold J. Concrete compacting and finishing apparatus. 3,515,043, Cl. 94-48.
- Austin, Kenneth A., to Avco Corporation. Gas turbine accessory power drive unit. 3,514,945, Cl. 60-39.16
- Automatic Electric Laboratories, Inc.: See—
Clark, Robert C., 3,515,807.
- Cleary, Robert T., 3,515,813.
- Depner, William A., 3,516,039.
- Gay, Charles D., 3,515,811.
- Lender, Adam, 3,515,991.
- Stich, Frederick A., 3,515,974.
- Automatic Retailers of America, Inc.: See—
Heier, William, 3,515,312.
- Automatic Sprinkler Corporation: See—
Friendship, Kenneth F., 3,515,180.
- Automation Industries, Inc.: See—
Finnstrand, Harald, 3,515,116.
- Autopack Limited: See—
Lee, George Arthur, 3,515,255.
- Auzins, Raimunds, to United Industrial Syndicate, Inc. mesne. Apparatus for handling floating lighters. 3,515,085, Cl. 114-43.5
- Auzins, Raimunds, Sigman, Earl H., and Schneider, Alfred, to United Industrial Syndicate, Inc. System for handling cargo lighters and cargo hatch covers aboard ship. 3,515,086, Cl. 114-43.5
- Avco Corporation: See—
Austin, Kenneth A., 3,514,945.
- Baranow, Sanford, and Freeman, William R., Jr., 3,515,095.
- Brackman, Donald A., 3,515,071.
- Mika, John I., 3,515,340.
- Zurbrick, John R., and Menchel, Robert S., 3,515,987.
- Avery, Howard W., to General Electric Company. Light controlling display apparatus responsive to fluid pressure. 3,514,882, Cl. 40-28.
- Avril, Arthur C., to A&T Development Corporation. Drying apparatus. 3,514,870, Cl. 34-108.
- Babany, Lucien, to CIT-Compagnie Industrielle des Telecommunications. Circuit serving for detecting the synchronism between two frequencies. 3,515,997, Cl. 328-134.
- Babcock, John C.: See—
Campbell, J. Allan, Babcock, John C., and Pike, John E., 3,515,719.
- Bachman Machine Company, Inc.: See—
Kolb, Russell H., 3,515,917.
- Backofen, Hans-Dieter: See—
Matusch, Siegfried, Backofen, Hans-Dieter, and Schaper, Helmut 3,515,009.
- Bacon, Oliver M., to Hunnewell Soap Company, The. Method of treating aqueous liquids and compositions. 3,515,666, Cl. 210-52.
- Bader, Izaak Walton, to Swingline Inc. Round headed nail assembly. 3,515,271, Cl. 206-56.
- Badische Anilin- & Soda-Fabrik Aktiengesellschaft: See—
Steinbrunn, Gustav, and Fischer, Adolf, 3,515,744.
- Baenziger, Robert C., to Electro-Netic Steel, Inc. Tuner with separable housing parts; one part carrying rotor and its contacts, other part carrying wiper contacts. 3,516,033, Cl. 334-50.
- Bagg, Halsey O.: See—
Mejean, Jacques G., Bagg, Halsey O., and Klatte, Henry B., 3,514,999.
- Baginski, Albert R., Okada, David T., and Stastny, Edwin O., to Mattel, Inc. Projectile firing gun toy. 3,515,112, Cl. 124-19.
- Bailey Meter Company: See—
Boone, Robert E., 3,516,003.
- Cohen, Kenneth W., 3,515,160.
- Baker, Alfred Dickens: See—
Jones, Kenneth James, and Baker, Alfred Dickens 3,515,365.
- Baker, Jack R., to Jariba Corporation. Ankle support. 3,515,136, Cl. 128-166.
- Baker, John C.: See—
Magnuson, Lee T., Kusko, Alexander, and Baker, John C., 3,515,969.
- Baker, Joseph C., and Thompson, Thomas W., to International Business Machines Corporation. Imprinter with print mode selection. 3,515,063, Cl. 101-269.
- Baker-Roos, Inc.: See—
Smith, James R., 3,515,247.
- Baldwin-Lima-Hamilton Corporation: See—
Jester, Thomas C., White, Ira Morgan, and Ung, Harry L., 3,515,370.
- Kammer, Haim J., 3,515,235.
- Balistrand, Georges, to Rhone-Poulenc S.A. Process for the polymerisation of acrylonitrile. 3,515,705, Cl. 260-85.5
- Ball Brothers Research Corporation: See—
Ried, Louis, Jr., and Gilland, Jerry R., 3,515,878.
- Wise, Richard S., 3,515,802.

- Balutau, Jean-Michel, and Rodier, Christian, to Societe d'Optique, Precision Electronique et Mecanique. Optical beam separator for colour television. 3,515,460, Cl. 350-173.
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Vore, Herbert G., and Bardsley, Donald E., 3,515,281.
- Barnd, John W. Multi-zone temperature control. 3,515,345, Cl. 236-1.
- Barnes Corporation: See—
Barnes, James W., and Van De Boe, Rexford W., 3,516,044.
- Barnes Drill Co.: See—
Estabrook, Mark R., 3,515,507.
- Barnes, James W., and Van De Boe, Rexford W., to Barnes Corporation. Carrier for transistor outline semiconductor device. 3,516,044, Cl. 339-65.
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- Baron, Anthony V., Drewry, Hugh S., and Lees, John N., Jr., to Allis-Chalmers Manufacturing Company. Valve and valve control for preventing passage of processed material to blower for pyrometer sight passage on a rotary kiln. 3,515,379, Cl. 263-33.
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- Bartnik, Richard W. Unit dispenser with visual inventory control. 3,515,265, Cl. 206-42.
- Basic Vegetable Products, Inc.: See—
Aguliar, Henry, 3,515,193.
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Landfried, Bert W., Bassett, Harold J., and Moneymaker, John R., 3,515,562.
- Bates, Harlan W.: See—
Swing, Dennis M., Drake, Lloyd A., and Bates, Harlan W., 3,515,894.
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- Batog, Stephen L., to Case, J. I., Company. Crop pickup mechanism. 3,514,937, Cl. 56-345.
- Battelle Development Corporation, The: See—
Butterfield, James F., 3,515,492.
- Baudrand, Donald W.: See—
Mallory, Glenn O., Jr., and Baudrand, Donald W., 3,515,564.
- Bauer, Gerhard: See—
Flesch, Peter, and Bauer, Gerhard 3,515,561.
- Bauer, William V., to Lummus Company, The. Production of phosphene. 3,515,752, Cl. 260-544.
- Baugh, Charles W., to Huck Manufacturing Company. Container fastener. 3,515,419, Cl. 287-189.36
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- Baumel, Joseph, to Controlotron Corporation. Liquid gauge. 3,515,000, Cl. 73-304.
- Bausch & Lomb Incorporated: See—
Altman, Richard M., and Korones, Herbert D., 3,515,480.
- Chisholm, James J., 3,515,489.
- de Normand, Robert H., 3,515,484.
- Herbert, Douglas, and Gill, Kenneth R., 3,514,908.
- Letter, Eugene C., 3,515,587.
- Letter, Eugene C., 3,515,880.
- Rosenberger, Harold E., 3,515,463.
- Baxley, Ralph D. Grove heater. 3,515,120, Cl. 126-59.5
- Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., deceased (by Massing, John W., administrator), and Smoyer, Claude B., to International Business Machines Corporation. Electro optical positioner. 3,515,877, Cl. 250-202.
- Baxter, J. H., & Co.: See—
Jacobs, Alfred J., and Napier, Joseph T., 3,515,184.
- Baynard, Joseph S., Jr., to Western Electric Company, Incorporated. Resistance controlled pulse generator. 3,515,815, Cl. 179-90.
- Bayne, Peter D., to Schlitz, Jos., Brewing Company. Fluorocarbon gas as a foam improving additive for carbonated beverages. 3,515,560, Cl. 99-49.
- Bazinet, Wilfred P., Jr.: See—
Koester, Charles J., Bazinet, Wilfred P., Jr., and Ask, Clifford W., 3,516,001.
- Bazkoh Denkyokubo Kabushiki Kaisha: See—
Nakamura, Takeshi, 3,515,846.
- Beall, Glenn L., to Faucet-Queens Inc., The. Hose attachment. 3,515,413, Cl. 285-8.
- Bechtel International Corporation: See—
Freeborg, Robert M., 3,514,838.
- Beck, Edward G., Jr., to Stolle Corporation, The. Method for securing an elongated metal member to a flat metal sheet. 3,514,834, Cl. 29-157.3
- Becker, Dietrich, Hochstein, Roland, and Lieckfeldt, Hans, to Zeiss Ikon Aktiengesellschaft. Key for small film cameras. 3,515,044, Cl. 95-1.
- Beckman Instruments, Inc.: See—
Nather, Roy E., 3,515,861.
- Becken, Basil B., to Pitney-Bowes, Inc. Fluid to electric transducer. 3,515,827, Cl. 200-81.9
- Beeman, Harriet B. Hospital bed. 3,514,795, Cl. 5-327.
- Beer, Rudolf E., Klessig, Clarence E., and LaBotz, Richard J., to Aerojet-General Corporation. Blades and blade assemblies for turbine engines, compressors and the like. 3,515,499, Cl. 416-95.
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- Behrends, Deane O.: See—
Krusse, Frederick V., and Behrends, Deane O., 3,515,350.
- Behrens, Henry, to Gillette Company, The. Apparatus for measuring sweep of continuous strip material. 3,515,885, Cl. 250-219.
- Beinhaur, Ernest Lloyd, and Wahl, Frederick William, to AMP Incorporated. Electrical connector assembly. 3,515,794, Cl. 174-90.
- Belardi, Richard J.: See—
Rueffer, Harold F., and Belardi, Richard J., 3,514,848.
- Belcourt, Francis J., and Kulp, Karl T., to Sperry Rand Corporation. Radiation hardened clock pulse distributor. 3,515,995, Cl. 328-103.
- Bell & Howell Company: See—
Bixby, William E., 3,515,549.
- Browder, Lewis B., 3,515,470.
- Bell, David: See—
Coulter, Michael Oliver, and Bell, David 3,515,661.
- Bell Telephone Laboratories, Incorporated: See—
Bobeck, Andrew H., Della Torre, Edward, and Scovil, Henry E. D., 3,516,077.
- Brolin, Stephen J., 3,516,022.
- Dillon, Joseph F., Jr., 3,515,457.
- Fracassi, Renato D., and Savage, John E., 3,515,805.
- Keefer, Frank D., Thelemaque, Louis E., and Walsh, Henry J., 3,515,810.
- Kompfner, Rudolf, 3,515,455.
- Lynch, William T., 3,514,846.
- Robertson, George H., 3,515,990.
- Rosenberg, Robert, and Schulte, Harry J., Jr., 3,515,887.
- Schlosser, Wolfgang O., 3,516,008.
- Tabor, William J., 3,515,456.
- Untamo, Peter P., 3,516,020.
- Beller, Frank W., to Belson, Manufacturing Co., Inc. Campfire pit. 3,515,118, Cl. 126-29.
- Bellvita, Ricardo: See—
Kraessig, Hans, and Bellvita, Ricardo 3,515,505.
- Belson, Manufacturing Co., Inc.: See—
Beller, Frank W., 3,515,118.
- Bencze, William Laszlo, to Ciba Corporation. Triecyclic acids. 3,515,746, Cl. 260-473.
- Bender, Ludwig: See—
Sennewald, Kurt, Bender, Ludwig, Gehrmann, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.
- Benedum, Paul G.: See—
Price, John Roy, 3,514,898.
- Bengt Gunnar Tornqvist: See—
Westergren, Rolf Albert Fredrik, 3,514,810.
- Bennes Marrel: See—
Paccard, Gilbert, 3,515,166.
- Bens, Jean Raymond, and Delarue, Jean-Claude, to Compagnie Generale de Radiologie. Method and apparatus employing an electron target and X-ray filter of the same chemical element for generating X-rays of prescribed energy. 3,515,874, Cl. 250-86.
- Benson, James M., to Teledyne, Inc. D.C. circuit for operating asymmetric thermopile. 3,514,998, Cl. 73-204.
- Berezna, John, to International Telephone and Telegraph Corporation. Feature equipment for use in electronic switching telephone systems. 3,515,820, Cl. 179-175.2
- Berg Mfg. & Sales Co.: See—
Berg, Stanley, and Dobrikin, Harold L., 3,515,169.
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- Bergendahl, Kavalli Alverius, to Rosengrens, E. A., Aktiebolag. Lock with adjustable tumbler assembly. 3,514,982, Cl. 70-355.
- Berger, Charles V., to Universal Oil Products Company. Catalytic conversion process. 3,515,765, Cl. 260-669.
- Bergholm, Carl Arne, to Svenska Cellulosa Aktiebolaget. Counter-flow washing method for removing liquid from a product distributed therein. 3,515,632, Cl. 162-60.
- Bergquist, Erwin F. Carpet cap strip. 3,514,914, Cl. 52-273.
- Bermel, Thomas W., to Corning Glass Works. Fluid majority gate. 3,515,159, Cl. 137-81.5
- Bernstein, Jack, and Yale, Harry Louis, to Squibb, E. R., & Sons, Inc. Pentafluorocinnamamide derivatives. 3,515,753, Cl. 260-558.
- Bertin et Compagnie: See—
Faure, Marc Henri Jean, 3,515,073.

- Bertone, Richard A.: See—
Bowditch, Hoel L., William George F., and Bertone, Richard A. 3,515,162.
- Beseler, Charles, Company: See—
Field, Philip M., and Nemesnyik, John C., 3,515,476.
- Bethlehem Steel Corporation: See—
Merrill, Neal W., and Schenck, William H., 3,514,991.
- Beusink, Bernard Joseph: See—
Horowitz, Alexandre, and Beusink, Bernard Joseph 3,514,932.
Horowitz, Alexandre, and Beusink, Bernard Joseph 3,514,933.
- Beuyukian, Charles S., and Mitchell, Mike J., to North American Rockwell Corporation. Brazing process. 3,514,842, Cl. 29-494.
- Bevis Industries, Inc.: See—
Fish, Kenneth Elton, 3,514,823.
- Beyerle, Rudi: See—
Ritter, Heinrich, Beyerle, Rudi, and Nitz, Rolf-Eberhard 3,515,721.
- Bick, Klaus, Weinreich, Wolfgang, and Harmsen, Lothar, to Paderwerk Gebr. Benteler. Method for continuous casting of metal ingots. 3,515,202, Cl. 164-89.
- Bickner, Clarence T. Apparatus for making ornamental bows. 3,515,317, Cl. 223-46.
- Bird Machine Company: See—
Roos, John Treymann, 3,515,375.
- Bixby, William E., to Bell & Howell Company. Photoelectro-solographic article and method utilizing diazo material. 3,515,549, Cl. 96-15.
- Bizerba-Werke Wilhelm Kraut KG: See—
Kuhle, Ernst, and Schwarz, Josef, 3,515,231.
- Black, Eileen Rockwell, to Flexnit Company, Inc. Foundation garment. 3,515,141, Cl. 128-533.
- Black, Eileen Rockwell, to Flexnit Company, Inc. Foundation garment. 3,515,142, Cl. 128-533.
- Black, Eileen R., to Flexnit Company, Inc. Foundation garments. 3,515,143, Cl. 128-533.
- Blackburn, Albert W. Control of aircraft by deflection of propulsion gases. 3,515,361, Cl. 244-52.
- Blackley, William D., Siegart, William R., and Chafetz, Harry, to Texaco Inc. Fluorinated paraffin wax coatings. 3,515,582, Cl. 117-143.
- Blackstone Corporation: See—
Patrick, Russell, 3,514,867.
- Blackwelder Manufacturing Company: See—
Hill, Fredrick L., and Sindel, Loyd Curtis, 3,515,290.
- Blatt, Leland F. Rollers. 3,514,829, Cl. 29-130.
- Bleistein, Edward: See—
Dreyfus, Marc George, and Bleistein, Edward 3,515,490.
- Blessinger, Thomas. Check photographing apparatus. 3,515,478, Cl. 355-48.
- Bliedershauser, Heinz, to Gebrüder Boehringer Gesellschaft mit Beschränkter Haftung. Magazine bar for transferring knitted fabric. 3,514,978, Cl. 66-148.
- Bliss, Beatrice. Cake holder and canister set assembly. 3,515,304, Cl. 220-23-86.
- Bloom, Joseph Lewis, to Lucas, Joseph, (Industries) Limited. Control systems. 3,514,947, Cl. 60-39-28.
- Blum, Albert. Submersible pump assemblage. 3,515,495, Cl. 415-126.
- Blum, Bernard: See—
Schwartzberg, John W., and Blum, Bernard 3,515,343.
- Boardman, Franklin: See—
Reimschuessel, Herbert K., and Boardman, Franklin 3,515,707.
- Boback, Andrew H., Della Torre, Edward, and Scovil, Henry E. D., to Bell Telephone Laboratories, Incorporated. Magnetic propagation device wherein pole patterns move along the periphery of magnetic disks. 3,516,077, Cl. 340-174.
- Bodway, George E., to Hewlett-Packard Company. Triode sputtering apparatus using an electron emitter. 3,515,663, Cl. 204-298.
- Boehme, Klaus: See—
Sommer, Erwin, Boehme, Klaus, and Gerlach, Klaus 3,515,634.
- Boehringer Ingelheim G.m.b.H.: See—
Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl, 3,515,741.
- Boeing Company, The: See—
Frank, Edward C., 3,515,485.
- Boerner, Donald R., to Singer-General Precision, Inc. Fluidic to electronic converter. 3,515,828, Cl. 200-83.
- Boettcher, Stephen A., to Speedfan Corporation. Lapping machine. 3,515,115, Cl. 125-11.
- Bogie, Nelson H. Centrifugal roller mill. 3,515,356, Cl. 241-90.
- Bohm, John, to Northern Electric Company Limited. Surge protection device. 3,515,945, Cl. 317-31.
- Boileau, Jacques, to Compagnie Generale des Etablissements Michelin. Pneumatic tires. 3,515,197, Cl. 152-361.
- Boiler Equipment and Controls, Inc.: See—
Hamilton, John S., Jr., 3,515,102.
- Bolkow Gesellschaft mit beschränkter Haftung: See—
Schutz, Manfred, 3,515,040.
- Bollinger, Howard N., to American Hospital Supply Corporation. Wheelchair tray attachment. 3,515,429, Cl. 297-153.
- Bolt, Murray H., and Nick, Howard H., to International Business Machines Corporation. Digital transmission system. 3,516,065, Cl. 340-170.
- Bonanno, Joseph L., Tepper, Sidney, and Boydman, Hyman, to Topper Corporation. Doll having electrical action-producing mechanism responsive to actuators on separate articles. 3,514,899, Cl. 46-232.
- Bonsor, Charles A. Cutting attachment for mower blades. 3,514,935, Cl. 56-295.
- Book, Philip S.: See—
Weischedel, Richard C., and Book, Philip S., 3,515,879.
- Booles, Ernest William: See—
Brown, Leonard, and Booles, Ernest William 3,514,977.
- Boone, Robert E., to Bailey Meter Company. High-gain single-stage A.C. cascade amplifier circuit. 3,516,003, Cl. 330-17.
- Boothe, Willis Anson, to General Electric Company. Fluid amplifier mechanism. 3,515,030, Cl. 91-3.
- Bordalen, Knut, and Risberg, Eliif, to Sentralenstitutt for Industriell Forskning. Method and apparatus for regulating supplied current in cathodic protection. 3,515,654, Cl. 204-147.
- Borden, Inc.: See—
Columbus, Peter S., and Mason, Ronald T., 3,515,630.
- Bornus, Melford B. Mail clip. 3,515,337, Cl. 232-33.
- Bortmas, Howard J., to Wean Industries Inc. Apparatus for storing a variable length of strip. 3,515,327, Cl. 226-113.
- Bos, Marinus Anton, Noordanus, Johannes, and Rosier, Gerardus, to U.S. Philips Corporation, mesne. Stepwise adjustable phase controlled oscillator loop. 3,516,007, Cl. 331-18.
- Bosch, Robert, G.m.b.H.: See—
Reichardt, Wolfgang, 3,515,104.
- Bossart, Clayton J., to Mine Safety Appliances Company. Gas chromatography column and method of making same. 3,514,925, Cl. 55-386.
- Bourhenne, Francis K.: See—
Gaines, Jack H., and Bourhenne, Francis K., 3,516,045.
- Bouyoucos, John V., to General Dynamics Corporation. Acoustic apparatus. 3,516,052, Cl. 340-12.
- Bowditch, Hoel L., William George F., and Bertone, Richard A., to Foxboro Company, The. Tilt-ring pneumatic control device. 3,515,162, Cl. 137-86.
- Bower, Robert W., and Shifrin, Gordon A., to Hughes Aircraft Company. Method of making field-effect device with insulated gate. 3,514,844, Cl. 29-571.
- Bowman, Donald B. Hemodialysis method and equipment. 3,515,275, Cl. 210-22.
- Bowman, John H., to U.S. Industries, Inc. Self-centering bushing. 3,515,417, Cl. 287-52-04.
- Bowman, Robert S., to St. Joseph Lead Company. Electrically conductive zinc oxide. 3,515,686, Cl. 252-512.
- Boydman, Hyman: See—
Bonanno, Joseph L., Tepper, Sidney, and Boydman, Hyman 3,514,899.
- Brach, Josef: See—
Muhlberg, Heinz-Joachim, Schacht, Eckhard, and Brach, Josef 3,515,611.
- Brackman, Donald A., to Avco Corporation. Fail-safe retardation sensing system. 3,515,071, Cl. 102-78.
- Bradley, James. Devices for building circuit arrangements. 3,514,872, Cl. 35-19.
- Bramley, Anthony. Gun barrel oiling device. 3,514,888, Cl. 42-1.
- Brandes, Ernest E. Air distributing apparatus. 3,515,052, Cl. 98-41.
- Brane, Ralph M., and Hart, Donald P., to PPG Industries, Inc. Aqueous, electrodepositable compositions of polycarboxylic acid resin and an organophilic cation-modified clay. 3,515,689, Cl. 260-22.
- Bratton, David R., to Solidstate Controls, Inc. Synchronization circuit. 3,515,895, Cl. 307-64.
- Braut, Andre R., and Chitayat, Anwar K., to OPTOMECHANISMS, Inc. Lead screw measuring means. 3,515,481, Cl. 356-73.
- Braun Engineering Company: See—
Braun, Frederick W., and Oree, Samuel, Jr., 3,514,992.
- Braun, Frederick W., and Oree, Samuel, Jr., to Braun Engineering Company. Cold header. 3,514,992, Cl. 72-455.
- Braunschweigische Maschinenbauanstalt: See—
Matusch, Siegfried, Backofen, Hans-Dieter, and Schaper, Helmut, 3,515,009.
- Bray, William E., Hirvela, Robert J., and Kalther, Dennis E., to Collins Radio Company. Data character assembler and disassembler. 3,516,069, Cl. 340-172.5
- Bray, William R. Injector-ram jet engine. 3,514,956, Cl. 60-269.
- Brent, George. Cigarette with filter. 3,515,151, Cl. 131-265.
- Breuer, Hermann, Hoehn, Hans, and Roesch, Egon, to Squibb, E. R., & Sons, Inc. Compositions and methods for producing a muscle relaxing effect in an animal with 2,3-substituted-6-amino-4-quinazolones. 3,515,787, Cl. 424-251.
- Briscoe, Josiah Alfred, to Imperial Chemical Industries Limited. Method of producing a coherent multifilament yarn. 3,514,824, Cl. 28-72.1
- British Petroleum Company Limited, The: See—
Groszek, Aleksander Jerzy, 3,515,668.
- British Resin Products Limited: See—
Hunt, Thomas, 3,515,690.
- British Titan Products Company Limited: See—
Moody, John Robert, and Lederer, Gerald, 3,515,566.
- Britt, Jack, to Rolls-Royce Limited. Lubrication system for a bearing. 3,514,943, Cl. 60-39-08.
- Broat, Robert C., Krupa, Walter H., and Cooley, George William, to Kelsey-Hayes Company. Apparatus for electro chemical machining. 3,515,659, Cl. 204-224.
- Brockfeld & Meyer: See—
Meyer, Erich, 3,515,149.

- Brockway, James E.: See—
Poe, Lloyd Richard, and Brockway, James E., 3,515,421.
- Brolin, Stephen J., to Bell Telephone Laboratories, Incorporated. Delta modulation encoders with randomized idle circuit noise. 3,516,022, Cl. 332-11.
- Bronson, Howard J., Johnson, Frederick W., and Weltha, Marvin D., to Collins Radio Company. Continuous flow mass pin-to-board hot air soldering device. 3,515,330, Cl. 228-8.
- Brooks, Robert E.: See—
Heflinger, Lee O., Brooks, Robert E., and Wuerker, Ralph F., 3,515,453.
- Broussard, Paul Daniel. Stringed musical instrument body construction and finish. 3,515,024, Cl. 84-291.
- Browder, Lewis B., to Bell & Howell Company. Control information recording and sensing methods and apparatus. 3,515,470, Cl. 352-92.
- Brown, Earl L., to Carrier Corporation. Refrigeration system having generator temperature control means. 3,514,965, Cl. 62-148.
- Brown, Edgar D., Jr., to General Electric Company. Iodoethyl-substituted organosilicon compound lubricating compositions and use thereof. 3,515,670, Cl. 252-49.6
- Brown, George J., to Transmetrics Incorporated. High-precision system for measuring an unknown fluid pressure and for generating a predetermined. 3,515,005, Cl. 73-705.
- Brown, Harvey A., Erickson, John G., Husted, Donald R., and Wright, Charles D., to Minnesota Mining and Manufacturing Company. Fluorinated sym-triazine derivatives. 3,515,603, Cl. 149-109.
- Brown, Leonard, and Booles, Ernest William, to William Cotton Limited. Full fashioned knitting machine. 3,514,977, Cl. 66-126.
- Brown, Robert F., Jr., to Teledyne Industries-Geotech Division. Amplifier for enhancing differential input signals. 3,516,005, Cl. 330-69.
- Brown, S. G., Limited: See—
Duck, Ivan Alfred, 3,515,006.
- Bruch, Forrest B., and Hood, William C., to Ethylene Gulf Coast Corporation. Bonding method and article. 3,514,831, Cl. 29-149.5
- Brumelow, Joseph S. Dual cavity bandpass filter. 3,516,030, Cl. 333-73.
- Brundage, Clinton F.: See—
Smith, Edwin K., and Brundage, Clinton F., 3,515,257.
- Brunk, David H., to United States of America, Navy. Navigation computer. 3,515,342, Cl. 235-150.27
- Brunswick Corporation: See—
Cuddon-Fletcher, Angus H., 3,515,035.
- Bryson, Lloyd G.: See—
Canonica, Domenic A., Bryson, Lloyd G., and Slaughter, Gerald M., 3,515,545.
- Buchmuller, Josef: See—
Muncke, Ludwig, Buchmuller, Josef, and Hartlieb, Otto 3,515,412.
- Buddy L Corporation: See—
Appel, Mel, 3,516,057.
- Buehler Corporation, The: See—
Buehler, John L., 3,515,366.
- Buehler, John L., to Buehler Corporation, The. Lost wax jewelry mold. 3,515,366, Cl. 249-165.
- Buhr, Jacob, to Electrohome Limited. Automatic motor shut-off networks for signal seeking receivers. 3,515,960, Cl. 318-16.
- Bunker-Ramo Corporation, The: See—
Church, Charles, Flajole, Henry J., and Kerber, Harold, 3,515,831.
- Michaels, Leonard A., and Sullivan, Albert Manley, Jr., 3,515,949.
- Burdeska, Kurt E., von der Crone, Jost, Menasse, Raphael, and Pugin, Andre, to Whitten, H. A., & Co., mesne. Substituted benzoquinones and fungicidal method employing same. 3,515,790, Cl. 424-309.
- Burkett, Jerald L.: See—
Loughran, Gerard A., and Burkett, Jerald L., 3,515,695.
- Burkhart, William H., Jr. Tool manufacture. 3,515,022, Cl. 83-685.
- Burns, Eugene A.: See—
Lubowitz, Hyman R., and Burns, Eugene A., 3,515,772.
- Burns, Eugene A., and Lubowitz, Hyman R., to TRW Inc. Sterilizable battery containers. 3,515,699, Cl. 260-75.
- Burns, Joseph R., to RCA Corporation. Signal translating circuit comprising a plurality of IGFET amplifiers cascaded in direct coupled fashion. 3,516,004, Cl. 330-19.
- Burton, Harold William, and Long, Nigel, to Lucas, Joseph, (Industries) Limited. Steering wheels for road vehicles incorporating electrical switches. 3,515,825, Cl. 200-61.57
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- Busch, Richard E., to Addmaster Corporation. Stop pin carriage. 3,515,857, Cl. 235-60.
- Business Assets Corporation: See—
Kallas, William C., 3,515,836.
- Butenshon, Claus, to Semikron Gesellschaft fur Gleichrichterbau und Elektronik m.b.H. Semiconductor arrangement. 3,515,955, Cl. 317-234.
- Butler, Lee D.: See—
Grey, Donald M., Butler, Lee D., and Welker, Jerry W., 3,515,291.
- Butterfield, James F., to Battelle Development Corporation, The. Combined physical color and subjective color. 3,515,492, Cl. 356-256.
- Buzzard, Wallace C., and Krysiak, Joseph E. Design of a laminated ball or roller for application in a bearing. 3,515,447, Cl. 308-188.
- Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzky, Melvin, and Wickersheim, Kenneth A., to Lockheed Aircraft Corporation. Method for making luminescent materials. 3,515,675, Cl. 252-301.4
- Byram, George W., and Whitehouse, Harper John, to United States of America, Navy. Surface wave transducer. 3,515,911, Cl. 310-8.1
- Cady, George C.: See—
Allen, Joseph C., Teasdale, Thomas S., and Cady, George C., 3,515,212.
- Cady, Richard C., Jr., to National Cash Register Company, The. Thermal printing head with diffused printing elements. 3,515,850, Cl. 219-216.
- Cagle, Wesley J., to Case, J. I., Company. Transport axle assembly. 3,515,408, Cl. 280-415.
- Cain, George Robert, to Koppers Company, Inc. Method and apparatus for charging a coke oven. 3,515,293, Cl. 214-23.
- Caldwell, E. L., & Sons, Inc.: See—
Fowler, Byron Leo, 3,515,221.
- Caldwell, French. Thermionic energy converter. 3,515,908, Cl. 310-4.
- Caldwell, John R.: See—
Jackson, Winston J., Jr., and Caldwell, John R., 3,515,628.
- Calgon Corporation: See—
Joyce, Ronald S., 3,515,107.
- California Computer Products, Inc.: See—
Lewis, Edward V., 3,515,888.
- Cameron, Scott H., to IIT Research Institute. Multistation graphical terminal system. 3,516,067, Cl. 340-172.5
- Camp, Harold E., and Evans, James W., to Corning Glass Works. Razor blade configuration. 3,514,856, Cl. 30-346.53
- Campano, Frank J., Hiatt, Gregg C., and McGovern, William, to International Business Machines Corporation. Storage addressing. 3,516,070, Cl. 340-172.5
- Campbell, J. Allan, Babcock, John C., and Pike, John E., to Upjohn Company, The. 7-Methyl-6,19-epoxy steroids of the androstane series. 3,515,719, Cl. 260-239.55
- Canadian Patents and Development Limited: See—
Whitaker, Donald R., 3,515,641.
- Cane Machinery & Engineering Company: See—
Giardina, Jacob A., 3,514,927.
- Canonica, Domenic A., Bryson, Lloyd G., and Slaughter, Gerald M., to United States of America, Atomic Energy Commission. Refractory and ceramic brazing alloys. 3,515,545, Cl. 75-134.
- Cantalupo, Francis J., to Crane Co. Declutching mechanism. 3,515,250, Cl. 192-48.91
- Cap, Miroslav, Cizinsky, Zdenek, Dohnalek, Rudolf, Chvojka, Jiri, and Karkoska, Vitezslav. Apparatus for the separation of salts from solutions. 3,515,521, Cl. 23-273.
- Carbonneau, Rene R., to Ray Plastic Inc. Disc projecting toy pistol. 3,515,114, Cl. 124-27.
- Carhart, John L.: See—
Hirst, Donald, and Carhart, John L., 3,515,194.
- Carlon, Kenneth G.: See—
Cutler, Milton, Carlon, Kenneth G., and Sherman, Louis M., 3,515,070.
- Carlson, Joel A. Fishing rod container. 3,515,263, Cl. 206-16.
- Carper, H. A., to Uni-Tech Manufacturing Co. Leukocyte DNA viscosity test. 3,515,517, Cl. 23-230.
- Carrier Corporation: See—
Brown, Earl L., 3,514,965.
- Eisberg, Keith V., 3,514,970.
- McNeely, Lowell A., 3,514,971.
- Carrock, Frederick E., and Doak, Kenneth W., to Dart Industries, Inc. Process for preparation of acrylonitrile-butadiene-styrene graft copolymers. 3,515,692, Cl. 260-33.6
- Carson, Don B., and Uitti, Kenneth D., to Universal Oil Products Company. Catalytic conversion process. 3,515,767, Cl. 260-669.
- Casas, Raul E., and Rayces, Juan L., to Parkin-Elmer Corporation, The. Catadioptric objective of the cassegrain type. 3,515,461, Cl. 350-199.
- Cascade Corporation: See—
Emke, Cornelis A., 3,515,301.
- Case, J. I., Company: See—
Batog, Stephen L., 3,514,937.
- Cagle, Wesley J., 3,515,408.
- Seaberg, David H., 3,515,224.
- Casey, George F., Co.: See—
Casey, George F., Sr., 3,515,229.
- Casey, George F., Sr., to Casey, George F., Co. Hydraulic bucket drill. 3,515,229, Cl. 173-151.
- Cassady, Samuel G. Cutting assembly. 3,514,934, Cl. 56-294.
- Cassella Farbwerke Mainkur Aktiengesellschaft: See—
Ritter, Heinrich, Beyerle, Rudi, and Nitz, Rolf-Eberhard, 3,515,721.
- Castaldo, Domenic R.: See—
Adams, Robert L., Castaldo, Domenic R., and Kurtz, Gerald W., 3,515,998.
- Caterpillar Tractor Company: See—
Dezelan, Joseph E., Hicks, Leon E., and Johnson, Howard L., 3,515,032.
- Maguire, Roy L., 3,515,446.
- Sansom, Jack E., 3,515,601.

JUNE 2, 1970

- Cattin, Emile Cesaire, to Societe Cattin & Cie S.A. Multiple-reading watch with built-in electric lighting means. 3,514,939, Cl. 58-50.
- Cauvin, Andre, to Societe des Automobiles SIMCA. Torque responsive control system for multiple head screw driving machines. 3,515,226, Cl. 173-12.
- Cayocca, Iver D.: See—
Davidson, Frederick H., Curtis, Albert B., Jr., and Cayocca, Iver D. 3,514,864.
- Ce De Candy Inc.: See—
Auge, Peter, 3,515,111.
- Celanese Corporation: See—
Watson, George A., 3,515,621.
- Central Manufacturing District: See—
Garnero, Anthony L., 3,515,624.
- Centronics Data Computer Corporation: See—
Howard, Robert, and Wang, An, 3,516,068.
- Cernik, George, to Hughes Aircraft Company. Method for making clamped helix assemblies. 3,514,843, Cl. 29-559.
- Ceskoslovenska akademie ved: See—
Pecak, Vaclav, Vit, Jaroslav, and Prochazka, Vladimir, 3,515,522.
- Cha, Dae Yang, and Jahnke, Heinz K., to Upjohn Company. The Process for isolating antibiotics. 3,515,717, Cl. 260-210.
- Chafetz, Harry: See—
Blackley, William D., Siegert, William R., and Chafetz, Harry 3,515,582.
- Chamberlin, John B., and Noth, Richard W., to International Business Machines Corporation. Gelation coating method for electronic circuit panels. 3,515,585, Cl. 117-212.
- Chambers, Edgar M., 1/2 to Schlesinger, Hymen. Marine security means for towboats and the like. 3,515,090, Cl. 114-235.
- Chandler Evans Inc.: See—
Guzewicz, Edmund A., 3,515,352.
- Chang, Richard Shih-Teng: See—
Ryan, John W., and Chang, Richard Shih-Teng 3,515,390.
- Chantiers Navals de la Ciotat: See—
Rodrigues, Edouard Georges Daniel, 3,514,839.
- Chappex, Jean-Michel. Control mechanism for the Jacquard device of a rectilinear knitting machine. 3,514,975, Cl. 66-75.
- Charbonnages de France: See—
Foch, Pierre, 3,515,381.
- Charlton, John: See—
Clark, Duncan, Hayden, Percy, and Charlton, John 3,515,758.
- Cheever, Wilbur D.: See—
Perusse, Norman J., and Cheever, Wilbur D. 3,515,038.
- Chemical Construction Corporation: See—
Shah, Indravadan S., 3,515,200.
- Cherry, Wesley R., to Sun Oil Company. Liquid smudge fuel compositions. 3,515,526, Cl. 44-61.
- Chevalier, Michel: See—
Huret, Jerome, Chevalier, Michel, and Rocherolles, Raymond 3,515,976.
- Chisholm, James J., to Bausch & Lomb Incorporated. Optical apparatus. 3,515,489, Cl. 356-201.
- Chisso Corporation: See—
Ando, Masao, 3,515,837.
- Chitayat, Anwar K.: See—
Brault, Andre R., and Chitayat, Anwar K. 3,515,481.
- Chiu, Thomas T., Pickelman, Dale M., and Moore, Eugene R., to Dow Chemical Company. The. Anionic resin for electroconductive paper. 3,515,648, Cl. 204-2.
- Cholet, Jacques, and Dubois, Jean Claude, to Institut Francais du Petrole des Carburants et Lubrifiants. Spark generator. 3,516,053, Cl. 340-12.
- Christensen, Richard E.: See—
Scott, Paul R., and Christensen, Richard E. 3,515,211.
Scott, Paul R., and Christensen, Richard E. 3,515,215.
- Chu, Victor F. H., and Umberger, Jacob Quentin, to Du Pont de Nemours, E. I., and Company. Photographic color film and process of making same. 3,515,557, Cl. 96-74.
- Church, Charles, Flajole, Henry J., and Kerber, Harold, to Bunker-Ramo Corporation. The. Timing switch with means for urging a pair of contact arms into pressure engagement with a pivotal shaft and rotatable cam. 3,515,831, Cl. 200-153.
- Church, Robert John, to Du Pont de Nemours, E. I., and Company. Stable fertilizer ammoniating solution and method of making said solution. 3,515,533, Cl. 71-30.
- Chvojka, Jiri: See—
Cap, Miroslav, Cizinsky, Zdenek, Dohnalek, Rudolf, Chvojka, Jiri, and Karkoska, Vitezslav 3,515,521.
- Ciba Corporation: See—
Bence, William Laszlo, 3,515,746.
de Stevens, George, and Werner, Lincoln Harvey, 3,515,786.
- Ciba Limited: See—
Stauble, Max, and Weber, Kurt, 3,515,732.
- Cilione, Augustine. Control for fastener attaching machine. 3,515,329, Cl. 227-78.
- CIT-Compagnie Industrielle des Telecommunications: See—
Babany, Lucien, 3,515,997.
Royer, Jean, 3,515,999.
- City of Hope: See—
Roberts, Eugene, 3,515,789.
- Cizinsky, Zdenek: See—
Cap, Miroslav, Cizinsky, Zdenek, Dohnalek, Rudolf, Chvojka, Jiri, and Karkoska, Vitezslav 3,515,521.
- Clapp, John M., to Ingersoll-Rand Company. Torque release and shut-off device for rotary tools. 3,515,251, Cl. 192-150.
- Clark, Clarence C., and Hetzel, George F. Intersected jamb nut with collar retainer. 3,515,415, Cl. 285-354.
- Clark, Duncan, Hayden, Percy, and Charlton, John, to Imperial Chemical Industries Limited. Process for the production of ethylene compounds. 3,515,758, Cl. 260-614.
- Clark, Kenneth Gould, and Kemp, David Charles, to Feed Service (Livestock) Limited. Mechanical feeders for livestock. 3,515,099, Cl. 119-75.
- Clark, Kenneth R., deceased (by Clark, Marilyn J., executrix), to Oster, John, Manufacturing Co. Combination can opener and ice crusher. 3,515,357, Cl. 241-101.
- Clark, Marilyn J.: See—
Clark, Kenneth R. 3,515,357.
- Clark, Peter Vincent McDonald: See—
Morton, Peter Harlow, and Clark, Peter Vincent McDonald 3,515,543.
Morton, Peter Harlow, and Clark, Peter Vincent McDonald 3,515,544.
- Clark, Robert C., to Automatic Electric Laboratories, Inc. Conference arrangement having a plurality of transmission modes. 3,515,807, Cl. 179-18.
- Clark-Schwebel Fiber Glass Corporation: See—
Bates, Thomas E., 3,515,623.
- Claypoole, Stewart A., and Mertsoc, Martin M., to Corning Glass Works. Electrical component with attached leads. 3,515,958, Cl. 317-242.
- Cleary, Robert T., to Automatic Electric Laboratories, Inc. Telephone ringing signal transfer device. 3,515,813, Cl. 179-84.
- Cleveland Technical Center, Inc.: See—
King, Joseph W., and McClaren, Donald L., 3,515,984.
- Clinton, Raymond O., to Sterling Drug Inc. 2-(Lower-alkoxy)methylene-androstan-17 β -ol-3-ones and preparation thereof. 3,515,735, Cl. 260-397.4.
- Clizbe, David E., and Crowell, John A., to Du Pont de Nemours, E. I., and Company. Dynamoelectric machine and corrugated plastic slot liner insert therefor. 3,515,923, Cl. 310-215.
- Clupak, Inc.: See—
Futch, James M., Jr., 3,515,633.
- Clyne, Robert W. Tank discharging conveyor. 3,515,260, Cl. 198-154.
- Cockerham, Robert George, and Yarwood, Thomas Alan, to Gas Council, The. Catalytic treatment of hydrocarbons. 3,515,527, Cl. 48-214.
- Codman & Shurtleff, Inc.: See—
Mallina, Rudolph F., 3,515,139.
- Coffman, William H., Jr., to Lewbill Industries Inc. Mist-producing device. 3,515,348, Cl. 239-103.
- Cohen, Kenneth W., to Bailey Meter Company. Multiple input fluid element. 3,515,160, Cl. 137-81.5.
- Colarossi, Lawrence A., Reiling, Gebhart Jr., Jr., Tarquinio, Anthony V., and James, Thomas S., deceased (by Willis, Joanne Elizabeth, executrix), to Pittsburgh-Des Moines Steel Company. Portable welding apparatus. 3,515,844, Cl. 219-125.
- Colgate-Palmolive Company: See—
Reinish, Martin David, and Ledgett, Lowell Ashton, 3,515,672.
- Colledge, Edwin H.: See—
Garrow, Peter J., and Colledge, Edwin H. 3,515,482.
- Colley, Rowan Herbert, to Rolls-Royce Limited. Gas turbine by-pass engine. 3,514,954, Cl. 60-261.
- Collinet, Jean-Claude R.: See—
Hines, Marion E., Collinet, Jean-Claude R., and White, Joseph F. 3,516,015.
- Collins, Keith Douglas, to Rotax Limited. Spark ignition apparatus. 3,515,937, Cl. 315-209.
- Collins Radio Company: See—
Bray, William E., Hirvela, Robert J., and Kaliher, Dennis E., 3,516,069.
Bronson, Howard J., Johnson, Frederick W., and Weltha, Marvin D., 3,515,330.
Johnson, Robert A., 3,516,029.
- Columbus, Peter S., and Mason, Ronald T., to Borden, Inc. Resin adhesive composition and laminated structure utilizing the same. 3,515,630, Cl. 161-245.
- Comastri, Mauro, and Wiquel, Valentino, to S.p.A. Vetreria Italiana Balzaretto Modigliani. Method of forming a band of mineral fibers and making tubing from said band. 3,515,610, Cl. 156-62.8.
- Combs, Robert Leonard, Slonaker, David Frank, and Wooten, Willis Carl, Jr., to Eastman Kodak Company. Polyolefin blends for films and sheeting. 3,515,775, Cl. 260-897.
- Comer, Alva Gene, Reed, Robert E., and Fitch, Ernest C., Jr., to Cyclonics Corporation. Method and apparatus for decontaminating fluid. 3,515,276, Cl. 210-26.
- Comm, Daniel, to Dano Modules, Inc. Modular building construction. 3,514,910, Cl. 52-79.
- Commerford, Robert T., to Alpha Industries, Inc. Tunable microwave switching. 3,516,031, Cl. 333-98.
- Commissariat a l'Energie Atomique: See—
Pflugrad, Kurt, 3,515,639.
Yerouchalmi, David, 3,515,913.
- Compagnie des Competeurs: See—
Guillemin, Germain Joseph Edmond, 3,515,985.
- Compagnie Generale d'Electricite: See—
Aupoix, Marcel, and Moisson-Franckhauser, Francois, 3,515,793.

JUNE 2, 1970

LIST OF PATENTEES

PI 7

- Huret, Jerome, Chevalier, Michel, and Rocherolles, Raymond, 3,515,976.
- Compagnie Generale de Radiologie: See—
Bens, Jean Raymond, and Delarue, Jean-Claude, 3,515,874.
- Compagnie Generale des Etablissements Michelin: See—
Boileau, Jacques, 3,515,197.
- Condon, Robert Scofield. Pencil lead pointer. 3,515,187, Cl. 145-3.3.
- Connelly, La Vern R., to Eaton Yale & Towne, Inc. Process for treating ferrous surfaces. 3,515,599, Cl. 148-6.15.
- Conner, James Leon, to Gichner Mobile Systems, Inc. Tow bar with shear mount. 3,515,410, Cl. 280-445.
- Conover, Lloyd H., to Pfizer, Chas., & Co., Inc. Antibacterial agents. 3,515,731, Cl. 260-351.
- Conrad, Lucas J.: See—
Allred, Cyrus A., Jr., and Conrad, Lucas J. 3,514,808.
- Consolidated Film Industries: See—
Solow, Sidney P., 3,515,474.
- Consolidated Paper (Bahamas) Limited: See—
Kobza, Anthony, 3,515,336.
- Continental Can Company, Inc.: See—
Sammelink, Adelbert, 3,515,965.
Wolfe, Robert W., 3,515,614.
- Continental Tapes, Incorporated: See—
Dahl, Rolf, 3,515,773.
- Control Data Corporation: See—
Perkins, Robert L., and Keel, Beat G., 3,514,851.
- Controlotron Corporation: See—
Baumoeil, Joseph, 3,515,000.
- Convex Limited: See—
Zysman, Milton, 3,514,797.
- Cook, John W., to Westinghouse Electric Corporation. Apparatus for controlling the flow of a cooling medium onto workpieces. 3,514,984, Cl. 72-7.
- Cook, Shirl E., and Sistrunk, Thomas O., to Ethyl Corporation. Tetramethyllead recovery. 3,515,739, Cl. 260-437.
- Cooley, George William: See—
Broat, Robert C., Krupa, Walter H., and Cooley, George William 3,515,659.
- Coombe, John G. B.: See—
Dickson, Alexander F., Coombe, John G. B., and West, Francis G. 3,515,182.
- Cooper, Irving Brooks, to Industrial Instrumentations, Inc. Shift register controlled scanning function monitor. 3,516,089, Cl. 340-413.
- Cooper, Roy G. Temperature sensing devices. 3,516,082, Cl. 340-227.1.
- Coordes, John E., to United States of America, Army. Multipurpose control valve. 3,515,502, Cl. 417-178.
- Copley, Russell Dean, and Hubbard, Arthur Lowell, to Deere & Company. Discharge ducts for cotton harvester. 3,515,437, Cl. 302-59.
- Coppola, Joseph R., to USM Corporation. Boots. 3,514,877, Cl. 36-2.5.
- Cordry, Floyd A., to Warwick Electronics Inc. Piano keying circuit for electrical musical instrument, with selective by-pass circuits for other instrumental effects. 3,515,791, Cl. 84-1.01.
- Corning Glass Works: See—
Bermel, Thomas W., 3,515,159.
Camp, Harold E., and Evans, James W., 3,514,856.
Claypoole, Stewart A., and Mertsoc, Martin M., 3,515,958.
Mullaly, Robert B., 3,515,170.
- Cornish, George Kent, and Penfold, Garn Farley, to Deere & Company. Control system for a harvesting machine. 3,514,929, Cl. 56-21.
- Costa, Robert B., to Rain Bird Sprinkler Mfg. Corporation. Impact motor driven pop-up sprinkler. 3,515,351, Cl. 239-206.
- Cottle, Victor Claude Herbert: See—
Ashton, Thomas Richard, Cottle, Victor Claude Herbert, and Jackson, David 3,514,919.
- Coulter Electronics, Inc.: See—
Proni, Oscar, 3,515,494.
- Coulter, Michael Oliver, and Bell, David, to Murgatroyd's Salt and Chemical Company Limited. Electrolytic cells having detachable anodes secured to current distributors. 3,515,661, Cl. 204-263.
- Courville, Rudolph S. Winged logging wedge. 3,515,372, Cl. 254-104.
- Coustau, Robert, to Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine Courbevoil. Apparatus for geological surveying. 3,514,996, Cl. 73-153.
- Cragoe, Edward J., Jr., to Merck & Co., Inc. 2-(5-Amino-1H-1,2,4-triazol-3-yl)-3-aminopyrazines and processes for their preparation. 3,515,723, Cl. 260-250.
- Craig, Robert S., to General Electric Company. Cholesterol-substituted siloxanes. 3,515,734, Cl. 260-397.2.
- Crane Co.: See—
Cantalupo, Francis J., 3,515,250.
- Cravens, Robert D., and DePass, Ernest T., said DePass assor. to Union Camp Corporation. Five panel folder machine. 3,514,922, Cl. 53-374.
- Crawford, Francis W., to Kansas State University Research Foundation. Combination electric and internal combustion power unit for automobiles. 3,515,968, Cl. 318-139.
- Crawford, Robert F.: See—
Goldsmith, Harry, and Crawford, Robert F. 3,515,866.
- Crowell, John A.: See—
Clizbe, David E., and Crowell, John A. 3,515,923.
- Crown Controls Corporation: See—
Stammen, Harold A., 3,515,233.
- Crown Zellerbach Corporation: See—
Tonn, Edward G., and Yang, Christen H. C., 3,515,270.
- Crowther, Thomas S., to Massachusetts Institute of Technology. Methods of improving magnetic characteristics of films for memory application. 3,515,606, Cl. 156-3.
- Cuddon-Fletcher, Angus H., to Brunswick Corporation. Piston pin lubrication. 3,515,035, Cl. 92-159.
- Culver, William H., to International Business Machines Corporation. Stimulated Raman parametric amplifier. 3,515,897, Cl. 307-88.3.
- Curley, Delbert V. Combined material mixer and distributor. 3,515,374, Cl. 259-46.
- Curran, Frank J., Co.: See—
Curran, Frank J., 3,515,302.
- Curran, Frank J., to Curran, Frank J., Co. Package for solid diffusing material. 3,515,302, Cl. 220-4.
- Curran, John E., and O'Donnell, John F., to International Business Machines Corporation. Method and means for attenuating common mode electrical noise currents. 3,516,026, Cl. 333-12.
- Curtis, Albert B., Jr.: See—
Davidson, Frederick H., Curtis, Albert B., Jr., and Cayocca, Iver D. 3,514,864.
- Curtis, Donald R., to Allis-Chalmers Manufacturing Company. Paper making machine headbox. 3,515,635, Cl. 162-339.
- Cusiter, George C., and Whalen, Charles S., to Raytheon Company. Gyroscope damping mechanism. 3,515,007, Cl. 74-5.5.
- Cutler, Milton, Carlon, Kenneth G., and Sherman, Louis M., to United States of America, Army. Chemiluminescent peraminioethylene positioned within a brittle capsule. 3,515,070, Cl. 102-60.0.
- Cyclonics Corporation: See—
Comer, Alva Gene, Reed, Robert E., and Fitch, Ernest C., Jr., 3,515,276.
- Dabisch, Wolfgang, to Tipp-Ex-Fabrikation Wolfgang Dabisch. Transfer sheet for obliterating typed character. 3,515,572, Cl. 117-36.1.
- Dahl, Rolf, to Continental Tapes, Incorporated. Pressure-sensitive adhesives from polyurethane polymers and hydroxylated elastomers. 3,515,773, Cl. 260-859.
- Daigh, Harold D.: See—
Deeter, Wendell F., and Daigh, Harold D. 3,515,108.
- Daimler-Benz Aktiengesellschaft: See—
Deutschmann, Herbert, Wahnschaffe, Jurgen, Rudert, Wolfgang, and Mader, Herbert, 3,515,110.
- Daiwa Can Co., Ltd.: See—
Morikawa, Yonekichi, Takano, Kunro, and 5 Half spaing escape-ment, 3,515,188.
- Dal Mon Research Co.: See—
D'Alelio, Gaetano F., 3,515,710.
- Dale, John I., III, and Weaver, Max A., to Eastman Kodak Company. Thiazolyl monoazo dyes containing the imidoethylsulfonylethyl group. 3,515,714, Cl. 260-158.
- D'Alelio, Gaetano F., to Dal Mon Research Co., mesne. Beryllium containing polymeric composition. 3,515,710, Cl. 260-93.5.
- Dalto Electronics Corporation: See—
Tucker, Arthur R., 3,514,871.
- Damy, Eduardo M. Hopper car door actuating and locking mechanism. 3,515,075, Cl. 105-249.
- Danford, Tiras J., Abbott, Phillip E., and Mitchell, John D., to Harrington Manufacturing Company. Tobacco harvester. 3,515,234, Cl. 180-27.
- Daniele, Donald T.: See—
Before, Robert N., and Daniele, Donald T. 3,515,261.
- Dano Modules, Inc.: See—
Comm, Daniel, 3,514,910.
- Dano, Paul K., to Globe Universal Sciences, Inc., mesne. Analog to digital conversion system. 3,516,085, Cl. 340-347.
- Dart Industries, Inc.: See—
Carrock, Frederick E., and Doak, Kenneth W., 3,515,692.
- Das, Dilip K., to Raytheon Company. Electrical device having intermediate dielectric layer. 3,515,629, Cl. 161-220.
- Davenport, Wes H., 1/2 to Miles, Thomas L., Jr. Hydraulic system. 3,514,950, Cl. 60-54.5.
- Davidescu, Grigore, and Poenita, Gheorghe. Pumping unit for bottom-hole pump drive. 3,515,008, Cl. 74-37.
- Davidson, Frederick H., Curtis, Albert B., Jr., and Cayocca, Iver D., to Aerojet-General Corporation. Extensometer. 3,514,864, Cl. 33-148.
- Davidson, James N.: See—
Gwathmey, Edward S., Davidson, James N., and Ziegler, John M. 3,514,997.
- Davies, Gwyn Tudor: See—
Waters, John Murray, Lucas, John, and Davies, Gwyn Tudor 3,515,347.
- Dawkins, John Campbell Francis, Gaved, Roy Alfred, and Greig, Alan, to Diagrit Grinding Company Limited. Holder for a cutting tool bit. 3,514,826, Cl. 29-96.
- D.D.W., Inc.: See—
Westermann, William S., 3,514,813.
- Debras, Robert, to Societe de Fabrication d'Instruments de Mesure (S.F.I.M.). Illuminated pushbutton switch. 3,515,835, Cl. 200-167.
- Decca Limited: See—
Smith, John Alec Sydney, and Tong, David Arthur, 3,515,981.
- Deere & Company: See—
Copley, Russell Dean, and Hubbard, Arthur Lowell, 3,515,437.
Cornish, George Kent, and Penfold, Garn Farley, 3,514,929.
Haight, Robert Eugene, and Sullivan, Thomas Milo, 3,515,246.

- Jackson, William Wayne, and Essex, Duane Arnold, 3,515,219.
Magnuson, Lee T., Kusko, Alexander, and Baker, John C., 3,515,969.
Morrison, Charles Samuel, 3,515,144.
Muncke, Ludwig, Buchmuller, Josef, and Hartlieb, Otto, 3,515,412.
Youngberg, Charles Harold, Larson, Dennis Luverne, and Swales, Barton Lee, 3,515,223.
Deeter, Wendell F., and Daigh, Harold D., to Atlantic Richfield Company. Vapor recovery system. 3,515,108, Cl. 123-136.
Defina, Frank P. Transistorized circuit breaker (or fuse). 3,515,944, Cl. 317-33.
DeHaan, Edward Fokko, and Schampers, Paulus Philippus Maria, to U.S. Philips Corporation. Camera tube including means for regeneration of lead monoxide target layer. 3,515,927, Cl. 313-179.
Delaire, Gerard V.: See—
Peace, Robert G., and Delaire, Gerard V. 3,514,827.
De Lange, Herman Kasper Adriaan, to U.S. Philips Corporation. Device for producing a pulse sequence. 3,515,921, Cl. 310-168.
Delany, Edward Bernard: See—
Sherman, Stanley Allen, and Delany, Edward Bernard 3,515,869.
Delarue, Jean-Claude: See—
Bens, Jean Raymond, and Delarue, Jean-Claude 3,515,874.
D'Elia, Anthony N., and Stolarz, Edward M. Roller curler. 3,515,851, Cl. 219-222.
Della Torre, Edward: See—
Bobbeck, Andrew H., Della Torre, Edward, and Scovil, Henry E. D. 3,516,077.
De Nardi, Mario, and Knaert, William F., to Sonotone Corporation. Multipurpose transducer housing plug with acoustical vent. 3,515,821, Cl. 179-179.
Denny, Hugh W.: See—
Margeson, Theodore M., and Denny, Hugh W. 3,515,891.
de Normand, Robert H., to Bausch & Lomb Incorporated. Adjustable vacuum chuck for holding lenses having different radii during optical examination. 3,515,484, Cl. 356-124.
Dense Securitas A/S: See—
Meyer, Svend Scheel, 3,516,083.
DePass, Ernest T.: See—
Cravens, Robert D., and DePass, Ernest T. 3,514,922.
Depner, William A., to Automatic Electric Laboratories, Inc. Relay construction. 3,516,039, Cl. 335-270.
Deseret Pharmaceutical Company: See—
Santomieri, Louis S., 3,515,137.
De Smidt, Woodrow A., to Allen-Bradley Company. Locking device for enclosure for switches and the like. 3,515,423, Cl. 292-256.71
Desoutter Brothers Limited: See—
States, Ronald Frederick, 3,515,225.
de Stevens, George, and Werner, Lincoln Harvey, to Ciba Corporation. Hypotensive compositions containing a 3,4-dihydro-1,2,4-benzothiadiazine-1,1-dioxide and a hydrazino phthalazine. 3,515,786, Cl. 424-246.
Deutsch Company: See—
Josenhans, Roland K., 3,516,035.
Deutsch Filters Relay Division: See—
Josenhans, Roland K., 3,516,035.
Deutsch, Ralph, to North American Rockwell Corporation. Digital organ. 3,515,792, Cl. 84-1.03
Deutschmann, Herbert, Wahnschaffe, Jurgen, Rudert, Wolfgang, and Mader, Herbert, to Daimler-Benz Aktiengesellschaft. Crankcase bottom part. 3,515,110, Cl. 123-195.
De Valroger, Pierre Albert Marie, and Lavet, Marius. Motors and pump combination fed by a direct current or rectified current power source. 3,515,966, Cl. 318-127.
DeVillers, Edmund J., to Paperlyn Company. Self-erecting, disposable headress. 3,514,789, Cl. 2-198.
DeVore, Waldo D.: See—
Higgins, Edward M., Rosenbaum, Harold D., and DeVore, Waldo D. 3,515,873.
Dezelan, Joseph E., Hicks, Leon E., and Johnson, Howard L., to Caterpillar Tractor Company. Pilot bleed system for remote control valve operation. 3,515,032, Cl. 91-51.
Diagrit Grinding Company Limited: See—
Dawkins, John Campbell Francis, Gaved, Roy Alfred, and Greig, Alan, 3,514,826.
Diamond International Corporation: See—
Before, Robert N., 3,515,259.
Before, Robert N., and Daniele, Donald T., 3,515,261.
Dibrell, Elisabeth. Bedclothes. 3,514,796, Cl. 5-334.
Dickson, Alexander F., Coombe, John G. B., and West, Francis G., to Shell Oil Company. One-point mooring system for loading or unloading a fluid into or from a ship. 3,515,182, Cl. 141-387.
Diczhazy, Raymond B., to United States of America, Army, mesne. Cycloconverter blanking circuit. 3,515,977, Cl. 321-18.
Dietrich, Henri: See—
Schindler, Walter, and Dietrich, Henri 3,515,785.
Dillon, Joseph F., Jr., to Bell Telephone Laboratories, Incorporated. Magnetically-controlled beam deflector. 3,515,457, Cl. 350-151.
Distillers Company Limited, The: See—
Yeomans, Bertram, 3,515,737.
Dix, Sydney, to GTI Corporation, mesne. Diode sealer. 3,515,840, Cl. 219-85.
Dixon, Alan F.: See—
Legat, Wilhelm H., and Dixon, Alan F. 3,514,845.
Doak, Kenneth W.: See—
Carrock, Frederick E., and Doak, Kenneth W. 3,515,692.
Dobin, Charlotte: See—
Schilling, Ronald B., and Dobin, Charlotte 3,515,953.
Dobrikin, Harold L.: See—
Berg, Stanley, and Dobrikin, Harold L. 3,515,169.
Dobson, Harold R., to General Dynamics Corporation. Engine testing system. 3,514,995, Cl. 73-117.2
Dodge, Gerald F., III, and True, Howard D. F., Jr., to General Electric Company. Ice maker with improved ice storage receptacle. 3,514,964, Cl. 62-137.
Doede, John H.: See—
Vonderhe, Robert H., Doede, John H., and Lindenmeyer, Carl W. 3,515,486.
Dohnalek, Rudolf: See—
Cap, Miroslav, Cizinsky, Zdenek, Dohnalek, Rudolf, Chvojka, Jiri, and Karkoska, Vitezslav 3,515,521.
Dokos, Sophocles J., to Sunbeam Corporation. Temperature responsive control means. 3,515,856, Cl. 219-493.
Doll, Jean Henri, and Druesne, Henri Desire, to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme). Method for applying spacing means between electrodes of electric power sources. 3,515,596, Cl. 136-175.
Dolphin, Lambert T., Jr.: See—
Wickersham, Arthur F., Jr., and Dolphin, Lambert T., Jr. 3,515,935.
Dombro, Robert A., to Universal Oil Products Company. Preparation of alcohols. 3,515,759, Cl. 260-618.
Donjon, Jacques, to Societe de Fabrication d'Instruments de Mesure (S.F.I.M.). Amplifier arrangement having low voltage drift with temperature variation. 3,516,006, Cl. 330-69.
Donze, Michel, to L'Air Liquide. Method of starting a scarfing pass. 3,515,189, Cl. 148-9.5
Dorfman, Edwin: See—
Weil, Edward D., Dorfman, Edwin, and Linder, Jerome 3,515,537.
Dougherty, John J., Jr. Pedestal timber pile shoe. 3,514,959, Cl. 61-53.
Douglas, Raymond J., Iwasaki, Cedric E., and Kossoff, Joseph, to Matel, Inc. Doll-driven wheel toy and ratchet device for driving same. 3,514,897, Cl. 46-109.
Dow Chemical Company, The: See—
Chiu, Thomas T., Pickelman, Dale M., and Moore, Eugene R., 3,515,648.
Holthaus, Richard L., 3,515,777.
Nelson, Alfred R., and Floria, Vernon D., 3,515,709.
Walters, Harold A., and Morehouse, Donald S., 3,515,569.
Doyle, John B. Safety lock for a trailer coupler. 3,514,980, Cl. 70-258.
Drakard, David B. Frames. 3,514,886, Cl. 40-152.1
Drake, Lloyd A.: See—
Swing, Dennis M., Drake, Lloyd A., and Bates, Harlan W. 3,515,894.
Swing, Dennis M., and Drake, Lloyd A. 3,515,896.
Drewry, Hugh S.: See—
Baron, Anthony V., Drewry, Hugh S., and Lees, John N., Jr. 3,515,379.
Dreyfus, Marc George, and Bleistein, Edward, to U.S. Philips Corporation, mesne. Sample cell for detection of an atmospheric contaminant by internal reflection spectrometry. 3,515,490, Cl. 356-244.
Driver James E., Sr.: See—
Klein, Robert E., and Driver James E., Sr. 3,514,988.
Driver, Wilbur B.: See—
Furtado, Edward, 3,515,269.
Druesne, Henri Desire: See—
Doll, Jean Henri, and Druesne, Henri Desire 3,515,596.
Druker, Leonard J., and Sachi, Leonard Wayne, to Minnesota Mining and Manufacturing Company. Dry process proof sheet composition. 3,515,559, Cl. 96-109.
Dryon, Jacques Max Charles, to Ateliers Heuze, Malevez et Simon Reunis Societe Anonyme. Apparatus for scoring sheet glass. 3,515,020, Cl. 83-11.
Dubied, Edouard, et Cie. (Societe Anonyme): See—
Joseph, Pierre, 3,514,976.
Dubois, Jean Claude: See—
Cholet, Jacques, and Dubois, Jean Claude 3,516,053.
Duck, Ivan Alfred, to Brown, S. G., Limited. Spring pivots. 3,515,006, Cl. 74-5.
Ducourneau, Pierre. Meat cutting machines. 3,515,192, Cl. 146-102.
Duffield, Alan, to Imperial Chemical Industries Limited. Thermoplastic laminates having improved surface properties. 3,515,626, Cl. 161-162.
Duncan, Angelo N., to Smith, A. O., Corporation. Circulating liquid heating system. 3,515,123, Cl. 126-362.
Dunlop Company Limited, The: See—
Woodhams, Raymond T., and Wood, Bertie B. J., 3,515,704.
Dunnoss, Jack, to Servoflo Corporation. Flow delivery system. 3,515,164, Cl. 137-151.
Dunston, James M., to United States of America, Army. Method of making a slotted gas burner head. 3,514,833, Cl. 29-157.
Du Pont de Nemours, E. I., and Company: See—
Chu, Victor F. H., and Umberger, Jacob Quentin, 3,515,557.
Church, Robert John, 3,515,533.
Clizbe, David E., and Crowell, John A., 3,515,923.
Fields, Reuben T., and Hartig, Martval J., 3,515,778.
Hayes, John A., and Preisendanz, Edward S., 3,515,308.

- Irwin, Howard D., 3,515,577.
Meadows, Geoffrey W., 3,514,818.
Meadows, Geoffrey W., 3,515,540.
O'Connell, William Grogan, Sanford, Herbert Brooks, Jr., and Edwards, Bernard S., 3,515,780.
Scribner, Richard M., 3,515,720.
Wild, Darrel Dean, 3,515,760.
Durand & Huguenin A.G.: See—
Goorhuis, Hendrik, and Urosevic-Jovanovic, 3,515,504.
Durand & Huguenin A.G.: See—
Schenkel, Hans, 3,515,598.
Dusen, Van, & Co., Inc.: See—
Wolfe, Walter W., Holten, Herbert A., Messner, Jack D., and Olson, Ivan E., 3,515,258.
Dworak, Roger A.: See—
South, William H., and Dworak, Roger A. 3,515,975.
Dynamics Corporation of America: See—
Seay, Perry A., 3,515,867.
Dziergwa, Herbert: See—
Rasch, Erhard, and Dziergwa, Herbert 3,516,010.
East, H. G., & Company, Limited: See—
Freeman, Maurice Frederick, 3,515,163.
Eastes, Frank E., to Grace, W. R., & Co. Urea/salt of an acid complex and a wetting agent-antistatic composition for synthetic polymers. 3,515,580, Cl. 117-138.8
Eastman Kodak Company: See—
Allentoff, Norman, and Rotondo, Richard J., 3,515,547.
Combs, Robert Leonard, Slonaker, David Frank, and Wooten, Willis Carl, Jr., 3,515,775.
Dale, John I., III, and Weaver, Max A., 3,515,714.
Fassbender, Henry J., 3,515,555.
Goldman, Martin, and Staudenmayer, William J., 3,515,568.
Hein, Henry F., and Patterson, Roger W., 3,515,477.
Hurst, James E., 3,515,972.
Jackson, Winston J., Jr., and Caldwell, John R., 3,515,628.
Kotkas, Heiti, and Johnston, James R., 3,515,333.
Louis Audran, Roger Gaston, Hilaire, Jean-Claude, Louis Bourdon, Jean Alexandre, and Pierre Lestienne, Andre Francois, 3,515,551.
Peace, Robert G., and Delaire, Gerard V., 3,514,827.
Russell, Harold D., and Amering, Charles F., 3,515,556.
Straley, James M., and Wallace, David J., 3,515,506.
Straley, James M., Fisher, John G., and Wallace, David J., 3,515,715.
Van Lare, Earl J., 3,515,722.
Wood, Edwin Lee, and Gibson, Roger E., 3,515,565.
Eaton Yale & Towne, Inc.: See—
Connelly, La Vern R., 3,515,599.
Esser, Ernst S., 3,515,299.
Hierta, Lars J., and Mannhardt, Werner G., 3,515,676.
Kelly, Douglas E., 3,515,368.
McPherson, John C., 3,515,031.
Ebert, Michael: See—
Wallace, Bert H., 3,515,148.
Ebihara, Tameaki, and Mikami, Takashi, to Victor Company of Japan, Limited. Television camera for selectively picking up scenes in color or monochromatically. 3,515,800, Cl. 178-5.4
Eddy, Robert T., to Reliance Electric Company. Variable capacity positive displacement pump. 3,515,496, Cl. 417-440.
Edenhofer, Albrecht, Ramuz, Henri, and Spiegelberg, Hans, to Hoffmann-La Roche Inc. Anti-tubercular compositions and methods employing pyridine derivatives. 3,515,788, Cl. 424-263.
Edwards, Bernard S.: See—
O'Connell, William Grogan, Sanford, Herbert Brooks, Jr., and Edwards, Bernard S. 3,515,780.
Edwards, Samuel L. Rocket driven vehicle transmission. 3,515,232, Cl. 180-7.
Eisberg, Keith V., to Carrier Corporation. Absorption refrigeration machine. 3,514,970, Cl. 62-476.
Ejectoret S.A.: See—
Gruska, Ralph, 3,515,493.
Eklund, Gosta Ulf, and Johansson, Kurt Hjalmar, to International Standard Electric Corporation. Breakdown detecting arrangement for transmission systems with noise. 3,515,819, Cl. 179-170.
Eklund, Phillip R. Cryogenic refrigerator compressor improvement. 3,515,034, Cl. 92-152.
Elbling, Joseph, to Olivetti, Ing. C., & C., S.p.A. Position control device for machine tools and similar equipments. 3,515,962, Cl. 318-18.
Elco Corporation: See—
Scheingold, William, and Rossman, Donald, 3,516,048.
Eldridge, David George: See—
Hayner, Paul F., and Eldridge, David George 3,515,346.
Electro Chemical Laboratories Corporation: See—
Fearon, Robert E., 3,515,525.
Electrohome Limited: See—
Buhr, Jacob, 3,515,960.
Szabo, John, 3,515,907.
Electro-Netic Steel, Inc.: See—
Baenziger, Robert C., 3,516,033.
Electronic Data Systems Corporation: See—
Morgan, Richard E., 3,515,814.
Spraker, Earl D., 3,515,806.
Spraker, Earl D., 3,516,062.
Electronic Engineering Company: See—
Greene, George Boyd, 3,515,093.
Elektronik m.b.H.: See—
Butenschon, Claus, 3,515,955.
Ellen, Joseph R., Jr. Lift device. 3,515,243, Cl. 182-68.
Ellis, Jefferson W.: See—
Jones, William N., and Ellis, Jefferson W. 3,515,600.
Ellis, Robert. Surf-board construction and method of making same. 3,514,798, Cl. 9-310.
Elox Inc.: See—
Lobur, Walter, 3,515,838.
Eltro G.m.b.H. & Co.: See—
Hess, Walther, 3,515,882.
Emery, Robert J., to Gilford Instruments Laboratories, Inc. Fluid sample flow cell. 3,515,491, Cl. 356-246.
Emke, Cornelis A., to Cascade Corporation, mesne. Lift truck with a pivotal, shiftable and tiltable mast. 3,515,301, Cl. 214-674.
Endsley, William L., Jr. Sliding retractable porch for camper bodies. 3,515,406, Cl. 280-166.
Enge, Harald A., to High Voltage Engineering Corporation. Non-dispersive magnetic deflection method. 3,516,037, Cl. 335-210.
Engineered Plastics, Incorporated: See—
Poteat, George A., 3,515,283.
English Electric Company Limited, The: See—
Warrington, Albert R. Van Cordlandt, 3,515,943.
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi, to Kokusai Denshin Denwa Kabushiki Kaisha. Time-divisional accumulation and distribution system for digital information. 3,516,074, Cl. 340-172.5
Entschel, Roland, Mueller, Curt, and Wehrli, Walter, to Sandoz Ltd., a/k/a Sandoz A.G. Basic dyes. 3,515,733, Cl. 260-377.
Erickson, John G.: See—
Brown, Harvey A., Erickson, John G., Husted, Donald R., and Wright, Charles D. 3,515,603.
Esquibel, Arthur E.: See—
Esquibel, Arthur M., and Esquibel, Arthur E. 3,514,981.
Esquibel, Arthur M., and Esquibel, Arthur E. Lock box. 3,514,981, Cl. 70-298.
Esser, Ernst S., to Eaton Yale & Towne, Inc. Industrial truck with self actuated load lifting attachment. 3,515,299, Cl. 214-350.
Essex, Duane Arnold: See—
Jackson, William Wayne, and Essex, Duane Arnold 3,515,219.
Estabrook, Mark R., to Barnes Drill Co. Method and apparatus for decontaminating fluid with delayed filtering. 3,515,507, Cl. 8-158.
Estlick, Raymond J., to Raytheon Company. Variable resistance device. 3,516,041, Cl. 338-154.
Etchison, John O., Jr., and Tucker, John G., to Western Electric Company, Incorporated. Apparatus for wrapping wire on terminals. 3,514,835, Cl. 29-203.
Ethyl Corporation: See—
Cook, Shirl E., and Sistrunk, Thomas O., 3,515,739.
Sibert, John W., 3,515,757.
Ethylene Gulf Coast Corporation: See—
Bruch, Forrest B., and Hood, William C., 3,514,831.
Evans, James W.: See—
Camp, Harold E., and Evans, James W. 3,514,856.
Evans, Robert C., to General Electric Company. High speed propulsion engine. 3,514,957, Cl. 60-270.
Evans, William Robert, to AMP Incorporated. Bundle tie. 3,514,815, Cl. 24-16.
Everett, Charles T., to Everett Industries, Inc. Cut-off machine. 3,514,906, Cl. 51-99.
Everett Industries, Inc.: See—
Everett, Charles T., 3,514,906.
Evers, Heinz, to Interstella AG. Apparatus for molding hollow articles. 3,514,812, Cl. 18-5.
Every, Peter, and Stelzer, William, to Kelsey-Hayes Company. Skid control system including hydraulic modulating valve. 3,515,440, Cl. 303-21.
EVG Entwicklungs und Verwertungs-Gesellschaft m.b.H.: See—
Gott, Hans, Ritter, Josef, Ritter, Gert, and Ritter, Klaus, 3,515,177.
Express Dairy Company (London) Limited: See—
Ashton, Thomas Richard, Cottle, Victor Claude Herbert, and Jackson, David, 3,514,919.
Fairchild Camera and Instrument Corporation: See—
Kroemer, Herbert, and Shyam, Megha, 3,516,019.
Famigietto, John M. Thimble setter. 3,514,800, Cl. 12-1.
Farbenfabriken Bayer Aktiengesellschaft: See—
Siegel, Edgar, and Sasse, Klaus, 3,515,713.
Farhat, Kelly: See—
Oberster, Arthur E., Smith, George E.P., Jr., and Farhat, Kelly 3,515,751.
Farr, James B., to Texumseh Products Company. Solid state ignition with automatic timing advance. 3,515,109, Cl. 123-148.
Farrand, William A.: See—
Horsfall, Robert B., Farrand, William A., and Williams, Warner D. 3,516,081.
Farrington Business Machines Corporation: See—
Barbour, William P., 3,515,060.
Farrington Electronics, Inc.: See—
Tyburski, Robert M., and Springer, Robert F., 3,515,383.

- Fashfellow, George H.: See—
Parlanti, Conrad A., Fashfellow, George H., and Fauntleroy, Dort 3,515,203.
- Fassbender, Henry J., to Eastman Kodak Company. Toning composition for direct positive paper. 3,515,555, Cl. 96-52.
- Fast Load Control, Inc.: See—
Park, Robert H., 3,515,893.
- Faucet-Queens Inc., The: See—
Beall, Glenn L., 3,515,413.
- Fauntleroy, Dort: See—
Parlanti, Conrad A., Fashfellow, George H., and Fauntleroy, Dort 3,515,203.
- Faure, Marc Henri Jean, to Bertin et Compagnie. Transport facilities with fluid sustained vehicle. 3,515,073, Cl. 104-23.
- Fearon, Robert E., to Electro Chemical Laboratories Corporation. Fire building device. 3,515,525, Cl. 44-38.
- Federal-Mogul Corporation: See—
Williams, Charles W., and Jensen, Elmer C., 3,515,448.
- Feed Service (Livestock) Limited: See—
Clark, Kenneth Gould, and Kemp, David Charles, 3,515,099.
- Feldman, Jacob R., Klose, Robert Edward, and MacAllister, Robert V., to General Foods Corporation. Cold water-dispersible starch composition and method for making same. 3,515,591, Cl. 127-32.
- Feldman, Julian: See—
Frampton, Orville D., and Feldman, Julian 3,515,740.
- Fibreboard Corporation: See—
Pellaton, Ernest C., 3,515,037.
- Field, George Francis, and Sternbach, Leo Henryk, to Hoffmann-La Roche Inc. Process for the preparation of substituted 4-phenyl or 4-pyridyl-1,2-dihydroquinazoline compounds and novel substituted 4-pyridyl-1,2-dihydroquinazoline products. 3,515,724, Cl. 260-251.
- Field, Philip M., and Nemesnyik, John C., to Beseler, Charles, Company. Overhead projector. 3,515,476, Cl. 353-87.
- Fields, Reuben T., and Hartig, Martval J., to Du Pont de Nemours, E. I., and Company. Continuous molding of thermoplastic resin. 3,515,778, Cl. 264-40.
- Finch, Harry D., to Shell Oil Company. Chemical waterflooding techniques using complex surfactants. 3,515,214, Cl. 166-272.
- Finger Keys, Inc.: See—
Hindman, Daniel T., and Morris, Robert V., 3,516,059.
- Fink, Herbert: See—
Schroder, Gunter, and Fink, Herbert 3,515,750.
- Finsstrand, Harald, to Automation Industries, Inc., mesne. Utensil holder for a cooking unit. 3,515,116, Cl. 126-24.
- Firestone Tire & Rubber Company, The: See—
Oberster, Arthur E., Smith, George E.P., Jr., and Farhat, Kelly, 3,515,751.
- Fischer, Adolf: See—
Steinbrunn, Gustav, and Fischer, Adolf 3,515,744.
- Fish, Kenneth Elton, to Bevis Industries, Inc. Tenting clip for gripping material of varying thicknesses. 3,514,823, Cl. 26-62.
- Fishel, Norman A., to Universal Oil Products Company. Polymerization process. 3,515,769, Cl. 260-683.15
- Fisher, John G.: See—
Straley, James M., Fisher, John G., and Wallace, David J. 3,515,715.
- Fisher, Julian V., to Illinois Tool Works Inc. Spring clip. 3,515,363, Cl. 248-71.
- Fitch, Ernest C., Jr.: See—
Comer, Alva Gene, Reed, Robert E., and Fitch, Ernest C., Jr. 3,515,276.
- Fitzgerald, Charles T., Jr., to Industrial Nucleonics Corporation. Process controller with dynamic set-point adjustment responsive to the statistical variance of the controlled property. 3,515,860, Cl. 235-151.13
- Flajole, Henry J.: See—
Church, Charles, Flajole, Henry J., and Kerber, Harold 3,515,831.
- Flank, William H., to Air Products and Chemicals, Inc. Faujasite production. 3,515,511, Cl. 23-112.
- Flank, William H., to Air Products and Chemicals, Inc. Contact masses containing faujasite. 3,515,680, Cl. 252-455.
- Flank, William H., McEvoy, James E., and Mills, George Alexander, to Air Products and Chemicals, Inc. Faujasite in matrix particles. 3,515,681, Cl. 252-455.
- Flank, William H., McEvoy, James E., and Mills, George Alexander, to Air Products and Chemicals, Inc. Cracking catalyst manufacture. 3,515,682, Cl. 252-455.
- Flank, William H., McEvoy, James E., and Mills, George Alexander, to Air Products and Chemicals, Inc. Cerium faujasite catalyst. 3,515,683, Cl. 252-455.
- Flebu, Rolf Johan. Dust arrester. 3,514,924, Cl. 55-237.
- Flesch, Peter, and Bauer, Gerhard. Method of preparing a chopped meat composition. 3,515,561, Cl. 99-108.
- Fletcher, Richard Lees: See—
Kenyon, Jack, and Fletcher, Richard Lees 3,514,928.
- Flexnit Company, Inc.: See—
Black, Eileen R., 3,515,143.
Black, Eileen Rockwell, 3,515,141.
Black, Eileen Rockwell, 3,515,142.
- Floria, James David, to Goodrich, B. F., Company, The. Tire and wheel for passenger automobiles. 3,515,196, Cl. 152-352.
- Floria, Vernon D.: See—
Nelson, Alfred R., and Floria, Vernon D. 3,515,709.
- Flow, Henry C., and Ruderman, Stanley G. Portable resuscitator unit. 3,515,135, Cl. 128-145.6
- Flowers, Gilbert E., to United States of America, Air Force. Weld electrode holder. 3,515,847, Cl. 219-138.
- FMC Corporation: See—
Hill, Kenneth L., and Peake, Clinton J., 3,515,536.
Seaborn, Paul E., 3,515,273.
- Foch, Pierre, to Charbonnages de France. Method of heat treatment of sludges. 3,515,381, Cl. 263-53.
- Foltz, Robert E., to Lawrence Brothers, Inc. Guide channel follower device. 3,514,805, Cl. 16-90.
- Fong, William, to National Research Development Corporation. Alternating current electric motor with multiple parallel circuits winding and method of winding. 3,515,922, Cl. 310-198.
- Foot, Richard H., to United States of America, Air Force. Video automatic gain control system for maintaining constant background noise level. 3,515,804, Cl. 178-73
- Ford Industries, Inc.: See—
Joyaux, Henri B., 3,516,061.
- Ford Motor Company: See—
Adahan, Carmeli, 3,515,012.
Lemieux, George E., Leonard, Richard L., and Reynolds, Robert L., 3,515,439.
- Foster Grant Co., Inc.: See—
Mitchell, Atherton R., 3,515,468.
- Fougere, Maurice H.: See—
Southward, Leonard B., and Fougere, Maurice H. 3,515,294.
- Fowler, Byron Leo, to Caldwell, E. L., & Sons, Inc. Scraper blade attachment for tractors. 3,515,221, Cl. 172-447.
- Foxboro Company, The: See—
Bowditch, Hoel L., William George F., and Bertone, Richard A., 3,515,162.
Robinson, Robert J., 3,514,989.
- Fracassi, Renato D., and Savage, John E., to Bell Telephone Laboratories, Incorporated. Data scrambler. 3,515,805, Cl. 178-22.
- Frampton, Orville D., and Feldman, Julian. Cyano cyclohexenyl compounds. 3,515,740, Cl. 260-464.
- Francis, James M.: See—
Mecklin, Charles D., Francis, James M., and Hale, George H. 3,515,349.
- Franklyn, Gilbert W. Fishing lure. 3,514,890, Cl. 43-42.05
- Frank, Edward C., to Boeing Company, The. Blade tracking system. 3,515,485, Cl. 356-152.
- Frankenplastik Vertriebs GmbH & Co., KG: See—
Paksy, Jenő, 3,514,893.
- Frattallone, Michele. Heel having interchangeable support portion. 3,514,879, Cl. 36-42.
- Fredlake, John J., Keck, Milton F., and Schwent, Glennon V., to United States of America, Navy, mesne. Turboprop fuel control for use with contaminated or varied fuels. 3,514,949, Cl. 60-39.28
- Freeborg, Robert M., to Bechtel International Corporation, mesne. Method of severing a nuclear fuel bundle. 3,514,838, Cl. 29-426.
- Freedman, Ruth. Bust form. 3,514,792, Cl. 3-36.
- Freeman, Maurice Frederick, to East, H. G., & Company, Limited. Respiratory apparatus. 3,515,163, Cl. 137-102.
- Freeman, William R., Jr.: See—
Baranow, Sanford, and Freeman, William R., Jr. 3,515,095.
- Fregert, Gustav Sigfrid. Test patch for diagnosing allergies. 3,515,126, Cl. 128-2.
- Frey, Walter: See—
Toth, Istvan, and Frey, Walter 3,515,729.
- Frick, David F., to Singer Company, The. Pulse responsive counters. 3,515,341, Cl. 235-92.
- Frick, Hans-Dieter, Knapp, Walter, and Osegowitsch, Victor, to Agfa-Gevaert Aktiengesellschaft. Control arrangement for a regenerator unit in a continuous developer. 3,515,311, Cl. 222-57.
- Fried, Josef, and Krapcho, John, to Squibb, E. R., & Sons, Inc. Amino acid derivatives. 3,515,749, Cl. 260-516.
- Friendship, Kenneth F., to Automatic Sprinkler Corporation. Method and apparatus for filling containers with beverages using a packed line principle. 3,515,180, Cl. 141-6.
- Frill, Richard K., and Reiss, John R., to Westinghouse Air Brake Company. Draft apparatus with tension-breakable emergency release means. 3,515,288, Cl. 213-64.
- Fritz, Richard D., and Whitehouse, Harper J., to United States of America, Navy. Acoustic absorbing material. 3,515,910, Cl. 310-8.
- Fry, William Lawrence, to Lucas, Joseph, (Industries) Limited. Contact breaker assemblies. 3,515,833, Cl. 200-166.
- Fry, William Lawrence, to Lucas, Joseph, (Industries) Limited. Contact breaker assemblies. 3,515,834, Cl. 200-166.
- Fujimoto, Keimei: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
- Fujinami, Akira: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
- Fujita, Takashi: See—
Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi 3,516,034.

- Fukata, Yasuo: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi 3,516,074.
- Furtado, Edward, to Driver, Wilbur B. Container for coiled wire. 3,515,269, Cl. 206-52.
- Furtak, Ronald T., and Schier, Robert W., to Krueger Metal Products, Inc. Combination coat hanger and hanger support. 3,515,319, Cl. 223-85.
- Fusayama, Takeo: See—
Yokouchi, Rei, Ichikawa, Yoshimitsu, Izeki, Syotaro, and Fusayama, Takeo 3,515,700.
- Futch, James M., Jr., to Clupak, Inc. Compacting of paper and similar fiber webs. 3,515,633, Cl. 162-206.
- Future Products Development Corporation: See—
Ray, Bartow, 3,515,377.
- Gach, Peter P., to Sunbeam Plastics Corporation. Replaceable cap. 3,515,307, Cl. 220-60.
- Gaeth, Rudolf H., and Horvath, Bert, to Phillips Petroleum Company. Metal containing catalysts and preparation. 3,515,679, Cl. 252-454.
- GAF Corporation: See—
Houser, Robert W., 3,515,488.
- Gaines, Jack H., and Bourhenne, Francis K., to Sierra Electric Corporation. Telephone jack receptacle. 3,516,045, Cl. 339-125.
- Galko, Andrew J., to United States of America, Army. Device for increasing strength and lethality of explosives. 3,515,068, Cl. 102-22.
- Gallagher, Richard J. Compression spring. 3,515,382, Cl. 267-1.
- Galmiche, Philippe, Hivert, Andre, and Marty, Michel, to Office National d'Etudes et de Recherches Aerospatiales. Refractory alloys containing a dispersed phase of thoria and in processes for their production. 3,515,523, Cl. 29-182.5
- Gambini, Romain. Device for removing the burr from the ends of cylindrical parts. 3,515,029, Cl. 90-11.
- Gamson, Robert M.: See—
Kramer, David N., and Gamson, Robert M. 3,515,644.
- Ganz Villamosagi Muvek: See—
Kovacs, Janos, 3,515,916.
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- Gardner, Newell J., and Lastinger, William R. Fire safety system. 3,515,218, Cl. 169-2.
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- Gary, Leo A. Conveyor system having computer for finding the centers of objects being conveyed. 3,515,254, Cl. 198-21.
- Gas Council, The: See—
Cockerham, Robert George, and Yarwood, Thomas Alan, 3,515,527.
- Hoggarth, Malcolm Leslie, 3,514,868.
- Ward, Edward J., and Hall, Peter R., 3,515,206.
- Gascoigne, Denis, and Warne, Eugene Harold, to Lucas, Joseph, (Industries) Limited. Fuel systems for gas turbine engines. 3,514,944, Cl. 60-39.09
- Gaved, Roy Alfred: See—
Dawkins, John Campbell Francis, Gaved, Roy Alfred, and Greig, Alan 3,514,826.
- Gay, Charles D., to Automatic Electric Laboratories, Inc. Marking circuit for a relay crosspoint network. 3,515,811, Cl. 179-18.
- Gebrüder Boehringer Gesellschaft mit Beschränkter Haftung: See—
Bliederhauser, Heinz, 3,514,978.
- Gedemer, Fred J.: See—
Reynolds, George E., Gedemer, Fred J., and Ainsworth, Howard K. 3,515,637.
- Gehrmann, Klaus: See—
Sennwald, Kurt, Bender, Ludwig, Gehrmann, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.
- Geigy Chemical Corporation: See—
Schindler, Walter, and Dietrich, Henri, 3,515,785.
- Gejo, Tetuo, Manabe, Tosikatu, Hamura, Yasuzi, and Uchimura, Kotaro, to Hitachi, Ltd. Plasma torch. 3,515,839, Cl. 219-75.
- Geller, William, to General Telephone & Electronics Laboratories Incorporated. Bilateral analog switch. 3,515,906, Cl. 307-255.
- General Dynamics Corporation: See—
Bouyoucos, John V., 3,516,052.
Dobson, Harold R., 3,514,995.
Hotine, William, 3,514,847.
- General Electric Company: See—
Avery, Howard W., 3,514,882.
Boothe, Willis Anson, 3,515,030.
Brown, Edgar D., Jr., 3,515,670.
Craig, Robert S., 3,515,734.
Dodge, Gerald F., III, and True, Howard D. F., Jr., 3,514,964.
Evans, Robert C., 3,514,957.
Geyer, Howard M., 3,515,033.
Goodridge, Lawrence C., 3,516,049.
Hobson, Charles F., Jr., 3,515,940.
Houtman, Jack A., 3,515,919.
Hurtle, Ralph L., and Willard, Henry G., 3,515,829.
Hurtle, Ralph L., and Willard, Henry G., 3,516,090.
- Jackson, Dale H., 3,515,959.
- Johnson, Robert H., 3,515,011.
- Joslyn, John A., and Lubitz, William J., 3,515,971.
- Kelling, Leroy U. C., 3,514,869.
- Kershaw, Delmar D., 3,515,928.
- Mason, Lowell M., 3,514,836.
- Nuccio, Joseph F., 3,515,608.
- Otto, Charles W., 3,515,918.
- Parker, Frederick A., 3,515,133.
- Paulson, Elmer E., and Judge, Daniel M., 3,514,955.
- Sanford, Robert A., 3,515,595.
- Schmid, Hermann, 3,515,859.
- Schmidt, Ferenc J., 3,515,662.
- Smith, Dallas F., 3,514,837.
- Stetson, Earl W., 3,515,947.
- Thomasson, Gene I., and Parillo, Edward V., 3,515,420.
- Vodicka, Vincent, 3,514,825.
- Wagner, Donald M., 3,516,042.
- Walsh, LaVerne E., and Keimer, Gerald W., 3,515,930.
- Weischel, Richard C., and Book, Philip S., 3,515,879.
- Weiser, Earnest F., 3,515,970.
- Wetter, Charles R., 3,515,936.
- Yu, Se Puan, Shaver, Paul J., and Tantraporn, Wirojana, 3,516,018.
- General Foods Corporation: See—
Feldman, Jacob R., Klose, Robert Edward, and MacAllister, Robert V., 3,515,591.
- General Motors Corporation: See—
Weinand, Louis H., 3,515,395.
- General Signal Corporation: See—
Pickert, Lynn I., 3,515,416.
- General Telephone & Electronics Laboratories Incorporated: See—
Geller, William, 3,515,906.
- General Time Corporation: See—
Keane, Raymond A., Jr., and Adams, James N., 3,514,940.
- Gerber, Curtis E. Camper. 3,515,426, Cl. 296-23.
- Gerlach, Klaus: See—
Sommer, Erwin, Boehme, Klaus, and Gerlach, Klaus 3,515,634.
- Gerole International Inc.: See—
Preradovich, Radovan H., 3,514,911.
- Gesellschaft für Entwicklung und Apparatebau Rickhey, Dipl.-Ing., George J., & Co., K.G.: See—
Rickhey, George J., 3,515,925.
- Gestetner Limited: See—
Styles, Leonard Walter, 3,515,062.
- Gettig, William. Edge connector for printed circuit board. 3,516,046, Cl. 339-176.
- Geyer, Howard M., to General Electric Company. Actuators. 3,515,033, Cl. 92-33.
- Ghielmetti, Giuseppe, and Trinchera, Carlo, to SPA-Societe Prodotti Antibiotici S.p.A. Process for the production of lysozyme. 3,515,643, Cl. 195-66.
- Giacobbe, Charles J. Vehicle tire mount. 3,515,436, Cl. 301-38.
- Giardina, Jacob A., to Cane Machinery & Engineering Company. Cane cutting level control device. 3,514,927, Cl. 56-16.
- Gibson, Roger E.: See—
Wood, Edwin Lee, and Gibson, Roger E. 3,515,565.
- Gichner Mobile Systems, Inc.: See—
Conner, James Leon, 3,515,410.
- Gies, Robert M., to Shell Oil Company. Consolidating earth formations with saturated-silica solution. 3,515,216, Cl. 166-288.
- Gilbert, Dale H. Automobile luggage rack. 3,515,323, Cl. 224-42.08
- Gilbert, Eric Davenport, to Marconi Company Limited, The. Steerable aerial installations. 3,515,015, Cl. 74-802.
- Gilford Instruments Laboratories, Inc.: See—
Emery, Robert J., 3,515,491.
- Gill, Kenneth R.: See—
Herbert, Douglas, and Gill, Kenneth R. 3,514,908.
- Gilland, Jerry R.: See—
Ried, Louis, Jr., and Gilland, Jerry R. 3,515,878.
- Gillette Company, The: See—
Behrens, Henry, 3,515,885.
- Gilman, Richard F.: See—
Johnson, Allan M., and Gilman, Richard F. 3,515,664.
- Glanzstoff AG: See—
Sommer, Erwin, Boehme, Klaus, and Gerlach, Klaus, 3,515,634.
- Glaser, Hellmut I.: See—
Woodward, Robert M., and Glaser, Hellmut I. 3,514,841.
- Globe Universal Sciences, Inc.: See—
Dano, Paul K., 3,516,085.
- Glowacki, Matthew P. Slide assembly for extendable tables. 3,515,077, Cl. 108-89.
- Gobble, Lawrence T.: See—
Studebaker, James B., Zagar, Irvin F., and Gobble, Lawrence T. 3,515,497.
- Godfrey, John J.: See—
Morgan, Charles R., and Godfrey, John J. 3,515,742.
- Golay, Marcel J. E., to Perkin-Elmer Corporation, The. Magnetic field control apparatus. 3,515,979, Cl. 324-0.5
- Goldblatt, Leo A., and Robertson, James A., Jr., to United States of America, Agriculture. Process for removing aflatoxin from peanuts. 3,515,736, Cl. 260-412.2
- Goldman, Martin, and Staudenmayer, William J., to Eastman Kodak Company. Processing of erasing from a thermographic element. 3,515,568, Cl. 117-2.

- Goldschmidt, Robert E., Litwiller, Robert J., and Powers, Don M., to International Business Machines Corporation. Apparatus for accumulating the sum of a plurality of operands. 3,515,344, Cl. 235-175.
- Goldsmith, Fred C., to Lubrizol Corporation. The Continuous process for reacting turpentine and alkyl phenols with phosphorus pentasulfide. 3,515,712, Cl. 260-139.
- Goldsmith, Harry, and Crawford, Robert F., to United States Borax & Chemical Corporation. Trifluoromethyl benzimidazoles. 3,515,866, Cl. 260-309.2
- Goodrich, B. F., Company, The: See—
Floria, James David, 3,515,196.
Hallman, Allan D., 3,515,443.
Japs, Archie B., and Murphy, Walter T., 3,515,573.
Siddles, James, 3,515,618.
- Goodridge, Lawrence C., to General Electric Company. Multiple electrical terminal connector for panelboards and/or load centers. 3,516,049, Cl. 339-242.
- Goodyear Tire & Rubber Company, The: See—
Hoverman, William, Jr., 3,514,916.
- Goorhuis, Hendrik, and Urosevic-Jovanovic, to Durand & Hoguein A.G. Method for continuous dyeing of textile materials made from linear, aromatic polyesters. 3,515,504, Cl. 8-46.
- Gordon, George Andrew Douglas. Electric circuit arrangements providing earth leakage protection. 3,515,942, Cl. 317-18.
- Gordon, Irving, to Hooker Chemical Corporation. Mixed esters of phosphonic acid and preparation. 3,515,776, Cl. 260-927.
- Goss, Jonathan, and Westlund, Dennis E., to Sperry Rand Corporation. Data and control character discrimination scheme for digital computer system. 3,516,073, Cl. 340-172.5
- Goto, Eizo, to Tokyo Shibaura Electric Co., Ltd. Process for sealing metal body to glass body. 3,515,530, Cl. 65-43.
- Gott, Hans, Ritter, Josef, Ritter, Gert, and Ritter, Klaus, to EVG Entwicklungs und Verwertungsgesellschaft m.b.H. Mesh welding machine. 3,515,177, Cl. 140-112.
- Gotze, Gotthold: See—
Wehr, Georg, and Gotze, Gotthold, 3,515,185.
- Gould, Francis E.: See—
Shepherd, Thomas H., and Gould, Francis E., 3,515,579.
- Grabner, Ruth, to Industrial Trading Company. Wiper construction for use in conjunction with slides in machines. 3,515,444, Cl. 308-3.5
- Grace, W. R., & Co.: See—
Arnold, Roger F., 3,515,575.
Eastes, Frank E., 3,515,580.
Marans, Nelson S., 3,515,747.
Morgan, Charles R., and Godfrey, John J., 3,515,742.
Wood, Louis L., 3,515,693.
Wood, Louis L., 3,515,694.
- Grady, Maurice J. Vehicle seat for children. 3,515,431, Cl. 297-250.
- Grambal, Jirich, to Zavody Jana Svermy, narodni podnik. Sintered carbide compound. 3,515,524, Cl. 29-182.7
- Gray, Forest D., to Tenneco Oil Company. Apparatus for supplying water to a steam generator. 3,515,209, Cl. 166-62.
- Great Canadian Oil Sands Limited: See—
Shawhan, Elbert N., 3,515,988.
- Green, Derek Bernard, to Scovill Manufacturing Company. Actuator for aerosol valves. 3,515,316, Cl. 222-207.
- Green, William Hickman: See—
Hill, William Charles, Green, William Hickman, and Hunt, Herbert James, 3,514,819.
- Greene, George Boyd, to Electronic Engineering Company. Pressure wave generator. 3,515,093, Cl. 116-137.
- Greenewald, Herbert, Jr., to North American Rockwell Corporation. Aluminum alloy solidification. 3,515,546, Cl. 75-138.
- Greenspan, Lewis, and Wexler, Arnold, to United States of America, Commerce. Instrument for measuring the adiabatic saturation temperature (thermodynamic wet-bulb temperature) of a vapor-gas mixture. 3,515,001, Cl. 73-338.6
- Greig, Alan: See—
Dawkins, John Campbell Francis, Gaved, Roy Alfred, and Greig, Alan, 3,514,826.
- Grey, Donald M., Butler, Lee D., and Welker, Jerry W., to Sperry Rand Corporation. Bale wagon having single bale unloading means. 3,515,291, Cl. 214-6.
- Griffiths, Thomas M. Mowers. 3,514,930, Cl. 56-25.4
- Grobe, Wolfgang, to International Standard Electric Corporation. Switching grid matrix with crosspoint elements, controlled by marking pulses being very short compared to their responding period. 3,516,064, Cl. 340-166.
- Groos, Horst-Hans, to Schloemann Aktiengesellschaft. Horizontal hydraulic extrusion presses, including tube presses. 3,514,987, Cl. 72-265.
- Gross, Alton W. Method of making a self-locking screw. 3,515,602, Cl. 148-154.
- Gross, Eschcol S. Stair climbing dolly. 3,515,401, Cl. 280-5.26
- Groszek, Aleksander Jerzy, to British Petroleum Company Limited. The Graphite and heavy metal sulphides. 3,515,668, Cl. 252-12.
- Grover, Blanchard H., to Holly Hydraulics, Inc. Berry harvester. 3,514,936, Cl. 56-330.
- Grunberg, Emanuel, to Hoffmann-La Roche Inc. Antibacterial composition containing 5-methyl-3-sulfanilamidoisoxazole and trimethoxybenzyl pyrimidine. 3,515,783, Cl. 424-229.
- Gruska, Ralph, to Ejectoret S.A. Holder for stick of pasty material. 3,515,493, Cl. 401-74.
- GTL Corporation: See—
Dix, Sydney, 3,515,840.
- Guier, William. Transporter for manual slips. 3,514,822, Cl. 24-263.
- Guillemin, Germain Joseph Edmond, to Compagnie des Competeurs. Magnetometer incorporating probe in the form of a saturable ferromagnetic core subjected to the magnetic field to be measured and to an auxiliary exciting alternating field. 3,515,985, Cl. 324-43.
- Guinot, Gabriel L., to Societe Anonyme Poclair. Turret earthworking machine. 3,515,298, Cl. 214-138.
- Gunderson, Arnold J. Modular hopscotch court. 3,515,385, Cl. 273-1.
- Gurchot, Charles. Method of obtaining exocrine secretions from live animals. 3,515,124, Cl. 128-1.
- Guthrie, Clifton W., Sr. Carton construction. 3,515,331, Cl. 229-14.
- Guthrie Machinery Company: See—
Raimer, Charles H., 3,514,801.
- Gutshall, Charles Edward, to Illinois Tool Works Inc. Lightning ar-restor assembly. 3,515,948, Cl. 317-61.
- Guzewicz, Edmund A., to Chandler Evans Inc. Rocket nozzle. 3,515,352, Cl. 239-265.15
- Gwathmey, Edward S., Davidson, James N., and Ziegler, John M., to Teledyne, Inc. Airstream direction detector. 3,514,997, Cl. 73-180.
- Habscheid, Peter, and Robra, Helmut, to Schloemann Aktiengesellschaft. Cooling means for extruded material. 3,514,986, Cl. 72-253.
- Hackenberg, Walter, and Siegel, Herbert, to International Standard Electric Corporation. Call forwarding system. 3,515,812, Cl. 179-18.
- Hadjidakis, Achilles, to Mineral Technological Institut. apparatus for adjusting the suction slot in a drag suction dredger. 3,514,881, Cl. 37-58.
- Hadwin, James Frederick, to Union Carbide Corporation. Air-cooled laser system. 3,516,011, Cl. 331-94.5
- Haffner, Mark P., and Spies, George R., to Air Reduction Company, Incorporated. Gas mixture proportioner. 3,515,155, Cl. 137-7.
- Hagen, Donald H. Transmission system. 3,515,014, Cl. 74-665.
- Hahn, Charles E., Jr. Water storage and pressure maintainer for well pumps. 3,515,172, Cl. 137-798.
- Hahn, Johann, to Zeiss Ikon Aktiengesellschaft. Photographic camera with flash exposure range. 3,515,047, Cl. 95-11.
- Haight, Robert Eugene, and Sullivan, Thomas Milo, to Deere & Company. Final drive lubricating device. 3,515,246, Cl. 184-11.
- Hale, George H.: See—
Mecklin, Charles D., Francis, James M., and Hale, George H., 3,515,349.
- 5 Half spaing escapement: See—
Morikawa, Yonekichi, Takano, Kunro, and 5 Half spaing escapement 3,515,188.
- Hall, Peter R.: See—
Ward, Edward J., and Hall, Peter R., 3,515,206.
- Hallaman, Allan D., to Goodrich, B. F., Company, The. Traction belt. 3,515,443, Cl. 305-38.
- Halliburton Company: See—
Perkins, Lee E., 3,515,210.
- Halling, Horst: See—
Patzelt, Rupert, and Halling, Horst, 3,515,872.
- Hallman, Newt, and Ward, Dennis J., to Universal Oil Products Company. Catalytic conversion process. 3,515,764, Cl. 260-669.
- Halstead, Alberta M.: See—
Halstead, Arthur M., and Nimyłowicz, Osyp, 3,515,518.
- Halstead, Arthur M., deceased (by Halstead, Alberta M., administratrix), and Nimyłowicz, Osyp, to United States of America, Army. Coolant for propellant actuated gas generator. 3,515,518, Cl. 23-281.
- Hambleton, Warner V., and Unthank, Dean P., to Vogt, Henry, Machine Company, Inc. Welded header and tube assembly for steam generators. 3,515,101, Cl. 122-365.
- Hamilton, John S., Jr., to Boiler Equipment and Controls, Inc. Desuperheater control system. 3,515,102, Cl. 122-479.
- Hamlett, Sidney J., to White Consolidated Industries, Inc. Shuttle race cover. 3,515,082, Cl. 112-158.
- Hamrick, Joseph T. High temperature explosive system containing trinitromeritylene. 3,515,604, Cl. 149-107.
- Hamura, Yasuzi: See—
Gejo, Tetuo, Manabe, Tosikatu, Hamura, Yasuzi, and Uchimura, Kotaro, 3,515,839.
- Hannah, William James: See—
Robertson, James Strang Terrace, and Hannah, William James, 3,515,303.
- Hannes Marker: See—
Weiss, Siegfried, 3,515,402.
- Harbage, Alfred B., Jr., to United States of America, Navy. Soft rubber squeeze film bearing. 3,515,449, Cl. 308-238.
- Harmen, Lothar: See—
Bick, Klaus, Weinreich, Wolfgang, and Harmsen, Lothar, 3,515,202.
- Harrington Manufacturing Company: See—
Danford, Tiras J., Abbott, Phillip E., and Mitchell, John D., 3,515,234.
- Harris, John Derek: See—
Barnes, Stanley Charles, Harris, John Derek, and Owen, Kenneth Stanley, 3,515,597.
- Harrison, Stanley: See—
Martin, Frederick W., and Harrison, Stanley, 3,515,956.
- Hart, Donald P.: See—
Brane, Ralph M., and Hart, Donald P., 3,515,689.
- Hartig, Martval J.: See—
Fields, Reuben T., and Hartig, Martval J., 3,515,778.

- Hartlieb, Otto: See—
Muncke, Ludwig, Buchmuller, Josef, and Hartlieb, Otto, 3,515,412.
- Hartwell Corporation: See—
Poe, Lloyd Richard, and Brockway, James E., 3,515,421.
Poe, Lloyd Richard, 3,515,422.
- Harvey, Paul, Ltd., Inc.: See—
Harvey, William Paul, 3,514,790.
- Harvey, William Paul, to Harvey, Paul, Ltd., Inc. Simulated pocket handkerchief. 3,514,790, Cl. 2-279.
- Har-Wil Corporation: See—
Heier, William, 3,515,312.
- Harza, Richard D. Freezing apparatus for garbage disposal. 3,514,969, Cl. 62-341.
- Hasegawa, Akemi: See—
Okada, Yoichi, Watanabe, Tsutomu, and Hasegawa, Akemi, 3,515,615.
- Hatcher, Arthur L., Jr., and Naylor, Arthur G., to Western Electric Company, Incorporated. Methods and apparatus for measuring the area of an article. 3,515,487, Cl. 356-157.
- Hattori, Naohiko: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi, 3,516,074.
- Haugwitz, Rudiger D., to Olin Mathieson Chemical Corporation. 2,2'-Bis(pyridyl-N-oxide) dithiolcarbonates and trithiocarbonates. 3,515,726, Cl. 260-294.8
- Hawtin, Laurence Reginald: See—
Barber, Anthony Clifford, Hawtin, Laurence Reginald, and Lowe, Bryan Wilfred Hodson, 3,514,850.
- Hayden, Percy: See—
Clark, Duncan, Hayden, Percy, and Charlton, John, 3,515,758.
- Hayes, John A., and Preisendanz, Edward S., to Du Pont de Nemours, E. I., and Company. Safety-valve for a pressure vessel. 3,515,308, Cl. 220-89.
- Hayes, John C., to Universal Oil Products Company. Continuous low pressure catalytic reforming process with water and ammonia exclusion and programmed sulfur addition. 3,515,665, Cl. 208-138.
- Hayes, John C., and Mitsche, Roy T., to Universal Oil Products Company. Manufacture of chromia alumina catalysts. 3,515,685, Cl. 252-465.
- Hayner, Paul F., and Eldridge, David George, to Sanders Associates, Inc. Fluid temperature sensitive valve. 3,515,346, Cl. 236-34.5
- Heberlein & Co. A.G.: See—
Kraessig, Hans, and Bellvita, Ricardo, 3,515,505.
- Heflinger, Lee O., Brooks, Robert E., and Wuerker, Ralph F., to TRW Inc. Arrangement of beam matching holography. 3,515,453, Cl. 350-3.5
- Heidecker, Stephen C., Taft, David D., and Wallman, Walter A., to Ashland Oil & Refining Company. Electrophotographic composition comprising zinc oxide and a metallic naphthenate. 3,515,550, Cl. 96-1.8
- Heidrich, Paul F.: See—
Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., and Smoyer, Claude B., 3,515,877.
- Heier, William, 50% to Automatic Retailers of America, Inc., and 50% to Har-Wil Corporation, mesne. Liquid dispenser. 3,515,312, Cl. 222-146.
- Hein, Henry F., and Patterson, Roger W., to Eastman Kodak Company. Photographic projection printing apparatus. 3,515,477, Cl. 355-42.
- Heinz, Alfred, to Western Electric Company, Incorporated. Temperature controllable strand annealer. 3,515,848, Cl. 219-155.
- Helbig, Jim D. Equipment for loading, transporting and unloading passengers. 3,515,074, Cl. 104-28.
- Helgemier, Heinrich. Super-elevation and gradient measuring devices for track. 3,514,862, Cl. 33-60.
- Hellerbach, Joseph, to Hoffmann-La Roche Inc. 2,3a-Diazahydrindanone and 3H-pyrido-[1,2-c] pyrimidin-3-one derivatives. 3,515,725, Cl. 260-251.
- Helman, Earl E. Stem for smoking pipe. 3,515,150, Cl. 131-207.
- Helms, John D.: See—
Niemeyer, James M., and Helms, John D., 3,515,842.
- Henry, David W., and Hoff, Dale R., to Merck & Co., Inc. Semicarbazone and thiosemicarbazone derivatives of 5-nitroimidazoles. 3,515,728, Cl. 260-309.
- Henson, William P., to Mobile Drilling Company, Inc. Drilling apparatus. 3,515,228, Cl. 173-43.
- Henson, William P., and Woods, Ross S., to Mobile Drilling Company, Inc. Safety switch. 3,515,824, Cl. 200-52.
- Hepfer, Ivan C. Pre-plating conditioning process. 3,515,649, Cl. 204-38.
- Her Majesty Industries, Inc.: See—
Ramsey, Willard A., 3,515,080.
- Herbert, Douglas, and Gill, Kenneth R., to Bausch & Lomb Incorporated. Process for finishing contact lenses. 3,514,908, Cl. 51-284.
- Herbsthofer, Franz J., to Massey-Ferguson G.m.b.H. Threshing concave. 3,515,145, Cl. 130-27.
- Hercules, David M., and Lytle, Fred E., to United States of America, Atomic Energy Commission. Process for producing chemiluminescence by reduction of the 1,6-diaminopyrene radical cation. 3,515,674, Cl. 252-188.3
- Hercules Incorporated: See—
Mauz, Otto, Reindl, Eugen, and Vetter, Hans Joachim, 3,515,698.
- Herkenberg, Wolfgang, to Thiokol Chemical Corporation, mesne. Apparatus for treating thermoplastic fabric during weaving. 3,515,174, Cl. 139-291.
- Herman, Ralph Bertrand, and Renwick, William, to Plessey Company Limited, The. Quadrature modulators. 3,516,023, Cl. 332-48.
- Herter, Eberhard, to International Standard Electric Corporation. Supervisory circuit arrangements. 3,515,809, Cl. 179-18.
- Hervet, George L., to Universal Oil Products Company. Reactor with internal protective sleeve for corrosive systems. 3,515,520, Cl. 23-290.
- Hess, Walther, to Eltro G.m.b.H. & Co. Device for protecting the human eye against laser radiation. 3,515,882, Cl. 250-213.
- Heth, Sherman C., and Kaufman, Vernon R., to Jacobsen Manufacturing Company. Leveler for a reel-type lawn mower. 3,514,926, Cl. 56-7.
- Hetzl, George F.: See—
Clark, Clarence C., and Hetzel, George F., 3,515,415.
- Hewlett-Packard Company: See—
Bodway, George E., 3,515,663.
- Hiatt, Gregg C.: See—
Campano, Frank J., Hiatt, Gregg C., and McGovern, William, 3,516,070.
- Hick, Michael Alfred Sampson: See—
Longworth, David Phillip, Hick, Michael Alfred Sampson, and Lugton, William Townsley, 3,515,982.
- Hickey, John F. Modular knock-down cabinet. 3,515,451, Cl. 312-263.
- Hickok, William Kelsey, to Sylvania Electric Products, Inc. Chrominance circuitry for television receivers. 3,515,801, Cl. 178-5.4
- Hicks, Leon E.: See—
Dezelan, Joseph E., Hicks, Leon E., and Johnson, Howard L., 3,515,032.
- Hidassy, Laszlo, to Thomas & Betts Corporation. Automatic bundling strap installing tool. 3,515,178, Cl. 140-123.6
- Hierta, Lars J., and Mannhardt, Werner G., to Eaton Yale & Towne, Inc. Oil fog generating device. 3,515,676, Cl. 252-359.
- Higgins, Edward M., Rosenbaum, Harold D., and DeVore, Waldo D., to University of Kentucky Research Foundation. Method and apparatus for analyzing and calibrating radiation beams of X-ray generators. 3,515,873, Cl. 250-83.3
- High Voltage Engineering Corporation: See—
Enge, Harald A., 3,516,037.
- Trump, John G., 3,515,939.
- Hilaire, Jean-Claude: See—
Louis Audran, Roger Gaston, Hilaire, Jean-Claude, Louis Bourdon, Jean Alexandre, and Pierre Lestienne, Andre Francois, 3,515,551.
- Hill, Fredrick L., and Sindel, Loyd Curtis, to Blackwelder Manufacturing Company. Bale transfer mechanism. 3,515,290, Cl. 214-6.
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- Hipotronich, Inc.: See—
Peschel, Stanley G., 3,515,986.
- Hirose, Akira: See—
Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio, 3,515,538.
- Hirst, Donald, and Carhart, John L., to Acme Staple Company, Inc. Threaded staple. 3,515,194, Cl. 151-41.72
- Hirvela, Robert J.: See—
Bray, William E., Hirvela, Robert J., and Kaliher, Dennis E., 3,516,069.
- Hisada, Seizo: See—
Mima, Hiroyuki, and Hisada, Seizo, 3,515,642.
- Hisamoto, Hironori, Nishimura, Muneco, and Machida, Kanji, to Matsushita Electric Industrial Co., Ltd. Convergence device. 3,516,038, Cl. 335-212.
- Hitachi, Ltd.: See—
Gejo, Tetuo, Manabe, Tosikatu, Hamura, Yasuzi, and Uchimura, Kotaro, 3,515,839.
- Kaneko, Yoichi, Sawada, Ryoka, Iida, Shinya, and Kawaguchi, Kazuo, 3,516,017.
- Maruyama, Eiichi, and Uchino, Ikue, 3,515,954.
- Migita, Masatoshi, 3,516,016.

- Hivert, Andre: See—
Galmiche, Philippe, Hivert, Andre, and Marty, Michel 3,515,523.
- Hobart Brothers Company: See—
Wildenthaler, Leo E., 3,515,845.
- Hobson, Charles F., Jr., to General Electric Company. Parallel-assisted circuit interrupting device. 3,515,940, Cl. 317-11.
- Hochstein, Roland: See—
Becker, Dietrich, Hochstein, Roland, and Lieckfeldt, Hans 3,515,044.
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- Hochstrasser, Josef, and Wolff, Justus. Process and apparatus for treating elongated deformable articles. 3,515,138, Cl. 128-270.
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Williams, Malcolm, and Hodgson, Duncan Barry 3,515,978.
- Hodoley, Svetlana, and McCormack, John F., to Photocircuits Corporation. Autocatalytic metal plating solutions. 3,515,563, Cl. 106-1.
- Hoehn, Hans: See—
Breuer, Hermann, Hoehn, Hans, and Roesch, Egon 3,515,787.
- Hoff, Dale R.: See—
Henry, David W., and Hoff, Dale R. 3,515,728.
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- Hoffmann-La Roche Inc.: See—
Edenhofer, Albrecht, Ramuz, Henri, and Spiegelberg, Hans 3,515,788.
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- Grunberg, Emanuel, 3,515,783.
- Hellerbach, Joseph, 3,515,725.
- Sternbach, Leo Henryk, and Sternbach, Leo Henryk 3,515,756.
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- Hogg, Alex. Freeze branding device. 3,515,096, Cl. 119-1.
- Hoggarth, Malcolm Leslie, to Gas Council, The. Apparatus for the distribution of gas in a vessel. 3,514,868, Cl. 34-57.
- Holleman, Jan C.: See—
McManus, Thomas, and Holleman, Jan C. 3,514,866.
- Hollenbach, Edwin A., to Philadelphia National Bank, The, mesne. Fork lift truck with a mast pivotal about a vertical axis. 3,515,300, Cl. 214-671.
- Holley Carburetor Company: See—
Soeters, Raymond A., 3,515,105.
- Holly Hydraulics, Inc.: See—
Grover, Blanchard H., 3,514,936.
- Holmes, John F., to Sanders Associates, Inc. Conversion of mat jack-up drill platforms to floating drill platforms. 3,515,084, Cl. 114-0.5.
- Holmes, Peter Desmond, and Thornhill, Alan Richard. Production of hydrogen containing gases. 3,515,514, Cl. 23-212.
- Holten, Herbert A.: See—
Wolfe, Walter W., Holten, Herbert A., Messner, Jack D., and Olson, Ivan E. 3,515,258.
- Holthaus, Richard L., to Dow Chemical Company, The. Method of obtaining a convenient opening device. 3,515,777, Cl. 264-27.
- Honeywell Inc.: See—
Allen, Rufus, Jr., 3,515,961.
- Amdur, Elias J., 3,515,658.
- Kent, Holger C., 3,515,161.
- Taylor, Daniel G., 3,515,003.
- Hood, William C.: See—
Bruch, Forrest B., and Hood, William C. 3,514,831.
- Hooker Chemical Corporation: See—
Gordon, Irving, 3,515,776.
- Jones, William N., and Ellis, Jefferson W., 3,515,600.
- McVey, Harold J., 3,515,094.
- Weil, Edward D., Dorfman, Edwin, and Linder, Jerome, 3,515,537.
- Hopkins Manufacturing Corporation: See—
Irwin, Lee K., 3,515,483.
- Horizons Incorporated: See—
Rose, Selwyn H., 3,515,688.
- Horowitz, Alexandre, and Beusink, Bernard Joseph, to U.S. Philips Corporation, mesne. Adjusting device for oscillating cutter mechanism. 3,514,932, Cl. 56-293.
- Horowitz, Alexandre, and Beusink, Bernard Joseph, to U.S. Philips Corporation, mesne. Reciprocating cutter mechanism. 3,514,933, Cl. 56-293.
- Horsfall, Robert B., Farrand, William A., and Williams, Warner D., to North American Rockwell Corporation. Fluid bearing pads for supporting transducers. 3,516,081, Cl. 340-174.1.
- Horton, Robert R., to St. Croix Research Company, mesne. Method for determining female hormone deficiency. 3,515,516, Cl. 23-230.
- Horvath, Bert: See—
Gaeth, Rudolf H., and Horvath, Bert 3,515,679.
- Hotine, William, to General Dynamics Corporation. Process for making photoconductive matrices. 3,514,847, Cl. 29-572.
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- Houdaille Industries, Inc.: See—
King, John L., Jr., 3,515,249.
- Obergefell, Ronald F., and Ahinok, Robert A., 3,515,245.
- House, Lloyd D. Toy gun for discharging elastic bands. 3,515,387, Cl. 273-101.
- House of Coins, Inc.: See—
Zukor, Lee J., 3,515,475.
- Houser, James A., to Standco Industries, Inc. Method and apparatus for handling, preparing and feeding rods for a thread forming machine. 3,514,799, Cl. 10-162.
- Houser, Robert W., to GAF Corporation. Film examining apparatus for detecting flaws in a continuously moving film web in which a delay circuit is used to permit deriving both the blanking signal and the inspection signal from a single light source. 3,515,488, Cl. 356-200.
- Houtman, Jack A., to General Electric Company. Stator assembly for single phase induction motor. 3,515,919, Cl. 310-166.
- Hoverman, William, Jr., to Goodyear Tire & Rubber Company, The. Sealing strip. 3,514,916, Cl. 52-400.
- Howard Displays, Inc.: See—
Howard, Fred, 3,514,875.
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- Howard, John Arthur, to Rotary Hoes Limited. Method of, and means for reducing the tractive effort on an agricultural tool. 3,514,960, Cl. 61-72.6.
- Howard, Robert, and Wang, An, to Centronics Data Computer Corporation, mesne. Cash flow computer. 3,516,068, Cl. 340-172.5.
- Howell, Edward K. General Electric Company Synchronous switching circuit. 3,515,902, Cl. 307-252.
- Howell, John D.: See—
Krasienko, Stanley L., and Howell, John D. 3,515,951.
- Huang, Ching Yun, Sato, Katsuo, and Ikegami, Masuya, to Japan Gas-Chemical Company, Inc. Photopolymerization process for hydroxy alkyl acrylates. 3,515,656, Cl. 204-159.22.
- Hubbard, Arthur Lowell: See—
Copley, Russell Dean, and Hubbard, Arthur Lowell 3,515,437.
- Huchital, David A., to Perkin-Elmer Corporation, The. Argon laser. 3,516,012, Cl. 331-94.5.
- Huck Manufacturing Company: See—
Baugh, Charles W., 3,515,419.
- Patton, John P. G., 3,515,028.
- Hudson, William W., to Western Electric Company, Incorporated. Methods of and apparatus for forming leads of articles. 3,515,175, Cl. 140-1.
- Hughes Aircraft Company: See—
Alexander, William F., 3,515,360.
- Bower, Robert W., and Shiffrin, Gordon A., 3,514,844.
- Cernik, George, 3,514,843.
- Hillis, Donuil A., 3,516,002.
- King, Harry J., 3,515,932.
- Morse, James H., 3,515,938.
- Peifer, Albert G., and Starr, Matthew C., 3,515,464.
- Rueffer, Harold F., and Belardi, Richard J., 3,514,848.
- Hulliger, Fritz, to American Cyanamid Company. Synthesis of single crystals of $ZrSiO_4$ and $HfSiO_4$ by a halogen transport reaction. 3,515,508, Cl. 23-21.
- Hunnell Soap Company, The: See—
Bacon, Oliver M., 3,515,666.
- Hunt, Herbert James: See—
Hill, William Charles, Green, William Hickman, and Hunt, Herbert James 3,514,819.
- Hunt, Thomas, to British Resin Products Limited. Copolymer salts for water dilutable surface coating compositions. 3,515,690, Cl. 260-22.
- Huret, Jerome, Chevalier, Michel, and Rocherolles, Raymond, to Compagnie Generale d'Electricite. Switchgear structure for high D.C. voltages. 3,515,976, Cl. 321-8.
- Hurst, James E., to Eastman Kodak Company. Centrifugal switching means for D.C. motor speed control. 3,515,972, Cl. 318-325.
- Hurtle, Ralph L., and Willard, Henry G., to General Electric Company. Current-limiting circuit breaker with novel arc initiating and extinguishing means. 3,515,829, Cl. 200-144.
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- Husted, Donald R.: See—
Brown, Harvey A., Erickson, John G., Husted, Donald R., and Wright, Charles D. 3,515,603.
- Hutton, William C., and Reibold, Robert C., to McDonnell Douglas Corporation, mesne. Analog comparator. 3,516,060, Cl. 340-149.
- Ichihara, Wachio: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki 3,515,567.
- Ichikawa, Yoshimitsu: See—
Yokouchi, Rei, Ichikawa, Yoshimitsu, Izeki, Syotaro, and Fusayama, Takeo 3,515,700.
- Ideal Industries, Inc.: See—
Metcalfe, Irving R., 3,515,018.
- Iga, Atsushi: See—
Tawara, Yoshio, and Iga, Atsushi 3,515,817.
- Igarashi, Sumio: See—
Izumi, Hiroshi, Sengoku, Tomonori, Igarashi, Sumio, and Kamio, Kosaku 3,515,589.

- Iglewitz, Meyer. Inflatable tubeless tire seating device. 3,515,198, Cl. 157-1.21.
- Iida, Shinya: See—
Kaneko, Yoichi, Sawada, Ryoka, Iida, Shinya, and Kawaguchi, Kazuo 3,516,017.
- IIT Research Institute: See—
Cameron, Scott H., 3,516,067.
- Ikegami, Masuya: See—
Huang, Ching Yun, Sato, Katsuo, and Ikegami, Masuya 3,515,656.
- Illinois Tool Works Inc.: See—
Fisher, Julian V., 3,515,363.
- Gutshall, Charles Edward, 3,515,948.
- Imadate, Hiroshi, to Toa Electric Company. Detecting and counting apparatus for particles suspended in a liquid. 3,515,884, Cl. 250-218.
- Imoto, Shozo: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki 3,515,567.
- Imperial Chemical Industries Limited: See—
Anderson, John Ramsay, 3,515,532.
- Blasco, Josiah Alfred, 3,514,824.
- Clark, Duncan, Hayden, Percy, and Charlton, John, 3,515,758.
- Duffield, Alan, 3,515,626.
- Imperial Metal Industries (Kynoch) Limited: See—
Morton, Peter Harlow, and Clark, Peter Vincent McDonald, 3,515,543.
- Morton, Peter Harlow, and Clark, Peter Vincent McDonald, 3,515,544.
- Import Inspection Services: See—
Mylin, Gary C., 3,515,053.
- Improved Machinery Inc.: See—
Vore, Herbert G., and Bardsley, Donald E., 3,515,281.
- Inc.: See—
Taylor, Daniel G., 3,515,003.
- Industrial Instrumentations, Inc.: See—
Cooper, Irving Brooks, 3,516,089.
- Industrial Nucleonics Corporation: See—
Fitzgerald, Charles T., Jr., 3,515,860.
- Industrial Trading Company: See—
Grabner, Ruth, 3,515,444.
- Ingeniorsfirma Nils Weibull AB: See—
Westesson, Lawe Herbert, 3,515,282.
- Ingersoll-Rand Company: See—
Clapp, John M., 3,515,251.
- Wordsworth, Albert G., 3,515,399.
- Inoue, Masahiko, to Toyota Jidosha Kogyo Kabushiki Kaisha. Pushbutton separable fastener. 3,514,816, Cl. 24-77.
- Inoue, Morio, Kano, Gota, Matsuno, Jinichi, and Takayanagi, Shigetoshi, to Matsushita Electronics Corporation. Method for manufacturing semiconductor devices. 3,515,583, Cl. 117-200.
- Inoue, Seiichi: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi 3,516,074.
- Institut Francais du Pétrole des Carburants et Lubrifiants: See—
Cholet, Jacques, and Dubois, Jean Claude, 3,516,053.
- International Business Machines Corporation: See—
Adams, Robert L., Castaldo, Domenic R., and Kurtz, Gerald W., 3,515,998.
- Baker, Joseph C., and Thompson, Thomas W., 3,515,063.
- Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., and Smoyer, Claude B., 3,515,877.
- Bolt, Murray H., and Nick, Howard H., 3,516,065.
- Campano, Frank J., Hiatt, Gregg C., and McGovern, William, 3,516,070.
- Chamberlin, John B., and Noth, Richard W., 3,515,585.
- Culver, William H., 3,515,897.
- Curran, John E., and O'Donnell, John F., 3,516,026.
- Goldschmidt, Robert E., Litwiller, Robert J., and Powers, Don M., 3,515,344.
- Kohn, Gerhard, 3,516,021.
- Lazzarini, Donald J., Sabad, Joseph J., and Wiley, Robert T., 3,515,590.
- Matic, Richard E., and Mayfield, Jacob R., 3,516,078.
- Mix, Arthur L., Jr., 3,515,855.
- Pole, Robert V., 3,515,452.
- Pole, Robert V., 3,516,013.
- Pugh, Emerson W., 3,516,079.
- International Harvester Company: See—
Mecklin, Charles D., Francis, James M., and Hale, George H., 3,515,349.
- International Standard Electric Corporation: See—
Eklund, Gosta Ulf, and Johansson, Kurt Hjalmar, 3,515,819.
- Grobe, Wolfgang, 3,516,064.
- Hackenberg, Walter, and Siegel, Herbert, 3,515,812.
- Herter, Eberhard, 3,515,809.
- Niedergesass, Dieter, 3,515,808.
- Ralph, Frank, 3,514,852.
- Roos, Heinz, 3,516,071.
- International Telephone and Telegraph Corporation: See—
Bereznak, John, 3,515,820.
- Klein, Robert E., and Driver James E., Sr., 3,514,988.
- Marbury, Benjamin Rutledge, Keough, Timothy J., and Kalensky, Charles James, 3,515,992.
- Interspace Corporation: See—
Kowalewski, Casimir K., 3,515,414.
- Interstella AG: See—
Evers, Heinz, 3,514,812.
- Ion Physics Corporation: See—
Abers, Ilgonis, 3,515,369.
- Martin, Frederick W., and Harrison, Stanley, 3,515,956.
- Ionics, Incorporated: See—
Parsi, Edgardo J., 3,515,513.
- Ippolito, Aristide: See—
Ippolito, James, and Ippolito, Aristide 3,515,046.
- Ippolito, James, and Ippolito, Aristide. Protective instrumentation housing. 3,515,046, Cl. 95-11.
- Irwin, Howard D., to Du Pont de Nemours, E. I., and Company. Apparatus and process for impregnating porous articles. 3,515,577, Cl. 117-115.
- Irwin, Lee K., to Hopkins Manufacturing Corporation. Methods of aiming and determining misalignment of vehicle headlights. 3,515,483, Cl. 356-121.
- Isaksen, Robert A., Longley, Raymond L., Jr., and Williams, Charles R., to Monsanto Company. Textile-sizing processes. 3,515,581, Cl. 117-139.5.
- Ishihara, Yasushi: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Israel Ministry of Defence, State of the: See—
Raviv, Szmuel, Rabinovitz, Elsa, and Malkiely, Shimon, 3,515,655.
- Ital-Bed Costruzione Letti e Affini S.r.l.: See—
Pofferi, Giancarlo, 3,514,794.
- Itaya, Nobushige: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosioti, and Fujimoto, Keimei 3,515,730.
- I-T-E Imperial Corporation: See—
MacVaugh, Wayne H., 3,515,396.
- Itek Corporation: See—
Philbrick, Richard W., and Arazi, Efraim R., 3,515,881.
- Iwasaki, Cedric E.: See—
Douglas, Raymond J., Iwasaki, Cedric E., and Kossoff, Joseph 3,514,897.
- Izeki, Syotaro: See—
Yokouchi, Rei, Ichikawa, Yoshimitsu, Izeki, Syotaro, and Fusayama, Takeo 3,515,700.
- Izumi, Hiroshi, Sengoku, Tomonori, Igarashi, Sumio, and Kamio, Kosaku, to Nippon Carbide Kogyo Kabushiki Kaisha. Vinyl-coated electric wire. 3,515,589, Cl. 117-232.
- Jackson, Dale H., to General Electric Company. Plural motor proportional speed control using pulse responsive speed controls. 3,515,959, Cl. 318-7.
- Jackson, David: See—
Ashton, Thomas Richard, Cottle, Victor Claude Herbert, and Jackson, David 3,514,919.
- Jackson, William Wayne, and Essex, Duane Arnold, to Deere & Company. Rod weeder. 3,515,219, Cl. 172-44.
- Jackson, Winston J., Jr., and Caldwell, John R., to Eastman Kodak Company. Polyester resin melt adhesive laminate and method of making same. 3,515,628, Cl. 161-184.
- Jacob, Beatrice A. Feeding utensils for children. 3,514,887, Cl. 40-324.
- Jacobs, Alfred J., and Napier, Joseph T., to Baxter, J. H., & Co. Apparatus for deep incising poles. 3,515,184, Cl. 144-2.
- Jacobsen Manufacturing Company: See—
Heth, Sherman C., and Kaufman, Vernon R., 3,514,926.
- Jacobson, William P., to Anderson Bros. Mfg. Co. Package with tear strip. 3,515,334, Cl. 229-51.
- Jacoby, George V., to RCA Corporation. Readback circuit for information storage systems. 3,516,066, Cl. 340-174.1.
- Jaecke, William A. Space saver cabinet. 3,515,450, Cl. 312-245.
- Jahnke, Heinz K.: See—
Cha, Dae Yang, and Jahnke, Heinz K. 3,515,717.
- James, Loyal W.: See—
King, William L., King, John F., and James, Loyal W. 3,514,905.
- James, Thomas S.: See—
Colarossi, Lawrence A., Reiling, Gebhart J., Jr., Tarquinio, Anthony V., and James, Thomas S. 3,515,844.
- Jamison, Will B., to National Mine Service Company. Method and apparatus for arresting an explosion in a mine. 3,515,217, Cl. 169-2.
- Japan Exlan Company Limited: See—
Minato, Takashi, Matsumura, Yasuo, Kojima, Yukio, and Maruyama, Kunio, 3,515,706.
- Nakanome, Iyohiko, and Uno, Yoshihiro, 3,515,657.
- Sekiguchi, Hideto, Shimoda, Keitaro, and Takeya, Kenji, 3,515,627.
- Japan Gas-Chemical Company, Inc.: See—
Huang, Ching Yun, Sato, Katsuo, and Ikegami, Masuya, 3,515,656.
- Ueno, Tamotsu, and Nakano, Takashi, 3,515,768.
- Japanese Geon Co., Ltd., The: See—
Koide, Takeo, Nishitai, Iwaki, and Niimura, Masaaki, 3,515,762.

- Japs, Archie B., and Murphy, Walter T., to Goodrich, B. F., Company. The Method for coating impregnated textile substrates with polymeric coatings free of pits, air bubbles, and blisters. 3,515,573, Cl. 117-47.
- Jariba Corporation: See—
Baker, Jack R., 3,515,136.
- Jay, Richard C., to Taxi Advertising Company. Advertising system. 3,514,885, Cl. 40-129.
- Jemison, Volney M., to Minijector Corporation. Adjustable variable delivery pump. 3,515,016, Cl. 74-828.
- Jendry, Edward J. Wear compensated lathe chuck. 3,515,400, Cl. 279-121.
- Jensen, Elmer C.: See—
Williams, Charles W., and Jensen, Elmer C. 3,515,448.
- Jester, Thomas C., White, Ira Morgan, and Ung, Harry L., to Baldwin-Lima-Hamilton Corporation. Multistage throttle valve. 3,515,370, Cl. 251-120.
- Johansson, Kurt Hjalmar: See—
Eklund, Gosta Ulf, and Johansson, Kurt Hjalmar 3,515,819.
- Johnson & Johnson: See—
Kalwaite, Frank, 3,515,325.
Listner, Gregory Julius, 3,515,687.
Steinberg, Wallace H., 3,515,781.
- Johnson, Allan M., and Gilman, Richard F. Demineralizing process and apparatus. 3,515,664, Cl. 204-306.
- Johnson, Frederick Paul, to Simon, Henry, Limited. Bundling machines. 3,515,056, Cl. 100-4.
- Johnson, Frederick W.: See—
Bronson, Howard J., Johnson, Frederick W., and Weltha, Marvin D. 3,515,330.
- Johnson, George H. Adjustable mercury switch. 3,515,830, Cl. 200-152.
- Johnson, Howard L.: See—
Dezelan, Joseph E., Hicks, Leon E., and Johnson, Howard L. 3,515,032.
- Johnson, Robert A., to Collins Radio Company. Mechanical filters employing multimode resonators. 3,516,029, Cl. 333-71.
- Johnson, Robert H., to General Electric Company. Lubrication and cooling of high speed gears. 3,515,011, Cl. 74-467.
- Johnson, Thomas B., to Plasteel Products Corporation. Sheet metal wall panel with compressible edge seal. 3,514,915, Cl. 52-393.
- Johnson, Walter H., Jr., and Pritchett, William C., to Atlantic Richfield Company. Radioactive borehole logging method and apparatus whereby elements of interest are determined by generating gamma rays having a predetermined critical energy such that they are resonantly scattered by said elements. 3,515,871, Cl. 250-71.5.
- Johnston, James R.: See—
Kotkas, Heiti, and Johnston, James R. 3,515,333.
- Jones, Kenneth James, and Baker, Alfred Dickens, to Lucas, Joseph, (Industries) Limited. Rear view mirror having resilient connector. 3,515,365, Cl. 248-481.
- Jones, Malcolm D., to Kelsey-Hayes Company. Permanent magnet inductor generator for vehicle wheel speed sensor. 3,515,920, Cl. 310-168.
- Jones, Richard J., to United States of America, Navy. High pressure sighting lens with relief port. 3,515,465, Cl. 350-319.
- Jones, Robert E., Jr., and Price, Harold J., to Kaman Science Corporation. Automatic neutron activator analyzer. 3,515,868, Cl. 250-106.
- Jones, Robert L., 1/2 to Palm, James T. Mold and method for casting concrete panels. 3,515,779, Cl. 264-41.
- Jones, Will, Jr.: See—
King, Rudy W., and Jones, Will, Jr. 3,515,371.
- Jones, William N., and Ellis, Jefferson W., to Hooker Chemical Corporation. Metal treating process and composition. 3,515,600, Cl. 148-6.16.
- Jones, William R., to North American Rockwell Corporation. Coiled wire element. 3,515,241, Cl. 181-56.
- Jordan, James E., to Outside Carpets, Inc. Laminated carpet or mat. 3,515,622, Cl. 161-66.
- Josenhans, Roland K., to Deutsch Filters Relay Division, division of the Deutsch Company. Miniature flat pack latching relay. 3,516,035, Cl. 335-202.
- Joseph, Pierre, to Dubied, Edouard, et Cie, (Societe Anonyme). Cam box for flat knitting machines. 3,514,976, Cl. 66-78.
- Joslyn, John A., and Lubitz, William J., to General Electric Company. Motor control system with feedback and variable gain amplifier responsive to current. 3,515,971, Cl. 318-308.
- Joyaux, Henri B., to Ford Industries, Inc. Electrical signaling apparatus. 3,516,061, Cl. 340-150.
- Joyce, Ronald S., to Calgon Corporation. Two-bed evaporative loss control device. 3,515,107, Cl. 123-136.
- Judge, Daniel M.: See—
Paulson, Elmer E., and Judge, Daniel M. 3,514,955.
- Jungwirth, Robert L., to United States of America, Army. Dome light assembly. 3,515,863, Cl. 240-7.35.
- Kabushiki Kaisha Daikin Seisakusho: See—
Adachi, Kazuma, 3,514,974.
- Kabushiki Kaisha Taihei Seisakusho: See—
Nagaoka, Noriyuki, 3,515,186.
- Kabushiki Kaisha Toyota Chuo Kenkyusho: See—
Asada, Taihei, 3,515,650.
- Kabushiki Kaisha Yuryo Kikakuin Kenkyusho: See—
Tsujino, Jiromaru, 3,515,130.
- Kalensky, Charles James: See—
Marbury, Benjamin Rutledge, Keough, Timothy J., and Kalensky, Charles James 3,515,992.
- Kaliher, Dennis E.: See—
Bray, William E., Hirvela, Robert J., and Kaliher, Dennis E. 3,516,069.
- Kallas, William C., to Business Assets Corporation. Elevator means for a heat scanner device. 3,515,836, Cl. 219-10.43.
- Kallrath, Heinrich: See—
Sennewald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.
- Kalwaite, Frank, to Johnson & Johnson. Apparatus for fibrillating a transversely oriented plastic material. 3,515,325, Cl. 225-93.
- Kaman Science Corporation: See—
Jones, Robert E., Jr., and Price, Harold J., 3,515,868.
- Kameda, Akiyoshi: See—
Nakamura, Takahiro, Yabuno, Yoshio, Kameda, Akiyoshi, and Aratani, Shozo 3,515,391.
- Kamio, Kosaku: See—
Izumi, Hiroshi, Sengoku, Tomonori, Igarashi, Sumio, and Kamio, Kosaku 3,515,589.
- Kammer, Archer W., Jr.: See—
Kammerer, Archer W., 3,515,889.
- Kammerer, Archer W., 1/5 to Lamphere, Jean K., and 1/5 to Kammer, Archer W., Jr. Power generation apparatus. 3,515,889, Cl. 290-53.
- Kamner, Haim J., to Baldwin-Lima-Hamilton Corporation. Combined articulated and Ackerman steering system for vehicles. 3,515,235, Cl. 180-79.2.
- Kanegafuchi Boseki Kabushiki Kaisha: See—
Ueda, Keizo, Ohkawahara, Tsuneo, Mats, Masao, and Ando, Satoshi, 3,515,703.
- Kaneko, Yoichi, Sawada, Ryoka, Iida, Shinya, and Kawaguchi, Kazuo, to Hitachi, Ltd. Microwave semiconductor device. 3,516,017, Cl. 331-107.
- Kano, Gota: See—
Inoue, Morio, Kano, Gota, Matsuno, Jinichi, and Takayanagi, Shigetoshi 3,515,583.
- Kansas State University Research Foundation: See—
Crawford, Francis W., 3,515,968.
- Kant, Alvin W., to American Tractor Equipment Corporation. Cable plow mounting. 3,515,222, Cl. 172-484.
- Kappler, Karl. Double lever tool for cutting open containers of sheet metal or plastic materials. 3,514,853, Cl. 30-14.
- Karahashi, Yoshimitu, to Numata, Yehan. Micrometer having a non-rotating spindle. 3,514,865, Cl. 33-166.
- Karkoska, Vitezslav: See—
Cap, Miroslav, Cizinsky, Zdenek, Dohnalek, Rudolf, Chvojka, Jiri, and Karkoska, Vitezslav 3,515,521.
- Karmazin, John. Heat exchanger construction. 3,515,208, Cl. 165-178.
- Kaszmarn, John. Rotary engine. 3,515,103, Cl. 123-16.
- Kauffer & Co. GmbH: See—
Math, Friedrich Chr., 3,515,849.
- Kaufman, Vernon R.: See—
Heth, Sherman C., and Kaufman, Vernon R. 3,514,926.
- Kawaguchi, Kazuo: See—
Kaneko, Yoichi, Sawada, Ryoka, Iida, Shinya, and Kawaguchi, Kazuo 3,516,017.
- Kawazoe, Shiro: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki 3,515,567.
- Kayser-Roth Corporation: See—
Strauss, Ludwig, 3,515,140.
- Kazamaki, Tomokazu, and Takahashi, Yasuo, to Asahi Kogaku Kogyo Kabushiki Kaisha. Fish-eye type objective lens system. 3,515,462, Cl. 350-214.
- Keane, Raymond A., Jr., and Adams, James N., to General Time Corporation. Illuminating assembly for a clock. 3,514,940, Cl. 58-50.
- Kearney, Joseph P., and Murphy, Eugene F., to Westinghouse Electric Corporation. Short arc lamp seal. 3,515,929, Cl. 313-219.
- Keck, Milton F.: See—
Fredlake, John J., Keck, Milton F., and Schwent, Glennon V. 3,514,949.
- Keck, Delta Lee. Wash article. 3,514,802, Cl. 15-118.
- Keefer, Frank D., Thelemaque, Louis E., and Walsh, Henry J., to Bell Telephone Laboratories, Incorporated. Multistage end marked folded ferreed switching network. 3,515,810, Cl. 179-18.
- Keel, Beat G.: See—
Perkins, Robert L., and Keel, Beat G. 3,514,851.
- Keimer, Gerald W.: See—
Walsh, LaVerne E., and Keimer, Gerald W. 3,515,930.
- Keleket CGR Corporation: See—
Marquis, Roger A., 3,515,870.
- Keller, Arnold, to Austenal Europa, Inc. Trepan with automatic stop means. 3,515,100, Cl. 128-310.
- Kelling, Leroy U. C., to General Electric Company. Contour tracing apparatus. 3,514,869, Cl. 33-174.
- Kelly, Douglas E., to Eaton Yale & Towne, Inc. Thermally responsive on and off vacuum control valve. 3,515,368, Cl. 251-11.
- Kelsey-Hayes Company: See—
Broat, Robert C., Krupa, Walter H., and Cooley, George William, 3,515,659.
- Every, Peter, and Stelzer, William, 3,515,440.

- Jones, Malcolm D., 3,515,920.
- Kemp, David Charles: See—
Clark, Kenneth Gould, and Kemp, David Charles 3,515,099.
- Kendale Industries, Inc.: See—
Hoffman, George J., Setele, William O., and Law, Lester E., 3,514,804.
- Kennecott Copper Corporation: See—
Skarbo, Rold R., 3,515,512.
- Kennedy, Alvin B., Jr. Collapsible protective hat. 3,514,787, Cl. 2-3.
- Kent, Holger C., to Honeywell Inc. Flow control apparatus. 3,515,161, Cl. 137-81.5.
- Kenyon, Jack, and Fletcher, Richard Lees, to Mather & Platt Limited. Bean harvesting machines. 3,514,928, Cl. 56-19.
- Keough, Timothy J.: See—
Marbury, Benjamin Rutledge, Keough, Timothy J., and Kalensky, Charles James 3,515,992.
- Kephart, Jimmy F., to United States of America, Air Force. Trimode rocket engine. 3,514,953, Cl. 60-258.
- Kerber, Harold: See—
Church, Charles, Flajole, Henry J., and Kerber, Harold 3,515,831.
- Kershaw, Delmar D., to General Electric Company. One-shot arc lamp with mass of vaporizable wire between electrodes. 3,515,928, Cl. 313-184.
- Kershaw, Stanley S., Jr., to McGraw-Edison Company. Lightning arrester sparkover control. 3,515,934, Cl. 315-36.
- Kersnar, Paul W., and Taormina, Samuel, to Progressive Products Co. Chelating and cleaning compound and method. 3,515,673, Cl. 252-152.
- Keshishian, Vahe, to North American Rockwell Corporation. Alpha-particle-emitting radioisotope generator. 3,515,875, Cl. 250-106.
- Kidd, Archibald Watson, to Kidd, Archie, (Designs) Limited. Combined seed and fertilizer drills for agricultural use. 3,515,315, Cl. 222-193.
- Kidd, Archie, (Designs) Limited: See—
Kidd, Archibald Watson, 3,515,315.
- Killion, Donald C. Retractable truck body cover. 3,515,428, Cl. 296-100.
- Kinderman, Frederick W. Golf cart. 3,515,403, Cl. 280-47.19.
- King, Harry J., to Hughes Aircraft Company. Hollow cathode plasma generator. 3,515,932, Cl. 313-339.
- King, Jack C., to Shaw-Walker Company, The. Apparatus for producing a weldment of thin metal. 3,515,841, Cl. 219-91.
- King, John F.: See—
King, William L., King, John F., and James, Loyal W. 3,514,905.
- King, John L., Jr., to Houdaille Industries, Inc. Torque sensitive releasing means for sprag clutches. 3,515,249, Cl. 192-45.1.
- King, Joseph W., and McClaren, Donald L., to Cleveland Technical Center, Inc. Apparatus and method for measuring distance between spaced magnetic members. 3,515,984, Cl. 324-34.
- King, Rudy W., and Jones, Will, Jr., to Orbit Valve Company, mesne. Valve and valve seat. 3,515,371, Cl. 251-214.
- King, William L., King, John F., and James, Loyal W., to McKenzie Pump Corporation, mesne. Hydraulic method and apparatus for dispensing granular material under pressure. 3,514,905, Cl. 51-12.
- Kingsbury, Albert W., Miller, Durando, and Alexander, Gerald, to Sybron Corporation. Counter-current ion exchange with downflow contactor. 3,515,277, Cl. 210-33.
- Kinkead Industries, Incorporated: See—
Klekamp, Lee M., 3,514,855.
- Kirby, Thomas E., Jr.: See—
Hoffler, William B., and Kirby, Thomas E., Jr. 3,514,920.
- Kitagawa, Noriyoshi, to Nippon Electric Company, Limited. Semiconductor device having low capacitance junction. 3,515,957, Cl. 317-235.
- Kitahara, Katumasa, to Matsushita Electric Industrial Co., Ltd. Adapter for EP records of an automatic changer. 3,515,392, Cl. 274-10.
- Kitamura, Shigeyoshi: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
- Kivela, Stanley Edward. Food carrying and preparing appliance. 3,515,119, Cl. 126-37.
- Klatte, Henry B.: See—
Mejean, Jacques G., Bagg, Halsey O., and Klatte, Henry B. 3,514,999.
- Klaus, Kaspar. Device for cargo trucks for transporting and lateral loading and unloading. 3,515,295, Cl. 214-77.
- Klein, Gerardo. Guide for travelling curtains. 3,514,806, Cl. 16-94.
- Klein, Robert E., and Driver James E., Sr., to International Telephone and Telegraph Corporation. Tool for making cordwood module. 3,514,988, Cl. 72-332.
- Klekamp, Lee M., to Kinkead Industries, Incorporated. Trimmer for trimming carpeting to a reference edge. 3,514,855, Cl. 30-293.
- Klessig, Clarence E.: See—
Beer, Rudolf E., Klessig, Clarence E., and LaBotz, Richard J. 3,515,499.
- Klose, Robert Edward: See—
Feldman, Jacob R., Klose, Robert Edward, and MacAllister, Robert V. 3,515,591.
- Knapp, Helmut. Roller blind shutter. 3,515,049, Cl. 95-57.
- Knapp, Walter: See—
Frick, Hans-Dieter, Knapp, Walter, and Osegowitsch, Victor 3,515,311.
- Knapeack Aktiengesellschaft: See—
Sennewald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.
- Knauert, William F.: See—
De Nardi, Mario, and Knauert, William F. 3,515,821.
- Knuth, William H., and Shiflet, William F., to Aerojet-General Corporation. Retractable cushion cells for fluid cushion vehicles. 3,515,238, Cl. 180-121.
- Kobyashi, Takeji: See—
Kusuda, Zenji, and Kobyashi, Takeji 3,514,968.
- Kobza, Anthony, to Consolidated Paper (Bahamas) Limited. Tear strip opening means for containers. 3,515,336, Cl. 229-66.
- Koch, Carl, to Sinar AG Schaffhausen. Mirror reflex attachment for cameras. 3,515,048, Cl. 95-49.
- Koester, Charles J., Bazinet, Wilfred P., Jr., and Ask, Clifford W., to American Optical Corporation, mesne. Light-amplifying laser structures and the like. 3,516,001, Cl. 330-4.3.
- Kogel, Wilhelm Georg, to Aktiebolaget Electrolux. Absorption refrigeration apparatus of the inert gas type. 3,514,972, Cl. 62-490.
- Kohashi, Tadao, Tanaka, Kazunobu, and Suzuki, Norio, to Matsushita Electric Industrial Co., Ltd. Power supply unit. 3,515,890, Cl. 307-2.
- Kohn, Gerhard, to International Business Machines Corporation. Field effect transistor microwave generator. 3,516,021, Cl. 331-117.
- Koide, Takeo, Nishitai, Iwaki, and Niimura, Masaaki, to Japanese Geon Co., Ltd. The Method for inhibiting polymerization of conjugated dienes. 3,515,762, Cl. 260-666.5.
- Kojima, Yukio: See—
Minato, Takashi, Matsumura, Yasuo, Kojima, Yukio, and Maruyama, Kunio 3,515,706.
- Kokusai Denshin Denwa Kabushiki Kaisha: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi, 3,516,074.
- Kolb, Russell H., to Bachman Machine Company, Inc. Thermostat device housing. 3,515,917, Cl. 310-71.
- Kolodziej, Edward. Regenerative air turbines. 3,514,951, Cl. 60-59.
- Kompfner, Rudolf, to Bell Telephone Laboratories, Incorporated. Digital light deflecting systems. 3,515,455, Cl. 350-150.
- Koons, Edwin Russell, Parker, Ralph G., Jr., and Rupley, Jeffery P., to Mallory, P. R., & Co., Inc. Solderable stainless steel. 3,515,950, Cl. 317-230.
- Koppe, Herbert: See—
Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl 3,515,741.
- Koppers Company, Inc.: See—
Cain, George Robert, 3,515,293.
- Koritale, Sambasivarao, to United States of America, Agriculture. Selective hydrogenation of soybean oil with supported copper catalysts. 3,515,678, Cl. 252-432.
- Korones, Herbert D.: See—
Altman, Richard M., and Korones, Herbert D. 3,515,480.
- Korpel, Adrianus, and Whitman, Robert L., to Zenith Radio Corporation. Radiation scanning system. 3,515,458, Cl. 350-160.
- Koseki, Yasuo: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi 3,516,074.
- Koshi, Masato: See—
Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio 3,515,538.
- Kossoff, Joseph: See—
Douglas, Raymond J., Iwasaki, Cedric E., and Kossoff, Joseph 3,514,897.
- Kotkas, Heiti, and Johnston, James R., to Eastman Kodak Company. Combination wrap-base roll box. 3,515,333, Cl. 229-40.
- Kovacs, Janos, to Ganz Villamossagi Muvek. Arrangement for cooling the laminated body of rotating electric machines. 3,515,916, Cl. 310-65.
- Kowalewski, Casimir K., to Interspace Corporation. Flexible sectional pipe lines. 3,515,414, Cl. 285-165.
- Kozerski, Henry. Universal joint. 3,514,973, Cl. 64-17.
- Kraessig, Hans, and Bellvila, Ricardo, to Heberlein & Co. A.G. Textile process which uses concentrated sulfuric acid after resin treatment. 3,515,505, Cl. 8-116.3.
- Kramer, David N., and Gamson, Robert M., to United States of America, Army. Reversed enzymatic detection method for anticholinesterases. 3,515,644, Cl. 195-103.5.
- Krapcho, John: See—
Fried, Josef, and Krapcho, John 3,515,749.
- Krasienko, Stanley L., and Howell, John D., to Mallory, P. R., & Co., Inc. Hermetically sealed electrolytic capacitor. 3,515,951, Cl. 317-230.
- Kreis, Philipp. Cowl for gas lamps. 3,515,865, Cl. 240-74.
- Kroemer, Herbert, and Shyam, Megha, to Fairchild Camera and Instrument Corporation. Transverse negative mobility devices. 3,516,019, Cl. 331-107.
- Krook, Edwin J., and Suess, Jack E., to Kysor Industrial Corporation. Mounting assembly for actuators of cylinder locks. 3,514,983, Cl. 70-370.
- Kroy Company: See—
Merrill, Neal W., and Schenck, William H., 3,514,991.
- Krueger Metal Products, Inc.: See—
Furtak, Ronald T., and Schier, Robert W., 3,515,319.

- Krull, Maurice. Slip-on fish line attachment. 3,514,891, Cl. 43-44.87.
 Krupa, Walter H.: See—
 Broat, Robert C., Krupa, Walter H., and Cooley, George William 3,515,659.
 Kruse, Frederick V., and Behrends, Deane O., to AG-Rain Incorporated. Water irrigation system. 3,515,350, Cl. 239-189.
 Krysiak, Joseph E.: See—
 Buzzard, Wallace C., and Krysiak, Joseph E. 3,515,447.
 Kubanek, George R.: See—
 Reimschuessel, Herbert K., Kubanek, George R., and Mountford, George A. 3,514,963.
 Kuhnle, Ernst, and Schwarz, Josef, to Bizerba-Werke Wilhelm Kraut KG. Price-indicating weighing scale. 3,515,231, Cl. 177-34.
 Kulp, Karl T.: See—
 Belcourt, Francis J., and Kulp, Karl T. 3,515,995.
 Kunststoff-Verfahrenstechnik Isernhagen HB GmbH & Co. KG: See—
 Ruhnau, Joachim, 3,515,376.
 Kuo, Ted L. C., to Thomas & Betts Corporation. Connector for electrical conductors with deformable side panels for contact with such conductors. 3,515,795, Cl. 174-94.
 Kurashiki Rayon Company Limited: See—
 Tsuji, Takaakira, and Tanabe, Kenichi, 3,515,696.
 Kurtz, Gerald W.: See—
 Adams, Robert L., Castaldo, Domenic R., and Kurtz, Gerald W. 3,515,998.
 Kusko, Alexander: See—
 Magnuson, Lee T., Kusko, Alexander, and Baker, John C. 3,515,969.
 Kuster, William. Apparatus for recovering a fat-free protein from animal by-products. 3,515,279, Cl. 210-195.
 Kusuda, Zenji, and Kobayashi, Takeji, to Matsushita Electronics Corporation. Electric refrigerator with compressor control. 3,514,968, Cl. 62-227.
 Kusuda, Zenji, and Shimomura, Hiroshi, to Matsushita Electronics Corporation. Defrosting control circuit for electric refrigerator. 3,514,966, Cl. 62-156.
 Kyllonen, Allen W., to Westinghouse Air Brake Company. Railway car wheel tread brake apparatus. 3,515,248, Cl. 188-202.
 Kyryluk, William F. Solar heat transducer apparatus. 3,514,942, Cl. 60-26.
 Kysor Industrial Corporation: See—
 Krook, Edwin J., and Suess, Jack E., 3,514,983.
 Laboda, J. Gene: See—
 McArthur, John G., 3,515,117.
 LaBotz, Richard J.: See—
 Beer, Rudolf E., Klessig, Clarence E., and LaBotz, Richard J. 3,515,499.
 LaBotz, Richard J., to Aerojet-General Corporation. Method of making a metallic filter. 3,515,605, Cl. 156-3.
 Lady Jayne (Hair Products) Limited: See—
 Loughton, Malcolm, 3,515,152.
 Lahrheim, Robert: See—
 Bauknight, Paul D., and Lahrheim, Robert 3,514,990.
 Laing, Graham S., to Northern Electric Company Limited. Housing for a telephone instrument and grommet for use therewith. 3,515,816, Cl. 179-100.
 L'Air Liquide: See—
 Donze, Michel, 3,515,189.
 La Morgese, Carl J. Combination mask-closure cap. 3,515,154, Cl. 132-88.5.
 Lamphere, Jean K.: See—
 Kammerer, Archer W., 3,515,889.
 Landfried, Bert W., Bassett, Harold J., and Moneymaker, John R., to Top-Seor Products, Inc. Frozen confections containing glycerol and propylene glycol monoesters of isostearic acid. 3,515,562, Cl. 99-136.
 Landron, Rafael, Jr., to Texas Instruments, Incorporated. Method for making a glass-to-metal seal. 3,514,849, Cl. 29-588.
 Lan-Elec. Limited: See—
 Anecki, Jozef Longi, and Nowak, Richard, 3,515,191.
 Lange, Howard George, to Zenith Radio Corporation. Charging process for electrostatic screening of color tubes. 3,515,548, Cl. 96-1.
 Lange, Julius, to Texas Instruments, Incorporated. Interdigitated strip line coupler. 3,516,024, Cl. 333-10.
 Lante, Leonhard M., to McDonnell Douglas Corporation. Photoconductive circuit for measuring capacity of electrical cells. 3,515,983, Cl. 324-29.5.
 Lapine, Norman F., Sr.: See—
 Hines, Eugene W., and Lapine, Norman F., Sr. 3,515,409.
 LaRocca, Clement, and Schwartz, Bernard, to Parke, Davis & Company. Package comprising space stuffer means comprising free flowing bodies in flexible bag means. 3,515,267, Cl. 206-46.
 Larsen, Earl I., to Mallory, P. R., & Co., Inc. Method of making dispersion-strengthened ductile materials. 3,515,542, Cl. 75-122.5.
 Larson, Dennis Luverne: See—
 Youngberg, Charles Harold, Larson, Dennis Luverne, and Swales, Barton Lee 3,515,223.
 Lastinger, William R.: See—
 Gardner, Newell J., and Lastinger, William R. 3,515,218.
 Loughton, Malcolm, to Lady Jayne (Hair Products) Limited. Hair waving devices. 3,515,152, Cl. 132-33.
 Lavet, Marius: See—
 De Valroger, Pierre Albert Marie, and Lavet, Marius 3,515,966.
 Law, Lester E.: See—
 Hoffman, George J., Setele, William O., and Law, Lester E. 3,514,804.
 Law, Malcolm J., to Preston, John, and Company (Chemicals) Limited. Bright nickel plating. 3,515,652, Cl. 204-49.
 Lawrence Brothers, Inc.: See—
 Foltz, Robert E., 3,514,805.
 Lawrence, Howard L. Missile-firing weapon. 3,515,113, Cl. 124-27.
 Layton, Jack D. Mechanism for coupling a vehicle to a unit leading the vehicle. 3,515,411, Cl. 280-460.
 Lazaridis, Lazaros J., to Thermo Electron Corporation. Radiant-tube furnace. 3,515,380, Cl. 263-42.
 Lazzarini, Donald J., Sabad, Joseph J., and Wiley, Robert T., to International Business Machines Corporation. Temperature stable ink transfer coating compositions. 3,515,590, Cl. 117-235.
 Lea, Lawrence N. Magnetic shunt switches and the like. 3,516,036, Cl. 335-207.
 Lear Siegler, Inc.: See—
 Matthews, David R., 3,516,056.
 McLaughlin, John A., and Van Eck, Rudolf A., 3,515,967.
 Snider, Gerald L., 3,516,055.
 Lederer, Gerald: See—
 Moody, John Robert, and Lederer, Gerald 3,515,566.
 Ledgett, Lowell Ashton: See—
 Reinish, Martin David, and Ledgett, Lowell Ashton 3,515,672.
 Ledig, Kurt W.: See—
 Wendt, Gerhard R., and Ledig, Kurt W. 3,515,784.
 Lee, George Arthur, to Autopack Limited. Article sorting machine. 3,515,255, Cl. 198-33.
 Lee, Yoon Chai, to Monsanto Company. Process for the production of polyblends. 3,515,774, Cl. 260-880.
 Leeds & Northrup Company: See—
 Arkin, David M., Mattedi, Bruno A., Sanders, Richard P., and Sullivan, Joseph F., 3,516,063.
 Schwartzberg, John W., and Blum, Bernard, 3,515,343.
 Leef, George R., and Nordlin, Henry G., to United States of America, Army, mesne. Constant impedance high resolution phase shifter. 3,516,028, Cl. 333-31.
 Lees, John N., Jr.: See—
 Baron, Anthony V., Drewry, Hugh S., and Lees, John N., Jr. 3,515,379.
 Leesona Limited: See—
 Norton, John, 3,515,359.
 Legat, Wilhelm H., and Dixon, Alan F., to Raytheon Company. Method of making integrated circuits with complementary elements. 3,514,845, Cl. 29-571.
 Lemieux, George E., Leonard, Richard L., and Reynolds, Robert L., to Ford Motor Company. Automatic control circuit for an anti-skid braking system in an automotive vehicle driveline. 3,515,439, Cl. 303-21.
 Lender, Adam, to Automatic Electric Laboratories, Inc. High-speed correlative digital transmission system with orthogonal coherent recovery using absolute reference. 3,515,991, Cl. 325-38.
 Leonard, Carey C. Farm gate. 3,514,901, Cl. 49-191.
 Leonard, Richard L.: See—
 Lemieux, George E., Leonard, Richard L., and Reynolds, Robert L. 3,515,439.
 LeSuer, William M., to Lubrizol Corporation. The high molecular weight carboxylic acid ester stabilized metal dispersions and lubricants and fuels containing the same. 3,515,669, Cl. 252-39.
 Leszczynski, Martin E., to Scandia Packaging Machinery Company. Display carton. 3,515,266, Cl. 206-44.
 Letter, Eugene C., to Bausch & Lomb Incorporated. Method for changing the optical characteristics of an article. 3,515,587, Cl. 117-217.
 Letter, Eugene C., to Bausch & Lomb Incorporated. Radiation sensitive recording system using solid state electrolytic layer. 3,515,880, Cl. 250-213.
 Levy, Donald J., to Lockheed Aircraft Corporation. Deposition of gold films. 3,515,571, Cl. 117-35.
 Levy, Harold F., and Levy, Leonard D. Combination packaging structure, trouble light and replacement head lamp. 3,515,864, Cl. 240-44.2.
 Levy, Leonard D.: See—
 Levy, Harold F., and Levy, Leonard D. 3,515,864.
 Lewbill Industries Inc.: See—
 Coffman, William H., Jr., 3,515,348.
 Lewis, Edward V., to California Computer Products, Inc. Manual optical digitizer. 3,515,888, Cl. 250-237.
 Lieckfeldt, Hans: See—
 Becker, Dietrich, Hochstein, Roland, and Lieckfeldt, Hans 3,515,044.
 Light, Glen W.: See—
 Scott, Sidney R., and Light, Glen W. 3,515,065.
 Lilly, Eli, and Company: See—
 Garbrecht, William L., 3,515,727.
 Lincoln Valley Minerals Incorporated: See—
 Summers, Otto Murray, 3,515,199.
 Lindberg, Bjorn Edvin, and Nordberg, Lars Ture Vilhelm. Device for packaging one or more containers, for instance for clinical samples, and at least one appurtenant information card or the like. 3,515,268, Cl. 206-47.

- Lindeameyer, Carl W.: See—
 Vonderhe, Robert H., Doede, John H., and Lindenmeyer, Carl W. 3,515,486.
 Linder, Jerome: See—
 Weil, Edward D., Dorfman, Edwin, and Linder, Jerome 3,515,537.
 Lindsey, Gordon. Herbicidal composition. 3,515,535, Cl. 71-65.
 Lipsett, Morley S., to Perkin-Elmer Corporation, The. High stability laser. 3,516,009, Cl. 331-94.5.
 Listner, Gregory Julius, to Johnson & Johnson. Sterically rearranged polymers. 3,515,687, Cl. 260-2.
 Littmann, David: See—
 Machlup, Gustav F., and Littmann, David 3,515,239.
 Litwiller, Robert J.: See—
 Goldschmidt, Robert E., Litwiller, Robert J., and Powers, Don M. 3,515,344.
 Livingston, Owen W., to Tennessee Valley Authority. Recycling ammonium sulfate in nitric phosphate processing. 3,515,534, Cl. 71-34.
 Lobur, Walter, to Elox Inc., mesne. Electrical discharge machining pulse duration control apparatus and method. 3,515,838, Cl. 219-69.
 Lockheed Aircraft Corporation: See—
 Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzy, Melvin, and Wickersheim, Kenneth A., 3,515,675.
 Levy, Donald J., 3,515,571.
 Lokka, Leif. Device for supporting and positioning rock drilling machines. 3,515,227, Cl. 173-43.
 Long, Nigel: See—
 Burton, Harold William, and Long, Nigel 3,515,825.
 Burton, Harold William, and Long, Nigel 3,515,826.
 Longley, Raymond I., Jr.: See—
 Isaksen, Robert A., Longley, Raymond I., Jr., and Williams, Charles R. 3,515,581.
 Longworth, David Phillip, Hick, Michael Alfred Sampson, and Lugton, William Townsley, to Associated Electrical Industries Limited. Arrangement for synthetic circuit-breaker testing including current controlled application of the simulated short circuit current. 3,515,982, Cl. 324-28.
 Lorang, Malcolm M., to Magnavox Company, The. Contrast range control. 3,515,803, Cl. 178-6.
 Loughran, Gerard A., and Burkett, Jerald L., to United States of America, Air Force. Polydisiliclyde polymers. 3,515,695, Cl. 260-47.
 Loughran, Lee R.: See—
 Reynolds, George E., and Loughran, Lee R. 3,515,636.
 Louis Audran, Roger Gaston, Hilaire, Jean-Claude, Louis Bourdon, Jean Alexandre, and Pierre Lestienne, Andre Francois, to Eastman Kodak Company. Photographic processes and elements. 3,515,551, Cl. 96-35.
 Louis Bourdon, Jean Alexandre: See—
 Louis Audran, Roger Gaston, Hilaire, Jean-Claude, Louis Bourdon, Jean Alexandre, and Pierre Lestienne, Andre Francois 3,515,551.
 Love, William Harold, and Mumford, Eustace Harold, to Owens-Illinois, Inc. Glass melting furnace and method of operation. 3,515,529, Cl. 65-27.
 Low, John L., III: See—
 Archer, Bill, and Low, John L., III 3,514,918.
 Lowe, Bryan Wilfred Hodson: See—
 Barber, Anthony Clifford, Hawtin, Laurence Reginald, and Lowe, Bryan Wilfred Hodson 3,514,850.
 Lu, James W. B., to Perflex Corporation. Fin configuration for fin and tube heat exchanger. 3,515,207, Cl. 165-151.
 Lubitz, William J.: See—
 Joslyn, John A., and Lubitz, William J. 3,515,971.
 Lubowitz, Hyman R.: See—
 Burns, Eugene A., and Lubowitz, Hyman R. 3,515,699.
 Lubowitz, Hyman R., and Burns, Eugene A., to TRW Inc. Cyclized polydiene-polyether resins. 3,515,772, Cl. 260-836.
 Lubrizol Corporation, The: See—
 Goldsmith, Fred C., 3,515,712.
 LeSuer, William M., 3,515,669.
 Lucas, John: See—
 Waters, John Murray, Lucas, John, and Davies, Gwyn Tudor 3,515,347.
 Lucas, Joseph, (Industries) Limited: See—
 Allport, Maurice James, 3,516,088.
 Barnes, Stanley Charles, Harris, John Derek, and Owen, Kenneth Stanley, 3,515,597.
 Bloom, Joseph Lewis, 3,514,947.
 Burton, Harold William, and Long, Nigel, 3,515,825.
 Burton, Harold William, and Long, Nigel, 3,515,826.
 Fry, William Lawrence, 3,515,833.
 Fry, William Lawrence, 3,515,834.
 Gascoigne, Denis, and Warne, Eugene Harold, 3,514,944.
 Jones, Kenneth James, and Baker, Alfred Dickens, 3,515,365.
 Martin, Rex, 3,515,832.
 Palmer, Kenneth Percival, 3,515,002.
 Warne, Eugene Harold, 3,514,946.
 Williams, Malcolm, and Hodgson, Duncan Barry, 3,515,978.
 Young, Donald Allan, 3,516,047.
 Ludwig, Gerhard: See—
 Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl 3,515,741.
 Lugton, William Townsley: See—
 Longworth, David Phillip, Hick, Michael Alfred Sampson, and Lugton, William Townsley 3,515,982.
 Lukas, Josef, and von Dohlen, Klaus, to Patent-Treuhand-Gesellschaft fur Elektrische Gluhlampen m.b.H. Coil winding machines. 3,515,176, Cl. 140-71.5.
 Lummus Company, The: See—
 Bauer, William V., 3,515,752.
 Luther, William B., and Martinson, Donald L., to Shell Oil Company. Block copolymer strippable coatings of butadiene styrene block copolymer containing a fatty acid amide. 3,515,528, Cl. 51-310.
 Lynch, William T., to Bell Telephone Laboratories, Incorporated. Method of fabricating planar avalanche photodiode. 3,514,846, Cl. 29-572.
 Lyne & Bowler Pump Company: See—
 Wykes, Claude E., 3,515,013.
 Lytle, Fred E.: See—
 Hercules, David M., and Lytle, Fred E. 3,515,674.
 Lytle, Josiah C., to Alexander-Tagg Industries, Inc. Exhaust silencer for internal combustion engines. 3,515,242, Cl. 181-56.
 MacAllister, Robert V.: See—
 Feldman, Jacob R., Klose, Robert Edward, and MacAllister, Robert V. 3,515,591.
 MAC Engineering and Equipment Company: See—
 McAlpine, Charles H., and McGowan, Kenneth G., 3,515,204.
 Machida, Kanji: See—
 Hisamoto, Hironori, Nishimura, Muneo, and Machida, Kanji 3,516,038.
 Machlup, Gustav F., and Littmann, David, to Minnesota Mining and Manufacturing Company. Stethoscope head construction. 3,515,239, Cl. 181-24.
 MacMillan Bloedel Limited: See—
 McManus, Thomas, and Hollemans, Jan C., 3,514,866.
 MacVaugh, Wayne H., to I-T-E Imperial Corporation, mesne. Gasket for interfittng conduit sections of an isolated phase bus system. 3,515,396, Cl. 277-177.
 Mader, Herbert: See—
 Deutschmann, Herbert, Wahnschaffe, Jurgen, Rudert, Wolfgang, and Mader, Herbert 3,515,110.
 Magnavox Company, The: See—
 Lorang, Malcolm M., 3,515,803.
 Magne, Frank C.: See—
 Mod, Robert R., Magne, Frank C., and Skau, Evald L. 3,515,754.
 Magnuson, Lee T., Kusko, Alexander, and Baker, John C., to Deere & Company. Trigger circuit for inverter. 3,515,969, Cl. 318-197.
 Maguire, Roy L., to Caterpillar Tractor Company. Lubricated track roller. 3,515,446, Cl. 308-20.
 Maitilasso, Anthony J., to Scientific Incineration Devices, Inc. Incinerator. 3,515,078, Cl. 110-8.
 Malkiely, Shimon: See—
 Raviv, Szmuel, Rabinovitz, Elsa, and Malkiely, Shimon 3,515,655.
 Mallina, Rudolph F., to Codman & Shurtleff, Inc. Atraumatic clamp. 3,515,139, Cl. 128-322.
 Mallory, Glenn O., Jr., and Baudrand, Donald W., to Allied Research Products, Inc., mesne. Stabilization of electroless plating solutions. 3,515,564, Cl. 106-1.
 Mallory, P. R., & Co., Inc.: See—
 Koons, Edwin Russell, Parker, Ralph G., Jr., and Rupley, Jeffery P., 3,515,950.
 Krasienko, Stanley L., and Howell, John D., 3,515,951.
 Larsen, Earl I., 3,515,542.
 Manabe, Tosikatu: See—
 Gejo, Tetuo, Manabe, Tosikatu, Hamura, Yasuzi, and Uchimura, Kotaro 3,515,839.
 Manasevit, Harold M., to North American Rockwell Corporation. Single crystal silicon on beryllium oxide. 3,515,576, Cl. 117-106.
 Mannhardt, Werner G.: See—
 Hiarta, Lars J., and Mannhardt, Werner G. 3,515,676.
 Mantsune Tekko Kabushiki Kaisha (Nantsune Iron Works, Ltd.): See—
 Moriuchi, Sadanobu, 3,515,190.
 Marans, Nelson S., to Grace, W. R., & Co. Polyesters, polyamides, and polyester-amides of mixtures of nitrilotriacetic and N-(acetamide)-iminodiacetic acids. 3,515,747, Cl. 260-482.
 Marathon Oil Company: See—
 Olson, Danford H., and Storms, Phillip W., 3,515,748.
 Marbury, Benjamin Rutledge, Keough, Timothy J., and Kalensky, Charles James, to International Telephone and Telegraph Corporation. Automatic alarm detector. 3,515,992, Cl. 325-322.
 Marconi Company Limited, The: See—
 Gilbert, Eric Davenport, 3,515,015.
 Marcovitch, Jacob, 1/3 to Rotary Profile Anstalt. Profiling of metal billets. 3,514,985, Cl. 72-241.
 Margeson, Theodore M., and Denny, Hugh W., said Denny, Hugh W. assor to said Margeson, Theodore M. Electric selective control circuit. 3,515,891, Cl. 307-10.
 Marquis, Roger A., to Keleket CGR Corporation. X-ray system for superimposing the image of a reference object and an X-ray image. 3,515,870, Cl. 250-65.
 Martin, Frederick W., and Harrison, Stanley, to Ion Physics Corporation. High-voltage semiconductor device having a guard ring containing substitutionally active tone in interstitial positions. 3,515,956, Cl. 317-234.
 Martin, Harry M., and Poche, Paul J. Cane heaper. 3,515,256, Cl. 198-33.

JUNE 2, 1970

- Martin, Rex, to Lucas, Joseph, (Industries) Limited. Thrust washers for use with helically wound springs and improved ignition switches utilizing such thrust washers. 3,515,832, Cl. 200-166.
- Martinson, Donald L.: See—
Luther, William B., and Martinson, Donald L. 3,515,528.
- Marty, Michel: See—
Galmiche, Philippe, Hivert, Andre, and Marty, Michel 3,515,523.
- Maruyama, Eiichi, and Uchino, Ikue, to Hitachi, Ltd. Ohmic contact to semiconductor. 3,515,954, Cl. 317-234.
- Maruyama, Kunio: See—
Minato, Takashi, Matsumura, Yasuo, Kojima, Yukio, and Maruyama, Kunio 3,515,706.
- Marvin Cutting Tools Ltd.: See—
Wale, Dennis H., 3,514,828.
- Mason, Lowell M., to General Electric Company. Apparatus for producing insulation in the slots of magnetic cores. 3,514,836, Cl. 29-205.
- Mason, Ronald T.: See—
Columbus, Peter S., and Mason, Ronald T. 3,515,630.
- Mason, Ruth Elaine. Training tennis racket. 3,515,386, Cl. 273-73.
- Massachusetts Institute of Technology: See—
Crowther, Thomas S., 3,515,606.
- Smith, Donald O., 3,516,080.
- Massey-Ferguson G.m.b.H.: See—
Herbsthofer, Franz J., 3,515,145.
- Massing, Jo M.: See—
Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., and Smoyer, Claude B. 3,515,877.
- Massing, John W.: See—
Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., and Smoyer, Claude B. 3,515,877.
- Mastabar Mining Equipment Company Limited: See—
Shuttleworth, Peter, 3,514,961.
- Masuda, Teruyoshi: See—
Oki, Takehiro, Ota, Akira, and Masuda, Teruyoshi 3,515,036.
- Math, Friedrich Chr., to Kauffer & Co. GmbH. Electrical heating system. 3,515,849, Cl. 219-213.
- Mather & Platt Limited: See—
Kenyon, Jack, and Fletcher, Richard Lees, 3,514,928.
- Mather Company, The: See—
Hines, Eugene W., and Lapine, Norman F., Sr., 3,515,409.
- Matheson, Wilfrid G., Steinitz, Robert, and Strock, Lester W., to Sylvania Electric Products, Inc. Metal-evaporating source. 3,515,852, Cl. 219-275.
- Matick, Richard E., and Mayfield, Jacob R., to International Business Machines Corporation. Apparatus for selection of memory word location. 3,516,078, Cl. 340-174.
- Mats, Masao: See—
Ueda, Keizo, Ohkawahara, Tsuneo, Mats, Masao, and Ando, Satoshi 3,515,703.
- Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei, to Sumitomo Chemical Company, Ltd. Thienyl esters of cyclopropanecarboxylic acids. 3,515,730, Cl. 260-332.
- Matsumoto, Rimpey: See—
Sugiyama, Akira, Tanaka, Tadami, Matsumoto, Rimpey, and Riko, Yasuhiro 3,515,240.
- Matsumura, Yasuo: See—
Minato, Takashi, Matsumura, Yasuo, Kojima, Yukio, and Maruyama, Kunio 3,515,706.
- Matsuno, Jinichi: See—
Inoue, Morio, Kano, Gota, Matsuno, Jinichi, and Takayanagi, Shigetoshi 3,515,583.
- Matsumita Electric Industrial Co., Ltd.: See—
Hisamoto, Hironori, Nishimura, Munee, and Machida, Kanji, 3,516,038.
- Kitahara, Katumasa, 3,515,392.
- Kohashi, Tadao, Tanaka, Kazunobu, and Suzuki, Norio, 3,515,890.
- Nakamura, Takahiro, Yabuno, Yoshio, Kameda, Akiyoshi, and Aratani, Shozo, 3,515,391.
- Omura, Masuo, and Tsunoo, Masahiko, 3,515,039.
- Sato, Tadashige, and Tsutsumi, Shinya, 3,515,054.
- Sugiyama, Akira, Tanaka, Tadami, Matsumoto, Rimpey, and Riko, Yasuhiro, 3,515,240.
- Suzuki, Takashi, 3,515,570.
- Tawara, Yoshio, and Iga, Atsushi, 3,515,817.
- Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi, 3,516,034.
- Matsumita Electric Works, Ltd.: See—
Miwa, Teruo, Shibata, Zenzaburo, Araki, Hiroaki, Tanaka, Tadamoto, and Sakaguchi, Hiroshi, 3,515,697.
- Matsumita Electronics Corporation: See—
Inoue, Morio, Kano, Gota, Matsuno, Jinichi, and Takayanagi, Shigetoshi, 3,515,583.
- Kusuda, Zenji, and Shimomura, Hiroshi, 3,514,966.
- Kusuda, Zenji, and Kobayashi, Takeji, 3,514,968.
- Mattedi, Bruno A.: See—
Arkin, David M., Mattedi, Bruno A., Sanders, Richard P., and Sullivan, Joseph F. 3,516,063.
- Mattel, Inc.: See—
Baginski, Albert R., Okada, David T., and Stastny, Edwin O., 3,515,112.
- Douglas, Raymond J., Iwasaki, Cedric E., and Kossoff, Joseph, 3,514,897.
- Ryan, John W., Newman, Howard F., and Olson, Lorin P., 3,514,895.
- Ryan, John W., and Chang, Richard Shih-Teng, 3,515,390.
- Matthews, David R., to Lear Siegler, Inc. Traffic control system. 3,516,056, Cl. 340-38.
- Mattis, James J.: See—
Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzy, Melvin, and Wickersheim, Kenneth A. 3,515,675.
- Matusch, Siegfried, Backofen, Hans-Dieter, and Schaper, Helmut, to Braunschweigische Maschinenbauanstalt. Drive for rotary bodies having large dimensions and great weight. 3,515,009, Cl. 74-128.
- Mauz, Otto, Reindl, Eugen, and Vetter, Hans Joachim, to Hercules Incorporated. High molecular weight polymers containing the reaction product of an aliphatic amine and a mono- or dioxirane asstastic agent. 3,515,698, Cl. 260-75.
- Mavromatis, Albert: See—
Sedlak, Steve, and Mavromatis, Albert 3,515,625.
- May, George A., to Northern Electric Company Limited. Logic gate with stored charge carrier leakage path. 3,515,899, Cl. 307-215.
- Mayfield, Jacob R.: See—
Matick, Richard E., and Mayfield, Jacob R. 3,516,078.
- McAdams, Charles O., to North American Rockwell Corporation. Heating apparatus. 3,515,853, Cl. 219-346.
- McAlpine, Charles H., and McGowan, Kenneth G., to MAC Engineering and Equipment Company. Means and apparatus for casting intercell connections for batteries. 3,515,204, Cl. 164-334.
- McArthur, John G., to Laboda, J. Gene. Portable heating device. 3,515,117, Cl. 126-25.
- McCarthy, Raymond: See—
Weber, Carl W., and McCarthy, Raymond 3,515,305.
- McClaren, Donald L.: See—
King, Joseph W., and McClaren, Donald L. 3,515,984.
- McCormack, John F.: See—
Hodoley, Svetlana, and McCormack, John F. 3,515,563.
- McDade, Everest. Method for rapidly reproducing orchids. 3,514,900, Cl. 47-58.
- McDavid, Robert F. Protective football apparatus. 3,514,784, Cl. 2-2.
- McDonnell Douglas Corporation.: See—
Hutton, William C., and Reibold, Robert C., 3,516,060.
- Lante, Leonhard M., 3,515,983.
- McEvoy, Bernard F. Skin biopsy punch. 3,515,128, Cl. 128-2.
- McEvoy, James E.: See—
Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,681.
- Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,682.
- Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,683.
- McEvoy, James E., to Air Products and Chemicals, Inc. Fluidizable catalyst particle formation. 3,515,684, Cl. 252-455.
- McEwan, Thomas Joseph. Punchcard reading apparatus. 3,515,339, Cl. 235-61.7.
- McGovern, William: See—
Campano, Frank J., Hiatt, Gregg C., and McGovern, William 3,516,070.
- McGowan, Kenneth G.: See—
McAlpine, Charles H., and McGowan, Kenneth G. 3,515,204.
- McGraw-Edison Company: See—
Kershaw, Stanley S., Jr., 3,515,934.
- Sadler, Fred S., 3,515,588.
- McKenzie Pump Corporation.: See—
King, William L., King, John F., and James, Loyal W., 3,514,905.
- McKnight, Charles Allen. Intrauterine contraceptive device. 3,515,132, Cl. 128-130.
- McLaughlin, John A., and Van Eck, Rudolf A., to Lear Siegler, Inc. Two-phase power supply and motor. 3,515,967, Cl. 318-138.
- McManus, Thomas, and Hollemans, Jan C., to MacMillan Bloedel Limited. Method of rapidly cooling hot pyrophoric dust. 3,514,866, Cl. 34-9.
- McNeely, Lowell A., to Carrier Corporation. Absorption refrigeration machine. 3,514,971, Cl. 62-476.
- McPherson, Frank W., to Pope & Talbot, Inc. Decorative, laminated wood panel and method of making same. 3,515,620, Cl. 161-38.
- McPherson, John C., to Eaton Yale & Towne, Inc. Hydraulic booster motor. 3,515,031, Cl. 91-49.
- McVey, Harold J., to Hooker Chemical Corporation. Automatic control apparatus for liquid treating solutions. 3,515,094, Cl. 118-5.
- Meadows, Geoffrey W., to Du Pont de Nemours, E. I., and Company. Cobalt bonded tungsten carbide cutting tools. 3,514,818, Cl. 29-182.8.
- Meadows, Geoffrey W., to Du Pont de Nemours, E. I., and Company. Mixed cobalt/tungsten carbide powders. 3,515,540, Cl. 75-0.5.
- Mecklin, Charles D., Francis, James M., and Hale, George H., to International Harvester Company. Boom assembly for sprayers. 3,515,349, Cl. 239-169.
- Meek, Richard L.: See—
Winter, Ernest A., Satterwhite, William A., and Meek, Richard L. 3,515,510.
- Mehlretter, Charles L., and Wilham, Carl A. Hypochlorite modified cyanoethylated starch having intact granule form. 3,515,718, Cl. 260-233.3.
- Mejean, Jacques G., Bagg, Halsey O., and Klatte, Henry B., to Universal Oil Products Company. Quick disconnect means with electrically heated pitot tube. 3,514,999, Cl. 73-212.

JUNE 2, 1970

- Menasse, Raphael: See—
Burdeska, Kurt E., von der Crone, Jost, Menasse, Raphael, and Pugin, Andre 3,515,790.
- Menchel, Robert S.: See—
Zurbrick, John R., and Menchel, Robert S. 3,515,987.
- Menke, Wallace W.: See—
Ripley, John F., and Menke, Wallace W. 3,516,040.
- Mentrup, Anton: See—
Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl 3,515,741.
- Merck & Co., Inc.: See—
Cragoe, Edward J., Jr., 3,515,723.
- Henry, David W., and Hoff, Dale R., 3,515,728.
- Tull, Roger J., Weinstock, Leonard M., and Mulvey, Dennis M., 3,515,745.
- Merriam, Robert H., to United States of America, Army, mesne. Quadruple-balance mixer. 3,515,993, Cl. 325-446.
- Merrill, James, Sr. Wide band hyd coupler having an open end concrete insert. 3,514,917, Cl. 52-704.
- Merrill, Neal W., and Schenck, William H., said Schenck assor to Kroy Company, and said Merrill assor to Bethlehem Steel Corporation. Bender table assembly. 3,514,991, Cl. 72-420.
- Mertsoc, Martin M.: See—
Claypoole, Stewart A., and Mertsoc, Martin M. 3,515,958.
- Messner, Jack D.: See—
Wolfe, Walter W., Holten, Herbert A., Messner, Jack D., and Olson, Ivan E. 3,515,258.
- Metcalf, Irving R., to Ideal Industries, Inc. Device for stripping wires. 3,515,018, Cl. 81-9.5.
- Metcalfe, Kenneth, to Pioneer Oilsealing & Moulding Company Limited. Face seals. 3,515,393, Cl. 277-42.
- Meteor Research Limited: See—
Tabory, Paul C., 3,515,433.
- Metheny, Larry J., and Mihelick, Joseph R., to Reliance Electric Company. Pump structure. 3,515,503, Cl. 417-559.
- Metzler AG.: See—
Roy, Hrishikesh Chandra, 3,515,771.
- Meyer, Erich, to Brockfeld & Meyer. Apparatus for smoothing and destalking tobacco leaves. 3,515,149, Cl. 131-125.
- Meyer, Svend Scheel, to Denske Securitas A/S. Electric alarm system, preferably for a fire alarm. 3,516,083, Cl. 340-237.
- Michaels, Leonard A., and Sullivan, Albert Manley, Jr., to Bunker-Ramo Corporation, The, mesne. 3-D flatpack module packaging technique. 3,515,949, Cl. 317-101.
- Micron Sealing Corporation: See—
Ripley, John F., and Menke, Wallace W., 3,516,040.
- Microwave Associates, Inc.: See—
Hines, Marion E., and Ondria, John George, 3,516,014.
- Hines, Marion E., Collinet, Jean-Claude R., and White, Joseph F., 3,516,015.
- Middleton, Henry Edward: See—
Palfreyman, Jack, and Middleton, Henry Edward 3,515,501.
- Midgley, Noel H. Footwear. 3,514,878, Cl. 36-2.5.
- Miehle-Goss-Dexter, Incorporated: See—
Smith, Edwin K., and Brundage, Clinton F., 3,515,257.
- Migutaka, Masatoshi, to Hitachi, Ltd. Voltage controllable variable frequency Gunn oscillator of graded GaAsP composition. 3,516,016, Cl. 331-107.
- Mihelick, Joseph R.: See—
Metheny, Larry J., and Mihelick, Joseph R. 3,515,503.
- Mika, John I., to Avco Corporation. Digital coded security system. 3,515,340, Cl. 235-61.7.
- Mikami, Takashi: See—
Ebihara, Tameaki, and Mikami, Takashi 3,515,800.
- Miles, Thomas L., Jr.: See—
Davenport, Wes H., 3,514,950.
- Miller, Betty. Beauty care protective garment. 3,514,788, Cl. 2-87.
- Miller, Durando: See—
Kingsbury, Albert W., Miller, Durando, and Alexander, Gerald 3,515,277.
- Miller, George W. Psychedelic clock. 3,514,938, Cl. 58-2.
- Miller, Ralph A.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R., 3,515,306.
- Miller, Samuel E., to Quick Service Textiles, Inc. Apparatus for feeding and cutting strip material. 3,515,081, Cl. 112-130.
- Milligan, Virgil M. Pavement cutter. 3,515,435, Cl. 299-40.
- Millmaster Onyx Corporation: See—
Adams, Phillip, Shay, Edward Griffin, and Petrocci, Alphonso N., 3,515,671.
- Mills, George Alexander: See—
Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,681.
- Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,682.
- Flank, William H., McEvoy, James E., and Mills, George Alexander 3,515,683.
- Mills, John E., to USM Corporation. Sole old assemblies. 3,514,814, Cl. 18-42.
- Milo, August. Frost heave-protected shut-off valve. 3,515,157, Cl. 137-68.
- Mima, Hiroyuki, and Hisada, Seizo, to Takeda Chemical Industries, Ltd. Method for preparing a stabilized enzyme composition. 3,515,642, Cl. 195-63.
- Min, Sherman L., to United States of America, Navy. Impact responsive proximity initiator. 3,515,067, Cl. 102-7.4.
- Minato, Takashi, Matsumura, Yasuo, Kojima, Yukio, and Maruyama, Kunio, to Japan Exlan Company Limited. Lactonized acrylic polymers and production thereof. 3,515,706, Cl. 260-85.5.
- Mine Safety Appliances Company: See—
Bossart, Clayton J., 3,514,925.
- Mineraal Technologisch Instituut: See—
Hadjidakis, Achilles, 3,514,881.
- Minijector Corporation: See—
Jemison, Volney M., 3,515,016.
- Minnesota Mining and Manufacturing Company: See—
Brown, Harvey A., Erickson, John G., Husted, Donald R., and Wright, Charles D., 3,515,603.
- Druker, Leonard J., and Sachi, Leonard Wayne, 3,515,559.
- Machlup, Gustav F., and Littmann, David, 3,515,239.
- Sievert, James A., 3,515,798.
- Smith, George H., 3,515,552.
- Tiers, George Van Dyke, 3,515,701.
- Tomita, Jun, and Strahan, Thomas W., 3,515,578.
- Mitchell, Atherton R., to Foster Grant Co., Inc. Spectacle hinge. 3,515,468, Cl. 351-153.
- Mitchell, John D.: See—
Danford, Tiras J., Abbott, Phillip E., and Mitchell, John D. 3,515,234.
- Mitchell, Mike J.: See—
Beuyukian, Charles S., and Mitchell, Mike J. 3,514,842.
- Mitsche, Roy T.: See—
Hayes, John C., and Mitsche, Roy T. 3,515,685.
- Mitsubishi Rayon Co., Ltd.: See—
Miyamoto, Haruo, Uchida, Hideo, Uzawa, Katsuhiko, and Ohbayashi, Tsutomu, 3,515,616.
- Mitsui Katsui Chemicals, Incorporated: See—
Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio, 3,515,538.
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- Mix, Arthur L., Jr., to International Business Machines Corporation. Xerographic fusing apparatus. 3,515,855, Cl. 219-388.
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Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
- Mobile Drilling Company, Inc.: See—
Henson, William P., 3,515,228.
- Henson, William P., and Woods, Ross S., 3,515,824.
- Mod, Robert R., Magne, Frank C., and Skau, Evald L., to United States of America, Agriculture. N,N-disubstituted amides. 3,515,754, Cl. 260-558.
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- Mogilefsky, David B.: See—
Wethern, Richard J., 3,515,539.
- Mohr, John, & Sons: See—
Barbour, James W., and Porter, Lawrence B., 3,514,809.
- Moisson-Franckhauser, Francois: See—
Aupoix, Marcel, and Moisson-Franckhauser, Francois 3,515,793.
- Moline Malleable Iron Company: See—
Parlanti, Conrad A., Fashfellow, George H., and Fauntleroy, Dort, 3,515,203.
- Moll, Oswin C. Layout system and attachment for flexible coiled tapes. 3,514,863, Cl. 33-138.
- Momota, Kenzo: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Money maker, John R.: See—
Landfried, Bert W., Bassett, Harold J., and Money maker, John R. 3,515,562.
- Monsanto Company: See—
Hinkebein, John A., 3,515,515.
- Isaksen, Robert A., Longley, Raymond I., Jr., and Williams, Charles R., 3,515,581.
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- Montgomery, Lionel C., to Union Carbide Corporation. Method for metallizing a boron nitride containing body. 3,515,574, Cl. 117-71.
- Moody, John Robert, and Lederer, Gerald, to British Titan Products Company Limited. Process for producing coated titanium dioxide pigment. 3,515,566, Cl. 106-300.
- Moore, Aston L., and Moore, Charles R. Electrical leakage detector. 3,515,941, Cl. 317-18.
- Moore, Charles R.: See—
Moore, Aston L., and Moore, Charles R. 3,515,941.

- Moore, Eugene R.: See—
Chiu, Thomas T., Pickelman, Dale M., and Moore, Eugene R. 3,515,648.
- Morehouse, Donald S.: See—
Walters, Harold A., and Morehouse, Donald S. 3,515,569.
- Morfax Limited: See—
Moss, Brian Yoxall, 3,515,963.
- Morgan, Charles R., and Godfrey, John J., to Grace, W. R., & Co. Adiabatic process for preparing aminonitriles using heat recycle. 3,515,742, Cl. 260-465.5
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- Morikawa, Yonekichi, Takano, Kunro, and 5 Half spaing escapement, to Daiwa Can Co., Ltd. Prepared citrus fruit processing apparatus. 3,515,188, Cl. 146-3.
- Morita, Takanobu: See—
Akamatsu, Hiroo, and Morita, Takanobu 3,515,883.
- Moriuchi, Sadanobu, to Mantsune Tekko Kabushiki Kaisha (Nantsune Iron Works, Ltd.). Slicer. 3,515,190, Cl. 146-101.
- Morris, Robert V.: See—
Hindman, Daniel T., and Morris, Robert V. 3,516,059.
- Morrison, Charles Samuel, to Deere & Company. Device for sensing operating conditions in a harvesting machine. 3,515,144, Cl. 130-26.
- Morse, James H., to Hughes Aircraft Company. Control circuit for a multiple pulse laser machining device. 3,515,938, Cl. 315-240.
- Morton, Peter Harlow, and Clark, Peter Vincent McDonald, to Imperial Metal Industries (Kynoch) Limited. Hafnium alloys. 3,515,543, Cl. 75-134.
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- Moss, Brian Yoxall, to Morfax Limited. Outline following apparatus. 3,515,963, Cl. 318-18.
- Motorola, Inc.: See—
Robinson, Peter T., 3,515,952.
- Mountford, George A.: See—
Reimschuessel, Herbert K., Kubanek, George R., and Mountford, George A. 3,514,963.
- Mueller, Clair W., to Rex Chainbelt Inc. Conveyor chain link and method of forming same. 3,514,941, Cl. 59-35.
- Mueller, Curt: See—
Entschel, Roland, Mueller, Curt, and Wehrli, Walter 3,515,733.
- Muhlberg, Heinz-Joachim, Schacht, Eckhard, and Brach, Josef. Method for cementing chemically resistant tiles. 3,515,611, Cl. 156-71.
- Mullaly, Robert B., to Corning Glass Works. Constriction valve for flexible tubes. 3,515,170, Cl. 137-636.1
- Mulvey, Dennis M.: See—
Tull, Roger J., Weinstock, Leonard M., and Mulvey, Dennis M. 3,515,745.
- Mumford, Eustace Harold: See—
Love, William Harold, and Mumford, Eustace Harold 3,515,529.
- Munck International A/S: See—
Sjodin, Einar, 3,515,424.
- Muncke, Ludwig, Buchmuller, Josef, and Hartlieb, Otto, to Deere & Company. Three-point hitch. 3,515,412, Cl. 280-461.
- Muntwyler, Fredric C., Sr.: See—
Walus, A. Charles, and Muntwyler, Fredric C., Sr. 3,515,021.
- Murgatroyd's Salt and Chemical Company Limited: See—
Coulter, Michael Oliver, and Bell, David, 3,515,661.
- Murphy, Eugene F.: See—
Kearney, Joseph P., and Murphy, Eugene F. 3,515,929.
- Murphy, Walter T.: See—
Japs, Archie B., and Murphy, Walter T. 3,515,573.
- Murray Company of Texas, Inc.: See—
Stone, Alan J., 3,515,445.
- Murtaugh, John J., to Rex Chainbelt Inc. Slurry seal distributing box. 3,515,041, Cl. 94-44.
- Myers, John L., to Tasker Industries. Cathode ray tube magnetic deflection circuit. 3,515,933, Cl. 315-27.
- Mylin, Gary C., to Import Inspection Services. Meat inspection system and method. 3,515,053, Cl. 99-194.
- Nachod, James H., to United Aircraft Corporation. Aircraft rotor or propeller having blades which fold with pitch control mechanism controlling blade pitch during normal operation and during the folding and unfolding operation. 3,515,500, Cl. 416-142.
- Nagai, Tatsuhiko: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki 3,515,567.
- Nagaoka, Noriyuki, to Kabushiki Kaisha Taihei Seisakusho. Device for preventing bending of logs in veneer lathes. 3,515,186, Cl. 144-209.
- Nakagome, Yukio: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi 3,516,074.
- Nakamura, Takahiro, Yabuno, Yoshio, Kameda, Akiyoshi, and Aratani, Shozo, to Matsushita Electric Industrial Co., Ltd. Automatically reversing magnetic recording and reproducing system. 3,515,391, Cl. 274-4.
- Nakamura, Takeshi, to Bazkoh Denkyokubo Kabushiki Kaisha. Arc-welding electrodes and welding method using the same. 3,515,846, Cl. 219-137.
- Nakano, Takashi: See—
Ueno, Tamotsu, and Nakano, Takashi 3,515,768.
- Nakanome, Iyohiko, and Uno, Yoshihiro, to Japan Exlan Company Limited. Production of acrylonitrile polymers by photo-polymerization in an aqueous thiocyanate solution. 3,515,657, Cl. 204-159.24
- Napier, Joseph T.: See—
Jacobs, Alfred J., and Napier, Joseph T. 3,515,184.
- Nather, Roy E., to Beckman Instruments, Inc. Data reduction system for radiation counting equipment. 3,515,861, Cl. 235-159.
- National Cash Register Company, The: See—
Cady, Richard C., Jr., 3,515,850.
- Willer, Ernest M., 3,516,075.
- National Mine Service Company: See—
Jamison, Will B., 3,515,217.
- National Patent Development Corporation: See—
Shepherd, Thomas H., and Gould, Francis E., 3,515,579.
- National Research Development Corporation: See—
Fong, William, 3,515,922.
- Naylor, Arthur G.: See—
Hatcher, Arthur L., Jr., and Naylor, Arthur G. 3,515,487.
- Nealis, Raymond N. Aromatic filter. 3,515,146, Cl. 131-10.1
- Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek ten behoeve van de Volksgezondheid: See—
Somer, Jan C., 3,516,054.
- Nelson, Alfred R., and Floria, Vernon D., to Dow Chemical Company. The. Process for eliminating polymer build-up on reactor walls during polymerization of water-insoluble monoethylenically unsaturated liquid monomers. 3,515,709, Cl. 260-92.8
- Nelson, Ardell H., to Pittsburgh-Des Moines Steel Company. Insulating foundation for a low temperature storage tank. 3,514,913, Cl. 52-249.
- Nelson, Curtis F. Cushioned slipcover for chairs. 3,515,430, Cl. 297-218.
- Nemesnyik, John C.: See—
Field, Philip M., and Nemesnyik, John C. 3,515,476.
- Neufeld, Charles W. Toy animal having pivotal forward and rear portions. 3,514,896, Cl. 46-103.
- Nevarez, (Ocampo) Ricardo J., to Technical Investment Corporation. Monolithic building. 3,514,909, Cl. 52-73.
- Newman, Howard F.: See—
Ryan, John W., Newman, Howard F., and Olson, Lorin P. 3,514,895.
- Newson, Ivan Henry: See—
Walker, Peter Thomas, and Newson, Ivan Henry 3,515,646.
- Nick, Howard H.: See—
Bolt, Murray H., and Nick, Howard H. 3,516,065.
- Nickols, Richard C., Jr., to United Aircraft Corporation. Fuel cell with electrically conductive bonding means. 3,515,593, Cl. 136-86.
- Niedergesass, Dieter, to International Standard Electric Corporation. Control circuit for multistage crosspoint network. 3,515,808, Cl. 179-18.
- Nielsen, Robert N., Jr., to American Nucleonics Corporation. Locking mechanism and telescoping assembly. 3,515,418, Cl. 287-58.
- Niemeyer, James M., and Helms, John D., to Texas Instruments, Incorporated. Bond testing apparatus. 3,515,842, Cl. 219-109.
- Nietzel, Gunther: See—
Arberman, Jerome, and Nietzel, Gunther 3,516,051.
- Niimura, Masaaki: See—
Koide, Takeo, Nishitai, Iwaki, and Niimura, Masaaki 3,515,762.
- Nims, John B., Jr., to Atomic Power Development Associates, Inc. Fuel systems for nuclear reactors. 3,515,638, Cl. 176-28.
- Nimylowicz, Osyp: See—
Halstead, Arthur M., and Nimylowicz, Osyp 3,515,518.
- Nippon Carbide Kogyo Kabushiki Kaisha: See—
Izumi, Hiroshi, Sengoku, Tomonori, Igarashi, Sumio, and Kamio, Kosaku 3,515,589.
- Nippon Concrete Kogyo Kabushiki Kaisha: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Nippon Electric Company, Limited: See—
Kitagawa, Noriyoshi, 3,515,957.
- Okamoto, Kiyokazu, Yoshioka, Masahiro, Ando, Takeo, and Suzuki, Masatoshi, 3,515,964.
- Nippon-Tensai Seito Kabushiki Kaisha: See—
Oki, Takehiro, Ota, Akira, and Masuda, Teruyoshi, 3,515,036.
- Nishimura, Motoharu, to Yuasa Battery Company Limited. Deep submergence storage battery. 3,515,592, Cl. 136-6.
- Nishimura, Munao: See—
Hisamoto, Hironori, Nishimura, Munao, and Machida, Kanji 3,516,038.
- Nishitai, Iwaki: See—
Koide, Takeo, Nishitai, Iwaki, and Niimura, Masaaki 3,515,762.
- Nitz, Rolf-Eberhard: See—
Ritter, Heinrich, Beyerle, Rudi, and Nitz, Rolf-Eberhard 3,515,721.
- Nixon, Earl Hollis, and Wheeler, John Watson, to Western Electric Company, Incorporated. Circuit for determining when a sweep frequency is substantially equal to a standard frequency. 3,515,996, Cl. 328-133.
- Noguchi, Hiroaki: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki 3,515,567.
- Nolan, Kenneth Gordon, to American Cyanamid Company. Method for controlling insects. 3,515,782, Cl. 424-213.

- Nolt, Edwin B.: See—
Van Ginhoven, Robert M., and Nolt, Edwin B. 3,515,058.
- Noordanus, Johannes: See—
Bos, Marinus Anton, Noordanus, Johannes, and Rosier, Gerardus 3,516,007.
- Nordberg, Lars Ture Vilhelm: See—
Lindberg, Bjorn Edwin, and Nordberg, Lars Ture Vilhelm 3,515,268.
- Nordlin, Henry G.: See—
Leef, George R., and Nordlin, Henry G. 3,516,028.
- Norfleet, John H. Scarifier for use in removing wallpaper or the like. 3,514,854, Cl. 30-292.
- North American Rockwell Corporation: See—
Beuyukian, Charles S., and Mitchell, Mike J., 3,514,842.
- Deutsch, Ralph, 3,515,792.
- Greenewald, Herbert, Jr., 3,515,546.
- Horsfall, Robert B., Farrand, William A., and Williams, Warner D., 3,516,081.
- Jones, William R., 3,515,241.
- Keshishian, Vahe, 3,515,875.
- Manasevit, Harold M., 3,515,576.
- McAdams, Charles O., 3,515,853.
- Raper, Hubert L., 3,515,905.
- Welch, Joseph R., 3,515,645.
- White, Stanley A., 3,515,901.
- Northern Electric Company Limited: See—
Bohm, John, 3,515,945.
- Laing, Graham S., 3,515,816.
- May, George A., 3,515,899.
- Norton, John, to Leesona Limited. Creel. 3,515,359, Cl. 242-129.8
- Noth, Richard W.: See—
Chamberlin, John B., and Noth, Richard W. 3,515,585.
- Novak, Frank L. Educational toy. 3,514,894, Cl. 46-1.
- Nowak, Richard: See—
Anecki, Jozef Longi, and Nowak, Richard 3,515,191.
- Nuccio, Joseph F., to General Electric Company. Process for insulating the joints of electrical conductors. 3,515,608, Cl. 156-49.
- Numata, Yehan: See—
Karahashi, Yoshimitu, 3,514,865.
- Nunokawa, Koji: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Oates, James C.: See—
Ristuccia, Donald J., and Oates, James C. 3,515,799.
- Obergfell, Ronald F., and Ahinok, Robert A., to Houdaille Industries, Inc. Lubricant reverse metering valve system. 3,515,245, Cl. 184-7.
- Oberster, Arthur E., Smith, George E.P., Jr., and Farhat, Kelly, to Firestone Tire & Rubber Company. The. Process for oxidation of cyclohexane. 3,515,751, Cl. 260-533.
- Oborny, James M. Bale loading device. 3,515,292, Cl. 214-6.
- O'Connell, William Grogan, Sanford, Herbert Brooks, Jr., and Edwards, Bernard S., to Du Pont de Nemours, E. I., and Company. Process for drying gel-regenerated cellulose film. 3,515,780, Cl. 264-342.
- O'Donnell, John F.: See—
Curran, John E., and O'Donnell, John F. 3,516,026.
- Office National d'Etudes et de Recherches Aérospatiales: See—
Galmiche, Philippe, Hivert, Andre, and Marty, Michel, 3,515,523.
- Ogawa, Giichi. Tape cutter for cutting an adhesive tape in a definite length successively. 3,515,324, Cl. 225-11.
- Ohbayashi, Tsutomu: See—
Miyamoto, Haruo, Uchida, Hideo, Uzawa, Katsuhiko, and Ohbayashi, Tsutomu 3,515,616.
- Ohkawahara, Tsuneo: See—
Ueda, Keizo, Ohkawahara, Tsuneo, Mats, Masao, and Ando, Satoshi 3,515,703.
- Ohkubo, Katsuhiko. Plating solutions for rhodium and rhodium alloy platings having low internal stress. 3,515,651, Cl. 204-43.
- Ohta, Seizho: See—
Sugiura, Koichi, Ohta, Seizho, and Seo, Kiyokazu 3,515,434.
- Okada, Chisato: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Okada, David T.: See—
Baginski, Albert R., Okada, David T., and Stastny, Edwin O. 3,515,112.
- Okada, Yoichi, Watanabe, Tsutomu, and Hasegawa, Akemi, to Sumitomo Bakelite Company Limited. Method for bonding synthetic resin sheets and metal sheets. 3,515,615, Cl. 156-272.
- Okada, Yoshimasa: See—
Tomono, Koichi, Okada, Yoshimasa, and Takehama, Koichi 3,515,083.
- Okamoto, Kiyokazu, Yoshioka, Masahiro, Ando, Takeo, and Suzuki, Masatoshi, to Nippon Electric Company, Limited. Numerically controlled servomechanism including position offset. 3,515,964, Cl. 318-18.
- Oki, Takehiro, Ota, Akira, and Masuda, Teruyoshi, to Nippon Tensai Seito Kabushiki Kaisha. Easy-to-transplant seedbed holder and its manufacturing method. 3,515,036, Cl. 93-1.
- Okuno, Yosiotogi: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
- Olin Mathieson Chemical Corporation: See—
Haugwitz, Rudiger D., 3,515,726.
- Olivetti, Ing. C., & C., S.p.A.: See—
Eibling, Joseph, 3,515,962.
- Olson, Danford H., and Storms, Phillip W., to Marathon Oil Company. Preparation of aromatic carboxylic acids and nitro-substituted aromatic carboxylic acids. 3,515,748, Cl. 260-515.
- Olson, Ivan E.: See—
Wolfe, Walter W., Holten, Herbert A., Messner, Jack D., and Olson, Ivan E. 3,515,258.
- Olson, Lorin P.: See—
Ryan, John W., Newman, Howard F., and Olson, Lorin P. 3,514,895.
- Olson, Robert E.: See—
Smith, Roy E., and Olson, Robert E. 3,515,876.
- Olympia Werke AG: See—
Rix, Albert, Reiners, Siegfried, Ressel, Helmut, and Voigt, Manfred, 3,515,252.
- Omura, Masuo, and Tsunoo, Masahiko, to Matsushita Electric Industrial Co., Ltd. Electronic musical instruments with tone generating, mixing, and distributing systems. 3,515,039, Cl. 84-1.01
- Ondria, John George: See—
Hines, Marion E., and Ondria, John George 3,516,014.
- OPTOmechanisms, Inc.: See—
Brault, Andre R., and Chitayat, Anwar K., 3,515,481.
- Orbit Valve Company: See—
King, Rudy W., and Jones, Will, Jr., 3,515,371.
- Oree, Samuel, Jr.: See—
Braun, Frederick W., and Oree, Samuel, Jr. 3,514,992.
- Ornstein, Judy, and Ornstein, Leonard. Receptacle unit and kit. 3,515,262, Cl. 206-1.
- Ornstein, Leonard: See—
Ornstein, Judy, and Ornstein, Leonard 3,515,262.
- Osegowitsch, Victor: See—
Frick, Hans-Dieter, Knapp, Walter, and Osegowitsch, Victor 3,515,311.
- Oster, John, Manufacturing Co.: See—
Clark, Kenneth R., 3,515,357.
- Osterreichische Stickstoffwerke Aktiengesellschaft: See—
Wimmer, Helmut, Wagner, Anton, Staudigl, Rudolf, and Rudorfer, Hermann, 3,515,541.
- Ota, Akira: See—
Oki, Takehiro, Ota, Akira, and Masuda, Teruyoshi 3,515,036.
- Otsuka, Hideo: See—
Sugiyama, Hiroshi, Otsuka, Hideo, and Yamamoto, Masakazu 3,515,716.
- Otto, Charles W., to General Electric Company. Oil return pumping device. 3,515,918, Cl. 310-90.
- Outside Carpets, Inc.: See—
Jordan, James E., 3,515,622.
- Owen, Kenneth Stanley: See—
Barnes, Stanley Charles, Harris, John Derek, and Owen, Kenneth Stanley 3,515,597.
- Owens-Corning Fiberglas Corporation: See—
Woodward, Robert M., and Glaser, Helmut I., 3,514,841.
- Owens-Illinois, Inc.: See—
Love, William Harold, and Mumford, Eustace Harold, 3,515,529.
- Paccard, Gilbert, to Bennes Marrel. Safety valves. 3,515,166, Cl. 137-525.
- Pachmayr, Frank A. Cushioned firearm recoil pad. 3,514,889, Cl. 42-74.
- Packard Instrument Company, Inc.: See—
Smith, Roy E., and Olson, Robert E., 3,515,876.
- Paderwerk Gebr. Benteler: See—
Bick, Klaus, Weinreich, Wolfgang, and Harmsen, Lothar, 3,515,202.
- Paganelli, Claudio. System for artificially seeing in three dimensions without using glasses or other interpreting means. 3,515,454, Cl. 350-137.
- Pahl, John G. Pole-mounted air-break disconnect switch. 3,515,823, Cl. 200-48.
- Paksy, Jeno, to Frankenplastik Vertriebs GmbH & Co., KG. Resiliently coupled abutting members disposable in plural stable configurations. 3,514,893, Cl. 46-1.
- Palfreyman, Jack, and Middleton, Henry Edward, to Rolls-Royce Limited. Rotor blade assembly. 3,515,501, Cl. 416-193.
- Palm, James T.: See—
Jones, Robert L., 3,515,779.
- Palmer, Burtis E., to Western Electric Company, Incorporated. Magnetic electrical test probes and method therefor. 3,515,989, Cl. 324-72.5
- Palmer, Kenneth Percival, to Lucas, Joseph, (Industries) Limited. Temperature sensing apparatus. 3,515,002, Cl. 73-357.
- Paperlynen Company: See—
DeVillers, Edmund J., 3,514,789.
- Parillo, Edward V.: See—
Thomasson, Gene I., and Parillo, Edward V. 3,515,420.
- Park, Robert H., to Fast Load Control, Inc. Method of improving the stability of interconnected power systems. 3,515,893, Cl. 307-52.
- Parke, Davis & Company: See—
LaRocca, Clement, and Schwartz, Bernard, 3,515,267.
- Parker, Frederick A., to General Electric Company. Diving helmet and air supply system. 3,515,133, Cl. 128-142.2
- Parker, Ralph G., Jr.: See—
Koons, Edwin Russell, Parker, Ralph G., Jr., and Rupley, Jeffery P. 3,515,950.

Parker, Watson H. Stacked element filter apparatus. 3,515,280, Cl. 210-314.

Parkin-Elmer Corporation, The: See—
Casas, Raul E., and Rayces, Juan L., 3,515,461.

Parlanti, Conrad A., Fashellow, George H., and Fauntleroy, Dort, to Moline Malleable Iron Company. Multiple plunger injection cylinder for die casting. 3,515,203, Cl. 164-312.

Parsi, Edgardo J., to Ionics, Incorporated. Carbonation process for SO₂ removal. 3,515,513, Cl. 23-178.

Parsons, C. A., & Company Limited: See—
Wilkinson, Terence Sidwell, 3,515,912.

Passariello, Angelo G. Combination calendar and room deodorant. 3,514,884, Cl. 40-107.

Pastuszak, Ronald F., to Precision Systems Company, Inc. Workloader of the magazine type. 3,515,310, Cl. 221-211.

Patent Development Corporation: See—
Sciame, Tony, 3,515,059.

Patent-Treuhand-Gesellschaft fur Elektrische Gluhlampen m.b.H.: See—
Lukas, Josef, and von Dohlen, Klaus, 3,515,176.
Rasch, Erhard, and Dziergwa, Herbert, 3,516,010.

Patrick, Russell, to Blackstone Corporation. Clothes dryers with reversing drum. 3,514,867, Cl. 34-45.

Patterson, Roger W.: See—
Hein, Henry F., and Patterson, Roger W., 3,515,477.

Patton, John P. G., to Huck Manufacturing Company. Blind fastener. 3,515,028, Cl. 85-77.

Patzelt, Rupert, and Halling, Horst, to U.S. Philips Corporation, mesne. Photomultiplier with inwardly convex photocathode for low-level scintillation counting. 3,515,872, Cl. 250-71.5.

Paulson, Elmir E., and Judge, Daniel M., to General Electric Company. Mixing structures and turbofan engines employing same. 3,514,955, Cl. 60-262.

Peace, Robert G., and Delaire, Gerard V., to Eastman Kodak Company. Apparatus for forming hinges in all-plastic book covers. 3,514,827, Cl. 29-103.

Peake, Clinton J.: See—
Hill, Kenneth L., and Peake, Clinton J., 3,515,536.

Peantek, Gunter: See—
Sennewald, Kurt, Bender, Ludwig, Gehrmann, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar, 3,515,519.

Pecak, Vaclav, Vit, Jaroslav, and Prochazka, Vladimir, to Ceskoslovenska akademie ved. Method of producing alkali metal borohydrides. 3,515,522, Cl. 23-363.

Peifer, Albert G., and Starr, Matthew C., to Hughes Aircraft Company. Monochromatic prism assembly for laser application. 3,515,464, Cl. 350-286.

Pellaton, Ernest C., to Fibreboard Corporation. Apparatus and method for forming taped articles. 3,515,037, Cl. 93-1.

Penfold, Garn Farley: See—
Cornish, George Kent, and Penfold, Garn Farley, 3,514,929.

Penn Yan Boats, Incorporated: See—
Stuart, Robert B., 3,515,087.

Perego, Giuseppe. Gocart for children. 3,515,404, Cl. 280-87.02.

Perfex Corporation: See—
Lu, James W. B., 3,515,207.

Perkin-Elmer Corporation, The: See—
Golay, Marcel J. E., 3,515,979.
Huchital, David A., 3,516,012.
Lipsett, Morley S., 3,516,009.

Sherman, Stanley Allen, and Delany, Edward Bernard, 3,515,869.

Perkins, Lee E., to Halliburton Company. Filter apparatus for well tool string. 3,515,210, Cl. 166-205.

Perkins, Robert L., and Keel, Beat G., to Control Data Corporation. Method of manufacturing a magnetic head structure. 3,514,851, Cl. 29-603.

Perusse, Norman J., and Cheever, Wilbur D., to Wiremold Company, The. Helically ribbed tubing and method and apparatus for making the same. 3,515,038, Cl. 93-80.

Peschel, Stanley G., to Hipotronich, Inc. Method and apparatus for series resonant corona and dielectric testing of long lengths of high-voltage electrical transmission cable. 3,515,986, Cl. 324-54.

Peterson, Gilbert H. Method and structure for securing dental prostheses. 3,514,859, Cl. 32-2.

Peterson, Richard E.: See—
Wetherm, Richard J., 3,515,539.

Petrocci, Alphonso N.: See—
Adams, Phillip, Shay, Edward Griffin, and Petrocci, Alphonso N., 3,515,671.

Pfizer, Chas., & Co., Inc.: See—
Conover, Lloyd H., 3,515,731.

Pflugrad, Kurt, to Commissariat a l'Energie Atomique. Axial-mechanism control-rod actuator. 3,515,639, Cl. 176-36.

Philadelphia National Bank, The.: See—
Hollenbach, Edwin A., 3,515,300.

Philbrick, Richard W., and Arazi, Efraim R., to Itek Corporation. Panning control circuit for electronic image motion stabilization systems. 3,515,881, Cl. 250-213.

Philco-Ford Corporation: See—
Tiley, John W., 3,515,553.

Philips Roxane Inc.: See—
Williams, James M., 3,515,708.

Phillips Petroleum Company: See—
Gaeth, Rudolf H., and Horvath, Bert, 3,515,679.

Photocircuits Corporation: See—
Hodoley, Svetlana, and McCormack, John F., 3,515,563.

Pickelman, Dale M.: See—
Chiu, Thomas T., Pickelman, Dale M., and Moore, Eugene R., 3,515,648.

Pickert, Lynn L., to General Signal Corporation. Flange type swivel fitting. 3,515,416, Cl. 285-413.

Pierre Lestienne, Andre Francois: See—
Louis Audran, Roger Gaston, Hilaire, Jean-Claude, Louis Bourdon, Jean Alexandre, and Pierre Lestienne, Andre Francois, 3,515,551.

Pike, John E.: See—
Campbell, J. Allan, Babcock, John C., and Pike, John E., 3,515,719.

Pioneer Oilsealing & Moulding Company Limited: See—
Metcalfe, Kenneth, 3,515,393.

Pitler, Richard K., to Allegheny Ludlum Steel Corporation. Method of fabricating narrow-width composites. 3,514,840, Cl. 29-470.1.

Pitney-Bowes, Inc.: See—
Beeken, Basil B., 3,515,827.

Pittman, Calvin B. Match books. 3,515,264, Cl. 206-29.

Pittsburgh-Des Moines Steel Company: See—
Colarossi, Lawrence A., Reiling, Gebhart J., Jr., Tarquinio, Anthony V., and James, Thomas S., 3,515,844.
Nelson, Ardell H., 3,514,913.

Plasteel Products Corporation: See—
Johnson, Thomas B., 3,514,915.

Plate, Dr., G.m.b.H. Chemische Fabrik: See—
Raabe, Fritz, 3,515,702.

Plessey Company Limited, The: See—
Herman, Ralph Bertrand, and Renwick, William, 3,516,023.

Poche, Paul J.: See—
Martin, Harry M., and Poche, Paul J., 3,515,256.

Pochowicz, Donald R., to Universal Oil Products Company. Phthalocyanine-impregnated honeycombed ceramic catalyst. 3,515,677, Cl. 252-430.

Podell, Allen F., to Adams-Russell Co., Inc. Wide band hybrid coupler having an open end transmission line section coupled to each part. 3,516,025, Cl. 333-11.

Poe, Lloyd Richard, to Hartwell Corporation. Double lever flush latch. 3,515,422, Cl. 292-113.

Poe, Lloyd Richard, and Brockway, James E., to Hartwell Corporation. Opposed jaw latch. 3,515,421, Cl. 292-49.

Poenita, Gheorghe: See—
Davidescu, Grigore, and Poenita, Gheorghe, 3,515,008.

Pofferi, Giancarlo, to Ital-Bed Costruzione Letti e Affini S.r.l. Bed units. 3,514,794, Cl. 5-2.

Pole, Robert V., to International Business Machines Corporation. Forming a hologram of a subject recorded on an integral photograph with incoherent light. 3,515,452, Cl. 350-3.5.

Pole, Robert V., to International Business Machines Corporation. Scanning laser having a conjugate concentric cavity so that the direction in which light is emitted can be controlled. 3,516,013, Cl. 331-94.5.

Ponterio, Frank V., to Sperry Rand Corporation. Fluid jet accelerometer. 3,515,004, Cl. 73-515.

Poole, Norman M. Submersible pipe laying barges. 3,514,962, Cl. 61-72.3.

Pope & Talbot, Inc.: See—
McPherson, Frank W., 3,515,620.

Portec, Inc.: See—
Robards, Preston O., 3,515,287.

Porter, Lawrence B.: See—
Barbour, James W., and Porter, Lawrence B., 3,514,809.

Poschel, Alfred B. Photocomposing machine for cylinders. 3,515,479, Cl. 355-86.

Poteat, George A., to Engineered Plastics, Incorporated. Multiple storage tray structure. 3,515,283, Cl. 211-55.

Potocnik, Antone: See—
Young, Leparis D., and Potocnik, Antone, 3,515,353.

Potrafka, John R.: See—
Taylor, Douglas H., 3,515,134.

Powell, Austen V., to Austin Electronics, Inc. Constant power source periodically energized loads. 3,515,973, Cl. 320-1.

Powell, Richard Gordon, to ACF Industries, Incorporated. Railway car buff and draft force cushioning device. 3,515,286, Cl. 213-8.

Powers, Don M.: See—
Goldschmidt, Robert E., Litwiller, Robert J., and Powers, Don M., 3,515,344.

PPG Industries, Inc.: See—
Brane, Ralph M., and Hart, Donald P., 3,515,689.
Shorr, Norman, and Willems, Hubertus W. V., 3,515,531.
Starkey, James C., 3,515,660.

Prats, Michael, to Shell Oil Company. Shale oil recovery process using heated oil-miscible fluids. 3,515,213, Cl. 166-252.

Preble, Harry. Collapsible wig stand forming its own carrying case. 3,515,318, Cl. 223-66.

Precision Systems Company, Inc.: See—
Pastuszak, Ronald F., 3,515,310.

Preisendanz, Edward S.: See—
Hayes, John A., and Preisendanz, Edward S., 3,515,308.

Preradovich, Radovan H., to Gerole International Inc. Line pole rock anchor brackets. 3,514,911, Cl. 52-165.

Presson, Donald R. Spray nozzle. 3,515,354, Cl. 239-416.5.

Preston, John, and Company (Chemicals) Limited: See—
Law, Malcolm J., 3,515,652.

Price, Harold J.: See—
Jones, Robert E., Jr., and Price, Harold J., 3,515,868.

Price, John Roy, to Benedum, Paul G. Wand for use in playing a dexterity game. 3,514,898, Cl. 46-177.

Priefert, Erwin E. Irrigation pipe loader. 3,515,296, Cl. 214-77.

Pritchett, William C.: See—
Johnson, Walter H., Jr., and Pritchett, William C., 3,515,871.

Prochazka, Vladimir: See—
Pecak, Vaclav, Vit, Jaroslav, and Prochazka, Vladimir, 3,515,522.

Produits Chimiques Pechiney-Saint-Gobain: See—
Rombau, Paul, 3,515,509.

Progressive Products Co.: See—
Kersnar, Paul W., and Taormina, Samuel, 3,515,673.

Proni, Oscar, to Coulter Electronics, Inc. Self-priming fluid pump. 3,515,494, Cl. 415-53.

Pugh, Emerson W., to International Business Machines Corporation. Magnetic storage device which exhibits pseudo-biaxial magnetic properties. 3,516,079, Cl. 340-174.

Pugin, Andre: See—
Burdeska, Kurt E., von der Crone, Jost, Menasse, Raphael, and Pugin, Andre, 3,515,790.

Pulcrano, Frank C., to ACF Industries, Incorporated. Side plate structure conduit for venting of covered hopper cars. 3,515,051, Cl. 98-6.

Pullman Incorporated: See—
Aquino, Herman A., 3,515,076.

Purex Corporation, Ltd.: See—
Voss, William Kenneth, 3,515,183.

Quick Service Textiles, Inc.: See—
Miller, Samuel E., 3,515,081.

Raabe, Fritz, to Plate, Dr., G.m.b.H. Chemische Fabrik. Laurolactam co-polyamide shaped articles having highly adhesive surfaces. 3,515,702, Cl. 260-78.

Rabinovitz, Elsa: See—
Raviv, Szmuel, Rabinovitz, Elsa, and Malkiely, Shimon, 3,515,655.

Raimer, Charles H., to Guthrie Machinery Company. Pick-up highway sweeper and conveyor assembly. 3,514,801, Cl. 15-84.

Rain Bird Sprinkler Mfg., Corporation: See—
Costa, Robert B., 3,515,351.

Ralph, Frank, to International Standard Electric Corporation. Method of making artificial telephone lines impedance matching networks. 3,514,852, Cl. 29-621.

Ramsey, Willard A., to Her Majesty Industries, Inc. Electronically synchronized sewing machine. 3,515,080, Cl. 112-121.14.

Ramuz, Henri: See—
Edenhofer, Albrecht, Ramuz, Henri, and Spiegelberg, Hans, 3,515,788.

Raper, Hubert L., to North American Rockwell Corporation. Multiplexer switching network using a current switch and floating power supply. 3,515,905, Cl. 307-254.

Rasch, Erhard, and Dziergwa, Herbert, to Patent-Treuhand-Gesellschaft fur Elektrische Gluhlampen m.b.H. Laser having a coated discharge tube to reduce the effects of clean-up. 3,516,010, Cl. 331-94.5.

Rauhut, Horst W., to United States of America, Army. Method of making foam sandwich. 3,515,612, Cl. 156-79.

Raviv, Szmuel, Rabinovitz, Elsa, and Malkiely, Shimon, to Israel Ministry of Defence, State of the. Electrolytic decontamination of radioactively contaminated equipment. 3,515,655, Cl. 204-141.

Ray, Bartow, to Future Products Development Corporation. Sewage disposal system. 3,515,377, Cl. 261-36.

Ray Plastic Inc.: See—
Carbonneau, Rene R., 3,515,114.

Rayces, Juan L.: See—
Casas, Raul E., and Rayces, Juan L., 3,515,461.

Raytheon Company: See—
Cusiter, George C., and Whalen, Charles S., 3,515,007.
Das, Dilip K., 3,515,629.
Estlick, Raymond J., 3,516,041.
Legat, Wilhelm H., and Dixon, Alan F., 3,514,845.

RCA Corporation: See—
Burns, Joseph R., 3,516,004.
Jacoby, George V., 3,516,066.
Schilling, Ronald B., and Dobin, Charlotte, 3,515,953.

Reaves, Woodrow W.: See—
White, Stanley M., and Reaves, Woodrow W., 3,515,069.

Reece, Algie A. Lawn roller. 3,515,220, Cl. 172-245.

Reed, Robert E.: See—
Comer, Alva Gene, Reed, Robert E., and Fitch, Ernest C., Jr., 3,515,276.

Regal, John A. Shielded safety gas main assembly. 3,515,173, Cl. 138-104.

Reibold, Robert C.: See—
Hutton, William C., and Reibold, Robert C., 3,516,060.

Reichardt, Wolfgang, to Bosch, Robert, G.m.b.H. Electromagnetically controlled fuel injection arrangement for internal combustion engines. 3,515,104, Cl. 123-32.

Reiling, Gebhart J., Jr.: See—
Colarossi, Lawrence A., Reiling, Gebhart J., Jr., Tarquinio, Anthony V., and James, Thomas S., 3,515,844.

Reimschuessel, Herbert K., and Boardman, Franklin, to Allied Chemical Corporation. Metal derivatives of novel saturated heterocyclic polymers. 3,515,707, Cl. 260-89.7.

Reimschuessel, Herbert K., Kubanek, George R., and Mountford, George A., to Allied Chemical Corporation. Handling and storage of ozone. 3,514,963, Cl. 62-48.

Reindl, Eugen: See—
Mauz, Otto, Reindl, Eugen, and Vetter, Hans Joachim, 3,515,698.

Reiners, Siegfried: See—
Rix, Albert, Reiners, Siegfried, Ressel, Helmut, and Voigt, Manfred, 3,515,252.

Reinish, Martin David, and Ledgett, Lowell Ashton, to Colgate-Palmolive Company. Apparatus and process for the preparation of detergent compositions. 3,515,672, Cl. 252-109.

Reiss, John R.: See—
Frill, Richard K., and Reiss, John R., 3,515,288.

Reliance Electric Company: See—
Eddy, Robert T., 3,515,496.

Metheny, Larry J., and Mihelick, Joseph R., 3,515,503.

Renwick, William: See—
Herman, Ralph Bertrand, and Renwick, William, 3,516,023.

Ressel, Helmut: See—
Rix, Albert, Reiners, Siegfried, Ressel, Helmut, and Voigt, Manfred, 3,515,252.

Rex Chainbelt Inc.: See—
Mueller, Clair W., 3,514,941.
Murtaugh, John J., 3,515,041.

Reymond, Ralph D. Manostat pump. 3,515,127, Cl. 128-2.

Reynolds, George E., Gedemer, Fred J., and Ainsworth, Howard K., to Allis-Chalmers Manufacturing Company. Papermaking machine press section. 3,515,637, Cl. 162-360.

Reynolds, George E., and Loughran, Lee R., to Allis-Chalmers Manufacturing Company. Fourdrinier drainage foil assembly. 3,515,636, Cl. 162-352.

Reynolds Metals Company: See—
Hoffler, William B., and Kirby, Thomas E., Jr., 3,514,920.

Reynolds, R. J., Tobacco Company: See—
Aldred, Cyrus A., Jr., and Conrad, Lucas J., 3,514,808.

Reynolds, Robert L.: See—
Lemieux, George E., Leonard, Richard L., and Reynolds, Robert L., 3,515,439.

Rhone-Poulenc S.A.: See—
Balitrand, Georges, 3,515,705.

Rich, Charles E., to United States of America, Army. Arc lamp with fuse wire and biasing support means therefor. 3,515,926, Cl. 313-146.

Richards, John P., and Shanta, Peter L., to Armour and Company. Proteinaceous constituent for glue consisting of the reaction product of powdered blood and formaldehyde vapor in the dry state. 3,515,711, Cl. 260-112.

Richardson, Raymond L., and Wildridge, John E., to United States of America, Navy. Parachute collapsing mechanism. 3,515,362, Cl. 244-142.

Richens, Jack: See—
Schumacher, Howard E., Richens, Jack, and Schmidt, Marvin F., 3,514,952.

Rickey, George J., to Gesellschaft fur Entwicklung und Apparatebau Rickhey, Dipl.-Ing. George J., & Co., K.G. Spark plug with annular ground electrode. 3,515,925, Cl. 313-139.

Ried, Louis, Jr., and Gilland, Jerry R., to Ball Brothers Research Corporation. Gain control system for photomultiplier using standardization pulses. 3,515,878, Cl. 250-207.

Riegelman, Harry M., to Ador Corporation. Adjustable handle for sliding sash. 3,514,904, Cl. 49-460.

Riegert, Richard P., to Sloan Instruments Corporation. Side pumped vacuum collar. 3,515,171, Cl. 137-798.

Riko, Yasuhiro: See—
Sugiyama, Akira, Tanaka, Tadami, Matsumoto, Rimpey, and Riko, Yasuhiro, 3,515,240.

Ring, Stanley A.: See—
Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzky, Melvin, and Wickersheim, Kenneth A., 3,515,675.

Ringe, Carl H., to Talcott, James, Inc., mesne. Underside lock-up device for printing plates. 3,515,066, Cl. 101-378.

Ripley, John F., and Menke, Wallace W., to Micron Sealing Corporation. Transformer structure. 3,516,040, Cl. 336-96.

Risberg, Eilif: See—
Bordalen, Knut, and Risberg, Eilif, 3,515,654.

Ristuccia, Donald J., and Oates, James C., to Westinghouse Electric Corporation. Electrical bushing mounted in casing with foamed resin. 3,515,799, Cl. 174-153.

Ritter, Gert: See—
Gott, Hans, Ritter, Josef, Ritter, Gert, and Ritter, Klaus, 3,515,177.

Ritter, Heinrich, Beyerle, Rudi, and Nitz, Rolf-Eberhard, to Cassella Farbwerke Mainkur Aktiengesellschaft. 3-Tertiary-aminoethyl-4-methyl or phenyl-7-ethoxycarbonylmethoxy-halo or mononitro oumarins and congeners. 3,515,721, Cl. 260-247.2.

Ritter, Josef: See—
Gott, Hans, Ritter, Josef, Ritter, Gert, and Ritter, Klaus, 3,515,177.

Ritter, Klaus: See—
Gott, Hans, Ritter, Josef, Ritter, Gert, and Ritter, Klaus, 3,515,177.

Ritzerfeld, Gerhard. Typewriter controlled recording apparatus. 3,515,338, Cl. 234-18.

Ritzerfeld, Gerhard. Apparatus and method for printing and recording on the same copy sheet. 3,515,061, Cl. 101-91.

Rix, Albert, Reiners, Siegfried, Ressel, Helmut, and Voigt, Manfred, to Olympia Werke AG. Half spacing escapement. 3,515,252, Cl. 197-84.

Robards, Preston O., to Portec, Inc. Modular cushioning mechanism. 3,515,287, Cl. 213-37.

Roberts, Eugene, to City of Hope. Analgesic-hypnotic therapy with 4-imidazoleacetic acid. 3,515,789, Cl. 424-273.

Robertson, George H., to Bell Telephone Laboratories, Incorporated. Apparatus for obtaining the amplitude and phase spectrums of a waveform. 3,515,990, Cl. 324-77.

Robertson, James A., Jr.: See—
Goldblatt, Leo A., and Robertson, James A., Jr. 3,515,736.

Robertson, James Strang Terrace, and Hannah, William James, to A.I.R., (Air Conditioning and Refrigeration) Limited. Light refrigerator container. 3,515,303, Cl. 220-9.

Robillard, Jean J. A., to U.S. Philips Corporation. Diazo type paper and new high speed diazo reproduction process. 3,515,554, Cl. 96-49.

Robinson, Peter T., to Motorola, Inc. Mounting structure for high power transistors. 3,515,952, Cl. 317-234.

Robinson, Robert J., to Foxboro Company, The. Method for die forming flexures using edge constraint. 3,514,989, Cl. 72-377.

Robra, Helmut: See—
Habscheid, Peter, and Robra, Helmut 3,514,986.

Roche, Federico Garcia. Manufacture of regulated window openings. 3,514,903, Cl. 49-416.

Rocherolles, Raymond: See—
Huret, Jerome, Chevalier, Michel, and Rocherolles, Raymond 3,515,976.

Rodier, Christian: See—
Baluteau, Jean-Michel, and Rodier, Christian 3,515,460.

Rodrigues, Edouard Georges Daniel, to Chantiers Navals de la Ciotat. Method for making multiwall vessels. 3,514,839, Cl. 29-463.

Roesch, Egon: See—
Breuer, Hermann, Hoehn, Hans, and Roesch, Egon 3,515,787.

Rogg, Herman O. Twist latch. 3,514,820, Cl. 24-221.

Rohm & Haas G.m.b.H.: See—
Schroder, Gunter, and Fink, Herbert 3,515,750.

Rohrbough, John R. Chord zither with tubular frame. 3,515,026, Cl. 84-286.

Rolls-Royce Limited: See—
Britt, Jack 3,514,943.
Colley, Rowan Herbert 3,514,954.
Palfreyman, Jack, and Middleton, Henry Edward 3,515,501.

Rombau, Paul, to Produits Chimiques Pechiney-Saint-Gobain. Process for extracting and concentrating europium. 3,515,509, Cl. 23-22.

Roos, Heinz, to International Standard Electric Corporation. Signalling system using time-division-multiplex. 3,516,071, Cl. 340-172.5.

Roos, John Treymann, to Bird Machine Company. Aeration apparatus. 3,515,375, Cl. 259-95.

Root, Wayne N.: See—
Van Tassel, Harry M., and Root, Wayne N. 3,515,647.

Root, Wayne N., and Utti, Kenneth D., to Universal Oil Products Company. Catalytic conversion process. 3,515,766, Cl. 260-669.

Roper, Charles R.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R. 3,515,306.

Roper, Frank: See—
Roper, William H., Roper, Robert E., and Roper, Charles R. 3,515,306.

Roper, Robert E.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R. 3,515,306.

Roper, William H., Roper, Robert E., and Roper, Charles R., 1/5 to Roper, Frank, and 1/5 to Miller, Ralph A. Container with cover and hidden cover release. 3,515,306, Cl. 220-60.

Rose, Selwyn H., to Horizons Incorporated. Extreme service phosphonitrile elastomers. 3,515,688, Cl. 260-2.

Rosenbaum, Harold D.: See—
Higgins, Edward M., Rosenbaum, Harold D., and DeVore, Waldo D. 3,515,873.

Rosenberg, Robert, and Schulte, Harry J., Jr., to Bell Telephone Laboratories, Incorporated. Optical scanner including at least one Gunn-effect oscillator element. 3,515,887, Cl. 250-225.

Rosenberger, Harold E., to Bausch & Lomb Incorporated. 45X Magnification semi-objective with field flattening lens. 3,515,463, Cl. 350-224.

Rosenblad, Curt Fredrick, Somer, Vaino, deceased, and Somer, Hannu, administrator. Method and system for flushing sulphite pulp digesters. 3,515,631, Cl. 162-48.

Rosengrens, E. A., Aktiebolag: See—
Bergendahl, Kavalil Alverius, 3,514,982.

Rosier, Gerardus: See—
Bos, Marinus Anton, Noordanus, Johannes, and Rosier, Gerardus 3,516,007.

Rossen, Hans Andreas. Cheese moulding apparatus. 3,514,857, Cl. 31-44.

Rossman, Donald: See—
Scheingold, William, and Rossman, Donald 3,516,048.

Rotary Hoes Limited: See—
Howard, John Arthur 3,514,960.

Rotary Profile Anstalt: See—
Marcovitch, Jacob 3,514,985.

Rotax Limited: See—
Collins, Keith Douglas 3,515,937.

Rotenburger Metallwerke GmbH: See—
Wehr, Georg, and Gotze, Gotthold 3,515,185.

Rotondo, Richard J.: See—
Allentoff, Norman, and Rotondo, Richard J. 3,515,547.

Roy, Hrishikesh Chandra, to Metzeler AG. Heat resistant natural rubber compositions comprising morpholine disulfide and aromatic amines. 3,515,771, Cl. 260-788.

Royal Industries, Inc.: See—
Stevenson, Billy E., and Rumsey, Thomas R., 3,515,438.

Royer, Jean, to CIT-Compagnie Industrielle des Telecommunications. Demodulator for a multivalent telegraphic signal. 3,515,999, Cl. 329-104.

Ruderman, Stanley G.: See—
Flow, Henry C., and Ruderman, Stanley G. 3,515,135.

Rudert, Wolfgang: See—
Deutschmann, Herbert, Wahnschaffe, Jurgen, Rudert, Wolfgang, and Mader, Herbert 3,515,110.

Rudlin, Craig R. Combination pump and oxygenator. 3,515,640, Cl. 195-1.8.

Rudloff, Bernard. Method of manufacture of reinforced unwoven felts. 3,515,609, Cl. 156-62.8.

Rudorfer, Hermann: See—
Wimmer, Helmut, Wagner, Anton, Staudigl, Rudolf, and Rudorfer, Hermann 3,515,541.

Rueffer, Harold F., and Belardi, Richard J., to Hughes Aircraft Company. Method of making a semiconductor device with protective glass sealing. 3,514,848, Cl. 29-588.

Rueger, Harman, to AMP Incorporated. Carrier for lamp and electrical terminals. 3,516,087, Cl. 340-381.

Ruhnau, Joachim, to Kunststoff-Verfahrenstechnik Isernhagen HB GmbH & Co. KG. Machine for coating plate or shell-shaped building elements. 3,515,376, Cl. 259-153.

Rumsey, Thomas R.: See—
Stevenson, Billy E., and Rumsey, Thomas R. 3,515,438.

Rupley, Jeffery P.: See—
Koons, Edwin Russell, Parker, Ralph G., Jr., and Rupley, Jeffery P. 3,515,950.

Ruskin, Asa P. Neurological diagnostic tool. 3,515,125, Cl. 128-2.

Russell, Harold D., and Amering, Charles F., to Eastman Kodak Company. Photographic developing process utilizing hemlock tannin polymer. 3,515,556, Cl. 96-63.

Ryan, John W., and Chang, Richard Shih-Teng, to Mattel, Inc. Device for reproducing recorded sounds in toys. 3,515,390, Cl. 274-1.

Ryan, John W., Newman, Howard F., and Olson, Lorin P., to Mattel, Inc. Material handling toy and track system. 3,514,895, Cl. 46-40.

Sabad, Joseph J.: See—
Lazzarini, Donald J., Sabad, Joseph J., and Wiley, Robert T. 3,515,590.

Sachi, Leonard Wayne: See—
Druker, Leonard J., and Sachi, Leonard Wayne 3,515,559.

Sacks, Stephen J., and Scott, John E., to Sperry Rand Corporation. Analog-to-digital converter. 3,516,084, Cl. 340-347.

Sadler, Fred S., to McGraw-Edison Company. Electrical component and method of making the same. 3,515,588, Cl. 117-230.

Sahm, Otto. Tubular rope clip blank. 3,514,817, Cl. 24-123.

Saito, Hachiro: See—
Saito, Tadashi, Saito, Masaya, and Saito, Masaru 3,515,326.

Saito, Masaru: See—
Saito, Tadashi, Saito, Masaya, and Saito, Masaru 3,515,326.

Saito, Masaya: See—
Saito, Tadashi, Saito, Masaya, and Saito, Masaru 3,515,326.

Saito, Tadashi, Saito, Masaya, and Saito, Masaru, 1/12 to Saito, Hachiro. Apparatus for cutting of steel bars. 3,515,326, Cl. 225-96.5.

Sakaguchi, Hiroshi: See—
Miwa, Teruo, Shibata, Zenzaburo, Araki, Hiroaki, Tanaka, Tadamoto, and Sakaguchi, Hiroshi 3,515,697.

Samuels, Ronald L., to TRW Inc. Radiant energy driven orientation system. 3,515,594, Cl. 136-89.

Sanada, Sukeyoshi. Hair clips. 3,515,153, Cl. 132-48.

Sanchez, Candido I.: See—
Sanchez, Venancio, and Sanchez, Candido I. 3,516,058.

Sanchez, Venancio, and Sanchez, Candido I. Dual warning indicator device. 3,516,058, Cl. 340-52.

Sanders Associates, Inc.: See—
Hayner, Paul F., and Eldridge, David George 3,515,346.

Holmes, John F., 3,515,084.

Sanders, Richard P.: See—
Arkin, David M., Mattedi, Bruno A., Sanders, Richard P., and Sullivan, Joseph F. 3,516,063.

Sandoz A.G.: See—
Entschel, Roland, Mueller, Curt, and Wehrli, Walter 3,515,733.

Toth, Istvan, and Frey, Walter 3,515,729.

Sandoz Ltd.: See—
Entschel, Roland, Mueller, Curt, and Wehrli, Walter 3,515,733.

Toth, Istvan, and Frey, Walter 3,515,729.

Sanford, Herbert Brooks, Jr.: See—
O'Connell, William Grogan, Sanford, Herbert Brooks, Jr., and Edwards, Bernard S. 3,515,780.

Sanford, Robert A., to General Electric Company. Current collectors for cells utilizing hot acid electrolytes. 3,515,595, Cl. 136-120.

Sansom, Jack E., to Caterpillar Tractor Company. Spray closet quench. 3,515,601, Cl. 148-147.

Santomieri, Louis S., to Deseret Pharmaceutical Company. Intravenous catheter unit with inserter means for sequential feeding of catheter. 3,515,137, Cl. 128-214.4.

Sasse, Klaus: See—
Siegel, Edgar, and Sasse, Klaus 3,515,713.

Satake, Toshihiko. Circulating-grain drying apparatus. 3,514,861, Cl. 34-33.

Sato, Hisao. Leather disintegrating apparatus. 3,515,358, Cl. 241-280.

Sato, Katsuo: See—
Huang, Ching Yun, Sato, Katsuo, and Ikegami, Masuya 3,515,656.

Sato, Tadashige, and Tsutsumi, Shinya, to Matsushita Electric Industrial Co., Ltd. Rotary toaster. 3,515,054, Cl. 99-335.

Satterwhite, William A.: See—
Winter, Ernest A., Satterwhite, William A., and Meek, Richard L. 3,515,510.

Savage, John E.: See—
Fracassi, Renato D., and Savage, John E. 3,515,805.

Sawada, Ryoka: See—
Kaneko, Yoichi, Sawada, Ryoka, Iida, Shinya, and Kawaguchi, Kazuo 3,516,017.

Saxmark, Olov Pontus, to AB Industrifadlar. Buckles for safety belts. 3,514,821, Cl. 24-230.

Scandia Packaging Machinery Company: See—
Leszczynski, Martin E. 3,515,266.

Schacht, Eckhard: See—
Muhlberg, Heinz-Joachim, Schacht, Eckhard, and Brach, Josef 3,515,611.

Schaffer, Karl, to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft. Apparatus for registering and adhering wrap-around plates to carrier shims. 3,515,617, Cl. 156-388.

Schaller, Robert L., and Towne, Donald L., to Sundstrand-Engelberg, Inc. Bar feeding apparatus. 3,515,289, Cl. 214-1.

Schallus, Erich: See—
Sennewald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.

Schampers, Paulus Philippus Maria: See—
DeHaan, Edward Fokko, and Schampers, Paulus Philippus Maria 3,515,927.

Schaper, Helmut: See—
Matusch, Siegfried, Backofen, Hans-Dieter, and Schaper, Helmut 3,515,009.

Scheingold, William, and Rossman, Donald, to Elco Corporation. Wire-formed contact. 3,516,048, Cl. 339-221.

Schenck, William H.: See—
Merrill, Neal W., and Schenck, William H. 3,514,991.

Schenkel, Hans, to Durand & Huguenin A.G. Stable preparation for the production of prints on an oxide film artificially produced on aluminum. 3,515,598, Cl. 148-6.1.

Scheu, Allyn B., and Stupak, Joseph J., Jr., to Scheu Manufacturing Company. Pipeline conversion device for field heaters. 3,515,121, Cl. 126-59.5.

Scheu Manufacturing Company: See—
Scheu, Allyn B., and Stupak, Joseph J., Jr., 3,515,121.

Schier, Robert W.: See—
Furtak, Ronald T., and Schier, Robert W. 3,515,319.

Schiffers, Josef, to Schloemann Aktiengesellschaft. Shear blades for cutting metal sheets or plates. 3,515,023, Cl. 83-698.

Schilling, Ronald B., and Dobin, Charlotte, to RCA Corporation. Adaptive diode having mobile doping impurities. 3,515,953, Cl. 317-234.

Schindler, Walter, and Dietrich, Henri, to Geigy Chemical Corporation. Compositions and methods for treating endogenous depression with 3-chloro-5-(γ -dimethylamino-propyl)-iminodibenzyl. 3,515,785, Cl. 424-244.

Schlesinger, Hymen: See—
Chambers, Edgar M., 3,515,090.

Schlitz, Jos., Brewing Company: See—
Bayne, Peter D., 3,515,560.

Schloemann Aktiengesellschaft: See—
Groos, Horst-Hans 3,514,987.

Habscheid, Peter, and Robra, Helmut 3,514,986.

Schiffers, Josef 3,515,023.

Schlosser, Wolfgang O., to Bell Telephone Laboratories, Incorporated. Power combining circuit for a plurality of microwave generators. 3,516,008, Cl. 331-56.

Schmid, Hermann, to General Electric Company. Digital filtering of analog signals. 3,515,859, Cl. 235-150.5.

Schmidt, Ferenc J., to General Electric Company. Electroforming assembly for producing complexly shaped articles. 3,515,662, Cl. 204-281.

Schmidt, Marvin F.: See—
Schumacher, Howard E., Richens, Jack, and Schmidt, Marvin F. 3,514,952.

Schneider, Alfred: See—
Auzins, Raimunds, Sigman, Earl H., and Schneider, Alfred 3,515,086.

Schneider, John L. Carrier for motorcycles. 3,515,322, Cl. 224-32.

Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft: See—
Schaffer, Karl 3,515,617.

Schoerner, Roger J., to Southwire Company. Insulated telephone cable. 3,515,796, Cl. 174-113.

Schroder, Gunter, and Fink, Herbert, to Rohm & Haas G.m.b.H. Preparation of methacrylic acid. 3,515,750, Cl. 260-526.

Schuh, Frank J., to Atlantic Richfield Company. High lift mud hopper. 3,515,156, Cl. 137-13.

Schulte, Harry J., Jr.: See—
Rosenberg, Robert, and Schulte, Harry J., Jr. 3,515,887.

Schumacher, Howard E., Richens, Jack, and Schmidt, Marvin F., to United States of America, Air Force. Variable bypass turbofan engine. 3,514,952, Cl. 60-225.

Schutz, Manfred, to Bolkow Gesellschaft mit beschränkter Haftung. Liquid fuel rocket engine. 3,515,040, Cl. 60-39.74.

Schwartz, Bernard: See—
LaRocca, Clement, and Schwartz, Bernard 3,515,267.

Schwartzberg, John W., and Blum, Bernard, to Leeds & Northrup Company. Correction entry circuit. 3,515,343, Cl. 235-151.3.

Schwarz, Josef: See—
Kuhnle, Ernst, and Schwarz, Josef 3,515,231.

Schwent, Glennon V.: See—
Fredlake, John J., Keck, Milton F., and Schwent, Glennon V. 3,514,949.

Schwitzgebel, Ralph K. Automobile camera systems. 3,515,472, Cl. 352-132.

Sciame, Tony, to Patent Development Corporation. Hot stamping die having insulated surfaces adjacent the die faces. 3,515,059, Cl. 101-31.

Scientific Incineration Devices, Inc.: See—
Maitilasso, Anthony J., 3,515,078.

Scott, John E.: See—
Sacks, Stephen J., and Scott, John E. 3,516,084.

Scott, Paul R., and Christensen, Richard E., to Shell Oil Company. Control of gypsum deposits from blended water rich in gypsum. 3,515,211, Cl. 166-244.

Scott, Paul R., and Christensen, Richard E., to Shell Oil Company. Fluid recovery from underground formations using supersaturated gypsum solutions. 3,515,215, Cl. 166-274.

Scott, Sidney R., and Light, Glen W. Drafting tool. 3,515,065, Cl. 101-368.

Scovill, Henry E. D.: See—
Bobeck, Andrew H., Della Torre, Edward, and Scovill, Henry E. D. 3,516,077.

Scovill Manufacturing Company: See—
Green, Derek Bernard 3,515,316.

Scribner, Richard M., to Du Pont de Nemours, E. I., and Company. Esters of testosterone and selected derivatives thereof with bicyclo[2.2.2]octane-1-and-octene-1-carboxylic acid. 3,515,720, Cl. 260-239.55.

Seaberg, David H., to Case, J. I., Company. Hydraulic cylinder control for bulldozer. 3,515,224, Cl. 172-809.

Seaborn, Paul E., to FMC Corporation. Method for detecting object in translucent substance and device therefor. 3,515,273, Cl. 209-111.7.

Sealot, Inc.: See—
Stevens, Justus Bickford 3,515,394.

Seay, Perry A., to Dynamics Corporation of America. Method and apparatus for controlling the speed of a moving body. 3,515,867, Cl. 246-182.

Sedlak, Steve, and Mavromatis, Albert, said Mavromatis assors. to said Sedlak. Composite flexible material containing a high proportion of filler particles. 3,515,625, Cl. 161-160.

Segar, William R., to Westinghouse Electric Corporation. Axle suspension system for transit vehicles. 3,515,405, Cl. 280-113.

Sekiguchi, Hideto, Shimoda, Keitaro, and Takeya, Kenji, to Japan Exlan Company Limited. Acrylic composite fibers having irreversible three dimensional coil crimps. 3,515,627, Cl. 161-173.

Sellers, Jack. Educational device. 3,514,876, Cl. 35-75.

Semikron Gesellschaft für Gleichrichterbau und: See—
Butenschon, Claus 3,515,955.

Semmelink, Adelbert, to Continental Can Company, Inc. Low frequency magnetostrictive flexural transducer. 3,515,965, Cl. 318-118.

Sengoku, Tomonori: See—
Izumi, Hiroshi, Sengoku, Tomonori, Igarashi, Sumio, and Kamio, Kosaku 3,515,589.

Sennewald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar, to Knapsack Aktiengesellschaft. Apparatus for electric arc-cracking of hydrocarbons. 3,515,519, Cl. 23-284.

Sentralenstitutt for Industriell Forskning: See—
Bordalen, Knut, and Risberg, Eilif 3,515,654.

Senyo Kogyo Kabushiki Kaisha: See—
Yamada, Saburo 3,515,253.

Seo, Kiyokazu: See—
Sugiura, Koichi, Ohta, Seizho, and Seo, Kiyokazu 3,515,434.

Servoflo Corporation: See—
Dunnous, Jack 3,515,164.

Setele, William O.: See—
Hoffman, George J., Setele, William O., and Law, Lester E. 3,514,804.

Shah, Indravadan S., to Chemical Construction Corporation. Process for treatment of pulping waste liquor. 3,515,200, Cl. 159-47.

Shanta, Peter L.: See—
Richards, John P., and Shanta, Peter L. 3,515,711.

Shaver, Paul J.: See—
Yu, Se Puan, Shaver, Paul J., and Tantraporn, Wirojana 3,516,018.

Shaw, John Leonard. Probe and test chamber for moisture sensing device. 3,514,994, Cl. 73-76.

Shawhan, Elbert N., to Great Canadian Oil Sands Limited. Stream analyzer for oil-in-water emulsions with compensation for temperature changes and for water conductivity changes. 3,515,988, Cl. 324-61.

Shaw-Walker Company, The: See—
King, Jack C., 3,515,841.

Shay, Edward Griffin: See—
Adams, Phillip, Shay, Edward Griffin, and Petrocci, Alphonso N., 3,515,671.

Shell Oil Company: See—
Arabian, Karekin G., 3,515,691.
Dickson, Alexander F., Coombe, John G. B., and West, Francis G., 3,515,182.
Finch, Harry D., 3,515,214.
Gies, Robert M., 3,515,216.
Luther, William B., and Martinson, Donald L., 3,515,528.
Prats, Michael, 3,515,213.
Scott, Paul R., and Christensen, Richard E., 3,515,211.
Scott, Paul R., and Christensen, Richard E., 3,515,215.
Simpson, Samuel W., 3,514,993.
Smith, Noyes D., Jr., and Vogel, Charles B., 3,515,237.
van Eek, Wouter H., 3,515,179.

Shepherd, Thomas H., and Gould, Francis E., to National Patent Development Corporation. Non-fogging transparent material. 3,515,579, Cl. 117-124.

Sherman, Louis M.: See—
Cutler, Milton, Carlson, Kenneth G., and Sherman, Louis M., 3,515,070.

Sherman, Robert M. Aquarium assembly. 3,515,097, Cl. 119-5.

Sherman, Stanley Allen, and Delany, Edward Bernard, to Perkin-Elmer Corporation. The Mass spectrometer exponential electromagnetic scanning arrangement providing for automatic discharge of the scanning magnet coil. 3,515,869, Cl. 250-41.9

Shibata, Zenzaburo: See—
Miwa, Tetsuo, Shibata, Zenzaburo, Araki, Hiroaki, Tanaka, Tadamoto, and Sakaguchi, Hiroshi 3,515,697.

Shiflet, William F.: See—
Knuth, William H., and Shiflet, William F., 3,515,238.

Shifrin, Gordon A.: See—
Bower, Robert W., and Shifrin, Gordon A., 3,514,844.

Shimoda, Keitaro: See—
Sekiguchi, Hideto, Shimoda, Keitaro, and Takeya, Kenji 3,515,627.

Shimomura, Hiroshi: See—
Kusuda, Zenji, and Shimomura, Hiroshi 3,514,966.

Shorr, Norman, and Willems, Hubertus W. V., to PPG Industries, Inc. High temperature traction rolls. 3,515,531, Cl. 65-253.

Shuttleworth, Peter, to Mastabar Mining Equipment Company Limited. Mine roof supports. 3,514,961, Cl. 61-45.

Shyam, Megha: See—
Kroemer, Herbert, and Shyam, Megha 3,516,019.

Sibert, John W., to Ethyl Corporation. Organic compounds and processes. 3,515,757, Cl. 260-604.

Sidles, James, to Goodrich, B. F., Company, The. Chopper. 3,515,618, Cl. 156-405.

Siebart, William R.: See—
Blackley, William D., Siegart, William R., and Chafetz, Harry 3,515,582.

Siegel, Edgar, and Sasse, Klaus, to Farbenfabriken Bayer Aktiengesellschaft. Reactive dyestuffs containing 2-chlorooxazole, 2-chlorothiazole or 2-chlorobenzimidazole rings. 3,515,713, Cl. 260-146.

Siegel, Herbert: See—
Hackenberg, Walter, and Siegel, Herbert 3,515,812.

Siemens Aktiengesellschaft: See—
Stein, Karl-Ulrich, 3,516,076.

Siems, Edward J. Motorized spreader apparatus. 3,515,313, Cl. 222-177.

Sierra Electric Corporation: See—
Gaines, Jack H., and Bourhenne, Francis K., 3,516,045.

Sievert, James A., to Minnesota Mining and Manufacturing Company. Elastic cover and removable core assembly. 3,515,798, Cl. 174-135.

Sigman, Earl H.: See—
Auzins, Raimunds, Sigman, Earl H., and Schneider, Alfred 3,515,086.

Silverman, Ralph H. Denture securing apparatus. 3,514,858, Cl. 32-2.

Simon, Henry, Limited: See—
Johnson, Frederick Paul, 3,515,056.

Simpson, Samuel W., to Shell Oil Company. Apparatus and method for automatic crystal point detection. 3,514,993, Cl. 73-17.

Sinar AG Schaffhausen: See—
Koch, Carl, 3,515,048.

Sinclair Research, Inc.: See—
Hoffman, William D., and Yoo, Jin Sun, 3,515,761.

Sindel, Loyd Curtis: See—
Hill, Fredrick L., and Sindel, Loyd Curtis 3,515,290.

Singer Company, The: See—
Frick, David F., 3,515,341.

Singer-General Precision, Inc.: See—
Boerner, Donald R., 3,515,828.

Sistrunk, Thomas O.: See—
Cook, Shirl E., and Sistrunk, Thomas O. 3,515,739.

Sjodin, Einar, to Munck International A/S. Arrangement in or relating to vacuum lifter. 3,515,424, Cl. 294-64.

Skarbo, Roald R., to Kennecott Copper Corporation. Complex sulfites of copper and iron and the method of preparing them. 3,515,512, Cl. 23-129.

Skau, Evald L.: See—
Mod, Robert R., Magne, Frank C., and Skau, Evald L. 3,515,754.

Slaughter, Gerald M.: See—
Canonic, Domenic A., Bryson, Lloyd G., and Slaughter, Gerald M. 3,515,545.

Slechts, John S., to United States of America, Army. Regenerative frequency modulation detector with voltage-controlled reactance controlled by output. 3,516,000, Cl. 329-140.

Sledge, Jesse Herbert, and Szybalski, Carl, to Sutliff Tobacco Company. Machine and method for making cigarettes. 3,515,147, Cl. 131-29.

Sloan Instruments Corporation: See—
Riegert, Richard P., 3,515,171.

Slonaker, David Frank: See—
Combs, Robert Leonard, Slonaker, David Frank, and Wooten, Willis Carl, Jr. 3,515,775.

Smith, A. O., Corporation: See—
Duncan, Angelo N., 3,515,123.

Smith, Dallas F., to General Electric Company. Coil-developing apparatus. 3,514,837, Cl. 29-205.

Smith, Donald O., to Massachusetts Institute of Technology. Magneto-optical memory sensing using thermal modulation. 3,516,080, Cl. 340-174.1

Smith, Dresden G., to United States of America, Navy, mesne. Shock indicator for shipping container. 3,515,091, Cl. 116-114.

Smith, Edwin K., and Brundage, Clinton F., to Miehle-Goss-Dexter, Incorporated. Apparatus and method for handling books and the like. 3,515,257, Cl. 198-102.

Smith, Everett K. Partition wall installation. 3,514,912, Cl. 52-204.

Smith, George E.P., Jr.: See—
Oberster, Arthur E., Smith, George E.P., Jr., and Farhat, Kelly 3,515,751.

Smith, George H., to Minnesota Mining and Manufacturing Company. Light-sensitive imaging sheet and method of using. 3,515,552, Cl. 96-35.1

Smith, Harvey A., to United Aircraft Corporation. Emergency space-suit helmet. 3,514,785, Cl. 2-2.1

Smith, Irving. Containers with decorative top closures. 3,515,332, Cl. 229-38.

Smith, James R., to Baker-Roos, Inc. Safety device for a winch. 3,515,247, Cl. 188-82.1

Smith, John Alec Sydney, and Tong, David Arthur, to Decca Limited. Super-regenerative resonance spectrometers. 3,515,981, Cl. 324-0.5

Smith, Noyes D., Jr., and Vogel, Charles B., to Shell Oil Company. Method for obtaining acoustical hologram of the interior wall of a tubular member. 3,515,237, Cl. 181-0.5

Smith, Roy E., and Olson, Robert E., to Packard Instrument Company, Inc. Method and apparatus for positioning a radioactive standard in a radioactive sample counting apparatus. 3,515,876, Cl. 250-106.

Smith, Roy R., Jr., to Smith R.P.M. Corporation. Controlled web length in-feed for rotary printing press. 3,515,328, Cl. 226-172.

Smith R.P.M. Corporation: See—
Smith, Roy R., Jr., 3,515,328.

Smoyer, Claude B.: See—
Baxter, Duane W., Heidrich, Paul F., Massing, Jo M., and Smoyer, Claude B. 3,515,877.

Smythe, George Edward, to U.S. Philips Corporation, mesne. Logic circuit arrangements. 3,515,900, Cl. 307-215.

Snazelle, Ernest E. Gregg. Motion picture console. 3,515,471, Cl. 352-131.

Snider, Gerald L., to Lear Siegler, Inc. Internally gimbaled attitude indicator. 3,516,055, Cl. 340-27.

Sobon, Leon E.: See—
Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzky, Melvin, and Wickersheim, Kenneth A. 3,515,675.

Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine Courbevoie: See—
Coustau, Robert, 3,514,996.

Societe Anonyme Poclain: See—
Guinot, Gabriel L., 3,515,298.

Societe Cattin & Cie S.A.: See—
Cattin, Emile Cesaire, 3,514,939.

Societe d'Optique, Precision Electronique et Mecanique: See—
Baluteau, Jean-Michel, and Rodier, Christian, 3,515,460.

Societe de Fabrication d'Instruments de Mesure (S.F.I.M.): See—
Debras, Robert, 3,515,835.
Donjon, Jacques, 3,516,006.

Societe des Accumulateurs Fixes et de Traction (Societe Anonyme): See—
Doll, Jean Henri, and Druesne, Henri Desire, 3,515,596.

Societe des Automobiles SIMCA: See—
Cauvin, Andre, 3,515,226.

Soeters, Raymond A., to Holley Carburetor Company. Ignition system. 3,515,105, Cl. 123-117.

Solheim, Jinn O. Grass clog clearing device for rotary mowers. 3,514,931, Cl. 56-255.

Solidstate Controls, Inc.: See—
Bratton, David R., 3,515,895.
Swing, Dennis M., Drake, Lloyd A., and Bates, Harlan W., 3,515,894.
Swing, Dennis M., and Drake, Lloyd A., 3,515,896.

Solow, Sidney P., to Consolidated Film Industries. Cue signal for motion picture film. 3,515,474, Cl. 352-236.

Somer, Hannu: See—
Rosenblad, Curt Fredrick, Somer, Vaino, deceased, and Somer, Hannu, administrator 3,515,631.

Somer, Jan C., to Nederlandse Organisatie voor Toegestapte Natuurwetenschappelijk Onderzoek ten behoeve van de Volksgezondheid. Ultrasonic transmitter. 3,516,054, Cl. 340-15.

Somer, Vaino: See—
Rosenblad, Curt Fredrick, Somer, Vaino, deceased, and Somer, Hannu, administrator 3,515,631.

Somerville Industries Limited: See—
Atkinson, William G., 3,515,335.

Sommer, Erwin, Boehme, Klaus, and Gerlach, Klaus, to Glanzstoff AG. Method of producing a fibrous fleece base material from three types of fibers. 3,515,634, Cl. 162-146.

Sonotone Corporation: See—
De Nardi, Mario, and Knauert, William F., 3,515,821.

Soryu Mishin Seizo Kabushiki Kaisha: See—
Tomono, Koichi, Okada, Yoshimasa, and Takehama, Koichi, 3,515,083.

Soryu Sewing Machine Mfg. Co., Ltd., The: See—
Tomono, Koichi, Okada, Yoshimasa, and Takehama, Koichi, 3,515,083.

South, William H., and Dworak, Roger A., to Westinghouse Electric Corporation. Current to voltage transducer. 3,515,975, Cl. 321-2.

Southward, Leonard B., and Fougere, Maurice H. Apparatus for use in enabling immobile persons and invalids to be placed in or removed from a vehicle. 3,515,294, Cl. 214-75.

Southwire Company: See—
Schoerner, Roger J., 3,515,796.

S.p.A. Vetreria Italiana Balzaretto Modigliani: See—
Comastri, Mauro, and Wiquel, Valentino, 3,515,610.

Sparks, Charles H. Tissue grafts. 3,514,791, Cl. 3-1.

SPA-Societe Produits Antibiotici S.p.A.: See—
Ghielmetti, Giuseppe, and Trinchera, Carlo, 3,515,643.

Speedfan Corporation: See—
Boettcher, Stephen A., 3,515,115.

Sperberg, Lawrence R. Means for transferring chemical into a pneumatic tire. 3,515,181, Cl. 141-38.

Sperberg, Lawrence R. Method of improving the durability of tires. 3,515,195, Cl. 152-153.

Sperry Rand Corporation: See—
Belcourt, Francis J., and Kulp, Karl T., 3,515,995.
Goss, Jonathan, and Westlund, Dennis E., 3,516,073.
Grey, Donald M., Butler, Lee D., and Welker, Jerry W., 3,515,291.
Ponterio, Frank V., 3,515,004.
Sacks, Stephen J., and Scott, John E., 3,516,084.
Van Ginhoven, Robert M., and Nolt, Edwin B., 3,515,058.
Wagstaff, Robert A., and Waldrop, Thomas W., 3,515,010.

Spicer, William M. Retainer clips for temporary wiring. 3,515,364, Cl. 248-74.

Spiegelberg, Hans: See—
Edenhofer, Albrecht, Ramuz, Henri, and Spiegelberg, Hans 3,515,788.

Spies, George R.: See—
Haffner, Mark P., and Spies, George R. 3,515,155.

Spivey, Jack B. Waterproof light assembly. 3,515,862, Cl. 240-7.5

Spofford, Thomas G., to Thomas & Betts Corporation. Hermaphroditic disconnect terminal. 3,516,043, Cl. 339-47.

Sporman, Charles F. Vertically and rotationally adjustable seat structure. 3,515,432, Cl. 297-347.

Sprague & Henwood, Incorporated: See—
Tomaine, Thomas A., 3,515,230.

Spraker, Earl D., to Electronic Data Systems Corporation. Portable input-output terminal. 3,515,806, Cl. 179-2.

Spraker, Earl D., to Electronic Data Systems Corporation. Uniquely coded identification and enabling of a data terminal. 3,516,062, Cl. 340-152.

Springer, Robert F.: See—
Tyburski, Robert M., and Springer, Robert F. 3,515,383.

Squibb, E. R., & Sons, Inc.: See—
Bernstein, Jack, and Yale, Harry Louis, 3,515,753.
Breuer, Hermann, Hoehn, Hans, and Roesch, Egon, 3,515,787.
Fried, Josef, and Krapcho, John, 3,515,749.

St. Croix Research Company: See—
Horton, Robert R., 3,515,516.

St. Joseph Lead Company: See—
Bowman, Robert S., 3,515,686.

Staeuble, Max, and Weber, Kurt, to Ciba Limited. Vat dyestuffs containing sulfonamide groups. 3,515,732, Cl. 260-354.

Stammen, Harold A., to Crown Controls Corporation. Articulated industrial truck. 3,515,233, Cl. 180-13.

Standco Industries, Inc.: See—
Houser, James A., 3,514,799.

Stanley Works GmbH: See—
Wiesmann, Herbert-Ludwig, 3,514,979.

Stapleton, Peter L., to USM Corporation. Extensible insoles. 3,514,880, Cl. 36-44.

Starkey, James C., to PPG Industries, Inc. Electrode stem connector, electrode assembly and electrolytic cell including the same. 3,515,660, Cl. 204-250.

Starr, Matthew C.: See—
Peifer, Albert G., and Starr, Matthew C. 3,515,464.

Stastny, Edwin O.: See—
Baginski, Albert R., Okada, David T., and Stastny, Edwin O. 3,515,112.

States, Ronald Frederick, to Desoutter Brothers Limited. Rotary impact tool having torque responsive disengagement and power control. 3,515,225, Cl. 173-12.

Staudenmayer, William J.: See—
Goldman, Martin, and Staudenmayer, William J. 3,515,568.

Staudigl, Rudolf: See—
Wimmer, Helmut, Wagner, Anton, Staudigl, Rudolf, and Rudorfer, Hermann 3,515,541.

Stein, Gary, to Applied Power Industries, Inc. Power control device. 3,515,441, Cl. 303-54.

Stein, Gustav, and Stein, Margerit. Turning pendulum mechanism. 3,515,915, Cl. 310-39.

Stein, Karl-Ulrich, to Siemens Aktiengesellschaft. Memory element employing stacked magnetic layers. 3,516,076, Cl. 340-174.

Stein, Margerit: See—
Stein, Gustav, and Stein, Margerit 3,515,915.

Steinberg, Wallace H., to Johnson & Johnson. Cold capsule. 3,515,781, Cl. 424-37.

Steinbrunn, Gustav, and Fischer, Adolf, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Substituted N-phenyl carbamates. 3,515,744, Cl. 260-471.

Steinemann, Samuel, to Straumann, Dr. Ing., Reinhard, Institut AG. Mechanical oscillator including a torsion bar. 3,515,914, Cl. 310-37.

Steinitz, Robert: See—
Matheson, Wilfrid G., Steinitz, Robert, and Strock, Lester W. 3,515,852.

Stelzer, William: See—
Every, Peter, and Stelzer, William 3,515,440.

Stempel, Arthur: See—
Sternbach, Leo Henryk, and Stempel, Arthur 3,515,755.

Stempel, Arthur, and Sternbach, Leo Henryk, to Hoffmann-La Roche Inc. Process for preparing 1,4-benzodiazepin-2-ones. 3,515,756, Cl. 260-562.

Stengel, Fritz C. Tennis game set scoreboard. 3,515,092, Cl. 116-120.

Stephan, Hans-Werner: See—
Sennwald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.

Sterling Drug Inc.: See—
Clinton, Raymond O., 3,515,735.

Sternbach, Leo Henryk: See—
Field, George Francis, and Sternbach, Leo Henryk 3,515,724.
Stempel, Arthur, and Sternbach, Leo Henryk 3,515,756.

Sternbach, Leo Henryk, and Stempel, Arthur, to Hoffmann-La Roche Inc. Lower alkanoyl amido benzophenones. 3,515,755, Cl. 260-562.

Stetson, Earl W., to General Electric Company. Inclined arc chamber for a spark gap. 3,515,947, Cl. 317-61.

Stevens, Daniel D. Immobilizing shoulder support. 3,515,131, Cl. 128-94.

Stevens, Justus Bickford, to Sealol, Inc. Vibration damping means for resilient convoluted members. 3,515,394, Cl. 277-88.

Stevenson, Billy E., and Rumsey, Thomas R., to Royal Industries, Inc., mesne. Motor vehicle braking apparatus. 3,515,438, Cl. 303-9.

Stewart, Dale A. Eyeglass bridge attachment for relieving nose pad pressure. 3,515,467, Cl. 351-130.

Stich, Frederick A., to Automatic Electric Laboratories, Inc. DC to DC power supply with isolated control circuit. 3,515,974, Cl. 321-2.

Stifter, John J. Orthodontic headstraps. 3,514,860, Cl. 32-14.

Stobbe, Paul J. Educational device for individual student use. 3,514,873, Cl. 35-31.

Stolarz, Edward M.: See—
D'Elia, Anthony N., and Stolarz, Edward M. 3,515,851.

Stolle Corporation, The: See—
Beck, Edward G., Jr., 3,514,834.

Stone, Alan J., to Murray Company of Texas, Inc., mesne. Conveyor bearing. 3,515,445, Cl. 308-20.

Stopper, Herbert, to Telefunken Patentverwertungsgesellschaft m.b.H. Electronic circuits utilizing emitter-coupled transistors. 3,515,904, Cl. 307-290.

Storms, Phillip W.: See—
Olson, Danford H., and Storms, Phillip W. 3,515,748.

Strahan, Thomas W.: See—
Tomita, Jun, and Strahan, Thomas W. 3,515,578.

Straley, James M., Fisher, John G., and Wallace, David J., to Eastman Kodak Company. Quaternized pyrazoloylozo dyes. 3,515,715, Cl. 260-163.

Straley, James M., and Wallace, David J., to Eastman Kodak Company. Polypropylene dyed with metal complexes of azo compounds. 3,515,506, Cl. 8-42.

Straumann, Dr. Ing., Reinhard, Institut AG.: See—
Steinemann, Samuel, 3,515,914.

Strauss, Ludwig, to Kayser-Roth Corporation. Brassieres. 3,515,140, Cl. 128-425.

Strie, Lothar: See—
Sennwald, Kurt, Bender, Ludwig, Gehrman, Klaus, Kallrath, Heinrich, Peantek, Gunter, Schallus, Erich, Stephan, Hans-Werner, and Strie, Lothar 3,515,519.

Strigrow, Lewis G. Load monitor module. 3,515,903, Cl. 307-252.

Strock, Lester W.: See—
Matheson, Wilfrid G., Steinitz, Robert, and Strock, Lester W. 3,515,852.
Strohl, Raymond A. Longhand-writing guide. 3,514,874, Cl. 35-37.
Strom, John Rutledge, to Sweco, Inc. Vertical dam. 3,514,907, Cl. 51-163.
Stuart, Robert B., to Penn Yan Boats, Incorporated. Planing boat. 3,515,087, Cl. 114-66.5
Studebaker, James B., Zagar, Irvin F., and Gobble, Lawrence T., to Wilfley, A. R., and Sons, Inc. Centrifugal pump having hydraulic seal means. 3,515,497, Cl. 415-112.
Stupak, Joseph J., Jr.: See—
Scheu, Allyn B., and Stupak, Joseph J., Jr. 3,515,121.
Styles, Leonard Walter, to Gestetner Limited. Releasable clamp for clamping a member on a plain sided polygonal section bar. 3,515,062, Cl. 101-118.
Suess, Jack E.: See—
Krook, Edwin J., and Suess, Jack E. 3,514,983.
Sugiura, Koichi, Ohta, Seizho, and Seo, Kiyokazu, to Toyota Jidosha Kogyo Kabushiki Kaisha. Seat arrangement. 3,515,434, Cl. 297-396.
Sugiyama, Akira, Tanaka, Tadami, Matsumoto, Rimpey, and Riko, Yasuhiro, to Matsushita Electric Industrial Co., Ltd. Microphone device. 3,515,240, Cl. 181-31.
Sugiyama, Hiroshi, Otsuka, Hideo, and Yamamoto, Masakazu, to Sumitomo Chemical Company, Ltd. Water-soluble monoazo dyes. 3,515,716, Cl. 260-200.
Sullivan, Albert Manley, Jr.: See—
Michaels, Leonard A., and Sullivan, Albert Manley, Jr. 3,515,949.
Sullivan, Joseph F.: See—
Arkin, David M., Mattedi, Bruno A., Sanders, Richard P., and Sullivan, Joseph F. 3,516,063.
Sullivan, Thomas Milo: See—
Haight, Robert Eugene, and Sullivan, Thomas Milo 3,515,246.
Sumitomo Bakelite Company Limited: See—
Okada, Yoichi, Watanabe, Tsutomu, and Hasegawa, Akemi, 3,515,615.
Sumitomo Chemical Company, Ltd.: See—
Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei, 3,515,730.
Sugiyama, Hiroshi, Otsuka, Hideo, and Yamamoto, Masakazu, 3,515,716.
Summers, Otto Murray, to Lincoln Valley Minerals Incorporated. Method and apparatus for recovering solids dissolved or suspended in a liquid solvent. 3,515,199, Cl. 159-23.
Sun Oil Company: See—
Cherry, Wesley R., 3,515,526.
Sunbeam Corporation: See—
Dokos, Sophocles J., 3,515,856.
Sunbeam Plastics Corporation: See—
Gach, Peter P., 3,515,307.
Sundstrand-Engelberg, Inc.: See—
Schaller, Robert L., and Towne, Donald L., 3,515,289.
Susquehanna Corporation, The: See—
Wallace, Jacob L., Jr., 3,516,072.
Sutliff Tobacco Company: See—
Sledge, Jesse Herbert, and Szybalski, Carl, 3,515,147.
Suzuki, Masatoshi: See—
Okamoto, Kiyokazu, Yoshioka, Masahiro, Ando, Takeo, and Suzuki, Masatoshi 3,515,964.
Suzuki, Norio: See—
Kohashi, Tadao, Tanaka, Kazunobu, and Suzuki, Norio 3,515,890.
Suzuki, Takashi, to Matsushita Electric Industrial Co., Ltd. Heat-sensitive sheet and method of thermographic reproduction using the same. 3,515,570, Cl. 117-25.
Svenska Cellulosa Aktiebolaget: See—
Bergholm, Carl Arne, 3,515,632.
Svenson, Ernest J. Hydraulic and electrical power unit. 3,515,167, Cl. 137-565.
Swales, Barton Lee: See—
Youngberg, Charles Harold, Larson, Dennis Luverne, and Swales, Barton Lee 3,515,223.
Sweco, Inc.: See—
Strom, John Rutledge, 3,514,907.
Swilling, Carl B. Line drag. 3,515,425, Cl. 294-66.
Swing, Dennis M., and Drake, Lloyd A., to Solidstate Controls, Inc. Standby switching system. 3,515,896, Cl. 307-64.
Swing, Dennis M., Drake, Lloyd A., and Bates, Harlan W., to Solidstate Controls, Inc. Standby control system. 3,515,894, Cl. 307-64.
Swingline Inc.: See—
Bader, Izaak Walton, 3,515,271.
Sybron Corporation: See—
Kingsbury, Albert W., Miller, Durando, and Alexander, Gerald, 3,515,277.
Sykes, Ronald, to Yorkshire Dyeware & Chemical Co. Ltd., The. Preparation of additives for electro-plating baths. 3,515,653, Cl. 204-54.
Sylvania Electric Products, Inc.: See—
Hickok, William Kelsey, 3,515,801.
Matheson, Wilfrid G., Steinitz, Robert, and Strock, Lester W., 3,515,852.
Symons, Robert C., to Timberjack Machines Limited. Logging vehicle. 3,515,297, Cl. 214-85.5

Szabo, John, to Electrohome Limited. Electronic latching networks. 3,515,907, Cl. 307-286.
Szybalski, Carl: See—
Sledge, Jesse Herbert, and Szybalski, Carl 3,515,147.
Tabor, Paul C., to Meteor Research Limited. Rotary seat back adjuster. 3,515,433, Cl. 297-374.
Tabor, William J., to Bell Telephone Laboratories, Incorporated. Optareadout implementation. 3,515,456, Cl. 350-151.
Tada, Fujio: See—
Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio 3,515,538.
Taft, David D.: See—
Heidecker, Stephen C., Taft, David D., and Wallman, Walter A. 3,515,550.
Taggart, Robert, Inc.: See—
Taggart, Robert, 3,515,089.
Taggart, Robert, to Taggart, Robert, Inc. Rudder. 3,515,089, Cl. 114-162.
Takahashi, Yasuo: See—
Kazamaki, Tomokazu, and Takahashi, Yasuo 3,515,462.
Takakita, Ko: See—
Takakita, Shinjiro, and Takakita, Ko 3,514,830.
Takakita, Shinjiro, and Takakita, Ko. Method for manufacturing a coating layer to protect the working surfaces of machinery. 3,514,830, Cl. 29-148.3
Takakuwa, Shohei, to Ushio Electric Inc. Pinch seal portion of discharge lamps or the like. 3,515,931, Cl. 313-318.
Takano, Kunro: See—
Morikawa, Yonekichi, Takano, Kunro, and 5 Half spaing escape-ment 3,515,188.
Takayanagi, Shigetoshi: See—
Inoue, Morio, Kano, Gota, Matsuno, Jinichi, and Takayanagi, Shigetoshi 3,515,583.
Takazawa, Yoshio: See—
Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio 3,515,538.
Takeda Chemical Industries, Ltd.: See—
Mima, Hiroyuki, and Hisada, Seizo, 3,515,642.
Tsurushima, Masaaki, and Yatani, Kozo, 3,515,743.
Takehama, Koichi: See—
Tomono, Koichi, Okada, Yoshimasa, and Takehama, Koichi 3,515,083.
Takeya, Kenji: See—
Sekiguchi, Hideto, Shimoda, Keitaro, and Takeya, Kenji 3,515,627.
Talcott, James, Inc.: See—
Ringe, Carl H., 3,515,066.
Vlier, Blaine Hempstead, 3,515,064.
Tamny, Sim, to Wayne Manufacturing Company. Street cleaner suction seal. 3,515,168, Cl. 137-565.
Tanabe, Kenichi: See—
Tsuiji, Takaakira, and Tanabe, Kenichi 3,515,696.
Tanaka, Kazunobu: See—
Kohashi, Tadao, Tanaka, Kazunobu, and Suzuki, Norio 3,515,890.
Tanaka, Masaru: See—
Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi 3,516,034.
Tanaka, Tadami: See—
Sugiyama, Akira, Tanaka, Tadami, Matsumoto, Rimpey, and Riko, Yasuhiro 3,515,240.
Tanaka, Tadamoto: See—
Miwa, Teruo, Shibata, Zenzaburo, Araki, Hiroaki, Tanaka, Tadamoto, and Sakaguchi, Hiroshi 3,515,697.
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiko, and Noguchi, Hiroaki. Method of surface treating polymer film to produce paper-like article. 3,515,567, Cl. 117-11.
Tantraporn, Wirojana: See—
Yu, Se Puan, Shaver, Paul J., and Tantraporn, Wirojana 3,516,018.
Taormina, Samuel: See—
Kersnar, Paul W., and Taormina, Samuel 3,515,673.
Tarquinio, Anthony V.: See—
Colarossi, Lawrence A., Reiling, Gebhart J., Jr., Tarquinio, Anthony V., and James, Thomas S. 3,515,844.
Tasker Industries: See—
Myers, John L., 3,515,933.
Tateisi Electronics Co.: See—
Akamatsu, Hiroo, and Morita, Takanobu, 3,515,883.
Tawara, Yoshio, and Iga, Atsushi, to Matsushita Electric Industrial Co., Ltd. Variable reluctance-type pickup utilizing anisotropic pole pieces. 3,515,817, Cl. 179-100.41
Taxi Advertising Company: See—
Jay, Richard C., 3,514,885.
Taylor, Cyril. Spring clip assemblies. 3,515,284, Cl. 211-60.
Taylor, Daniel G., to Honeywell Inc. Inc. Angular rate sensor vibrating wire. 3,515,003, Cl. 73-505.
Taylor, Douglas H., 50% to Potrafka, John R. Volumetric control device for positive pressure breathing machines. 3,515,134, Cl. 128-145.6
Teasdale, Thomas S.: See—
Allen, Joseph C., Teasdale, Thomas S., and Cady, George C. 3,515,212.

Technical Investment Corporation: See—
Nevarez, (Ocampo) Ricardo J., 3,514,909.
Teczotky, Melvin: See—
Byler, William H., Mattia, James J., Ring, Stanley A., Sobon, Leon E., Tecotzy, Melvin, and Wickersheim, Kenneth A. 3,515,675.
Teledyne, Inc.: See—
Benson, James M., 3,514,998.
Gwathmey, Edward S., Davidson, James N., and Ziegler, John M., 3,514,997.
Teledyne Industries-Geotech Division: See—
Brown, Robert F., Jr., 3,516,005.
Telefunken Patentverwertungsgesellschaft m.b.H.: See—
Stopper, Herbert, 3,515,904.
Tempered Spring Company Limited, The: See—
Waters, John Murray, Lucas, John, and Davies, Gwyn Tudor, 3,515,347.
Tenneco Oil Company: See—
Gray, Forest D., 3,515,209.
Tennessee Corporation: See—
Winter, Ernest A., Satterwhite, William A., and Meek, Richard L., 3,515,510.
Tennessee Valley Authority: See—
Livingston, Owen W., 3,515,534.
Tepper, Sidney: See—
Bonanno, Joseph L., Tepper, Sidney, and Boydman, Hyman 3,514,899.
Terwilliger, Al G. Protective garment. 3,514,786, Cl. 2-2.5
Texaco Inc.: See—
Allen, Joseph C., Teasdale, Thomas S., and Cady, George C., 3,515,212.
Blackley, William D., Siegert, William R., and Chafetz, Harry, 3,515,582.
Texas Instruments, Incorporated: See—
Landron, Rafael, Jr., 3,514,849.
Lange, Julius, 3,516,024.
Niemeyer, James M., and Helms, John D., 3,515,842.
Textrom, Ralph. Torsion cam fastener. 3,515,027, Cl. 85-32.
Texumseh Products Company: See—
Farr, James B., 3,515,109.
Tezuka, Kunitoshi. Device for refuse disposal by compression. 3,514,921, Cl. 53-124.
Theer, Anton, and Zanner, Johann, to Agfa-Gevaert Aktien-gesellschaft. Movie camera. 3,515,473, Cl. 352-224.
Thelemaque, Louis E.: See—
Keefer, Frank D., Thelemaque, Louis E., and Walsh, Henry J. 3,515,810.
Thermo Electron Corporation: See—
Lazaridis, Lazaros J., 3,515,380.
Thiokol Chemical Corporation: See—
Herkenberg, Wolfgang, 3,515,174.
Thomas & Betts Co., The: See—
Bauknight, Paul D., and Lahrheim, Robert, 3,514,990.
Thomas & Betts Corporation: See—
Hidassy, Laszlo, 3,515,178.
Kuo, Ted L. C., 3,515,795.
Spofford, Thomas G., 3,516,043.
Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl, to Boehringer Ingelheim G.m.b.H. 1-Cyanophenoxy-2-amino-alkanes. 3,515,741, Cl. 260-465.
Thomason, Gene I., and Parillo, Edward V., to General Electric Company. Quartz to metal seal for electrical devices. 3,515,420, Cl. 287-189.365
Thompson, Elliott P. Gauge holder. 3,515,398, Cl. 279-14.
Thompson, Harold B. Microfiche retrieval unit with solenoid film filter. 3,515,886, Cl. 250-219.
Thompson, Thomas W.: See—
Baker, Joseph C., and Thompson, Thomas W. 3,515,063.
Thornhill, Alan Richard: See—
Holmes, Peter Desmond, and Thornhill, Alan Richard 3,515,514.
Throop, Gilbert D., to Westinghouse Electric Corporation. Tap changer with voltage and current responsive protective means. 3,515,980, Cl. 323-43.5
Thulin, Lars Gustav, to Aktiebolaget Gotaverken. Bow thruster. 3,515,088, Cl. 114-148.
Thurmond, Allen M. Wild life feeder. 3,515,098, Cl. 119-51.
Tibbetts, George C., to Tibbetts Industries, Inc. Magnetic translating device. 3,515,818, Cl. 179-114.
Tibbetts Industries, Inc.: See—
Tibbetts, George C., 3,515,818.
Tiers, George Van Dyke, to Minnesota Mining and Manufacturing Company. Rubbery polyperfluoroalkylene oxides and process therefor. 3,515,701, Cl. 260-78.4
Tiley, John W., to Philco-Ford Corporation, mesne. Photolithographic deposition of phosphors on faceplate of CRT using spraying of photosensitive PVA-phosphor suspension in plural layers. 3,515,553, Cl. 96-36.1
Timberjack Machines Limited: See—
Symons, Robert C., 3,515,297.
Timmerbeil, Eberhard: See—
Timmerbeil, Hans-Jochen, and Timmerbeil, Eberhard 3,515,055.
Timmerbeil, Hans-Jochen, and Timmerbeil, Eberhard, to Titan Eisenwarenfabrik GmbH. Method for applying straps to packages of compressed material. 3,515,055, Cl. 100-3.

Tipp-Ex-Fabrikation Wolfgang Dabisch: See—
Dabisch, Wolfgang, 3,515,572.
Titan Eisenwarenfabrik GmbH: See—
Timmerbeil, Hans-Jochen, and Timmerbeil, Eberhard, 3,515,055.
Toa Electric Company: See—
Imadate, Hiroshi, 3,515,884.
Tokyo Shibaura Electric Co., Ltd.: See—
Goto, Eizo, 3,515,530.
Tomaine, Thomas A., to Sprague & Henwood, Incorporated. Heavy duty soil sampler. 3,515,230, Cl. 175-242.
Tomita, Akira, to Asahi Dengyo Kabushiki Kaisha. Blower. 3,515,498, Cl. 415-208.
Tomita, Jun, and Strahan, Thomas W., to Minnesota Mining and Manufacturing Company. Pressure-sensitive-adhesive tape. 3,515,578, Cl. 117-122.
Tompno, Koichi, Okada, Yoshimasa, and Takehama, Koichi, to Soryu Mishin Seizo Kabushiki Kaisha, a/k/a Soryu Sewing Machine Mfg. Co., Ltd., The. Device for free thread passage in the sewing machine. 3,515,083, Cl. 112-232.
Tong, David Arthur: See—
Smith, John Alec Sydney, and Tong, David Arthur 3,515,981.
Tonn, Edward G., and Yang, Christen H. C., to Crown Zellerbach Corporation. Pressure sensitive adhesive coated sealable substrate, resealable package embodying same, and method of manufacture and packaging. 3,515,270, Cl. 206-56.
Topper Corporation: See—
Bonanno, Joseph L., Tepper, Sidney, and Boydman, Hyman, 3,514,899.
Top-Score Products, Inc.: See—
Landfried, Bert W., Bassett, Harold J., and Moneymaker, John R., 3,515,562.
Toth, Istvan, and Frey, Walter, to Sandoz Ltd., a/k/a Sandoz A.G. Process for the production of brominated phthalocyanines. 3,515,729, Cl. 260-314.5
Towne, Donald L.: See—
Schaller, Robert L., and Towne, Donald L. 3,515,289.
Toyo Rayon Kabushiki Kaisha: See—
Yokouchi, Rei, Ichikawa, Yoshimitsu, Izeki, Syotaro, and Fusayama, Takeo, 3,515,700.
Toyota Jidosha Kogyo Kabushiki Kaisha: See—
Inoue, Masahiko, 3,514,816.
Sugiura, Koichi, Ohta, Seizho, and Seo, Kiyokazu, 3,515,434.
Transmetrics Incorporated: See—
Brown, George J., 3,515,005.
Trash Valet, Inc.: See—
Wilkes, Thomas H., 3,515,285.
Tregilas, Edward T. Atlantic Richfield Company Alkylation improvement through alkylate recycle. 3,515,770, Cl. 260-683.48
Trinchera, Carlo: See—
Ghielmetti, Giuseppe, and Trinchera, Carlo 3,515,643.
Triplett, Lee. Hinge construction. 3,514,807, Cl. 16-158.0
True, Howard D. F., Jr.: See—
Dodge, Gerald F., III, and True, Howard D. F., Jr. 3,514,964.
Truhan, Andrew. Surgical retractor and retainer device for sutures. 3,515,129, Cl. 128-20.
Trump, John George. Dielectric-covered electrodes. 3,515,909, Cl. 310-6.
Trump, John G., to High Voltage Engineering Corporation. Dust precipitator. 3,515,939, Cl. 317-3.
TRW Inc.: See—
Burns, Eugene A., and Lubowitz, Hyman R., 3,515,699.
Heflinger, Lee O., Brooks, Robert E., and Wuerker, Ralph F., 3,515,453.
Lubowitz, Hyman R., and Burns, Eugene A., 3,515,772.
Samuels, Ronald L., 3,515,594.
Young, Leparis D., and Potocnik, Antone, 3,515,353.
Tsuiji, Takaakira, and Tanabe, Kenichi, to Kurashiki Rayon Company Limited. Polyesters from hydroxyalkoxybenzoic acids, polyols and polycarboxylic acids. 3,515,696, Cl. 260-47.
Tsuji, Jiro, to Kabushiki Kaisha Yuryo Kikakuin Kenkyusho. Jet-injection hypodermic device. 3,515,130, Cl. 128-173.
Tsunoo, Masahiko: See—
Omura, Masuo, and Tsunoo, Masahiko 3,515,039.
Tsurushima, Masaaki, and Yatani, Kozo, to Takeda Chemical Industries, Ltd. 1,2,3-Trichloro-2-cyanopropane and the method for preparing same. 3,515,743, Cl. 260-465.7
Tsutsumi, Shinya: See—
Sato, Tadashige, and Tsutsumi, Shinya 3,515,054.
Tsuzaki, Takehiro: See—
Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi 3,516,034.
Tucker, Arthur R., to Dalto Electronics Corporation. Wide angle visual display. 3,514,871, Cl. 35-12.
Tucker, John G.: See—
Etchison, John O., Jr., and Tucker, John G. 3,514,835.
Tucker, Kenneth Richard. Eccentric chuck. 3,515,397, Cl. 279-6.
Tull, Roger J., Weinstock, Leonard M., and Mulvey, Dennis M., to Merck & Co., Inc. Synthesis of arylamino methylenemalonates. 3,515,745, Cl. 260-471.
Turney, Eugene T., Jr. Apparatus to selectively remove powder from coated sheet material. 3,514,803, Cl. 15-306.
Tyburski, Robert M., and Springer, Robert F., to Farrington Electronics, Inc. Document feeding apparatus. 3,515,383, Cl. 271-26.

Tyer, Clarence C., Jr. Machine for cutting fiber glass boards to form ducts. 3,515,019, Cl. 83-5.
 Uchida, Hideo: See—
 Miyamoto, Haruo, Uchida, Hideo, Uzawa, Katsuhiko, and Ohbayashi, Tsutomu 3,515,616.
 Uchimura, Kotaro: See—
 Gejo, Tetuo, Manabe, Tosikatu, Hamura, Yasuzi, and Uchimura, Kotaro 3,515,839.
 Uchino, Ikue: See—
 Maruyama, Eiichi, and Uchino, Ikue 3,515,954.
 Ueda, Keizo, Ohkawahara, Tsuneo, Mats, Masao, and Ando, Satoshi, to Kanegafuchi Boseki Kabushiki Kaisha. polyamide filament. 3,515,703, Cl. 260-78.
 Ueda, Kenzo: See—
 Matsui, Masanao, Ueda, Kenzo, Mizutani, Toshio, Itaya, Nobushige, Kitamura, Shigeyoshi, Fujinami, Akira, Okuno, Yosiotogi, and Fujimoto, Keimei 3,515,730.
 Ueno, Kisaburo, Koshi, Masato, Tada, Fujio, Hirose, Akira, and Takazawa, Yoshio, to Mitsui Kotsu Chemicals, Incorporated. 2-Acylamino-4-methyl-5-halo-thiazoles as selective herbicides. 3,515,538, Cl. 71-90.
 Ueno, Tamotsu, and Nakano, Takashi, to Japan Gas-Chemical Company, Inc. Processes for separating a xylene mixture into its components with high purity. 3,515,768, Cl. 260-674.
 Utti, Kenneth D.: See—
 Root, Wayne N., and Utti, Kenneth D. 3,515,766.
 Carson, Don B., and Utti, Kenneth D. 3,515,767.
 Utti, Kenneth D., to Universal Oil Products Company. Production of styrene. 3,515,763, Cl. 260-669.
 Ulrich, Charles J. Drilling apparatus. 3,515,017, Cl. 77-63.
 Umberger, Jacob Quentin: See—
 Chu, Victor F. H., and Umberger, Jacob Quentin 3,515,557.
 Ung, Harry L.: See—
 Jester, Thomas C., White, Ira Morgan, and Ung, Harry L. 3,515,370.
 Union Camp Corporation: See—
 Cravens, Robert D., and DePass, Ernest T., 3,514,922.
 Union Carbide Corporation: See—
 Hadwin, James Frederick, 3,516,011.
 Montgomery, Lionel C., 3,515,574.
 Uni-Tech Manufacturing Co.: See—
 Carper, H. A., 3,515,517.
 United Aircraft Corporation: See—
 Nachod, James H., 3,515,500.
 Nickols, Richard C., Jr., 3,515,593.
 Smith, Harvey A., 3,514,785.
 Wickstrand, Carl M., Jr., 3,515,205.
 United Industrial Syndicate, Inc.: See—
 Auzins, Raimunds, 3,515,085.
 Auzins, Raimunds, Sigman, Earl H., and Schneider, Alfred, 3,515,086.
 United States Borax & Chemical Corporation: See—
 Goldsmith, Harry, and Crawford, Robert F., 3,515,866.
 United States of America
 Agriculture: See—
 Goldblatt, Leo A., and Robertson, James A., Jr., 3,515,736.
 Koritala, Sambasivarao, 3,515,678.
 Mod, Robert R., Magne, Frank C., and Skau, Evald L., 3,515,754.
 Air Force: See—
 Flowers, Gilbert E., 3,515,847.
 Foote, Richard H., 3,515,804.
 Kephart, Jimmy F., 3,514,953.
 Loughran, Gerard A., and Burkett, Jerald L., 3,515,695.
 Schumacher, Howard E., Richens, Jack, and Schmidt, Marvin F., 3,514,952.
 Army: See—
 Barr, Irwin R., 3,515,072.
 Army: See—
 Cordes, John E., 3,515,502.
 Cutler, Milton, Carlson, Kenneth G., and Sherman, Louis M., 3,515,070.
 Army: See—
 Diczazy, Raymond B., 3,515,977.
 Army: See—
 Dunston, James M., 3,514,833.
 Galko, Andrew J., 3,515,068.
 Halstead, Arthur M., and Nimyłowicz, Osyp, 3,515,518.
 Jungwirth, Robert L., 3,515,863.
 Kramer, David N., and Gamson, Robert M., 3,515,644.
 Army: See—
 Lee, George R., and Nordlin, Henry G., 3,516,028.
 Merriam, Robert H., 3,515,993.
 Army: See—
 Rauhut, Horst W., 3,515,612.
 Rich, Charles E., 3,515,926.
 Slechts, John S., 3,516,000.
 Wachtenheim, Arthur I., 3,515,946.
 Wasilik, John H., 3,516,027.
 White, Stanley M., and Reaves, Woodrow W., 3,515,069.
 Wittbrodt, Donald R., 3,515,892.
 Zimmerman, Robert E., 3,515,407.
 Atomic Energy Commission: See—

Canonic, Domenic A., Bryson, Lloyd G., and Slaughter, Gerald M., 3,515,545.
 Hercules, David M., and Lytle, Fred E., 3,515,674.
 Vonderohe, Robert H., Doede, John H., and Lindenmeyer, Carl W., 3,515,486.
 Welch, Kimo M., 3,515,309.
 Commerce: See—
 Greenspan, Lewis, and Wexler, Arnold, 3,515,001.
 Interior: See—
 West, Jeffery L., 3,514,811.
 Navy: See—
 Arberman, Jerome, and Nietzel, Gunther, 3,516,051.
 Navy: See—
 Brunk, David H., 3,515,342.
 Byram, George W., and Whitehouse, Harper John, 3,515,911.
 Navy: See—
 Fredlake, John J., Keck, Milton F., and Schwent, Glennon V., 3,514,949.
 Navy: See—
 Fritz, Richard D., and Whitehouse, Harper J., 3,515,910.
 Garrow, Peter J., and Colledge, Edwin H., 3,515,482.
 Harbage, Alfred B., Jr., 3,515,449.
 Jones, Richard J., 3,515,465.
 Min, Sherman L., 3,515,067.
 Richardson, Raymond L., and Wildridge, John E., 3,515,362.
 Navy: See—
 Smith, Dresden G., 3,515,091.
 Navy: See—
 Utz, Gary E., 3,515,158.
 Wickersham, Arthur F., Jr., and Dolphin, Lambert T., Jr., 3,515,935.
 Navy: See—
 Zachmeier, August A., 3,515,388.
 Universal Oil Products Company: See—
 Berger, Charles V., 3,515,765.
 Carson, Don B., and Utti, Kenneth D., 3,515,767.
 Dombro, Robert A., 3,515,759.
 Fishel, Norman A., 3,515,769.
 Hallman, Newt, and Ward, Dennis J., 3,515,764.
 Hayes, John C., 3,515,665.
 Hayes, John C., and Mitsche, Roy T., 3,515,685.
 Hervet, George L., 3,515,520.
 Mejean, Jacques G., Bagg, Halsey O., and Klatte, Henry B., 3,514,999.
 Mogg, Joe L., 3,515,667.
 Pochowicz, Donald R., 3,515,677.
 Root, Wayne N., and Utti, Kenneth D., 3,515,766.
 Utti, Kenneth D., 3,515,763.
 Van Tassel, Harry M., and Root, Wayne N., 3,515,647.
 University of Kentucky Research Foundation: See—
 Higgins, Edward M., Rosenbaum, Harold D., and DeVore, Waldo D., 3,515,873.
 Uno, Naoyuki, to Asahi Kogaku Kogyo Kabushiki Kaisha. Camera coupled light measuring system. 3,515,045, Cl. 95-10.
 Uno, Yoshihiro: See—
 Nakanome, Iyohiko, and Uno, Yoshihiro 3,515,657.
 Untamo, Peter P., to Bell Telephone Laboratories, Incorporated. Inverter starting circuit. 3,516,020, Cl. 331-113.
 Unthank, Dean P.: See—
 Hambleton, Warner V., and Unthank, Dean P. 3,515,101.
 Upjohn Company, The: See—
 Campbell, J. Allan, Babcock, John C., and Pike, John E., 3,515,719.
 Cha, Dae Yang, and Jahnke, Heinz K., 3,515,717.
 Urošević-Jovanović: See—
 Goorhuis, Hendrik, and Urošević-Jovanović 3,515,504.
 U.S. Industries, Inc.: See—
 Bowman, John H., 3,515,417.
 U.S. Philips Corporation: See—
 Bos, Marinus Anton, Noordanus, Johannes, and Rosier, Gerardus, 3,516,007.
 De Lange, Herman Kasper Adriaan, 3,515,921.
 DeHaan, Edward Fokko, and Schampers, Paulus Philippus Maria, 3,515,927.
 Dreyfus, Marc George, and Bleistein, Edward, 3,515,490.
 Horowitz, Alexandre, and Beusink, Bernard Joseph, 3,514,932.
 Horowitz, Alexandre, and Beusink, Bernard Joseph, 3,514,933.
 Patzelt, Rupert, and Halling, Horst, 3,515,872.
 Robillard, Jean J. A., 3,515,554.
 Smythe, George Edward, 3,515,900.
 van der Pas, Martinus Marinus, 3,515,822.
 Zandveld, Frederik, 3,515,994.
 Ushio Electric Inc.: See—
 Takakuwa, Shohei, 3,515,931.
 USM Corporation: See—
 Coppola, Joseph R., 3,514,877.
 Mills, John E., 3,514,814.
 Stapleton, Peter L., 3,514,880.
 Utz, Gary E., to United States of America, Navy. Pure fluidic flow regulating system. 3,515,158, Cl. 137-81.5.
 Uzawa, Katsuhiko: See—
 Miyamoto, Haruo, Uchida, Hideo, Uzawa, Katsuhiko, and Ohbayashi, Tsutomu 3,515,616.

Van De Boe, Rexford W.: See—
 Barnes, James W., and Van De Boe, Rexford W. 3,516,044.
 Vander Molen, Donald R., to Whirlpool Corporation. Air conditioner control. 3,514,967, Cl. 62-180.
 van der Pas, Martinus Marinus, to U.S. Philips Corporation, mesne. Quick release spring latch for hearing aid casing. 3,515,822, Cl. 179-179.
 Van Eck, Rudolf A.: See—
 McLaughlin, John A., and Van Eck, Rudolf A. 3,515,967.
 van Eek, Wouter H., to Shell Oil Company. Offshore loading/unloading of tankers. 3,515,179, Cl. 141-1.
 Van Ginhoven, Robert M., and Nolt, Edwin B., to Sperry Rand Corporation. Fork feed baler. 3,515,058, Cl. 100-189.
 Van Lare, Earl J., to Eastman Kodak Company. Cyanine dyes. 3,515,722, Cl. 260-240.
 Van Sickle, John. Automobile glare shield. 3,515,427, Cl. 296-97.
 Van Tassel, Harry M., and Root, Wayne N., to Universal Oil Products Company. Method for distilling styrene and subjecting bottoms to thin film evaporation. 3,515,647, Cl. 203-49.
 Vapor Corporation: See—
 Zadoo, Vijay K., 3,515,165.
 VEB Pentacon Dresden Kamera- und Kinowerke: See—
 Winzenburg, Wilhelm, 3,515,469.
 Vega Industries, Inc.: See—
 Andrews, George M., 3,515,122.
 Ventron Corporation: See—
 Wade, Robert C., 3,515,738.
 Verlinde, Ko J. Apparatus for operating a spark ignition engine on two fuels. 3,515,106, Cl. 123-127.
 Vetter, Hans Joachim: See—
 Mauz, Otto, Reindl, Eugen, and Vetter, Hans Joachim 3,515,698.
 Victor Company of Japan, Limited: See—
 Ebihara, Tameaki, and Mikami, Takashi, 3,515,800.
 Vit, Jaroslav: See—
 Pecak, Vaclav, Vit, Jaroslav, and Prochazka, Vladimir 3,515,522.
 Vlier, Blaine Hempstead, to Talcott, James, Inc., mesne. Ink mist prevention system using pointed electrode members. 3,515,064, Cl. 101-349.
 Vodicka, Vincent, to General Electric Company. Method of manufacturing electroluminescent display devices. 3,514,825, Cl. 29-25.18.
 Vogel, Charles B.: See—
 Smith, Noyes D., Jr., and Vogel, Charles B. 3,515,237.
 Vogt, Henry, Machine Company, Inc.: See—
 Hambleton, Warner V., and Unthank, Dean P., 3,515,101.
 Voigt, Manfred: See—
 Rix, Albert, Reiners, Siegfried, Ressel, Helmut, and Voigt, Manfred 3,515,252.
 von der Crone, Jost: See—
 Burdeska, Kurt E., von der Crone, Jost, Menasse, Raphael, and Pugin, Andre 3,515,790.
 Vonderohe, Robert H., Doede, John H., and Lindenmeyer, Carl W., to United States of America, Atomic Energy Commission. Optical ranging device. 3,515,486, Cl. 356-152.
 von Dohlen, Klaus: See—
 Lukas, Josef, and von Dohlen, Klaus 3,515,176.
 von Gal, John C. Container cluster. 3,515,272, Cl. 206-65.
 von Starck, Axel, to AEG-Eltherm G.m.b.H. Apparatus for pouring measured quantities of liquid metals from an electromagnetic conveyor channel. 3,515,898, Cl. 307-118.
 Vore, Herbert G., and Bardsley, Donald E., to Improved Machinery Inc. Backing wire for rotary drum filters. 3,515,281, Cl. 210-402.
 Voss, William Kenneth, to Purex Corporation, Ltd. Winders for paper machines. 3,515,183, Cl. 242-66.
 Wachtenheim, Arthur I., to United States of America, Army. High power RF window protective device. 3,515,946, Cl. 317-321.
 Wade, Robert C., to Ventron Corporation. Reaction products of two chlorides of certain metals with borate esters. 3,515,738, Cl. 260-429.5.
 Wagner, Anton: See—
 Wimmer, Helmut, Wagner, Anton, Staudigl, Rudolf, and Rudorfer, Hermann 3,515,541.
 Wagner, Donald M., to General Electric Company. Base-referencing lamp-holder and projection lamp. 3,516,042, Cl. 339-45.
 Wagner, Josef. Airless spray gun. 3,515,355, Cl. 239-526.
 Wagstaff, Robert A., and Waldrop, Thomas W., to Sperry Rand Corporation. Spring loaded variable sheave support for a V-belt drive. 3,515,010, Cl. 74-230.17.
 Wahl, Frederick William: See—
 Beinhaus, Ernest Lloyd, and Wahl, Frederick William 3,515,794.
 Mixon, James Lenhart, Jr., and Wahl, Frederick William 3,516,050.
 Wahnschaffe, Jurgen: See—
 Deutschmann, Herbert, Wahnschaffe, Jurgen, Rudert, Wolfgang, and Mader, Herbert 3,515,110.
 Waldrop, Thomas W.: See—
 Wagstaff, Robert A., and Waldrop, Thomas W. 3,515,010.
 Wale, Dennis H., to Marwin Cutting Tools Ltd. End-milling cutters. 3,514,828, Cl. 29-105.
 Walker, Peter Thomas, and Newson, Ivan Henry, to Weir Westgarth Limited. Vertical multi-stage flash evaporator with separate horizontal condensing chamber. 3,515,646, Cl. 202-173.
 Wallace, Bert H., 15% to Ebert, Michael. Cigar wrapping machine. 3,515,148, Cl. 131-59.

Wallace, David J.: See—
 Straley, James M., and Wallace, David J. 3,515,506.
 Straley, James M., Fisher, John G., and Wallace, David J. 3,515,715.
 Wallace, Jacob L., Jr., to Susquehanna Corporation, The. Data collection system. 3,516,072, Cl. 340-172.5.
 Wallman, Walter A.: See—
 Heidecker, Stephen C., Taft, David D., and Wallman, Walter A. 3,515,550.
 Walsh, Henry J.: See—
 Keefer, Frank D., Thelemaque, Louis E., and Walsh, Henry J. 3,515,810.
 Walsh, LaVerne E., and Keimer, Gerald W., to General Electric Company. Compact bent end electric lamp. 3,515,930, Cl. 313-220.
 Walters, Harold A., and Morehouse, Donald S., to Dow Chemical Company, The. Method of preparing smooth surfaced articles and articles provided by the method. 3,515,569, Cl. 117-21.
 Walus, A. Charles, and Muntwyler, Fredric C., Sr., to Wire Machinery, Incorporated. Wire straightening and cutoff machine. 3,515,021, Cl. 83-80.
 Wanesky, William R., to Western Electric Company, Incorporated. Method of removing polymerised resist material from a substrate. 3,515,607, Cl. 156-17.
 Wang, An: See—
 Howard, Robert, and Wang, An 3,516,068.
 Ward, Dennis J.: See—
 Hallman, Newt, and Ward, Dennis J. 3,515,764.
 Ward, Edward J., and Hall, Peter R., to Gas Council, The. Cooling systems. 3,515,206, Cl. 165-32.
 Ware, James K., Jr. Sprig planter. 3,515,079, Cl. 111-3.
 Warne, Eugene Harold: See—
 Gascoigne, Denis, and Warne, Eugene Harold 3,514,944.
 Warne, Eugene Harold, to Lucas, Joseph, (Industries) Limited. Fuel systems for gas turbine engines. 3,514,946, Cl. 60-39.28.
 Warne, Eugene Harold, to Lucas, Joseph, (Industries) Limited. Fuel control systems for gas turbine engines. 3,514,948, Cl. 60-39.28.
 Warrington, Albert R., Van Cortlandt, to English Electric Company Limited, The. Electrical fault detector. 3,515,943, Cl. 317-27.
 Warwick Electronics Inc.: See—
 Cordry, Floyd A., 3,515,791.
 Wasilik, John H., to United States of America, Army. Variable surface-wave delay line. 3,516,027, Cl. 333-30.
 Watanabe, Tsutomu: See—
 Okada, Yoichi, Watanabe, Tsutomu, and Hasegawa, Akemi 3,515,615.
 Waterman, Neil S., to Atlantic Design & Development Corporation. Dispensing container with pivoting cover. 3,515,314, Cl. 222-189.
 Waters, John Murray, Lucas, John, and Davies, Gwyn Tudor, to Temper Spring Company Limited, The. Rail fastenings. 3,515,347, Cl. 238-310.
 Watson, George A., to Celanese Corporation. Striated cross-lapped nonwoven fabric simulating woven fabric. 3,515,621, Cl. 161-58.
 Wayne Manufacturing Company: See—
 Tammy, Sim, 3,515,168.
 Wean Industries Inc.: See—
 Bortmas, Howard J., 3,515,327.
 Weaver, Max A.: See—
 Dale, John I., III, and Weaver, Max A. 3,515,714.
 Weaver, Paul J. Fluidic tape reader. 3,515,858, Cl. 235-61.11.
 Weber, Carl W., and McCarthy, Raymond. Gas vent. 3,515,305, Cl. 220-44.
 Weber, Kurt: See—
 Stauble, Max, and Weber, Kurt 3,515,732.
 Webster, Clifford L. Ammunition carrying case. 3,515,321, Cl. 224-21.
 Wehner, Albert. Floor screens. 3,515,274, Cl. 209-322.
 Wehner, William C. Method of assembling an automatically adjustable pivot joint. 3,514,832, Cl. 29-149.5.
 Wehr, Georg, and Gotze, Gotthold, to Rotenburger Metallwerke GmbH. Apparatus for removing branches and bark from trees. 3,515,185, Cl. 144-3.
 Wehrli, Walter: See—
 Entschel, Roland, Mueller, Curt, and Wehrli, Walter 3,515,733.
 Weible, John E. Scaffolding device. 3,515,244, Cl. 182-150.
 Weil, Edward D., Dorfman, Edwin, and Linder, Jerome, to Hooker Chemical Corporation. Polychloro- α -hydroxybenzylphosphonic and phosphinic derivatives as plant growth control agents. 3,515,537, Cl. 71-86.
 Weiland, Carl W. Apparatus for providing an air cushion for a ground effect vehicle. 3,515,236, Cl. 180-117.
 Weinand, Louis H., to General Motors Corporation. Unidirectional pumping seal. 3,515,395, Cl. 277-134.
 Weinreich, Wolfgang: See—
 Bick, Klaus, Weinreich, Wolfgang, and Harmsen, Lothar 3,515,202.
 Weinstock, Leonard M.: See—
 Tull, Roger J., Weinstock, Leonard M., and Mulvey, Dennis M. 3,515,745.
 Weir Westgarth Limited: See—
 Walker, Peter Thomas, and Newson, Ivan Henry, 3,515,646.
 Weischedel, Richard C., and Book, Philip S., to General Electric Company. Optical sensor system. 3,515,879, Cl. 250-211.
 Weiser, Ernest F., to General Electric Company. Motor control system using current diverter. 3,515,970, Cl. 318-249.

- Weiss, Siegfried, to Hannes Marker. Safety ski binding. 3,515,402, Cl. 280-11.35.
- Welch, Kimo M., to United States of America, Atomic Energy Commission. Sensitive burst diaphragm for relief of overpressures. 3,515,309, Cl. 220-89.
- Welker, Jerry W.: See—
Grey, Donald M., Butler, Lee D., and Welker, Jerry W. 3,515,291.
- Weltha, Marvin D.: See—
Bronson, Howard J., Johnson, Frederick W., and Weltha, Marvin D. 3,515,330.
- Wendt, Gerhard R., and Ledig, Kurt W., to American Home Products Corporation. Biocidal methods. 3,515,784, Cl. 424-238.
- Werner, Hermann C., to Airetron Engineering Corporation. Electrostatic precipitators. 3,514,923, Cl. 55-130.
- Werner, Lincoln Harvey: See—
de Stevens, George, and Werner, Lincoln Harvey 3,515,786.
- Wernli, Hans, to Albiwerk Zurich A.G. Apparatus for filtering and dissipating microwave energy possessing undesired wave modes. 3,516,032, Cl. 333-98.
- West, Francis G.: See—
Dickson, Alexander F., Coombe, John G. B., and West, Francis G. 3,515,182.
- West, Gail. Multi-purpose cushioned seat. 3,514,793, Cl. 4-113.
- West, Jeffery L., to United States of America, Interior. Fish orienter. 3,514,811, Cl. 17-55.
- Westergren, Rolf Albert Fredrik, to Bengt Gunnar Tornqvist. Device for suspending or carrying pieces of soft material, especially cut up meat or pork or similar food stuffs. 3,514,810, Cl. 17-44.2.
- Westermann, William S., to D.D.W., Inc. Machine for making phonograph records. 3,514,813, Cl. 18-5.3.
- Western Electric Company, Incorporated: See—
Baynard, Joseph S., Jr., 3,515,815.
Etchison, John O., Jr., and Tucker, John G., 3,514,835.
Hatcher, Arthur L., Jr., and Naylor, Arthur G., 3,515,487.
Heinz, Alfred, 3,515,848.
Hudson, William W., 3,515,175.
Nixon, Earl Hollis, and Wheeler, John Watson, 3,515,996.
Palmer, Burtis E., 3,515,989.
Wanesky, William R., 3,515,607.
- Westesson, Lawe Herbert, to Ingeniorsfirman Nils Weibull AB. Filtering apparatus for laboratory filtering of liquids, method of making ancillary filter cartridges, and mold for carrying out the method. 3,515,282, Cl. 210-411.
- Westinghouse Air Brake Company: See—
Frill, Richard K., and Reiss, John R., 3,515,288.
Kyllonen, Allen W., 3,515,248.
- Westinghouse Electric Corporation: See—
Cook, John W., 3,514,984.
Kearney, Joseph P., and Murphy, Eugene F., 3,515,929.
Ristuccia, Donald J., and Oates, James C., 3,515,799.
Segar, William R., 3,515,405.
South, William H., and Dworak, Roger A., 3,515,975.
Throop, Gilbert D., 3,515,980.
- Westlind, Dennis E.: See—
Goss, Jonathan, and Westlind, Dennis E. 3,516,073.
- Wetch, Joseph R., to North American Rockwell Corporation. Evaporator-condenser unit for a distillation system. 3,515,645, Cl. 202-173.
- Wethern, Richard J., 30% to Mogilefsky, David B., and 20% to Peterson, Richard E. Method for producing finely divided powders. 3,515,539, Cl. 75-0.5.
- Wetter, Charles R., to General Electric Company. Heat sink and electrical connection means for an ignitron firing device. 3,515,936, Cl. 315-196.
- Wexler, Arnold: See—
Greenspan, Lewis, and Wexler, Arnold 3,515,001.
- Whalen, Charles S.: See—
Cusiter, George C., and Whalen, Charles S. 3,515,007.
- Wheeler, John Watson: See—
Nixon, Earl Hollis, and Wheeler, John Watson, 3,515,996.
- Whirlpool Corporation: See—
Vander Molen, Donald R., 3,514,967.
- Whitaker, Donald R., to Canadian Patents and Development Limited. Proteolytic enzymes. 3,515,641, Cl. 195-62.
- White Consolidated Industries, Inc.: See—
Hamlett, Sidney J., 3,515,082.
- White, Ira Morgan: See—
Jester, Thomas C., White, Ira Morgan, and Ung, Harry L. 3,515,370.
- White, Joseph F.: See—
Hines, Marion E., Collinet, Jean-Claude R., and White, Joseph F. 3,516,015.
- White, Stanley A., to North American Rockwell Corporation. NAND/NOR circuit. 3,515,901, Cl. 307-215.
- White, Stanley M., and Reeves, Woodrow W., to United States of America, Army. Cartridge for hand firing. 3,515,069, Cl. 102-37.4.
- Whitehouse, Harper J.: See—
Fritz, Richard D., and Whitehouse, Harper J. 3,515,910.
- Whitehouse, Harper John: See—
Byram, George W., and Whitehouse, Harper John 3,515,911.
- Whitman, Robert L.: See—
Korpel, Adrianus, and Whitman, Robert L. 3,515,458.
- Whittemore, Lawrence C. Lock for hydraulic brakes of vehicles. 3,515,442, Cl. 303-89.
- Whitten, H. A., & Co.: See—
Burdeska, Kurt E., von der Crone, Jost, Menasse, Raphael, and Pugin, Andre, 3,515,790.
- Wickersham, Arthur F., Jr., and Dolphin, Lambert T., Jr., to United States of America, Navy. Triggered spark transmitter device. 3,515,935, Cl. 315-111.
- Wickersheim, Kenneth A.: See—
Byler, William H., Mattis, James J., Ring, Stanley A., Sobon, Leon E., Tecotzky, Melvin, and Wickersheim, Kenneth A. 3,515,675.
- Wickstrand, Carl M., Jr., to United Aircraft Corporation. Mold construction forming single crystal pieces. 3,515,205, Cl. 164-353.
- Wiesmann, Herbert-Ludwig, to Stanley Works GmbH. Thin spring locks and unlocking means therefor. 3,514,979, Cl. 70-81.
- Wild, Darrel Dean, to Du Pont de Nemours, E. I., and Company. Isomerization process. 3,515,760, Cl. 260-654.
- Wildenthaler, Leo E., to Hobart Brothers Company. Electric arc welding gun. 3,515,845, Cl. 219-130.
- Wildridge, John E.: See—
Richardson, Raymond L., and Wildridge, John E. 3,515,362.
- Wiley, Robert T.: See—
Lazzarini, Donald J., Sabad, Joseph J., and Wiley, Robert T. 3,515,590.
- Wilfley, A. R., and Sons, Inc.: See—
Studebaker, James B., Zagar, Irvin F., and Gobble, Lawrence T. 3,515,497.
- Wilham, Carl A.: See—
Mehltretter, Charles L., and Wilham, Carl A. 3,515,718.
- Wilkes, Thomas H., to Trash Valet, Inc. Trash can holder. 3,515,285, Cl. 211-71.
- Wilkinson, Terence Sidwell, to Parsons, C. A., & Company Limited. Magneto-hydrodynamic apparatus. 3,515,912, Cl. 310-11.
- Willard, Henry G.: See—
Hurtle, Ralph L., and Willard, Henry G. 3,515,829.
Hurtle, Ralph L., and Willard, Henry G. 3,516,090.
- Willems, Hubertus W. V.: See—
Shorr, Norman, and Willems, Hubertus W. V. 3,515,531.
- Willer, Ernest M., to National Cash Register Company, The. Bistable magnetic thin film rod having a conductive overcoating. 3,516,075, Cl. 340-174.
- William Cotton Limited: See—
Brown, Leonard, and Booles, Ernest William, 3,514,977.
- William George F.: See—
Bowditch, Hoel L., William George F., and Bertone, Richard A. 3,515,162.
- Williams, Charles R.: See—
Isaksen, Robert A., Longley, Raymond I., Jr., and Williams, Charles R. 3,515,581.
- Williams, Charles W., and Jensen, Elmer C., to Federal-Mogul Corporation. Wheel bearing assembly construction. 3,515,448, Cl. 308-208.
- Williams, James M., to Philips Roxane Inc. Protecting dogs against Brucella canis bacteremia with killed Brucella abortus strain 45/20 vaccine. 3,515,708, Cl. 424-92.
- Williams, Malcolm, and Hodgson, Duncan Barry, to Lucas, Joseph, (Industries) Limited. Alternator voltage regulators. 3,515,978, Cl. 322-28.
- Williams, Robert W. Conductive baking oven. 3,515,854, Cl. 219-388.
- Williams, Warner D.: See—
Horsfall, Robert B., Farrand, William A., and Williams, Warner D. 3,516,081.
- Willis, Joanne Elizabeth: See—
Colarossi, Lawrence A., Reiling, Gebhart J., Jr., Tarquinio, Anthony V., and James, Thomas S. 3,515,844.
- Wilson, Frederick E., deceased (by Wilson, Ruth L., executrix), to Wilson Water Purification Corporation. Sewage treatment apparatus. 3,515,278, Cl. 210-109.
- Wilson, Ruth L.: See—
Wilson, Frederick E. 3,515,278.
- Wilson Water Purification Corporation: See—
Wilson, Frederick E., 3,515,278.
- Wimmer, Helmut, Wagner, Anton, Staudigl, Rudolf, and Rudorfer, Hermann, to Österreichische Stickstoffwerke Aktiengesellschaft. Process for the recovery of noble metals. 3,515,541, Cl. 75-83.
- Winkler, Alfred, to Agfa Aktiengesellschaft. Photographic roll film constructed so as to reduce deformation fog. 3,515,558, Cl. 96-78.
- Winter, Ernest A., Satterwhite, William A., and Meek, Richard L., to Tennessee Corporation. Recovery of zinc values from sulfide cores. 3,515,510, Cl. 23-55.
- Wintersberger, Lutz. Device for facilitating the removal of trousers. 3,515,320, Cl. 223-111.
- Winzenburg, Wilhelm, to VEB Pentacon Dresden Kamera- und Kinowerke. Cinematographic projector. 3,515,469, Cl. 352-40.
- Wiquel, Valentino: See—
Comastri, Mauro, and Wiquel, Valentino 3,515,610.
- Wire Machinery, Incorporated: See—
Walus, A. Charles, and Muntwyler, Fredric C., Sr., 3,515,021.
- Wiremold Company, The: See—
Perusse, Norman J., and Cheever, Wilbur D., 3,515,038.
- Wise, Richard S., to Ball Brothers Research Corporation. Special effects electronic simulator. 3,515,802, Cl. 178-6.
- Wittbrodt, Donald R., to United States of America, Army. Load disabling circuit. 3,515,892, Cl. 307-38.
- Wolfe, Norman B. Game club and ball of butyl rubber. 3,515,389, Cl. 273-193.

- Wolfe, Robert W., to Continental Can Company, Inc. Method for applying adhesive strips to can body blanks. 3,515,614, Cl. 156-265.
- Wolfe, Walter W., Holten, Herbert A., Messner, Jack D., and Olson, Ivan E., to Dusen, Van, & Co., Inc. Pawl for centrifugal thrower. 3,515,258, Cl. 198-128.
- Wolff, Justus: See—
Hochstrasser, Josef, and Wolff, Justus 3,515,138.
- Wood, Bertie B. J.: See—
Woodhams, Raymond T., and Wood, Bertie B. J. 3,515,704.
- Wood, Edwin Lee, and Gibson, Roger E., to Eastman Kodak Company. Self-extinguishing cellulose acetate compositions. 3,515,565, Cl. 106-177.
- Wood, Louis L., to Grace, W. R., & Co. Orthoester stabilized polyvinylchloride resins. 3,515,693, Cl. 260-45.8.
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- Wood, Remsen V. Inlay diffraction gratings. 3,515,459, Cl. 350-162.
- Woodhams, Raymond T., and Wood, Bertie B. J., to Dunlop Company Limited. The Process for the polymerization of episulphides. 3,515,704, Cl. 260-79.
- Woods, Ross S.: See—
Henson, William P., and Woods, Ross S. 3,515,824.
- Woodward, Robert M., and Glaser, Hellmut I., to Owens-Corning Fiberglas Corporation. Forming a tip section that feeds streams of heat-softened material. 3,514,841, Cl. 29-480.
- Wooten, Willis Carl, Jr.: See—
Combs, Robert Leonard, Slonaker, David Frank, and Wooten, Willis Carl, Jr. 3,515,775.
- Wordsworth, Albert G., to Ingersoll-Rand Company. Tool socket retainer. 3,515,399, Cl. 279-93.
- Wormsbecker, Edward. Spreader for fish jaws. 3,514,892, Cl. 43-53.5.
- Wright, Charles D.: See—
Brown, Harvey A., Erickson, John G., Husted, Donald R., and Wright, Charles D. 3,515,603.
- Wright, Malor: See—
Attridge, Curtis C., and Wright, Malor 3,515,050.
- Wuerker, Ralph F.: See—
Heflinger, Lee O., Brooks, Robert E., and Wuerker, Ralph F. 3,515,453.
- Wykes, Claude E., to Lyne & Bowler Pump Company. Resilient chain protector. 3,515,013, Cl. 74-611.
- Xerox Corporation: See—
Yang, Frank Y., 3,515,584.
- Yabuno, Yoshio: See—
Nakamura, Takahiro, Yabuno, Yoshio, Kameda, Akiyoshi, and Aratani, Shozo 3,515,391.
- Yale, Harry Louis: See—
Bernstein, Jack, and Yale, Harry Louis 3,515,753.
- Yamada, Bunkichi: See—
Tani, Kaneyasu, Yamada, Bunkichi, Imoto, Shozo, Kawazoe, Shiro, Ichihara, Wachio, Nagai, Tatsuhiro, and Noguchi, Hiroaki 3,515,567.
- Yamada, Saburo, to Senyo Kogyo Kabushiki Kaisha. Continuous auto-way for use in straight, curved, elevating and descending paths. 3,515,253, Cl. 198-17.
- Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi, to Matsushita Electric Industrial Co., Ltd. Electromagnetic relay utilizing a semiconductor element. 3,516,034, Cl. 335-2.
- Yamamoto, Keiichi: See—
Enomoto, Hajime, Nakagome, Yukio, Inoue, Seiichi, Koseki, Yasuo, Fukata, Yasuo, Hattori, Naohiko, and Yamamoto, Keiichi 3,516,074.
- Yamamoto, Masakazu: See—
Sugiyama, Hiroshi, Otsuka, Hideo, and Yamamoto, Masakazu 3,515,716.
- Yamashita, Akio: See—
Yamada, Tadashi, Yamashita, Akio, Tanaka, Masaru, Tsuzaki, Takehiro, and Fujita, Takashi 3,516,034.
- Yang, Christen H. C.: See—
Tonn, Edward G., and Yang, Christen H. C. 3,515,270.
- Yang, Frank Y., to Xerox Corporation. Xeroxing master. 3,515,584, Cl. 117-212.
- Yarwood, Thomas Alan: See—
Cockerham, Robert George, and Yarwood, Thomas Alan 3,515,527.
- Yatani, Kozo: See—
Tsurushima, Masaaki, and Yatani, Kozo 3,515,743.
- Yeomans, Bertram, to Distillers Company Limited, The. Production of organic acids. 3,515,737, Cl. 260-413.
- Yerouchalmi, David, to Commissariat a l'Energie Atomique. Electrically and thermally insulating elements for magnetohydrodynamic energy-conversion duct. 3,515,913, Cl. 310-11.
- Yokouchi, Rei, Ichikawa, Yoshimitsu, Izeki, Syotaro, and Fusayama, Takeo, to Toyo Rayon Kabushiki Kaisha. Process for the preparation of polyester for slideable film. 3,515,700, Cl. 260-75.
- Yoo, Jin Sun: See—
Hoffman, William D., and Yoo, Jin Sun 3,515,761.
- Yorkshire Dyeware & Chemical Co. Ltd., The: See—
Sykes, Ronald, 3,515,653.
- Yoshikawa, Mutsuo: See—
Arivasu, Hisashi, Okada, Chisato, Ishihara, Yasushi, Momota, Kenzo, Yoshikawa, Mutsuo, and Nunokawa, Koji 3,515,843.
- Yoshioka, Masahiro: See—
Okamoto, Kiyokazu, Yoshioka, Masahiro, Ando, Takeo, and Suzuki, Masatoshi 3,515,964.
- Young, Donald Allan, to Lucas, Joseph, (Industries) Limited. Electrical connectors. 3,516,047, Cl. 339-213.
- Young, Leparis D., and Potocnik, Antone, to TRW Inc. Combination valve and injector device for controlling, metering, and mixing two fluids. 3,515,353, Cl. 239-414.
- Youngberg, Charles Harold, Larson, Dennis Luverne, and Swales, Barton Lee, to Deere & Company. Hitch construction for two tandem disk harrows. 3,515,223, Cl. 172-658.
- Yu, Se Puan, Shaver, Paul J., and Tantraporn, Wirojana, to General Electric Company. Operation of series connected Gunn effect devices. 3,516,018, Cl. 331-107.
- Yuasa Battery Company Limited: See—
Nishimura, Motoharu, 3,515,592.
- Zachmeier, August A., to United States of America, Navy, mesne. Target raising mechanism. 3,515,388, Cl. 273-105.6.
- Zadoo, Vijay K., to Vapor Corporation. Pressure regulator. 3,515,165, Cl. 137-220.
- Zagar, Irvin F.: See—
Studebaker, James B., Zagar, Irvin F., and Gobble, Lawrence T. 3,515,497.
- Zandveld, Frederik, to U.S. Philips Corporation, mesne. Device for reproducing bivalent code elements registered in a moving signal carrier. 3,515,994, Cl. 328-92.
- Zanner, Johann: See—
Theer, Anton, and Zanner, Johann 3,515,473.
- Zavody Jana Svermy, narodni podnik: See—
Grambal, Jurich, 3,515,524.
- Zeile, Karl: See—
Thomas, Otto, Koppe, Herbert, Ludwig, Gerhard, Mentrup, Anton, and Zeile, Karl 3,515,741.
- Zeiss Ikon Aktiengesellschaft: See—
Becker, Dietrich, Hochstein, Roland, and Lieckfeldt, Hans, 3,515,044.
Hahn, Johann, 3,515,047.
- Zenith Radio Corporation: See—
Korpel, Adrianus, and Whitman, Robert L., 3,515,458.
Lange, Howard George, 3,515,548.
Moegenbier, Josef, 3,515,924.
- Ziaylek, Theodore, Jr. Hose clamp. 3,515,367, Cl. 251-9.
- Ziegler, John M.: See—
Gwathmey, Edward S., Davidson, James N., and Ziegler, John M. 3,514,997.
- Zimmerman, Philip D., to Amsted Industries Incorporated. Method of casting. 3,515,201, Cl. 164-66.
- Zimmerman, Robert E., to United States of America, Army. Torsilastic mounted articulation joint. 3,515,407, Cl. 280-400.
- Zucchelli, Vittorio. Method for covering the outer faces of a container. 3,515,613, Cl. 156-213.
- Zukor, Lee J., to House of Coins, Inc. Apparatus for viewing coins or the like. 3,515,475, Cl. 353-78.
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- Zysman, Milton, to Convex Limited, mesne. Mattress handle. 3,514,797, Cl. 5-345.

LIST OF DEFENSIVE PUBLICATIONS

APPLICANTS TO WHOM

DEFENSIVE PUBLICATIONS WERE ISSUED ON THE 2ND DAY OF JUNE, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O. G. 687.

Beyer, George L., and R. J. Rauscher. Toner composition for developing electrostatic images. 875,005, 6-2-70, Cl. 96-1.
 Burrus, Robert T., and N. L. Finch, Sr., to E. I. du Pont de Nemours and Co. Textile fiber finish containing biocide and fungicide. 875,001, 6-2-70, Cl. 252-8.8.
 Du Pont de Nemours, E. I., and Co.: See—
 Burrus, Robert T., and Finch. 875,001.
 FMC Corp.: See—
 Montgomery, Ronald E., and Incho. 875,002.
 Finch, Nell L., Sr.: See—
 Burrus, Robert T., and Finch. 875,001.
 Incho, Harry H.: See—
 Montgomery, Ronald E., and Incho. 875,002.
 Linder, Donald E. Regeneration of chromatography support. 875,004, 6-2-70, Cl. 34-30.
 Massey-Ferguson Inc.: See—
 Richey, Clarence B. 875,003.
 Montgomery, Ronald E., and H. H. Incho, to FMC Corp. Synergistic insecticidal compositions and method of use. 875,002, 6-2-70, Cl. 424-219.
 Rauscher, Raymond J.: See—
 Beyer, George L., and Rauscher. 875,005.
 Richey, Clarence B., to Massey-Ferguson Inc. Folding frame implement. 875,003, 6-2-70, Cl. 172-456.

LIST OF DESIGN PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abramson, Lee, H. M. Shackelford, Jr., and R. J. David, to Carnation Co. Pitcher. 217,734, 6-2-70, Cl. D44-21.
 Aderman, Wayne L., B. D. Bergschneider, T. F. Dunnington, J. T. Engh, C. J. Kellerman, E. R. Wiener, and F. Wilkey, Jr., to International Business Machines Corp. Sorter for document cards. 217,722, 6-2-70, Cl. D26-5.
 Aderman, Wayne L., F. Wilkey, Jr., and P. C. Yenerich, to International Business Machines Corp. Document reader. 217,723, 6-2-70, Cl. D26-5.
 Artex Hobby Products, Inc.: See—
 Marsee, Arnold R. 217,736.
 Barbers Hairstyling for Men, Inc.: See—
 Barry, James L., Mitchell, and Vaa. 217,752.
 Barry, James L., T. R. Mitchell, and R. O. Vaa, to The Barbers Hairstyling for Men, Inc. Razor. 217,752, 6-2-70, Cl. D95-3.
 Batts, John H., to John Thomas Batts, Inc. Garment hanger. 217,746, 6-2-70, Cl. D80-8.
 Batts, John H., to John Thomas Batts, Inc. Garment hanger. 217,747, 6-2-70, Cl. D80-8.
 Batts, John H., to John Thomas Batts, Inc. Garment hanger. 217,753, 6-2-70, Cl. D80-8.
 Batts, John Thomas, Inc.: See—
 Batts, John H. 217,746.
 Batts, John H. 217,747.
 Batts, John H. 217,753.
 Baxter Laboratories, Inc.: See—
 Goyke, Leonard F. 217,738.
 Bergschneider, Beryl D.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Brooks, Ernest H., II: See—
 Peterson, Samuel R., and Brooks. 217,744.
 Butler, Frank W. Boat bulkhead. 217,743, 6-2-70, Cl. D71-1.
 Carnation Co.: See—
 Abramson, Lee, Shackelford, and David. 217,734.
 Chlystun, Walter K.: See—
 Singer, Hans S., and Chlystun. 217,733.
 Chlystun, Walter K. Combined cover and utensil holder for a cooking dish or the like. 217,732, 6-2-70, Cl. D44-15.
 Cohn, Irwin. Toy truck or similar article. 217,726, 6-2-70, Cl. D84-15.
 Dalton, William F., and L. Schachner, to Xerox Corp. Combined microfilm viewer and reproducing machine accessory. 217,739, 6-2-70, Cl. D61-1.
 David, Robert J.: See—
 Abramson, Lee, Shackelford, and David. 217,734.
 Dunnington, Theodore F.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Engh, James T.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Ernest, Robert O., to Sunbeam Corp. Clock. 217,731, 6-2-70, Cl. D42-7.
 Esquire, Inc.: See—
 Moore, Buell. 217,735.
 Fisher-Price Toys, Inc.: See—
 Spengler, Duane E. 217,727.
 GAF Corp.: See—
 Simonelli, Robert M. 217,740.
 Simonelli, Robert M. 217,741.
 Glantz, Milton: See—
 Glantz, Samuel N. and M. 217,725.
 Glantz, Samuel N. and M. Bowling ball support. 217,725, 6-2-70, Cl. D84-5.
 Glaus, Heinrich, to Styner & Blenz A.G. Electrical scissors. 217,705, 6-2-70, Cl. D8-61.
 Goyke, Leonard F., to Baxter Laboratories, Inc. Handle for a sponge swab and the like. 217,738, 6-2-70, Cl. D49-22.
 Gurney, Robert, to ILG Industries Inc. Housing for ventilator or the like. 217,721, 6-2-70, Cl. D23-153.
 Hazard, Robert E., to Polytop Corp. Dispensing closure. 217,710, 6-2-70, Cl. D9-275.
 Hazard, Robert E., to Polytop Corp. Dispensing closure. 217,711, 6-2-70, Cl. D9-275.
 Hohulin, Samuel E.: See—
 Lagerstrom, Robert C., and Hohulin. 217,737.
 Holliday, Charles H., J. B. Mullin, and B. W. Straughan, to National Research Development Corp. Apparatus for the processing and growth of crystalline material under pressure. 217,717, 6-2-70, Cl. D16-2.
 International Business Machines Corp.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Aderman, Wayne L., Wilkey, and Yenerich. 217,723.
 Ireland, Edward A., to Sunbeam Corp. Attachment for a hair dryer. 217,749, 6-2-70, Cl. D86-10.
 Kamins, Seymour, D. Gelles, and J. Horodecky, to CTP Industries Inc. Combined closure and handle for a carrier bag. 217,712, 6-2-70, Cl. D9-291.
 Kellerman, Clarence J.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Lagerstrom, Robert C., and S. E. Hohulin, to National Union Electric Corp. Suction cleaner. 217,737, 6-2-70, Cl. D49-14.
 Laughlin, Clayton A., to Arthur Salm Inc. Combined letter opener and scissors or similar desk tool. 217,707, 6-2-70, Cl. D8-104.
 Magers, Wallace F., to Cook Chemical Co. Discharge head for hand pumps. 217,718, 6-2-70, Cl. D23-14.
 Marsee, Arnold R., to Artex Hobby Products, Inc. Applicator tip cleaning unit. 217,736, 6-2-70, Cl. D49-1.
 Masuyama, Kazuo, to Minolta Camera Kabushiki Kaisha. Underwater camera housing or similar article. 217,742, 6-2-70, Cl. D61-1.
 McKinney, James C., and W. D. West, to Texize Chemicals, Inc. Bottle. 217,709, 6-2-70, Cl. D9-63.
 McNair, Samuel L., and T. W. Kellogg, to The Songrand Corp. Steam generator for complexion care. 217,719, 6-2-70, Cl. D23-148.
 Miller, Earl A. Feather cutting head. 217,706, 6-2-70, Cl. D8-93.
 Miller, Robert A., to The Stanley Works. Combined door jamb and panel frame member. 217,713, 6-2-70, Cl. D13-6.
 Minolta Camera Kabushiki Kaisha: See—
 Masuyama, Kazuo. 217,742.
 Mitchell, Terrance E.: See—
 Barry, James L., Mitchell, and Vaa. 217,752.
 Montague, Robert M., to Paramedical Research and Development Corp. Aerosol dispenser. 217,720, 6-2-70, Cl. D23-148.
 Moore, Buell, to Esquire, Inc. Light fixture. 217,735, 6-2-70, Cl. D48-20.
 National Union Electric Corp.: See—
 Lagerstrom, Robert C., and Hohulin. 217,737.
 Norton Co.: See—
 Ten Eyck, Richard E. 217,750.
 Ten Eyck, Richard E. 217,751.
 Parke, Donald C. Display rack for earrings. 217,748, 6-2-70, Cl. D80-9.

LIST OF DESIGN PATENTEEES

Pearce, Woodrow W. Combined halter and bridle hanger. 217,724, 6-2-70, Cl. D30-45.
 Peterson, Samuel R., and E. H. Brooks II. Underwater craft. 217,744, 6-2-70, Cl. D71-1.
 Rubinstein, Helena, Inc.: See—
 Silson, Victor. 217,745.
 Ruben, James. Foldable bunk bed. 217,704, 6-2-70, Cl. D5-4.
 Salsgiver, John P., to United Technical Corp. Cart for gas tanks. 217,714, 6-2-70, Cl. D14-3.
 Schachner, Leonard: See—
 Dalton, William F., and Schachner. 217,739.
 Shackelford, Harry M., Jr.: See—
 Abramson, Lee, Shackelford, and David. 217,734.
 Silson, Victor, to Helena Rubinstein Inc. Fingertip brush. 217,745, 6-2-70, Cl. D86-13.
 Simonelli, Robert M., to GAF Corp. Slide loader accessory for a slide projector. 217,740, 6-2-70, Cl. D61-1.
 Simonelli, Robert M., to GAF Corp. Overhead projector. 217,741, 6-2-70, Cl. D61-1.
 Singer, Hans S., and W. K. Chlystun. Combined cooking and serving unit. 217,733, 6-2-70, Cl. D44-15.
 Sonnenleiter, George R., to Keystone Consolidated Industries, Inc. Entrance handle or the like. 217,708, 6-2-70, Cl. D8-167.
 Spengler, Duane E., to Fisher-Price Toys, Inc. Combined toy toolbox and work bench. 217,727, 6-2-70, Cl. D34-15.
 Sunbeam Corp.: See—
 Ernest, Robert O. 217,731.
 Ireland, Edward A. 217,749.
 Wilson, John R. 217,730.
 Wilson, Lawrence H. 217,728.
 Wilson, Lawrence H. 217,729.
 Tatum, Michael D., to Hellmuth, Obata and Kassabaum, Inc. Arm chair. 217,710, 6-2-70, Cl. D15-1.
 Ten Eyck, Richard E., to Norton Co. Masonry saw. 217,750, 6-2-70, Cl. D93-3.
 Ten Eyck, Richard E., to Norton Co. Masonry saw. 217,751, 6-2-70, Cl. D93-3.
 Tuson, Ian V., to Harlequin Mfg. Ltd. Electric golf cart. 217,715, 6-2-70, Cl. D14-3.
 Vaa, Robert O.: See—
 Barry, James L., Mitchell, and Vaa. 217,752.
 Wiener, Edward R.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Wilkey, Frank, Jr.: See—
 Aderman, Wayne L., Bergschneider, Dunnington, Engh, Kellerman, Wiener, and Wilkey. 217,722.
 Aderman, Wayne L., Wilkey, and Yenerich. 217,723.
 Wilson, Lawrence H., to Sunbeam Corp. Clock. 217,728, 6-2-70, Cl. D42-7.
 Wilson, Lawrence H., to Sunbeam Corp. Clock housing. 217,729, 6-2-70, Cl. D42-7.
 Wilson, John R., to Sunbeam Corp. Clock. 217,730, 6-2-70, Cl. D42-7.
 Xerox Corp.: See—
 Dalton, William F., and Schachner. 217,739.
 Yenerich, Phillip C.: See—
 Aderman, Wayne L., Wilkey, and Yenerich. 217,723.

CLASSIFICATION OF PATENTS

ISSUED JUNE 2, 1970

NOTE.—First number, class; second number, subclass; third number, patent number

2- 2 : 3,514,784	30-293 : 3,514,855	59- 35 : 3,514,941	75-122.5 : 3,515,542	112-158 : 3,515,082	131- 59 : 3,515,148
1 : 3,514,785	346.53 : 3,514,856	60- 26 : 3,514,942	134 : 3,515,543	232 : 3,515,083	125 : 3,515,149
5 : 3,514,786	31- 44 : 3,514,857	59.08 : 3,514,943	3,515,544	114- 5 : 3,515,084	207 : 3,515,150
3 : 3,514,787	32- 2 : 3,514,858	.09 : 3,514,944	3,515,545	43.5 : 3,515,085	265 : 3,515,151
87 : 3,514,788	3,514,859	.16 : 3,514,945	138 : 3,515,546	3,515,086	132- 33 : 3,515,152
198 : 3,514,789	14 : 3,514,860	.28 : 3,514,946	77- 63 : 3,515,017	66.5 : 3,515,087	48 : 3,515,153
279 : 3,514,790	33- 60 : 3,514,862	3,514,947	81- 9.5 : 3,515,018	148 : 3,515,088	88.5 : 3,515,154
3- 1 : 3,514,791	138 : 3,514,863	3,514,948	83- 5 : 3,515,019	162 : 3,515,089	136- 6 : 3,515,159
36 : 3,514,792	148 : 3,514,864	3,514,949	11 : 3,515,020	235 : 3,515,090	86 : 3,515,159
4-113 : 3,514,793	166 : 3,514,865	.74 : 3,515,040	80 : 3,515,021	116-114 : 3,515,091	89 : 3,515,159
5- 2 : 3,514,794	174 : 3,514,869	54.5 : 3,515,050	685 : 3,515,022	120 : 3,515,092	120 : 3,515,159
327 : 3,514,795	34- 9 : 3,514,866	59 : 3,514,951	698 : 3,515,023	137 : 3,515,093	134 : 3,515,159
334 : 3,514,796	33 : 3,514,861	225 : 3,514,952	84- 1.01 : 3,515,039	117- 2 : 3,515,094	175 : 3,515,159
345 : 3,514,797	45 : 3,514,867	258 : 3,514,953	3,515,791	.11 : 3,515,095	137- 7 : 3,515,155
8- 42 : 3,515,506	57 : 3,514,868	261 : 3,514,954	.03 : 3,515,792	21 : 3,515,096	13 : 3,515,156
46 : 3,515,504	108 : 3,514,870	262 : 3,514,955	286 : 3,515,026	25 : 3,515,097	68 : 3,515,157
116.3 : 3,515,505	19 : 3,514,872	269 : 3,514,956	291 : 3,515,024	35 : 3,515,098	81.5 : 3,515,158
158 : 3,515,507	31 : 3,514,873	270 : 3,514,957	314 : 3,515,025	36.1 : 3,515,099	3,515,159
9-310 : 3,514,798	37 : 3,514,874	61- 9 : 3,514,958	85- 32 : 3,515,027	47 : 3,515,099	3,515,160
10-162 : 3,514,799	55 : 3,514,875	45 : 3,514,961	77 : 3,515,028	71 : 3,515,100	3,515,161
12- 1 : 3,514,800	75 : 3,514,876	53 : 3,514,959	90- 11 : 3,515,029	102 : 3,515,101	86 : 3,515,162
15- 84 : 3,514,801	36- 2.5 : 3,514,877	72.3 : 3,514,962	91- 3 : 3,515,030	106 : 3,515,102	102 : 3,515,163
118 : 3,514,802	42 : 3,514,879	.6 : 3,514,960	49 : 3,515,031	115 : 3,515,103	154 : 3,515,164
306 : 3,514,803	44 : 3,514,880	137 : 3,514,964	51 : 3,515,032	122 : 3,515,104	220 : 3,515,165
16- 21 : 3,514,804	37- 58 : 3,514,881	148 : 3,514,965	92- 33 : 3,515,033	124 : 3,515,105	525 : 3,515,166
90 : 3,514,805	40- 28 : 3,514,882	156 : 3,514,966	152 : 3,515,034	138.8 : 3,515,106	565 : 3,515,167
94 : 3,514,806	67 : 3,514,883	180 : 3,514,967	159 : 3,515,035	139.5 : 3,515,107	3,515,168
158 : 3,514,807	107 : 3,514,884	227 : 3,514,968	93- 1 : 3,515,036	143 : 3,515,108	625.25 : 3,515,169
17- 1 : 3,514,808	129 : 3,514,885	341 : 3,514,969	80 : 3,515,037	200 : 3,515,109	636.1 : 3,515,170
12 : 3,514,809	152.1 : 3,514,886	476 : 3,514,970	94- 44 : 3,515,038	212 : 3,515,110	798 : 3,515,171
44.2 : 3,514,810	324 : 3,514,887	490 : 3,514,972	48 : 3,515,042	3,515,585	3,515,172
55 : 3,514,811	42- 1 : 3,514,888	64- 17 : 3,514,973	95- 1 : 3,515,043	217 : 3,515,586	138-104 : 3,515,173
18- 5 : 3,514,812	74 : 3,514,889	27 : 3,514,974	10 : 3,515,044	230 : 3,515,587	139-291 : 3,515,174
42 : 3,514,814	43- 42.05 : 3,514,890	65- 27 : 3,515,529	232 : 3,515,045	232 : 3,515,588	140- 1 : 3,515,175
23- 21 : 3,515,508	44.87 : 3,514,891	43 : 3,515,530	11 : 3,515,046	235 : 3,515,589	141 : 3,515,176
22 : 3,515,509	53.5 : 3,514,892	253 : 3,515,531	49 : 3,515,047	235 : 3,515,590	112 : 3,515,177
112 : 3,515,511	44- 38 : 3,515,525	66- 75 : 3,514,975	57 : 3,515,048	118- 5 : 3,515,094	123.6 : 3,515,178
129 : 3,515,512	61 : 3,515,526	78 : 3,514,976	89 : 3,515,049	48 : 3,515,095	141- 1 : 3,515,179
178 : 3,515,513	46- 1 : 3,514,893	126 : 3,514,977	96- 1 : 3,515,050	5 : 3,515,096	6 : 3,515,180
212 : 3,515,514	40 : 3,514,894	148 : 3,514,978	5 : 3,515,051	51 : 3,515,097	38 : 3,515,181
223 : 3,515,515	103 : 3,514,895	70- 81 : 3,514,979	8 : 3,515,052	75 : 3,515,099	387 : 3,515,182
230 : 3,515,516	109 : 3,514,896	258 : 3,514,980	35 : 3,515,053	122-365 : 3,515,101	144- 2 : 3,515,184
273 : 3,515,517	177 : 3,514,897	298 : 3,514,981	1 : 3,515,054	479 : 3,515,102	3 : 3,515,185
281 : 3,515,518	232 : 3,514,898	355 : 3,514,982	36.1 : 3,515,055	123- 32 : 3,515,103	209 : 3,515,186
284 : 3,515,519	47- 58 : 3,514,900	370 : 3,514,983	49 : 3,515,056	117 : 3,515,104	145- 3.3 : 3,515,187
290 : 3,515,520	48-214 : 3,515,527	71- 28 : 3,515,532	52 : 3,515,057	127 : 3,515,105	146- 3 : 3,515,188
363 : 3,515,522	49-191 : 3,514,901	34 : 3,515,534	63 : 3,515,058	136 : 3,515,106	101 : 3,515,190
24- 16 : 3,514,815	213 : 3,514,902	65 : 3,515,535	74 : 3,515,059	3,515,108	102 : 3,515,191
123 : 3,514,817	416 : 3,514,903	77 : 3,515,536	78 : 3,515,060	148 : 3,515,109	224 : 3,515,193
211 : 3,514,819	460 : 3,514,904	86 : 3,515,537	109 : 3,515,061	195 : 3,515,110	148- 6.1 : 3,515,198
221 : 3,514,820	51- 12 : 3,514,905	90 : 3,515,538	98- 6 : 3,515,062	124- 16 : 3,515,111	15 : 3,515,199
230 : 3,514,821	99 : 3,514,906	72- 7 : 3,514,984	41 : 3,515,063	19 : 3,515,112	16 : 3,515,200
263 : 3,514,822	163 : 3,514,907	241 : 3,514,985	99- 49 : 3,515,064	27 : 3,515,113	9.5 : 3,515,189
26 : 62 : 3,514,823	284 : 3,514,908	253 : 3,514,986	108 : 3,515,065	3,515,114	147 : 3,515,601
28- 72.1 : 3,514,824	310 : 3,515,528	265 : 3,514,987	136 : 3,515,066	125- 11 : 3,515,115	154 : 3,515,602
29- 25.18 : 3,514,825	52- 73 : 3,514,909	332 : 3,514,988	194 : 3,515,067	126- 24 : 3,515,116	149-107 : 3,515,604
96 : 3,514,826	79 : 3,514,910	377 : 3,514,989	335 : 3,515,068	25 : 3,515,117	109 : 3,515,603
103 : 3,514,827	165 : 3,514,911	410 : 3,514,990	100- 3 : 3,515,069	29 : 3,515,118	151- 41.72 : 3,515,194
105 : 3,514,828	204 : 3,514,912	420 : 3,514,991	4 : 3,515,070	37 : 3,515,119	152-153 : 3,515,195
130 : 3,514,829	249 : 3,514,913	455 : 3,514,992	126 : 3,515,071	59.5 : 3,515,120	352 : 3,515,196
148.3 : 3,514,830	273 : 3,514,914	73- 17 : 3,514,993	189 : 3,515,072	3,515,121	361 : 3,515,197
149.5 : 3,514,831	393 : 3,514,915	117.2 : 3,514,995	101- 31 : 3,515,073	62 : 3,515,122	156- 3 : 3,515,605
3,514,832	400 : 3,514,916	153 : 3,514,996	45 : 3,515,074	362 : 3,515,123	17 : 3,515,606
157 : 3,514,833	704 : 3,514,917	180 : 3,514,997	91 : 3,515,075	127- 32 : 3,515,591	49 : 3,515,607
182.5 : 3,515,523	741 : 3,514,918	204 : 3,514,998	118 : 3,515,076	128- 1 : 3,515,124	62.8 : 3,515,608
.7 : 3,515,524	839 : 3,514,919	212 : 3,514,999	269 : 3,515,077	2 : 3,515,125	3,515,609
.8 : 3,514,818	124 : 3,514,921	304 : 3,515,000	349 : 3,515,078	3,515,126	71 : 3,515,611
203 : 3,514,835	374 : 3,514,922	338.6 : 3,515,001	368 : 3,515,079	3,515,127	79 : 3,515,612
205 : 3,514,836	55-130 : 3,514,923	357 : 3,515,002	378 : 3,515,080	3,515,128	213 : 3,515,613
3,514,837	237 : 3,514,924	405 : 3,515,003	102- 7.4 : 3,515,081	3,515,129	265 : 3,515,614
426 : 3,514,838	386 : 3,514,925	505 : 3,515,004	22 : 3,515,082	94 : 3,515,130	272 : 3,515,615
463 : 3,514,839	56- 7 : 3,514,926	515 : 3,515,005	37.4 : 3,515,083	145.6 : 3,515,131	330 : 3,515,616
470.1 : 3,514,840	16 : 3,514,927	5 : 3,515,006	60 : 3,515,084	3,515,132	388 : 3,515,617
490 : 3,514,841	19 : 3,514,928	74- 5 : 3,515,007	87 : 3,515,085	3,515,133	405 : 3,515,618
494 : 3,514,842	21 : 3,514,929	37 : 3,515,008	104- 23 : 3,515,086	166 : 3,515,134	157- 1.21 : 3,515,198
559 : 3,514,843	25.4 : 3,514,930	128 : 3,515,009	28 : 3,515,087	173 : 3,515,135	159- 23 : 3,515,199
571 : 3,514,844	255 : 3,514,931	230.17 : 3,515,010	105-249 : 3,515,088	214.4 : 3,515,136	47 : 3,515,200
3,514,845	293 : 3,514,932	467 : 3,515,011	251 : 3,515,089	270 : 3,515,137	38 : 3,515,201
572 : 3,514,846	3,514,933	473 : 3,515,012	106- 1 : 3,515,090	310 : 3,515,138	58 : 3,515,202
3,514,847	294 : 3,514,934	611 : 3,515,013	177 : 3,515,091	322 : 3,515,139	66 : 3,515,203
588 : 3,514,848	295 : 3,514,935	665 : 3,515,014	300 : 3,515,092	425 : 3,515,140	86 : 3,515,204
3,514,849	330 : 3,514,936	802 : 3,515,015	108- 89 : 3,515,093	533 : 3,515,141	159 : 3,515,205
599 : 3,514,850	345 : 3,514,937	828 : 3,515,016	110- 8 : 3,515,094	3,515,142	160 : 3,515,206
603 : 3,514,851	58- 2 : 3,514,938	75- 5 : 3,515,017	111- 3 : 3,515,095	3,515,143	162 : 3,515,207
621 : 3,514,852	50 : 3,514,939	83 : 3,515,018	112-121.14 : 3,515,096	130- 26 : 3,515,144	173 : 3,515,208
30- 14 : 3,514,853	3,514,940		130 : 3,515,097	131- 10.1 : 3,515,145	184 : 3,515,209
292 : 3,514,854				29 : 3,515,146	220 : 3,515,210

CLASSIFICATION OF PATENTS

161-245 : 3,515,630	200-48 : 3,515,823	222-146 : 3,515,312	252-455 : 3,515,681	264-27 : 3,515,777	310-215 : 3,515,923
162-48 : 3,515,631	52 : 3,515,824	177 : 3,515,313	3,515,682	40 : 3,515,778	312-245 : 3,515,924
60 : 3,515,632	61.57 : 3,515,825	189 : 3,515,314	3,515,683	41 : 3,515,779	263 : 3,515,925
146 : 3,515,633	81.9 : 3,515,826	193 : 3,515,315	3,515,684	342 : 3,515,780	313-94 : 3,515,926
206 : 3,515,634	83 : 3,515,827	207 : 3,515,316	465 : 3,515,685	267-1 : 3,515,781	139 : 3,515,927
339 : 3,515,635	84 : 3,515,828	223-46 : 3,515,317	512 : 3,515,686	271-26 : 3,515,782	146 : 3,515,928
352 : 3,515,636	144 : 3,515,829	66 : 3,515,318	254-104 : 3,515,687	272-79 : 3,515,783	179 : 3,515,929
360 : 3,515,637	152 : 3,515,830	85 : 3,515,319	256-32 : 3,515,688	273-1 : 3,515,784	184 : 3,515,930
164-66 : 3,515,201	153 : 3,515,831	111 : 3,515,320	259-46 : 3,515,689	73 : 3,515,785	219 : 3,515,931
89 : 3,515,202	166 : 3,515,832	224-21 : 3,515,321	95 : 3,515,690	101 : 3,515,786	220 : 3,515,932
312 : 3,515,203	3,515,833	32 : 3,515,322	153 : 3,515,691	105.6 : 3,515,787	318 : 3,515,933
334 : 3,515,204	3,515,834	42.08 : 3,515,323	260-2 : 3,515,692	193 : 3,515,788	339 : 3,515,934
353 : 3,515,205	167 : 3,515,835	225-11 : 3,515,324	22 : 3,515,693	274-1 : 3,515,789	36 : 3,515,935
165-32 : 3,515,206	202-173 : 3,515,836	93 : 3,515,325	28.5 : 3,515,694	4 : 3,515,790	111 : 3,515,936
151 : 3,515,207	3,515,837	96.5 : 3,515,326	33.6 : 3,515,695	10 : 3,515,791	196 : 3,515,937
178 : 3,515,208	203-49 : 3,515,838	226-113 : 3,515,327	45.8 : 3,515,696	277-42 : 3,515,792	209 : 3,515,938
166-62 : 3,515,209	204-2 : 3,515,839	172 : 3,515,328	3,515,697	88 : 3,515,793	240 : 3,515,939
205 : 3,515,210	38 : 3,515,840	227-78 : 3,515,329	3,515,698	134 : 3,515,794	317-3 : 3,515,940
244 : 3,515,211	42 : 3,515,841	228-8 : 3,515,330	3,515,699	177 : 3,515,795	11 : 3,515,941
245 : 3,515,212	43 : 3,515,842	229-14 : 3,515,331	3,515,700	279-6 : 3,515,796	18 : 3,515,942
252 : 3,515,213	49 : 3,515,843	38 : 3,515,332	67.6 : 3,515,701	74 : 3,515,797	27 : 3,515,943
272 : 3,515,214	54 : 3,515,844	40 : 3,515,333	75 : 3,515,702	93 : 3,515,798	31 : 3,515,944
274 : 3,515,215	141 : 3,515,845	51 : 3,515,334	3,515,703	121 : 3,515,799	33 : 3,515,945
288 : 3,515,216	147 : 3,515,846	52 : 3,515,335	4 : 3,515,704	280-5.26 : 3,515,800	51 : 3,515,946
169-2 : 3,515,217	159.22 : 3,515,847	66 : 3,515,336	79 : 3,515,705	11.35 : 3,515,801	61 : 3,515,947
172-44 : 3,515,218	24 : 3,515,848	232-33 : 3,515,337	85.5 : 3,515,706	47.19 : 3,515,802	101 : 3,515,948
245 : 3,515,219	195 : 3,515,849	234-18 : 3,515,338	89.7 : 3,515,707	87.02 : 3,515,803	230 : 3,515,949
447 : 3,515,220	224 : 3,515,850	235-60 : 3,515,339	92.8 : 3,515,708	113 : 3,515,804	334 : 3,515,950
484 : 3,515,221	250 : 3,515,851	61.11 : 3,515,340	93.5 : 3,515,709	166 : 3,515,805	345 : 3,515,951
658 : 3,515,222	263 : 3,515,852	7 : 3,515,341	95.5 : 3,515,710	400 : 3,515,806	346 : 3,515,952
809 : 3,515,223	281 : 3,515,853	92 : 3,515,342	98.7 : 3,515,711	415 : 3,515,807	347 : 3,515,953
173-12 : 3,515,224	298 : 3,515,854	150.27 : 3,515,343	99.5 : 3,515,712	432 : 3,515,808	348 : 3,515,954
3,515,225	301 : 3,515,855	151.13 : 3,515,344	112 : 3,515,713	445 : 3,515,809	349 : 3,515,955
43 : 3,515,226	1 : 3,515,856	152 : 3,515,345	139 : 3,515,714	460 : 3,515,810	350 : 3,515,956
151 : 3,515,227	16 : 3,515,857	153 : 3,515,346	146 : 3,515,715	461 : 3,515,811	351 : 3,515,957
174-13 : 3,515,228	29 : 3,515,858	154 : 3,515,347	158 : 3,515,716	482 : 3,515,812	352 : 3,515,958
90 : 3,515,229	42 : 3,515,859	155 : 3,515,348	163 : 3,515,717	483 : 3,515,813	353 : 3,515,959
94 : 3,515,230	44 : 3,515,860	156 : 3,515,349	200 : 3,515,718	484 : 3,515,814	354 : 3,515,960
113 : 3,515,231	46 : 3,515,861	236-1 : 3,515,350	210 : 3,515,719	485 : 3,515,815	355 : 3,515,961
135 : 3,515,232	47 : 3,515,862	237-310 : 3,515,351	233.3 : 3,515,720	486 : 3,515,816	356 : 3,515,962
153 : 3,515,233	52 : 3,515,863	238-103 : 3,515,352	239.55 : 3,515,721	487 : 3,515,817	357 : 3,515,963
175-242 : 3,515,234	56 : 3,515,864	239-103 : 3,515,353	240 : 3,515,722	488 : 3,515,818	358 : 3,515,964
176-28 : 3,515,235	65 : 3,515,865	240-7.35 : 3,515,354	241 : 3,515,723	489 : 3,515,819	359 : 3,515,965
36 : 3,515,236	208-138 : 3,515,866	241-90 : 3,515,355	242 : 3,515,724	490 : 3,515,820	360 : 3,515,966
177-34 : 3,515,237	209-111.7 : 3,515,867	242-66 : 3,515,356	243 : 3,515,725	491 : 3,515,821	361 : 3,515,967
178-5.4 : 3,515,238	322 : 3,515,868	243-66 : 3,515,357	244 : 3,515,726	492 : 3,515,822	362 : 3,515,968
6 : 3,515,239	323 : 3,515,869	244-7.35 : 3,515,358	245 : 3,515,727	493 : 3,515,823	363 : 3,515,969
7.3 : 3,515,240	324 : 3,515,870	245-7.35 : 3,515,359	246 : 3,515,728	494 : 3,515,824	364 : 3,515,970
22 : 3,515,241	325 : 3,515,871	246-182 : 3,515,360	247 : 3,515,729	495 : 3,515,825	365 : 3,515,971
179-2 : 3,515,242	326 : 3,515,872	247-74 : 3,515,361	248 : 3,515,730	496 : 3,515,826	366 : 3,515,972
18 : 3,515,243	327 : 3,515,873	248-74 : 3,515,362	249 : 3,515,731	497 : 3,515,827	367 : 3,515,973
3,515,244	328 : 3,515,874	249-165 : 3,515,363	250 : 3,515,732	498 : 3,515,828	368 : 3,515,974
3,515,245	329 : 3,515,875	250-41.9 : 3,515,364	251 : 3,515,733	499 : 3,515,829	369 : 3,515,975
3,515,246	330 : 3,515,876	251-41.9 : 3,515,365	252 : 3,515,734	500 : 3,515,830	370 : 3,515,976
3,515,247	331 : 3,515,877	252-8.5 : 3,515,366	253 : 3,515,735	501 : 3,515,831	371 : 3,515,977
3,515,248	332 : 3,515,878	253-8.5 : 3,515,367	254 : 3,515,736	502 : 3,515,832	372 : 3,515,978
3,515,249	333 : 3,515,879	254-8.5 : 3,515,368	255 : 3,515,737	503 : 3,515,833	373 : 3,515,979
3,515,250	334 : 3,515,880	255-8.5 : 3,515,369	256 : 3,515,738	504 : 3,515,834	374 : 3,515,980
3,515,251	335 : 3,515,881	256-8.5 : 3,515,370	257 : 3,515,739	505 : 3,515,835	375 : 3,515,981
3,515,252	336 : 3,515,882	257-8.5 : 3,515,371	258 : 3,515,740	506 : 3,515,836	376 : 3,515,982
3,515,253	337 : 3,515,883	258-8.5 : 3,515,372	259 : 3,515,741	507 : 3,515,837	377 : 3,515,983
3,515,254	338 : 3,515,884	259-8.5 : 3,515,373	260 : 3,515,742	508 : 3,515,838	378 : 3,515,984
3,515,255	339 : 3,515,885	260-8.5 : 3,515,374	261 : 3,515,743	509 : 3,515,839	379 : 3,515,985
3,515,256	340 : 3,515,886	261-8.5 : 3,515,375	262 : 3,515,744	510 : 3,515,840	380 : 3,515,986
3,515,257	341 : 3,515,887	262-8.5 : 3,515,376	263 : 3,515,745	511 : 3,515,841	381 : 3,515,987
3,515,258	342 : 3,515,888	263-8.5 : 3,515,377	264 : 3,515,746	512 : 3,515,842	382 : 3,515,988
3,515,259	343 : 3,515,889	264-8.5 : 3,515,378	265 : 3,515,747	513 : 3,515,843	383 : 3,515,989
3,515,260	344 : 3,515,890	265-8.5 : 3,515,379	266 : 3,515,748	514 : 3,515,844	384 : 3,515,990
3,515,261	345 : 3,515,891	266-8.5 : 3,515,380	267 : 3,515,749	515 : 3,515,845	385 : 3,515,991
		267-8.5 : 3,515,381	268 : 3,515,750	516 : 3,515,846	386 : 3,515,992
			269 : 3,515,751	517 : 3,515,847	387 : 3,515,993
			270 : 3,515,752	518 : 3,515,848	388 : 3,515,994
			271 : 3,515,753	519 : 3,515,849	389 : 3,515,995
			272 : 3,515,754	520 : 3,515,850	390 : 3,515,996
			273 : 3,515,755	521 : 3,515,851	391 : 3,515,997
			274 : 3,515,756	522 : 3,515,852	392 : 3,515,998
			275 : 3,515,757	523 : 3,515,853	393 : 3,515,999
			276 : 3,515,758	524 : 3,515,854	394 : 3,516,000
			277 : 3,515,759	525 : 3,515,855	395 : 3,516,001
			278 : 3,515,760	526 : 3,515,856	396 : 3,516,002
			279 : 3,515,761	527 : 3,515,857	397 : 3,516,003
			280 : 3,515,762	528 : 3,515,858	398 : 3,516,004
			281 : 3,515,763	529 : 3,515,859	399 : 3,516,005
			282 : 3,515,764	530 : 3,515,860	400 : 3,516,006
			283 : 3,515,765	531 : 3,515,861	401 : 3,516,007
			284 : 3,515,766	532 : 3,515,862	402 : 3,516,008
			285 : 3,515,767	533 : 3,515,863	403 : 3,516,009
			286 : 3,515,768	534 : 3,515,864	404 : 3,516,010
			287 : 3,515,769	535 : 3,515,865	405 : 3,516,011
			288 : 3,515,770	536 : 3,515,866	406 : 3,516,012
			289 : 3,515,771	537 : 3,515,867	407 : 3,516,013
			290 : 3,515,772	538 : 3,515,868	408 : 3,516,014
			291 : 3,515,773	539 : 3,515,869	409 : 3,516,015
			292 : 3,515,774	540 : 3,515,870	410 : 3,516,016
			293 : 3,515,775	541 : 3,515,871	411 : 3,516,017
			294 : 3,515,776	542 : 3,515,872	412 : 3,516,018
			295 : 3,515,777	543 : 3,515,873	413 : 3,516,019
			296 : 3,515,778	544 : 3,515,874	414 : 3,516,020
			297 : 3,515,779	545 : 3,515,875	415 : 3,516,021
			298 : 3,515,780	546 : 3,515,876	416 : 3,516,022
			299 : 3,515,781	547 : 3,515,877	417 : 3,516,023
			300 : 3,515,782	548 : 3,515,878	418 : 3,516,024
			301 : 3,515,783	549 : 3,515,879	419 : 3,516,025
			302 : 3,515,784	550 : 3,515,880	420 : 3,516,026
			303 : 3,515,785	551 : 3,515,881	
			304 : 3,515,786	552 : 3,515,882	
			305 : 3,515,787	553 : 3,515,883	
			306 : 3,515,788	554 : 3,515,884	
			307 : 3,515,789	555 : 3,515,885	
			308 : 3,515,790	556 : 3,515,886	
			309 : 3,515,791	557 : 3,515,887	
			310 : 3,515,792	558 : 3,515,888	
				559 : 3,515,889	
				560 : 3,515,890	
				561 : 3,515,891	
				562 : 3,515,892	
				563 : 3,515,893	
				564 : 3,515,894	
				565 : 3,515,895	
				566 : 3,515,896	
				567 : 3,515,897	
				568 : 3,515,898	
				569 : 3,515,899	
				570 : 3,515,900	
				571 : 3,515,901	
				572 : 3,515,902	
				573 : 3,515,903	
				574 : 3,515,904	
				575 : 3,515,905	

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

Alabama.....	1	Kentucky.....	21	Oregon.....	41
Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
American Samoa.....	3	Maine.....	23	Puerto Rico.....	43
Arizona.....	4	Maryland.....	24	Rhode Island.....	44
Arkansas.....	5	Massachusetts.....	25	South Carolina.....	45
California.....	6	Michigan.....	26	South Dakota.....	46
Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
Florida.....	12	Nevada.....	32	Virgin Islands.....	52
Georgia.....	13	New Hampshire.....	33	Washington.....	53
Guam.....	14	New Jersey.....	34	West Virginia.....	54
Hawaii.....	15	New Mexico.....	35	Wisconsin.....	55
Idaho.....	16	New York.....	36	Wyoming.....	56
Illinois.....	17	North Carolina.....	37	U.S. Air Force.....	57
Indiana.....	18	North Dakota.....	38	U.S. Army.....	58
Iowa.....	19	Ohio.....	39	U.S. Navy.....	59
Kansas.....	20	Oklahoma.....	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

PATENTS

1 : 3,514,790	6 : 3,515,171	6 : 3,515,564	6 : 3,516,081	12 : 3,514,980	17 : 3,515,350
3,515,272	3,515,184	3,515,571	3,516,086	3,515,120	3,515,363
3,515,408	3,515,193	3,515,576	8 : 3,515,074	3,515,342	3,515,374
3,515,417	3,515,203	3,515,586	3,515,354	3,515,426	3,515,382
3,515,534	3,515,209	3,515,594	3,515,497	3,515,494	3,515,385
4 : 3,514,949	3,515,218	3,515,605	3,515,748	3,515,619	3,515,403
3,515,016	3,515,222	3,515,645	3,515,802	3,515,693	3,515,413
3,515,952	3,515,229	3,515,663	3,515,868	3,515,860	3,515,432
5 : 3,515,371	3,515,238	3,515,664	3,515,878	3,515,926	3,515,446
6 : 3,514,798	3,515,263	3,515,673	9 : 3,514,999	3,516,058	3,515,458
3,514,838	3,515,270	3,515,691	3,515,038	3,515,466	3,515,466
3,514,842	3,515,273	3,515,699	3,515,095	3,515,479	3,515,479
3,514,843	3,515,279	3,515,728	3,515,187	3,515,486	3,515,486
3,514,844	3,515,290	3,515,770	3,515,196	3,515,510	3,515,507
3,514,845	3,515,291	3,515,772	3,515,205	3,515,622	3,515,520
3,514,847	3,515,304	3,515,779	3,515,314	3,515,796	3,515,548
3,514,848	3,515,306	3,515,789	3,515,352	3,515,891	3,515,549
3,514,859	3,515,309	3,515,791	3,515,400	3,515,905	3,515,601
3,514,864	3,515,317	3,515,792	3,515,461	3,515,914	3,515,614
3,514,876	3,515,323	3,515,803	3,515,490	3,514,809	3,515,624
3,514,889	3,515,341	3,515,823	3,515,500	3,514,855	3,515,647
3,514,895	3,515,351	3,515,840	3,515,514	3,514,858	3,515,665
3,514,897	3,515,353	3,515,853	3,515,593	3,514,910	3,515,677
3,514,904	3,515,360	3,515,857	3,515,602	3,514,929	3,515,678
3,514,907	3,515,386	3,515,858	3,515,726	3,514,937	3,515,685
3,514,914	3,515,390	3,515,861	3,515,731	3,514,969	3,515,711
3,514,917	3,515,398	3,515,866	3,515,827	3,514,971	3,515,718
3,514,953	3,515,401	3,515,875	3,515,829	3,515,018	3,515,734
3,514,962	3,515,406	3,515,888	3,515,869	3,515,032	3,515,749
3,515,005	3,515,415	3,515,889	3,515,940	3,515,041	3,515,759
3,515,013	3,515,418	3,515,894	3,515,973	3,515,077	3,515,763
3,515,017	3,515,421	3,515,896	3,515,991	3,515,081	3,515,764
3,515,019	3,515,422	3,515,905	3,515,905	3,515,115	3,515,765
3,515,026	3,515,435	3,515,910	3,515,911	3,515,118	3,515,766
3,515,027	3,515,438	3,515,911	3,515,911	3,515,123	3,515,767
3,515,037	3,515,442	3,515,932	3,515,932	3,515,144	3,515,807
3,515,042	3,515,453	3,515,933	3,515,933	3,515,165	3,515,811
3,515,043	3,515,464	3,515,935	3,515,935	3,515,167	3,515,813
3,515,053	3,515,468	3,515,938	3,515,938	3,515,169	3,515,820
3,515,064	3,515,470	3,515,983	3,515,983	3,515,201	3,515,836
3,515,091	3,515,471	3,515,991	3,515,991	3,515,223	3,515,856
3,515,093	3,515,474	3,516,001	3,516,001	3,515,250	3,515,864
3,515,097	3,515,480	3,516,002	3,516,002	3,515,254	3,515,876
3,515,108	3,515,482	3,516,011	3,516,011	3,515,260	3,515,918
3,515,112	3,515,492	3,516,019	3,516,019	3,515,265	3,515,924
3,515,117	3,515,499	3,516,029	3,516,029	3,515,287	3,515,936
3,515,121	3,515,516	3,516,035	3,516,035	3,514,894	3,515,948
3,515,124	3,515,528	3,516,045	3,516,045	3,514,934	3,515,965
3,515,137	3,515,535	3,516,060	3,516,060	3,514,935	3,515,965
3,515,168	3,515,539			3,514,956	3,515,992

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

17 : 3,516,033	25 : 3,515,606	29 : 3,515,172	36 : 3,515,067	39 : 3,514,870	42 : 3,515,487
3,516,039	3,515,629	3,515,515	3,515,116	3,514,874	3,515,511
3,516,040	3,515,674	3,515,562	3,515,122	3,514,901	3,515,518
3,516,063	3,515,738	3,515,573	3,515,125	3,514,906	3,515,526
3,516,067	3,515,774	3,515,689	3,515,128	3,514,916	3,515,531
18 : 3,514,784	3,515,852	3,515,708	3,515,134	3,514,952	3,515,540
3,514,836	3,515,870	3,515,917	3,515,135	3,514,957	3,515,553
3,514,837	3,515,871	30 : 3,515,428	3,515,139	3,515,033	3,515,567
3,514,951	3,515,881	31 : 3,515,296	3,515,141	3,515,034	3,515,662
3,514,965	3,515,885	33 : 3,515,194	3,515,142	3,515,082	3,515,680
3,514,970	3,515,893	3,515,281	3,515,143	3,515,085	3,515,681
3,514,988	3,515,909	3,515,316	3,515,148	3,515,086	3,515,682
3,515,076	3,515,939	3,515,369	3,515,154	3,515,160	3,515,683
3,515,113	3,515,947	3,515,967	3,515,159	3,515,175	3,515,684
3,515,228	3,515,971	34 : 3,514,788	3,515,200	3,515,180	3,515,686
3,515,241	3,516,014	3,514,820	3,515,262	3,515,233	3,515,723
3,515,247	3,516,015	3,514,846	3,515,267	3,515,235	3,515,782
3,515,307	3,516,025	3,514,871	3,515,271	3,515,245	3,515,784
3,515,334	3,516,030	3,514,887	3,515,278	3,515,264	3,515,794
3,515,366	3,516,031	3,514,899	3,515,289	3,515,280	3,515,799
3,515,496	3,516,037	3,514,923	3,515,305	3,515,327	3,515,844
3,515,503	3,516,041	3,514,936	3,515,318	3,515,340	3,515,944
3,515,542	3,516,080	3,514,959	3,515,332	3,515,364	3,515,970
3,515,710	3,516,089	3,514,963	3,515,333	3,515,420	3,515,975
26 : 3,514,786	3,514,990	3,514,990	3,515,344	3,515,429	3,515,980
3,514,802	3,515,022	3,515,022	3,515,361	3,515,443	3,515,988
3,515,797	3,515,059	3,515,059	3,515,416	3,515,447	3,515,989
3,515,804	3,515,068	3,515,068	3,515,427	3,515,471	3,516,044
3,515,824	3,515,078	3,515,078	3,515,445	3,515,529	3,516,046
3,515,941	3,515,129	3,515,129	3,515,452	3,515,546	3,516,048
3,515,950	3,515,131	3,515,131	3,515,463	3,515,574	3,516,050
3,515,951	3,515,155	3,515,155	3,515,475	3,515,575	3,516,066
19 : 3,515,025	3,514,973	3,515,157	3,515,477	3,515,588	3,516,087
3,515,096	3,514,983	3,515,173	3,515,478	3,515,618	44 : 3,514,823
3,515,219	3,514,992	3,515,178	3,515,481	3,515,666	3,515,136
3,515,224	3,515,012	3,515,198	3,515,484	3,515,669	3,515,329
3,515,246	3,515,028	3,515,217	3,515,488	3,515,688	3,515,394
3,515,330	3,515,094	3,515,232	3,515,489	3,515,695	45 : 3,515,080
3,515,437	3,515,105	3,515,257	3,515,536	3,515,712	3,515,580
3,515,969	3,515,109	3,515,266	3,515,537	3,515,740	3,515,623
3,516,069	3,515,158	3,515,269	3,515,547	3,515,751	3,515,633
20 : 3,515,292	3,515,204	3,515,277	3,515,555	3,515,845	3,515,773
3,515,328	3,515,208	3,515,325	3,515,556	3,514,813	47 : 3,514,813
3,515,389	3,515,236	3,515,345	3,515,563	3,515,850	3,515,349
3,515,467	3,515,249	3,515,396	3,515,568	3,515,886	3,515,506
3,515,483	3,515,368	3,515,414	3,515,582	3,515,895	3,515,545
3,515,968	3,515,373	3,515,455	3,515,584	3,515,928	3,515,565
21 : 3,514,964	3,515,395	3,515,456	3,515,585	3,515,930	3,515,628
3,515,199	3,515,407	3,515,457	3,515,587	3,515,977	3,515,714
3,515,356	3,515,409	3,515,476	3,515,590	3,515,984	3,515,715
3,515,855	3,515,419	3,515,557	3,515,591	3,515,991	3,515,775
3,515,873	3,515,431	3,515,579	3,515,608	3,516,028	48 : 3,514,787
22 : 3,514,927	3,515,433	3,515,631	3,515,625	3,516,042	3,514,799
3,515,024	3,515,439	3,515,671	3,515,630	3,516,051	3,514,831
3,515,102	3,515,440	3,515,672	3,515,670	40 : 3,514,822	3,514,849
3,515,210	3,515,448	3,515,675	3,515,722	3,515,244	3,514,885
3,515,256	3,515,502	3,515,687	3,515,752	3,515,276	3,514,902
3,515,736	3,515,569	3,515,692	3,515,755	3,515,425	3,514,950
3,515,739	3,515,599	3,515,707	3,515,776	3,515,525	3,515,065
3,515,754	3,515,600	3,515,724	3,515,780	41 : 3,514,791	3,515,092
3,515,760	3,515,638	3,515,735	3,515,801	3,514,801	3,515,098
23 : 3,515,818	3,515,648	3,515,745	3,515,802	3,514,905	3,515,101
24 : 3,515,001	3,515,649	3,515,746	3,515,821	3,515,275	3,515,156
3,515,069	3,515,676	3,515,753	3,515,830	3,515,411	3,515,181
3,515,072	3,515,709	3,515,756	3,515,851	3,516,061	3,515,195
3,515,127	3,515,717	3,515,781	3,515,854	42 : 3,514,815	3,515,211
3,515,388	3,515,719	3,515,783	3,515,859	3,514,818	3,515,212
3,515,397	3,515,757	3,515,786	3,515,867	3,514,840	3,515,213
3,515,410	3,515,769	3,515,795	3,515,879	3,514,863	3,515,214
3,515,449	3,515,777	3,515,805	3,515,880	3,514,908	3,515,215
3,515,451	3,515,838	3,515,810	3,515,902	3,514,913	3,515,216
3,515,459	3,515,863	3,515,828	3,515,906	3,514,915	3,515,221
3,515,465	3,515,892	3,515,848	3,515,915	3,514,925	3,515,237
3,515,612	3,515,903	3,515,887	3,515,958	3,514,991	3

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

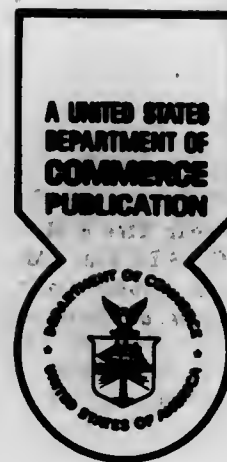
53 : 3,515,620 3,515,862	55 : 3,514,941 3,515,035	55 : 3,515,207 3,515,357	55 : 3,515,423 3,515,441	55 : 3,515,635 3,515,637	55 : 3,515,934 3,515,974
54 : 3,515,660	3,515,052	3,515,379	3,515,560	3,515,831	56 : 3,515,322
55 : 3,514,926	3,515,119				

Design Patents

6 : 217,724 217,734 217,743	17 : 217,725 217,731 217,737	20 : 217,719 217,750 217,751	26 : 217,729 217,730 217,746	29 : 217,716 31 : 217,745 36 : 217,712	44 : 217,710 217,711 217,709
8 : 217,744 217,748	217,738 217,740	24 : 217,704 25 : 217,714	217,747 217,753	37 : 217,727 39 : 217,739	45 : 217,732 217,733
9 : 217,713	217,741	26 : 217,726 217,707	27 : 217,722 217,723	37 : 217,720 39 : 217,736	48 : 217,735 50 : 217,706
17 : 217,708 217,721	20 : 217,749 217,718	217,728	217,752		

DEFENSIVE PUBLICATIONS APPLICATIONS
(Notice of Dec. 16, 1969, 869 O.G. 687)

26 : T875,003	36 : T875,002	36 : T875,005	37 : T875,001	40 : T875,004	
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U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 2, 1970

Volume 875

Number 1

TRADEMARKS NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 433,532 (TRIMCLIP), John J. Duffy, doing business as J. J. Duffy Co., Nail clippers and cuticle scissors; Reg. No. 539,527 (TRIMMETTE), The W. E. Bassett Company, Finger and toenail clippers; Reg. No. 614,595 (TRIM), same, Nail files; Reg. No. 632,793, same, Finger and toenail clippers; Reg. No. 643,651 (POCKET TRIM), same, Toilet kit—namely, nail clipper, nail file and comb; Reg. No. 643,652 (TRIM-PAC), same; Reg. No. 655,900 (TRIMCLIP), same, Nail clippers; Reg. No. 656,974 (TRIM-TRIO), same, Combination tool comprising a knife-like case with a plurality of pivoted blades; Reg. No. 657,002 (TRIMMIT), same; Reg. No. 672,259 (TRIM-ISTER), same, Nail clipper in a case; Reg. No. 693,900 (TRIM-KURV), same, Nail files; Reg. No. 695,400 (TRIM), same, Manicuring emery boards, filed Apr. 29, 1969, D.C. S.D.N.Y., Doc. 69-C-1795, *The W. E. Bassett Co. v. Popell Brothers Inc.* Notice of voluntary dismissal, Oct. 21, 1969.

Reg. No. 599,537. (See Reg. No. 433,527.)

Reg. No. 614,595. (See Reg. No. 433,527.)

Reg. No. 632,793. (See Reg. No. 433,527.)

Reg. No. 643,651. (See Reg. No. 433,527.)

Reg. No. 643,652. (See Reg. No. 433,527.)

Reg. No. 655,900. (See Reg. No. 433,527.)

Reg. No. 656,974. (See Reg. No. 433,527.)

Reg. No. 657,002. (See Reg. No. 433,527.)

Reg. No. 672,259. (See Reg. No. 433,527.)

Reg. No. 693,900. (See Reg. No. 433,527.)

Reg. No. 695,400. (See Reg. No. 433,527.)

Reg. No. 744,348 (AMETEK), Ametek, Inc., Electric motors, electric motor actuators and synchro transducers; Reg. No. 744,381, same, Springs, spring motors, spring motor reels, metal stampings for machine parts, and centrifugal drying machines; Reg. No. 744,391, same, Laundry washing machines, laundry liquid extracting machines, laundry washer-extractors, laundry ironers and laundry folding machines; Reg. No. 744,422, same, Pressure gauges, wire terminal and material pull testers, mechanical force gauges, material testing machines and accessories, beverage measuring dispensers, ammeters, voltmeters, thermometers, process control and recording instruments, and timing and pressure actuated mechanisms for opening parachutes; Reg. No. 744,507, same, Air volume controllers for water pressure systems, and industrial type fans; Reg. No. 744,712 (AMETEK AND DESIGN), same, Electric motors and electric motor actuators and synchro transducers; Reg. No. 744,750, same, Springs, spring motors, spring motor reels, metal stampings for machine parts, and centrifugal drying machines; Reg. No. 744,761, same, Laundry washing machines, laundry liquid extracting machines, laundry washer-extractors, laundry ironers and laundry folding machines; Reg. No. 744,769, same, Pressure gauges, wire terminal and material pull testers, mechanical force gauges, ma-

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1970

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]..... 24,172
Date of oldest new application..... June 2, 1969
Date of oldest amended application (filing date)..... October 20, 1966

C. M. WENDT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....	9-17-69	10-2-67
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....	7-9-69	10-20-68
(III) C. B. FOWLER, Classes 19, 21, 23, 26, 31, 34, 35, 36.....	9-4-69	11-2-66
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 26, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....	6-2-69	10-27-67
Renewals (All Classes).....	3-17-70	
Sec. 12(c) Publications (All Classes).....	3-17-70	

Applications filed during the month of April 1970—3,154

Registrations Issued 403—No. 891,850 to No. 892,252
Renewals Issued 120

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20540 to whom all subscriptions should be made payable and all communications addressed; subscription price, \$20.50 per annum, foreign mailing \$4.75 additional; single copies, 60 cents each.
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terial testing machines and accessories, beverage measuring dispensers, ammeters, voltmeters, thermometers, process control and recording instruments, temperature control instruments, and timing and pressure actuated mechanisms for opening parachutes; Reg. No. 744,800 (AMETEK), same, Liquid filtering apparatus and filter cloth therefor; Reg. No. 744,810 (AMETEK AND DESIGN), same; Reg. No. 744,820, same, Air volume controllers for water pressure systems, and industrial type fans, filed Jan. 9, 1970, D.C.N.J. (Newark), Doc. C-23-70, *Ametek, Inc. v. W. S. Shamlan & Co., Inc. and Harold V. Shram, etc.*

Reg. No. 744,801. (See Reg. No. 744,848.)

Reg. No. 744,801. (See Reg. No. 744,848.)

Reg. No. 744,822. (See Reg. No. 744,848.)

Reg. No. 744,507. (See Reg. No. 744,848.)

Reg. No. 744,712. (See Reg. No. 744,848.)

Reg. No. 744,750. (See Reg. No. 744,848.)

Reg. No. 744,761. (See Reg. No. 744,848.)

Reg. No. 744,769. (See Reg. No. 744,848.)

Reg. No. 744,800. (See Reg. No. 744,848.)

Reg. No. 744,810. (See Reg. No. 744,848.)

Reg. No. 744,820. (See Reg. No. 744,848.)

Reg. No. 850,708 (POLYGLAS), The Goodyear Tire & Rubber Company, Tires, filed Jan. 12, 1970, D.C., S.D. Fla. (Miami), Doc. 70-42-C-JE, *The Goodyear Tire & Rubber Co. v. National Brands Tire Co., Inc., doing business as National Tire Stores.*

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 264,747. Eaton Yale & Towne Inc., Cleveland, Ohio, assignee, by mesne assignment, of The K-Way Dispensing Equipment Company, Cleveland, Ohio. Filed Feb. 15, 1967.

K-WAY

Owner of Reg. No. 797,426.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Commercial Non-Refrigerated Beverage Dispensing Units and Parts Thereof (Int. Cl. 7).

Class 31—Filters and Refrigerators

For Commercial Refrigerated Beverage Dispensing Units and Parts Thereof (Int. Cl. 11).

First use April 1960.

SN 276,262. Tobey's Rasp Service Inc., Santa Cruz, Calif. Filed July 18, 1967.

TO-AIR

Class 4—Abrasives and Polishing Materials

For Buffing Wheels and Adapters for Attaching Same to Drive Shafts and the Like (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Rasps, Rasp Wheels, Combination Rasp and Buffing Wheels, and Adapters for Attaching Same to Driving Shafts and the Like (Int. Cl. 7).

First use Aug. 31, 1964.

SN 800,907. Coniker Enterprises, Inc., Chicago, Ill. Filed June 20, 1968.

MEETINGMASTER

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Portfolios for Secretarial Use (Int. Cl. 18).

Class 37—Paper and Stationery

For Notebooks, File Cards, File Folders; Stationery—Namely, Note Paper and Envelopes (Int. Cl. 16).

First use Nov. 29, 1967.

SN 304,845. Amicon Corporation, Lexington, Mass. Filed Aug. 12, 1968.



Class 5—Adhesives

For General Purpose Epoxy Adhesives (Int. Cl. 1). First use June 17, 1968.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrical Insulating and Encapsulating Compounds of the Type Used in Potting Electrical Components and Electrically-Conductive Resin Compounds (Int. Cls. 9 and 17). First use June 17, 1968.

Class 31—Filters and Refrigerators

For Ultrafiltration Membranes, Ultrafiltration Units, and Parts Thereof (Int. Cl. 11). First use Jan. 26, 1968.

SN 317,450. Homedic, Inc., Ferndale, Mich. Filed Jan. 24, 1969.

HOMEDIC

Class 100—Miscellaneous

For Rental of Home Care Therapeutic Equipment and Rental of Therapeutic Equipment to Hospitals and Doctors (Int. Cl. 42).

Class 101—Advertising and Business

For Distributorship Services in the Field of Therapeutic Equipment and Therapeutic Equipment Retail Store Services (Int. Cl. 35).

First use Nov. 1, 1966.

SN 317,693. Regenstelter Publishing Enterprises, Inc., Chicago, Ill. Filed Jan. 28, 1969.



Class 101—Advertising and Business

For Book and Pamphlet Manufacturing Services to the Order and/or Specification of Others (Int. Cl. 35).

Class 106—Material Treatment

For Book Binding Services (Int. Cl. 40).

First use on or about June 5, 1968.

SN 318,429. Kennedy & Cohen, Inc., Hallendale, Fla. Filed Feb. 5, 1969.

KENNEDY & COHEN

Class 21—Electrical Apparatus, Machines, and Supplies
For Televisions, Stereos and Dishwashers, and Dishwashers for Domestic Use (Int. Cl. 7 and 9).

Class 24—Laundry Appliances and Machines
For Washing Machines and Dryers (Int. Cl. 7).

Class 31—Filters and Refrigerators
For Refrigerators and Freezers (Int. Cl. 11).

Class 34—Heating, Lighting, and Ventilating Apparatus
For Air Conditioners (Int. Cl. 11).
First use on or before August 1966.

SN 818,686. Miguel Torres, Barcelona, Spain. Filed Feb. 7, 1969.

TORRES

"Torres" is a Spanish word for "towers." Owner of U.S. Reg. No. 641,512.

Class 47—Wines
For Wines (Int. Cl. 33).
First use February 1962; in commerce on or about Apr. 10, 1964.

Class 49—Distilled Alcoholic Liquors
For Brandy (Int. Cl. 33).
First use in 1953; in commerce in 1958.

SN 321,737. McCall Oil and Chemical Corporation, d.b.a. Great Western Chemical Company, Portland, Oreg. Filed Mar. 14, 1969.

GW

Class 6—Chemicals and Chemical Compositions

For Industrial Chemicals—Namely, Acetates, Acids, Alcohols, Alkalies, Amines, Fatty Acids, Glycols, Ketones, Phosphates, Pigments, Plasticisers, Silicates, Stearates, and Wet-ting Agents (Int. Cls. 1 and 2).

Class 101—Advertising and Business
For Chemical Product Distribution Services (Int. Cl. 35).
First use 1956.

SN 824,232. Rockware, Inc., Rockford, Ill. Filed Apr. 10, 1969.

SHELVES UNLIMITED

No registration rights are claimed for the word "Shelves" apart from the mark as shown, but the applicant waives none of its common law rights in said mark or any feature thereof.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Shelving Hardware Comprising Shelf Brackets and Shelf Bracket Standards (Int. Cl. 6).

Class 32—Furniture and Upholstery

For Shelving and Shelf Book Stops (Int. Cl. 20).
First use Jan. 31, 1969.

SN 326,580. Sperry Rand Corporation, New York, N.Y. Filed May 7, 1969.



Owner of Reg. Nos. 861,850, 878,587, and others.

Class 5—Adhesives

For Library Paste; Liquid Plastic for Book Repair; Contact Cement and Glue (Int. Cl. 1).

Class 11—Inks and Inking Materials
For Ink Pads and Ink Therefor (Int. Cl. 16).

Class 14—Metals and Metal Castings and Forgings
For Gold Leaf (Int. Cl. 2).

Class 16—Protective and Decorative Coatings

For Lacquer, Lacquer Thinner, and Furniture Finish—Namely, Stains and Varnishes (Int. Cl. 2).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Gluing Machines of the Counter or Desk Type; Pencil Sharpeners; Electric Hand Operated Erasing Machines; Numbering Machines; and Rubber Hand Stamps (Int. Cl. 16).

Class 29—Brooms, Brushes, and Dusters
For Gluing and Paint Brushes (Int. Cl. 16).

Class 32—Furniture and Upholstery

For Book Cases; Book Supports; Shelving; Cupboards; Cabinets; Lockers; Stands for Supporting Articles Such as Books, Coats, Hats, etc.; Desks; Carrels; Chairs; Museum Exhibit Cases (Int. Cl. 20).

Class 37—Paper and Stationery

For Periodical and Pamphlet Binders; Charts; Record Books; Binders for Holding New Newspapers; Loose Leaf Binders; Book mending Kits; Blank and Partially Printed Labels and Label Holders for Receiving and Displaying Labels; Celluloid Pockets and Protectors; Erasers; Binder Rings; Library Record Cards and Forms (Int. Cl. 16).

First use Oct. 20, 1967.

SN 326,581. Sperry Rand Corporation, New York, N.Y. Filed May 7, 1969.

SPERRY RAND

Owner of Reg. Nos. 861,850, 878,587, and others.

Class 5—Adhesives

For Library Paste; Liquid Plastic for Book Repair; Contact Cement and Glue (Int. Cl. 1).

Class 11—Inks and Inking Materials
For Ink Pads and Ink Therefor (Int. Cl. 16).

Class 14—Metals and Metal Castings and Forgings
For Gold Leaf (Int. Cl. 2).

Class 16—Protective and Decorative Coatings
For Lacquer, Lacquer Thinner, and Furniture Finish—Namely, Stains and Varnishes (Int. Cl. 2).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Gluing Machines of the Counter or Desk Type; Pencil Sharpeners; Electric Hand Operated Erasing Machines; Numbering Machines; and Rubber Hand Stamps (Int. Cl. 16).

Class 29—Brooms, Brushes, and Dusters
For Gluing and Paint Brushes (Int. Cl. 16).

Class 32—Furniture and Upholstery
For Book Cases; Book Supports; Shelving; Cupboards; Cabinets; Lockers; Stands for Supporting Articles Such as Books, Coats, Hats, etc.; Desks; Carrels; Chairs; Museum Exhibit Cases (Int. Cl. 20).

Class 37—Paper and Stationery
For Periodical and Pamphlet Binders; Charts; Record Books; Binders for Holding New Newspapers; Loose Leaf Binders; Book mending Kits; Blank and Partially Printed Labels and Label Holders for Receiving and Displaying Labels; Celluloid Pockets and Protectors; Erasers; Binder Rings; Library Record Cards and Forms (Int. Cl. 16).

First use Oct. 20, 1967.

SN 829,404. Laser Sciences, Inc., Bethel, Conn. Filed June 9, 1969.



Class 26—Measuring and Scientific Appliances
For Continuous Wave Gas Laser Systems (Int. Cl. 9).
First use Nov. 1, 1968.

Class 100—Miscellaneous

For Services of Consulting With Respect to Laser Technology and Application of Laser Technology to Commercial, Military and Governmental Uses and Development of Laser and Related Technology (Int. Cl. 42).
First use July 26, 1968.

SN 831,802. Victor Equipment Company, San Francisco, Calif. Filed July 7, 1969.

VICTOR

Owner of Reg. Nos. 220,890, 821,986, and others.

Class 31—Filters and Refrigerators

For Air Filters for Pneumatic Equipment (Int. Cl. 11).

Class 34—Heating, Lighting, and Ventilating Apparatus
For Flame Cutting and Welding Equipment—Namely, Torches, Nozzles, Tips, Controls, Regulators, Gauges, Fittings, Stands, Guides, and Accessories; Braising and Welding Flux; and Coated and Uncoated Welding Rods (Int. Cls. 1, 6, and 9).
First use February 1916.

SN 834,163. Iowa Mold Tooling Company, Inc., Garner, Iowa. Filed Aug. 1, 1969.



Class 19—Vehicles

For Motor Trucks, and Specially Designed Truck Bodies, Having Equipment for Changing, Repairing and Transporting Tires of Vehicles, Trucks, Tractors and Off-Road Vehicles (Int. Cl. 12).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Air Compressors; Air Compressor Kits Comprising an Air Compressor, an Electric Clutch, and Mounting Brackets for Mounting Such Compressor and Clutch to a Truck Engine; and Tire Servicing Equipment—Namely, Farm Vehicle Tire Bead Breaker Tools, and Hoists for Lifting and Handling Tires and Wheels (Int. Cl. 7).

First use Apr. 24, 1968.

SN 337,611. The Walter Reade Organisation, Inc., Oakhurst, N.J. Filed Sept. 11, 1969.



The lining on the drawing is a design feature of the mark, and does not represent color.

Class 38—Prints and Publications

For Developed Motion Picture Films, Filmstrips and Continuous Film Loops in Cartridges, Intended Primarily for Use by Educational Institutions (Int. Cl. 9).

Class 107—Education and Entertainment

For Production, Co-Production, Presentation, Leasing of Feature-Length and Short-Subject Motion Pictures for Theatrical, Non-Theatrical (Institutional) and Television Exhibition, and the Theatrical Exhibition of Feature-Length and Short-Subject Motion Pictures (Int. Cl. 41).

First use not later than Aug. 31, 1963.

SN 389,639. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

AUTUMN MORNING

Class 51—Cosmetics and Toilet Preparations

For Dusting Powder and Cologne (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 345,743. Cleaner Care, Inc., Eugene, Oreg. Filed Dec. 10, 1969.

CARE COAT

Class 6—Chemicals and Chemical Compositions

For Water Repellent for Fabrics (Int. Cl. 1).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Spray Units for Applying Water Repellent and Other Chemical Solutions to Garments (Int. Cl. 7).

First use Nov. 18, 1969.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105. A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 301,205. Dainippon Ink Kagaku Kogyo Kabushiki Kaisha (Dainippon Ink & Chemicals, Inc.), Itabashi-ku, Tokyo, Japan. Filed June 24, 1968.

EPICLON

For Epoxy Resins (Int. Cl. 1).

First use May 13, 1968; in commerce May 13, 1968.

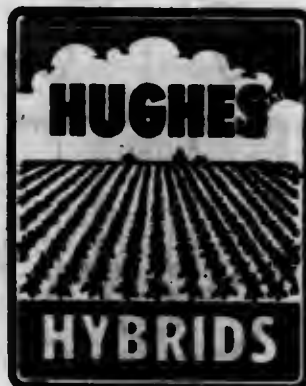
SN 306,780. International Paper Company, New York, N.Y. Filed Sept. 6, 1968.

UNIWOOD

For Resin Impregnated Cellulosic Fiber Sheets, Wherein the Resin Is in the Uncured State, for use as Internal Elements in the Manufacture of Plywood (Int. Cl. 16).

First use Apr. 4, 1968.

SN 311,369. Hughes Hybrids, Inc., Woodstock, Ill. Filed Nov. 5, 1968.



No exclusive right in the word "Hybrids" is claimed apart from the mark as shown. The lining in the drawing is a design feature which does not represent color and no claim to color is made.

For Hybrid Seed Corn (Int. Cl. 31).

First use Sept. 1, 1967.

SN 337,829. Phillips Petroleum Company, Bartlesville, Okla. Filed Sept. 12, 1969.

K-RESIN

For Synthetic Rubber (Int. Cl. 17).

First use Aug. 27, 1969.

SN 339,380. Robert L. Shuffett, Greensburg, Ky. Filed Sept. 30, 1969.

RLS

For Polled Hereford Cattle (Int. Cl. 31).

First use Jan. 1, 1964.

Class 2—Receptacles

SN 330,280. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed June 17, 1969.

E-Z POUR

Applicant disclaims the word "Pour" apart from the mark as shown. Owner of Reg. Nos. 227,085, 848,043, and others. For Folded Paperboard Dispensing Cartons (Int. Cl. 16).

First use May 20, 1969.

SN 348,560. Maryland Cup Corporation, Owings Mills, Md. Filed Jan. 14, 1970.

ANIMEALS

For Paper and Plastic Cups, Bowls, and Plates (Int. Cl. 21).

First use on or about Dec. 23, 1969.

SN 349,034. Zenith Specialty Bag Co., Inc., South El Monte, Calif. Filed Jan. 19, 1970.

GOLD-N-HOT

For Paper Bags Used as Food Containers (Int. Cl. 16).

First use July 14, 1969.

SN 350,446. American Machine & Foundry Company, New York, N.Y. Filed Feb. 4, 1970.

AMF

Owner of Reg. Nos. 714,104, 811,921, and others. For Tanks and Receptacles for Fluids and/or Fluid Suspensions, Including Pressure, Vacuum and Cryogenic Vessels, Which Are Portable, Mountable for Transport, and/or Installable at a Fixed Location (Int. Cl. 11).

First use as early as May 1963.

SN 350,904. Germain's, Inc., Los Angeles, Calif. Filed Feb. 9, 1970.

WESTERN WOODS

For Home and Garden Plant Containers—Namely, Redwood Tube, Patio Boxes, and Hanging Baskets, and Plastic and Pulp Container Liners (Int. Cls. 20 and 21).

First use Jan. 12, 1970.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 329,848. Gail Leather Products, Inc., New York, N.Y. Filed June 12, 1969.

RED LION

For Personal Leather Goods—Namely, Wallets, Key Cases, Pocket Secretaries, Car Cases, Money Folders, Money Clips, Utility Kits, and Purses (Int. Cl. 18).

First use Dec. 13, 1968.

Class 5—Adhesives

SN 325,381. Plumbercraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.

FORMULA 33

For Bathtub Trim in the Nature of a Self-Adhering Heavy Vinyl Flexible Material (Int. Cl. 17).

First use January 1965.

SN 325,383. Plumbercraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.

FORMULA 44

For Bathtub Trim in the Nature of a Self-Adhering Heavy Vinyl Flexible Material (Int. Cl. 17).

First use January 1965.

Class 6—Chemicals and Chemical Compositions

SN 313,751. R. T. Vanderbilt Company, Inc. New York, N.Y. Filed Dec. 5, 1968.

VANSEAL CS

For Surfactant for Use in Shampoos and Detergents (Int. Cl. 1).

First use Oct. 2, 1968.

SN 315,778. R. H. Miller Company, Homer, N.Y. Filed Jan. 3, 1969.

GALVASEAL

Owner of Reg. No. 790,806.

For Protective Coating Concentrate Having Incidental Lubricating Qualities, Applied by Dispersing in Water to Retard White Rust Corrosion on Galvanized Surfaces (Int. Cl. 2).

First use April 1951.

SN 318,846. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 10, 1969.

DOXOMEAN

For Synthetic Fatty Amine Surface Active Agents (Int. Cl. 1).

First use Jan. 29, 1969.

SN 319,030. Bison Corporation, Canton, Ohio. Filed Feb. 13, 1969.

ASTROCON

For Chemical Compound Consisting of a Bichromate or Chromic Acid Which Is Mixed With Water Forming a Solution Into Which Cadmium, Zinc or Other Metals Are Dipped To Be Passivated (Converted) (Int. Cl. 1).

First use on or about Sept. 26, 1968.

SN 324,178. Cotey Chemical Corporation, Lubbock, Tex. Filed Apr. 10, 1969.

WEL-CHLOR

For Dry Chlorine Used as a Disinfectant for Wells and Equipment (Int. Cl. 5).

First use Mar. 5, 1968.

SN 324,710. Ferguson Fumigants, Inc., Hazelwood, Mo. Filed Apr. 16, 1969.

ZYTOX

For Fumigants (Int. Cl. 5).

First use Mar. 21, 1969.

SN 326,348. Ciba Limited, Basel, Switzerland. Filed May 5, 1969.

CIBACRON PRONT

Owner of Swiss Reg. No. 232,052, dated May 20, 1968. For Dyestuffs, Coloring Matters (Int. Cl. 2).

SN 329,176. American Chemosol Corporation, New York, N.Y. Filed June 4, 1969.

CHEMOSOL

For Chemical Composition for Tobacco Treatment To Reduce Undesirable Constituents in Smoke Resulting From Pyrolysis of the Tobacco (Int. Cl. 1).

First use May 1, 1969.

SN 329,860. Hercules Incorporated, Wilmington, Del. Filed June 12, 1969.

MUPCO

For Chemical Color Pigments (Int. Cl. 2).

First use May 28, 1969.

SN 337,841. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Sept. 12, 1969.

QUESTRAL

For Dyestuffs Used in the Printing and Dyeing of Textiles (Int. Cl. 2).

First use on or about July 8, 1969.

SN 842,590. Institute of Gas Technology, Chicago, Ill. Filed Nov. 4, 1969.

HYGAS

For Synthetic Gas That Is Fully Interchangeable With Natural Gas and Is Produced by a Hydro-Gasification Process (Int. Cl. 1).
First use Dec. 5, 1968.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 838,226. Colibri Corporation of America, Mount Vernon, N.Y. Filed Sept. 18, 1969.

FIREBIRD

For Cigarette Lighters (Int. Cl. 34).
First use Jan. 15, 1969.

Class 10—Fertilizers

SN 325,606. Ickes-Braun Glasshouses, Inc., Aptakisic, Ill. Filed Apr. 25, 1969.

REDI-PLANT

For Potting Mixture, or Plant-Nurturing Mixture, Composed of Peat Moss, Horticultural Vermiculite, and Fertilizer (Int. Cl. 1).
First use Feb. 27, 1969.

SN 328,614. Betocel International Ltd., Basel, Switzerland. Filed May 29, 1969.

VERDYOL

Owner of Swiss Reg. No. 233,185, dated July 1, 1968.
For Soil Builder and Fertilizer (Int. Cl. 1).

SN 339,407. Abbott Laboratories, d.b.a. Amdal Company, North Chicago, Ill. Filed Oct. 1, 1969.



The drawing is lined for the color green, but no claim is made for any particular color. Owner of Reg. Nos. 827,107 and 872,848.

For Plant Nutrients, Growth Promotants, and Crop Regulators (Int. Cl. 1).
First use on or about July 1, 1965.

Class 11—Inks and Inking Materials

SN 824,217. Pacific Industries, Inc., New York, N.Y. Filed Apr. 10, 1969.



For Carbon Paper Used To Make an Image Readable by Optical Scanning Equipment Which Feeds Information to Computer Systems (Int. Cl. 16).
First use Mar. 24, 1969.

Class 12—Construction Materials

SN 285,907. Urethane Fabricators, Inc., Camden, N.J., by merger from Am-Finn Sanna, Inc., Camden, N.J. Filed Nov. 29, 1967.

LITE-BEAMS

For Simulated Wood Beams Made of Plastic Material (Int. Cl. 19).
First use Apr. 27, 1967.

SN 290,501. Lumaside, Inc., Milwaukee, Wis. Filed Feb. 7, 1968.

PRESTIGE

Owner of Reg. No. 693,030.
For Aluminum and Steel Building Siding for Horizontal and Vertical Application, Finished With Enamels and Plastic Finishes, Plain or With a Variety of Surface Patterns Embossed Into the Metal (Int. Cl. 19).
First use Mar. 4, 1958.

SN 305,504. Unitec Products, Inc., Timonium, Md. Filed Aug. 19, 1968.



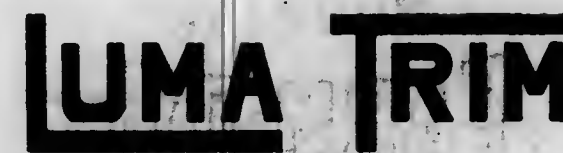
For Concrete Shingle (Int. Cl. 19).
First use June 19, 1968.

SN 323,076. American Timber Homes, Inc., Escanaba, Mich. Filed Mar. 28, 1969.



For Precut and Prefabricated Vacation Homes (Int. Cl. 19).
First use during or before June 1961.

SN 324,155. Aluminum Trim Company of America, Pittsburgh, Pa. Filed Apr. 10, 1969.



The word "Trim" is disclaimed apart from the mark as shown.

For Component Metal Parts for Soffits and Fascia—Namely, Fascia Caps, Crown Mountings, Underhill Trim, J-Channels, Angles, and Channel Runners (Int. Cl. 6).
First use Mar. 21, 1969.

SN 324,997. Andersen Corporation, Bayport, Minn. Filed Apr. 21, 1969.

PERMA-FIT

For Window Units Including Grilles and Muntins (Int. Cl. 19).
First use January 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 320,880. Unipak, Inc., Boston, Mass. Filed Mar. 5, 1969.

FAUCET MAGIC

For Shampoo Spray for Attachment to a Faucet (Int. Cl. 21).
First use Jan. 10, 1969.

SN 323,282. FMC Corporation, San Jose, Calif. Filed Apr. 1, 1969.



For Valve Discs for Valves Used in the Food and Beverage Industry (Int. Cl. 6).
First use Feb. 7, 1969.

SN 323,663. Advanced Drainage Systems, Inc., Newark, Del. Filed Apr. 4, 1969.

ADS

For Flexible Corrugated Drainage Tubing and Fittings and More Particularly Perforated Flexible Corrugated Tubing Drainage and Fittings (Int. Cl. 6).
First use July 7, 1967.

SN 323,690. Eisen- und Drahtwerk Erlau AG., Aalen, Wurttemberg, Germany. Filed Apr. 4, 1969.

ERLAU ROCK-X 13

For Tire Chains for Automotive Vehicles (Int. Cl. 12).
First use August 1963; in commerce September 1965.

SN 323,692. Eisen- und Drahtwerk Erlau AG., Aalen, Wurttemberg, Germany. Filed Apr. 4, 1969.

ERLAU ROCK-SPECIAL

For Tire Chains for Automotive Vehicles (Int. Cl. 12).
First use August 1963; in commerce September 1965.

SN 323,694. Eisen- und Drahtwerk Erlau AG., Aalen, Wurttemberg, Germany. Filed Apr. 4, 1969.

ERLAU ROCK-SUPER

For Tire Chains for Automotive Vehicles (Int. Cl. 12).
First use August 1963; in commerce September 1965.

SN 325,382. Plumbcraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.

CRYSTAL QUEEN

For Handles for Bathroom Faucets (Int. Cl. 6).
First use January 1965.

SN 325,385. Plumbcraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.



For Rubber Tankball for Toilet Tanks and Faucet Washers (Int. Cl. 11).
First use January 1965.

SN 345,804. Cathrineholm, Ltd., Norwalk, Conn. Filed Dec. 4, 1969.



For Bowls, Buffet Servers, Baking Pans, Tea Kettles, Coffee Pots, Butter Warmers, Skillets and Casserole Dishes (Int. Cl. 21).
First use Dec. 27, 1968.

SN 345,692. Thetford Corporation, Ann Arbor, Mich. Filed Dec. 8, 1969.

ELECTRA MAGIC

Owner of Reg. No. 836,578.
For Toilets (Int. Cl. 11).
First use Oct. 22, 1969.

Class 14—Metals and Metal Castings and Forgings

SN 332,678. Alcan Aluminum Corporation, Cleveland, Ohio. Filed July 16, 1969.



For Aluminum Sheet Material, Made From Core of High Strength Aluminum Alloy Clad Both Sides With a Relatively Pure Aluminum Alloy Particularly Selected for the Application of Porcelain Enamel (Int. Cl. 6).
First use June 1, 1968.

SN 343,286. Inspiration Consolidated Copper Company, New York, N.Y. Filed Nov. 12, 1969.

INSPIROD

For Copper Rods (Int. Cl. 6).
First use Oct. 24, 1969.

Class 15—Oils and Greases

SN 312,171. Acheson Industries, Inc., Port Huron, Mich. Filed Nov. 14, 1968.



For Lubricating Oils, Mineral Oils, Lubricating Greases, and Mold Release Agents (Int. Cl. 4).
First use Sept. 23, 1968.

SN 338,468. Candle Cabins of America, Inc., Mobile, Ala. Filed Sept. 22, 1969.



Without waiving any common law rights, applicant disclaims the word "Candle" apart from the mark as shown.
For Candles (Int. Cl. 4).
First use at least as early as Apr. 25, 1969.

SN 340,287. Southwest Georgia Oil Company, Inc., Bainbridge, Ga. Filed Oct. 9, 1969.

INLAND

For Gasoline (Int. Cl. 4).
First use May 1, 1969.

SN 342,143. Continental Oil Company, Ponca City, Okla. Filed Oct. 30, 1969.

DN 600

For Hydrocarbon-Based Fluid for Use as a Lubricant, Hydraulic Oil or Transmission Oil; and for Greases (Int. Cl. 4).
First use Aug. 14, 1969.

SN 343,055. Percy Sarms Corporation, Skokie, Ill. Filed Nov. 10, 1969.

EconoMIST

For Mold Release Agents (Int. Cl. 4).
First use Oct. 24, 1969.

SN 351,073. The Farm-Oyl Company, St. Paul, Minn. Filed Feb. 11, 1970.



Owner of Reg. No. 527,401.
For Lubricating Oils and Greases (Int. Cl. 4).
First use on or about July 1, 1928.

Class 16—Protective and Decorative Coatings

SN 274,834. Hayden Corporation West Springfield, West Springfield, Mass. Filed June 27, 1967.

TEBONY

For Mixture of Polymerized Tetrafluoroethylene and Acid Incorporated as an Ingredient in a Sealer for Coating Metals or Plastics or Other Materials With a Hardened Surface (Int. Cl. 2).
First use June 15, 1967.

SN 292,113. Liberty Bell Stores, Inc., Indianapolis, Ind. Filed Feb. 28, 1968.



Applicant disclaims the word "Stores" apart from the mark as shown.
For Latex Wall Paint (Int. Cl. 2).
First use July 1, 1967.

SN 311,565. Atlantic Richfield Company, Philadelphia, Pa. Filed Nov. 7, 1968.

ARCOTE

Owner of Reg. Nos. 645,035, 744,003, 849,263, and others.
For Protective Coatings in the Nature of Paint (Int. Cl. 2).
First use May 13, 1968.

SN 317,605. Politec International, S.A., Mexico City, Mexico. Filed Jan. 27, 1969.

POLITEC

For Synthetic Plastic Artist Paints (Int. Cl. 2).
First use July 26, 1958; in commerce Apr. 16, 1964.

SN 321,720. Dr. Kurt Herberts & Co., Wuppertal-Barmen, Germany. Filed 8-14-69.

STANDOX

Owner of German Reg. No. 416,098, dated Dec. 21, 1929.
For Lacquers, Paint Type Primers, Thermosetting Enamels and Paint, Particularly for Series Production and Repair, Painting of Automobiles and Agricultural Machinery (Int. Cl. 2).
First use 1952; in commerce February 1967.

Class 17—Tobacco Products

SN 316,411. P. J. Carroll & Company Limited, Dublin, Ireland. Filed Jan. 13, 1969.



For Cigarettes (Int. Cl. 34).
First use July 29, 1968; in commerce July 29, 1968.

SN 318,821. Reemtsma Cigarettenfabriken G.m.b.H., Hamburg, Germany. Filed Feb. 10, 1969.

ERNTE 23

The word "Ernte" can be translated as "harvest."
Owner of German Reg. No. 828,920, dated Dec. 9, 1966.
For Cigarettes (Int. Cl. 34).

SN 320,950. Havatampa Cigar Corporation, Tampa, Fla. Filed Mar. 6, 1969.

DON CESAR

For Cigars (Int. Cl. 34).
First use Feb. 21, 1969.

SN 327,794. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 25, 1969.

HUMI-SOFT POUCH

For Tobacco Pouches Containing Smoking Tobacco (Int. Cl. 34).
First use Mar. 20, 1969.

SN 327,829. Lorillard Corporation, New York, N.Y. Filed May 21, 1969.

BEECH-NUT

Owner of Reg. No. 594,799.
For Cigarettes and Chewing Tobacco (Int. Cl. 34).
First use 1897.

Class 18—Medicines and Pharmaceutical Preparations

SN 279,331. Phillips Roxane, Inc., New York, N.Y. Filed Aug. 29, 1967.



Owner of Reg. No. 741,839.
For Veterinary Preparations for Treatment of Dogs and Cats for: Sarcopic Mange, Ear Canker, Upset Stomach and Simple Diarrhea, Itching Due to Fungi, Fleas, Lice and Ticks, and Worms; Veterinary Vitamin Preparations; and Veterinary Grooming Preparation Having Medicinal Properties for Dogs and Cats; Veterinary Preparation for Treatment of: Swine Erysipelas, Staphylococcus and Streptococcus, Hog Cholera, and Swine Erysipelas, and Medicinal Preparations—Namely, Adrenocorticals, Antinauseants, Antacids, Antispasmodics, Cough and Cold Products, Antibacterials, Antibiotics, Sedatives, Circulatory and Respiratory Stimulants, Hemorrhoids, Cholera, Measles Vaccine, Female Hormones, Antiemesis, Antihistamines, Anticholinergics, Cholesterol and Lipid Reducers, Anti-Inflammatory Agents, Anti-Obesity, Antipyretics, Antiseptics, Barbiturates, Astringents, Bronchodilators, Laxatives, Vitamins, Wet Dressings, Enzymes, Gamma Globulin, Heparin Preparations, Corticosteroids, Hypnotics, Hypotensives, Lubricants, Hematinics, Emesis, Syrups, Medicated Anal Wipes, Tranquillizers, Antidiarrheals, and Cardiovascular Agents (Int. Cl. 5).
First use as early as August 1961.

SN 315,526. Allergan Pharmaceuticals, Santa Ana, Calif. Filed Jan. 2, 1969.

HYDROCARE

For Dermatological Preparation (Int. Cl. 5).
First use Nov. 12, 1968.

SN 317,402. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 23, 1969.

C-T-B

For Antitumor Agent (Int. Cl. 5).
First use Aug. 5, 1968.

SN 318,286. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Feb. 4, 1969.

ASCOR-B-SOL

For Intravenous Solutions Comprising Dextrose and Vitamins (Int. Cl. 5).
First use Jan. 2, 1969.

SN 318,287. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Feb. 4, 1969.

HEMOFIL

For Antihemophilic Factor (Human) for Intravenous Administration (Int. Cl. 5).
First use Dec. 23, 1968.

SN 325,374. Harold P. McDonald, Jr., Garden City, N.Y.
Filed Apr. 23, 1969.

CHRONO-DIAL

For Peritoneal Dialysis Solution for Chronic Renal Failure Patients (Int. Cl. 5).
First use Mar. 21, 1969.

SN 325,859. Fisons Pharmaceuticals Limited, Loughborough, England. Filed Apr. 29, 1969.

LOMUDAL

Owner of British Reg. No. 928,798, dated July 30, 1968.
For Pharmaceuticals for the Treatment of Alleviation of Respiratory and/or Allergic Conditions (Int. Cl. 5).

SN 327,228. Byk-Gulden Lomberg Chemische Fabrik GmbH, Konstanz, Germany. Filed May 14, 1969.

GLOBULACTIN

Owner of German Reg. No. 698,705, dated Mar. 7, 1956; and U.S. Reg. No. 254,054.
For Prophylaxis and Therapy of Bacterial and Virus Infections in Animals and Humans (Int. Cl. 5).
First use on or about April 1966; in commerce on or about April 1966.

SN 327,352. Bracco Industria Chimica S.p.A., Milan, Italy. Filed May 15, 1969.

UROVALIDIN

Owner of Italian Reg. No. 157,519, dated Dec. 13, 1961.
For Antibiotic Preparations for the Urinary Tract (Int. Cl. 5).

SN 340,742. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Oct. 15, 1969.

BENZEDREX

Owner of Reg. Nos. 329,610, 346,834, and others.
For Nasal Decongestant (Int. Cl. 5).
First use Aug. 1, 1944.

SN 341,573. Carter-Wallace, Inc., New York, N.Y. Filed Oct. 24, 1969.

NULCA

For Preparation for the Relief of Gastrointestinal Disturbances (Int. Cl. 5).
First use Sept. 25, 1969.

SN 349,134. Cooper Laboratories, Inc., Harrison, N.J. Filed Jan. 21, 1970.

ENURETROL

Owner of Reg. No. 762,646.
For Medicinal Preparation Used in the Treatment of Nocturnal Enuresis (Int. Cl. 5).
First use Apr. 25, 1963.

Class 19—Vehicles

SN 324,897. Draw-Tite Company, Belleville, Mich. Filed Apr. 18, 1969.

DRAW TITE

For Trailer Accessories—Namely, Hitches, Hitch Balls, Couplers, Towbars, and Dollies (Int. Cl. 12).
First use November 1947.

SN 328,286. Howard A. Ellenberger, d.b.a. Swing-Line Seat Company, Fort Wayne, Ind. Filed May 26, 1969.

SWING-LINE

For Seat Supports (Int. Cl. 12).
First use Mar. 31, 1967.

SN 329,795. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed June 12, 1969.

BRIDGESTONE 175 DUAL TWIN

Without waiver of any common law rights, applicant makes no claim of exclusive right to use of the numeral "175" or the words "Dual Twin" separate and apart from the mark as shown. Owner of Reg. Nos. 850,901, 857,819, and 857,821.
For Motorcycles, Bicycles and Their Parts (Int. Cl. 12).
First use Aug. 1, 1965; in commerce Aug. 1, 1965.

SN 332,441. Atelier Mecanique D'Alma Ltee (Ltd), Alma, Quebec, Canada. Filed July 14, 1969.



The drawing is lined for the color orange. The trademark is partly composed of two words, the first one being Moto and meaning "a combining form for motion and motor," the second one being Brousse and meaning "brush" (shrubs, bushes).
For Forward Wheel-Driven All Terrain Passenger Vehicle With Rear Wheel Steering (Int. Cl. 12).
First use July 1967; in commerce July 4, 1969.

SN 332,471. The Fixible Company, Loudonville, Ohio. Filed July 14, 1969.

Fixible

Owner of Reg. No. 507,898.
For Buses, Ambulances, Invalid and Funeral Cars, Motor Trucks and Motor Homes (Int. Cl. 12).
First use on or about Jan. 1, 1926.

SN 345,790. Benson Industries, Inc., Corona, Calif. Filed Dec. 10, 1969.

SIX-PAC

For Camper Bodies for Trucks (Int. Cl. 12).
First use June 1968.

Class 20—Linoleum and Oiled Cloth

SN 345,280. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Dec. 4, 1969.

PANACHE

For Vinyl Flooring (Int. Cl. 27).
First use Nov. 7, 1969.

SN 345,281. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Dec. 4, 1969.

FORTUNA

For Vinyl Flooring (Int. Cl. 27).
First use Nov. 7, 1969.

SN 345,282. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Dec. 4, 1969.

NIEU AMSTERDAM

For Vinyl Flooring (Int. Cl. 27).
First use Nov. 7, 1969.

SN 345,283. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Dec. 4, 1969.

COURIER

For Vinyl Flooring (Int. Cl. 27).
First use Nov. 7, 1969.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 251,402. ETC., Incorporated, Cleveland, Ohio. Filed Aug. 1, 1966.

KRIMPTITE

For Electrical Parts—Namely, Terminals and Connectors Stamped and Formed From Metal Strip Stock and Having Non-Insulated, Non-Reinforced Butt Seam, Wire Receiving Barrels for Wire Up to Size 10 A.W.G. (Int. Cl. 9).
First use in or about June 1956.

SN 282,449. Etablissements Merlin & Gerin, Societe Anonyme, Grenoble, France. Filed Oct. 13, 1967.



Owner of French Reg. No. 717,657, dated Oct. 4, 1966.
For Switches; Circuit Breakers; Isolators; Transformers; Switchboards; Semiconductors; Rectifiers; Ionisation Chambers; Apparatus for Remote Control Monitoring for Fault Testing of Insulation, and Activating an Alarm and/or Breaking a Circuit (Int. Cl. 9).

SN 300,590. General Dynamics Corporation, Rochester, N.Y. Filed June 17, 1968.

WEED

For Intrusion Detection Systems Comprised of an Electromagnetic Wave Transmitter and Receiver (Int. Cl. 9).
First use at least as early as June 6, 1966.

SN 303,359. Superior Continental Corporation, Hickory, N.C. Filed July 22, 1968.

**1
ONE**

For Telephone Carrier Apparatus Comprising Carrier Apparatus—Namely, Central Office and Subscriber Carrier Units for Telephone System Adapted for Connection to Existing Cable Pair, Both at the Central Office and Subscriber's Location, Creating an Additional Talking Circuit Over the Existing Cable Pair To Which an Additional Telephone Set May Be Supplied as a Subscriber's Terminal, for Telephone Trunk Service (EAS and Toll) (Int. Cl. 9).
First use July 12, 1968.

SN 303,361. Superior Continental Corporation, Hickory, N.C. Filed July 22, 1968.

**1
1**

For Telephone Carrier Apparatus Comprising Carrier Apparatus—Namely, Central Office and Subscriber Carrier Units for Telephone System Adapted for Connection to Existing Cable Pair, Both at the Central Office and Subscriber's Location, Creating an Additional Talking Circuit Over the Existing Cable Pair To Which an Additional Telephone Set May Be Supplied at a Subscriber's Terminal, for Telephone Trunk Service (EAS and Toll) (Int. Cl. 9).
First use July 12, 1968.

SN 303,362. Superior Continental Corporation, Hickory, N.C. Filed July 22, 1968.

**ONE
OVER
ONE**

For Telephone Carrier Apparatus Comprising Carrier Apparatus—Namely, Central Office and Subscriber Carrier Units for Telephone System Adapted for Connection to Existing Cable Pair, Both at the Central Office and Subscriber's Location, Creating an Additional Talking Circuit Over the Existing Cable Pair To Which an Additional Telephone Set May Be Supplied at a Subscriber's Terminal, for Telephone Trunk Service (EAS and Toll) (Int. Cl. 9).
First use July 12, 1968.

SN 312,473. International Rectifier Corporation, Los Angeles, Calif. Filed Nov. 13, 1968.

CRYDOMATIC

For Solid State Power and Speed Controls (Int. Cl. 9).
First use Dec. 29, 1965.

SN 312,474. International Rectifier Corporation, Los Angeles, Calif. Filed Nov. 18, 1968.

CRYDATROL

For Solid State Power and Speed Controls (Int. Cl. 9).
First use Oct. 24, 1966.

SN 315,922. Electronic Memories & Magnetics Corporation, Hawthorne, Calif., assignee of Indiana General Corporation, Valparaiso, Ind. Filed Jan. 6, 1969.

INDALLOY

Owner of Reg. No. 500,607.
For Wire Coated With Magnetic Material (Int. Cl. 9).
First use Nov. 22, 1968.

SN 317,619. Jean Rochet Societe Anonyme, Asnieres, France. Filed Jan. 27, 1969.

JEAN ROCHET

Priority claimed under Sec. 44(d) on French Reg. No. 748,669, dated July 29, 1968. Jean Rochet is the name of applicant's director, whose consent is of record.

For Electrical Apparatus and Instruments—Namely, Lamps, Warning Signals, Light Bulbs, Search Lights, and Portable Trouble Lights (Int. Cl. 11).

SN 320,086. Sensitron, Inc., Nashville, Tenn. Filed Feb. 25, 1969.

SENSITRON

For Electronic Alarm Systems for Detection of Fires and the Presence of Intruders (Int. Cl. 9).
First use Aug. 30, 1968.

SN 322,159. Formulabs Industrial Inks, Incorporated, Escondido, Calif. Filed Mar. 19, 1969.

ECONOCODER

For Wire Color Coding Machinery (Int. Cl. 9).
First use May 3, 1968.

SN 325,966. Fairchild Recording Equipment Corporation, Long Island City, N.Y. Filed Apr. 30, 1969.

FORUM

For Intercommunications Systems (Int. Cl. 9).
First use on or before Apr. 7, 1969.

SN 325,979. LDV Electro Science Industries, Inc., Syracuse, N.Y. Filed Apr. 30, 1969.



For Microwave Components—Namely, Microwave Absorber Stock; Couplers, Terminations; Waveguides; Connectors and Attenuators (Int. Cl. 9).
First use on or about Nov. 1, 1968.

SN 327,087. Nytronics, Inc., Pelham Manor, N.Y. Filed May 12, 1969.

SUPER WEE-DUCTOR

Owner of Reg. Nos. 744,684 and 746,847.
For Electrical Inductors (Int. Cl. 9).
First use 1964.

SN 327,936. Magnetics, Inc., East Butler, Pa. Filed May 21, 1969.

MU GUARD

For Magnetic Shielding Materials—Namely, High Permeability Magnetic Metals in Foil, Sheet, Strip, or Tape Form (Int. Cl. 9).
First use Apr. 28, 1969.

SN 328,456. Steiner KG, Schameder bei Erndtebruck, Germany. Filed May 27, 1969.

STEINERFILM

Owner of German Reg. No. 852,544, dated Jan. 13, 1968.
For Metallized Plastic Foil for Capacitors (Int. Cl. 9).

SN 329,191. Jennings Industries, Inc., Santa Cruz, Calif. Filed June 5, 1969.



For Various and Miscellaneous Electrical Apparatus, Machines and Supplies—Namely, Silicon Rectifiers, Battery Chargers, Regulated D.C. Power Supplies, Transient Suppressors, Radio Frequency Plate Chokes, Solid-State Tube Replacement Full-Wave Center Taps and Half-Wave Rectifiers, Bridge Rectifiers, Voltage Doublers, Filament Chokes, and Half-Wave Rectifier Blocks (Int. Cl. 9).
First use on or about Mar. 6, 1968.

SN 329,331. Boston Insulated Wire & Cable Co., Boston, Mass. Filed June 6, 1969.

AQUA LINK

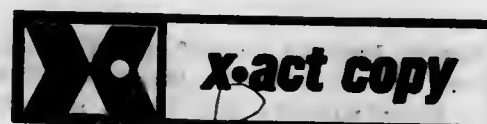
The word "Link" is disclaimed apart from the mark as shown.
For Underwater Electrical Cable Connectors (Int. Cl. 9).
First use May 23, 1969.

SN 330,533. Powerdyne Inc., Lake Oswego, Ore. Filed June 19, 1969.

VACPAC

For Electrical Switch Apparatus—Namely, Vacuum Interrupter Switches (Int. Cl. 9).
First use Feb. 6, 1967.

SN 331,465. X-Act Copy Corporation, Montvale, N.J. Filed June 30, 1969.



For Electrostatic Photocopier (Int. Cl. 9).
First use Feb. 19, 1969.

SN 331,870. Connectron Incorporated, South Amboy, N.J. Filed July 2, 1969.



Applicant disclaims "Inc." apart from the mark as shown.
For Modular Terminal Block Assemblies and Component Parts Thereof (Int. Cl. 9).
First use April 1962.

SN 331,708. Alumina Ferrite Corporation of America, Chatsworth, Calif. Filed July 3, 1969.

AFCOA

For Electric Ceramics for Use in Computer and Micro-Wave Applications Including Metallic Ceramic Parts, Ferrite Pole Pieces, Ferrite Cores and Assemblies, Alumina Tape Guides and Head Bodies and Ceramic Electrical Insulators, Magnetic Isolators and Alignment Rods (Int. Cls. 9 and 17).
First use July 1963.

SN 331,709. Alumina Ferrite Corporation of America, Chatsworth, Calif. Filed July 3, 1969.



For Electric Ceramics for Use in Computer and Micro-Wave Applications Including Metallic Ceramic Parts, Ferrite Pole Pieces, Ferrite Cores and Assemblies, Alumina Tape Guides and Head Bodies and Ceramic Electrical Insulators, Magnetic Isolators and Alignment Rods (Int. Cls. 9 and 17).
First use August 1968.

SN 334,189. Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden Filed Aug. 1, 1969.

THERMOKRAFT

Owner of Swedish Reg. No. 126,936, dated Nov. 4, 1969.
For Electrical Insulatory Paper Material—Namely, Insulation for Electrical Machines and Transformers (Int. Cl. 17).

SN 335,704. Perfect Parts, Inc., Carlstadt, N.J. Filed Aug. 19, 1969.



PERFECT PARTS

The word "Parts" is disclaimed apart from the mark as shown.

For Automotive Electrical Parts—Namely, Socket Assemblies, Trailer Connectors, Universal Switches, Voltage Reducers, Directional Signal Parts, Fuses, Oil Pressure Switches, Dash Pots, Battery Parts, Fuse Holders, Sparkplug Protectors, Lights and Lenses Thereof (Int. Cls. 9 and 11).
First use January 1940.

SN 341,978. Fedtro, Inc., Rockville Centre, N.Y. Filed Oct. 29, 1969.

COLORMATIC

For Television Antenna Couplers (Int. Cl. 9).
First use Oct. 17, 1969.

SN 342,788. Audio Visual Systems of America, Inc., Memphis, Tenn. Filed Nov. 6, 1969.



For Electrical Equipment Racks and Speaker Boxes, Theatre Sound System and Speaker Boxes (Int. Cl. 9).
First use Aug. 7, 1969.

SN 343,610. Winegard Company, Burlington, Iowa. Filed Nov. 14, 1969.

WINEGARD

For Radio and Television Antennas and Related System Components and Accessories—Namely, Amplifiers, Attenuation Pads, Couplers, Cable Connectors, Channel Traps, Line Splitters, Line Tap-Offs, Matching Transformers, Outlets, Plugs, Pre-Amplifiers, Receptacles, Sockets, and Wall Plate Covers (Int. Cl. 9).
First use January 1954.

Class 22—Games, Toys, and Sporting Goods

SN 293,546. Milton Bradley Company, East Longmeadow, Mass. Filed Mar. 18, 1968.

JUMBO

For Equipment Sold as a Unit for Playing a Card Game (Int. Cl. 28).
First use Nov. 1, 1967.

SN 318,964. R. B. Jarts, Inc., South Glens Falls, N.Y. Filed Feb. 12, 1969.

JARTS

For Component Parts of an Outdoor Dart Game Comprising Missiles, Targets, and Accessories Thereof (Int. Cl. 28).
First use Mar. 6, 1958.

SN 322,348. John Scarne Games, Inc., North Bergen, N.J. Filed Mar. 20, 1969.

SKARNEY

For Equipment Comprising Score Pads and Cards for Playing Card Games (Int. Cl. 28).
First use July 1968.

SN 323,304. Kenner Products Company, Cincinnati, Ohio. Filed Apr. 1, 1969.

GLO-STICKS

For Toys—Namely, Elongated Pieces of Colored Wax-Like Compositions Used, for Example, by Children, for Drawing and Coloring (Int. Cl. 28).
First use on or about Feb. 10, 1969.

SN 323,318. Kenner Products Company, Cincinnati, Ohio. Filed Apr. 1, 1969.

EASY CURL

Applicant disclaims the word "Curl" except as used in the combination shown.

For Toy Hair Setting Kits Containing Rollers, Clips, Electrically Operated Warmer for Rollers, and Styling Booklets (Int. Cl. 28).

First use on or about July 19, 1968.

SN 325,494. Kelmoore Industries, Redwood City, Calif., assignee of The Kelmon Company, Palo Alto, Calif. Filed Apr. 24, 1969.

LOVABLE LEGS

For Manually Operated Muscle Toning Board Type Exercising Device (Int. Cl. 28).

First use Apr. 15, 1969.

SN 326,686. Rapco, Inc., Chicago, Ill. Filed May 7, 1969.

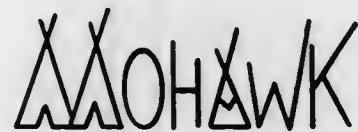


Applicant disclaims the phrase "Fun for Everyone!" apart from the mark as shown. Owner of Reg. No. 839,929.

For Juvenile Athletic Equipment, Toys, Toy Crafts and Hobby Kits (Int. Cl. 28).

First use June 1967.

SN 326,852. Columbia Industries, Inc., San Antonio, Tex. Filed May 9, 1969.



For Bowling Balls (Int. Cl. 28).

First use Mar. 13, 1969.

SN 337,230. Mattel, Inc., Hawthorne, Calif. Filed Sept. 8, 1969.

BAD

For Toy Miniature Automobiles (Int. Cl. 28).

First use Aug. 8, 1969.

SN 337,231. Mattel, Inc., Hawthorne, Calif. Filed Sept. 8, 1969.

VISION

For Toy Miniature Automobiles (Int. Cl. 28).

First use Aug. 8, 1969.

SN 337,233. Mattel, Inc., Hawthorne, Calif. Filed Sept. 8, 1969.

DIEGO

For Toy Miniature Automobiles (Int. Cl. 28).

First use Aug. 8, 1969.

SN 351,761. Kusan, Inc., Nashville, Tenn. Filed Feb. 19, 1970.

WESTERN HERITAGE

For Children's Toys—Namely, Gun and Holster Sets (Int. Cl. 28).

First use Feb. 11, 1969.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 295,337. Hercules Galion Products, Inc., Gallon, Ohio. Filed Apr. 10, 1968.



Owner of Reg. Nos. 357,686, 526,747, and 551,802.

For Stationary Refuse Compacting Machines and Refuse Containers for Use Therewith (Int. Cl. 7).

First use May 24, 1966.

SN 306,109. Intercontinental Systems, Inc., Los Angeles, Calif. Filed Sept. 24, 1968.

WORD PROCESSOR

For Business Machines—Namely, Automatic Electrical Typewriter With Textual Data Revision Control Apparatus (Int. Cl. 16).

First use Apr. 20, 1968.

SN 311,810. American Uniform Company, Cleveland, Tenn. Filed Nov. 12, 1968.

DUST-TEX

Owner of Reg. Nos. 337,545 and 772,503.

For Machines for Applying Dust-Collecting Fluids to Articles Such as Mops, Entry Carpets, and Dust Cloths (Int. Cl. 7).

First use in or about 1956.

SN 318,778. Harris-Intertype Corporation, Cleveland, Ohio. Filed Feb. 10, 1969.

COTTRELL

For Printing Presses Including Feeders, Web Offset Presses and Letter Presses and Equipment Used With Printing Presses—Namely, Reel Stands, Sheetters, and Folders (Int. Cl. 7).

First use at least by 1870.

SN 323,096. Fulghum Enterprises, Inc., Wadley, Ga. Filed Mar. 28, 1969.



For Fork Lift Trucks, Pullywood Loader Trucks, Tree Shears, and Bundle-Bucker Chain Saw (Int. Cls. 7 and 12).

First use Aug. 25, 1968.

SN 324,154. Allied Steel & Tractor Products, Inc., Cleveland, Ohio. Filed Apr. 10, 1969.

HO-PAC

For Earth Working Equipment—Namely, Vibratory Compactors and Parts Thereof (Int. Cl. 7).

First use August 1965.

SN 326,137. Sentry Products, Inc., Union, S.C. Filed May 1, 1969.



For Fire Extinguishers (Int. Cl. 9).

First use in or about September 1968.

SN 327,037. Modern Handling Systems, Alabaster, Ala. Filed May 12, 1969.

MODURA

Owner of Reg. No. 592,171.

For Idler Rolls for Belt Conveyors (Int. Cl. 7).

First use Apr. 8, 1969.

SN 327,248. Excellon Industries, Torrance, Calif. Filed May 14, 1969.

QUADRAMATIC

For Circuit Board Drilling Machines (Int. Cl. 7).

First use in or about January 1966.

SN 330,024. Universal Business Machines, Inc., Columbia, S.C. Filed June 13, 1969.

UBM

For Automatic and Semi-Automatic Document Sorting Machines and Parts Thereof (Int. Cl. 7).

First use October 1954.



No claim is made to the word "Saw" apart from the mark as shown, and reserving unto itself all common-law rights in and to the slogan "A Perfect Saw for Every Purpose," applicant disclaims the slogan apart from the mark as shown for registration purposes only. Owner of Reg. Nos. 837,909 and 838,313.

For Saws and Parts Thereof (Int. Cl. 8).

First use May 12, 1969; since 1884, as to "Atkins."

SN 331,767. National Engineering Company, Chicago, Ill. Filed July 3, 1969.

SHELL-PAK

For Apparatus for Conditioning Granular Material—Namely, Systems for Coating Hot Foundry Sand Comprising a Sand Mixer, Screen, and Heater (Int. Cl. 7).

First use on or about Apr. 28, 1969.

SN 331,926. Miton Car Wash Equipment, Inc., Buffalo, N.Y. Filed July 7, 1969.

BRUSH-MATIC

For Car Washing, Brushing and Waxing Machinery and Parts Thereof (Int. Cl. 7).

First use Aug. 1, 1968.

SN 333,462. United Silver and Cutlery Company, Los Angeles, Calif. Filed July 24, 1969.

TORINO

For Stainless Steel Flatware—Namely, Knives, Forks, Spoons, and Serving Pieces (Int. Cl. 8).

First use Jan. 9, 1969.

SN 333,607. The Sheffield Twist Drill and Steel Company Limited, Sheffield, England. Filed July 25, 1969.

ADD+VISE

For Vices, Clamping Jaws for Vices and Adapter Plates for Vices (Int. Cl. 6).

First use Jan. 24, 1969; in commerce Jan. 24, 1969.

SN 333,731. M & W Gear Company, Gibson City, Ill. Filed July 28, 1969.

TURBO-DOME

For Pistons for Internal Combustion Engines (Int. Cl. 7).

First use 1957.

SN 334,741. C. O. Porter Machinery Company, Grand Rapids, Mich. Filed Aug. 7, 1969.

PORTERMATION

For Wood Working Machine—Namely, Carvers, Jointers, Planers, Routers, Saw, and Shapers (Int. Cl. 7).

First use June 11, 1963.

SN 334,988. Clark Equipment Company, Buchanan, Mich. Filed Aug. 11, 1969.



For Frozen Food Wrapping Machines (Int. Cl. 7).
First use June 11, 1969.

SN 335,631. Wenger S.A., Delemont, Bern, Switzerland. Filed Aug. 18, 1969.

SWIBO

Owner of Swiss Reg. No. 180,261, dated Apr. 19, 1960.
For Butcher Knives (Int. Cl. 8).
First use 1961; in commerce 1961.

SN 336,152. Onelda Ltd., Onelda, N.Y. Filed Aug. 25, 1969.

COLISEUM

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use Aug. 13, 1969.

SN 336,430. Electro Engineering Products Co., Inc., Chicago, Ill. Filed Aug. 27, 1969.

TOTAL TORQUE

Applicant claims exclusive right to the use of the word "Torque" as a part of its mark but not otherwise.
For Electric Power Tools—Namely, Drills and Saws (Int. Cl. 7).
First use July 14, 1969.

SN 338,853. Mitsubishi Electric Corporation, Chiyoda-ku, Tokyo, Japan. Filed Sept. 25, 1969.

DIASINKER

Owner of Japanese Reg. No. 654,398, dated Sept. 29, 1964.
For Electrochemical Metal Machining Machines (Int. Cl. 7).

SN 340,727. Mobile Drilling Company, Inc., Indianapolis, Ind. Filed Oct. 15, 1969.

LIFELINE

For Automatically Actuated Switching Apparatus for Shutting Off the Mechanism of an Earth and Rock Drilling Apparatus (Int. Cl. 7).
First use July 31, 1968.

SN 343,577. McLaughlin Manufacturing Company, Plainfield, Ill. Filed Nov. 14, 1969.



For Earth Boring Machines (Int. Cl. 7).
First use November 1967.

SN 345,357. Metalcraft Engineering Company, Centerville, Iowa. Filed Dec. 4, 1969.

VERSA-DRILL

For Portable Earth Drill (Int. Cl. 7).
First use Sept. 27, 1968.

SN 345,477. MSL Industries, Inc., Chicago, Ill. Filed Dec. 5, 1969.

MSL

Owner of Reg. Nos. 832,055, 841,853, and others.
For Motor Driven Coil Handling and Power Press Feeding Equipment—Namely, Roll Feeds, Stock Straighteners, Cam Feeds, Pay-Off Reels, and Coil Cradles (Int. Cl. 7).
First use January 1969.

SN 346,782. Tobey's Rasp Service, Inc., Santa Cruz, Calif. Filed Dec. 19, 1969.



For Various Rasps Standard or Air-Cooled for Buffing, Repairing, Finishing Treads of Vehicle Tires, and for Use With Air Tools and Electric Drills, and Hub Units for the Support of the Rasps, Adapters for Conforming the Hub Units To Use With Different Sized Driving Shafts, and Tools for Cutting Plugs in Tires (Int. Cl. 7).
First use September 1968.

Class 24—Laundry Appliances and Machines

SN 345,319. Ever-ready Appliance Manufacturing Co., St. Louis, Mo. Filed Dec. 4, 1969.

BLACK BEAUTY

For Ironing Tables (Int. Cl. 21).
First use Nov. 28, 1969.

SN 345,320. Every-Ready Appliance Manufacturing Co., St. Louis, Mo. Filed Dec. 4, 1969.

BLACK PRIDE

For Ironing Tables (Int. Cl. 21).
First use Nov. 28, 1969.

Class 26—Measuring and Scientific Appliances

SN 309,100. Rebkoff Underwater Products, Inc., Fort Lauderdale, Fla., assignee of Dimitri Rebkoff, Fort Lauderdale, Fla. Filed Oct. 7, 1968.

CINEMARINE

For Underwater Motion Picture Camera Housing (Int. Cl. 9).
First use Sept. 1, 1958.

SN 319,447. Hycel Inc., Houston, Tex. Filed Feb. 18, 1969.

HYCEL MARK X

For Automated Device for Performing Chemical Testing Procedures and for Presenting a Readout or a Recording of the Results Thereof (Int. Cl. 9).
First use in or about August 1968.

SN 321,502. Kabushiki Kaisha Hattori Tokiten, d.b.a. K. Hattori & Co. Ltd., Guo-ku, Tokyo, Japan. Filed Mar. 12, 1969.

SEIKO

Owner of Japanese Reg. No. 730,784, dated Jan. 23, 1967.
For Tachographs and Parts and Fittings Therefor (Int. Cl. 9).

SN 323,743. Travis Electronics, Inc., Newton, Mass. Filed Apr. 4, 1969.

SCOPAC

For Electronic Instruments—Namely, Oscilloscope Spike Detectors (Int. Cl. 9).
First use on or before Feb. 5, 1969.

SN 332,927. Dynalco Corporation, Fort Lauderdale, Fla. Filed July 18, 1969.

DYNALCO

For Motion Detectors—Namely, Electronic Devices Which Sense Gear Shaft Rotation and Activate Alarm When Stoppage or Slow-Down Occurs (Int. Cl. 9).
First use June 2, 1969.

SN 334,365. Oxyair Engineering, Inc., Los Angeles, Calif. Filed Aug. 4, 1969.

OXYTIMER

For Electrical Oxygen Flow Timer (Int. Cl. 9).
First use July 31, 1969.

SN 334,814. Computervision Corporation, Waltham, Mass. Filed Aug. 8, 1969.

COMPUTERVISION

For Electro-Optical Automatic Mask Aligner (Int. Cl. 9).
First use July 1969.

SN 334,850. Lambda Electronics Corporation, Huntington, N.Y. Filed Aug. 8, 1969.

LAMBDA

Owner of Reg. Nos. 600,289 and 785,920.
For Electrical Measuring Instruments—Namely, Digital Voltmeters (Int. Cl. 9).
First use at least as early as June 1968.

SN 336,426. Custom Tool & Machine Co., Inc., Monroe, Conn. Filed Aug. 27, 1969.

SCRIBE-PLEX

For Inscription-Receiving Coated Plexiglas Sheets for Use in Converting Mechanical Drawings to a Template or Pattern (Int. Cl. 9).
First use Aug. 19, 1969.

SN 340,436. Southwestern Industries, Inc., Los Angeles, Calif. Filed Oct. 10, 1969.

ORIENTER

For Gyroscopic Instruments for Displaying Aircraft Flight Conditions (Int. Cl. 9).
First use at least as early as Sept. 8, 1969.

SN 347,178. South Bend Tool & Die Co., Inc., South Bend, Ind. Filed Dec. 29, 1969.

VISUSQUARE

For Measuring Tools—Namely Devices for Measuring for Squareness, Roundness and Dimensional Relationships, the Devices Comprising a Base, Cylinder and Collar Rotatable and Slidable on the Cylinder and Carrying a Finger To Facilitate Contact With the Item To Be Measured (Int. Cl. 9).
First use Jan. 15, 1969.

Class 27—Horological Instruments

SN 309,262. Kabushiki Kaisha Hattori Tokiten, Chuo-ku, Tokyo, Japan. Filed Oct. 9, 1968.

TRANSMATIC

Priority claimed under Sec. 44(d) on Japanese application filed July 17, 1968; Reg. No. 844,136, dated Jan. 27, 1970.
For Watches, Clocks, and Parts Thereof (Int. Cl. 14).

SN 321,990. A. Schild A.G., Grenschen, Solothurn, Switzerland. Filed Mar. 17, 1969.



Priority claimed under Sec. 44(d) on Swiss Reg. No. 234,855, dated Oct. 21, 1968.
For Regulating Devices for Fine Regulation of Watches and Chronometers (Int. Cl. 14).

Class 28—Jewelry and Precious-Metal Ware

SN 324,432. Exclusive China Company, Inc., New York, N.Y. Filed Apr. 14, 1969.

HALIFAX

For Silver and Silver Plated Flatware and Hollow Ware (Int. Cls. 8 and 14).
First use Mar. 1, 1969.

Class 29—Brooms, Brushes, and Dusters**Class 32—Furniture and Upholstery**

SN 841,705. Monica Simone Cosmetics, Inc., Brooklyn, N.Y. Filed Oct. 24, 1969.

MONICA SIMONE

The name "Monica Simone" is not the name of a particular individual. Owner of Reg. No. 884,418.

For Lip Brushes and Eyeliner Brushes (Int. Cl. 21).
First use July 1, 1965.

Class 31—Filters and Refrigerators

SN 306,874. The Bendix Corporation, Detroit, Mich. Filed Sept. 9, 1968.



Owner of Reg. No. 781,749.

For Filters and Demulsifiers and Parts Therefor for Purifying Fluids; Combination Filter, Water Separator and Fuel Cleanliness Gages Sold as a Unit (Int. Cl. 11).

First use Apr. 5, 1968; March 1964 as to the mark "Bendix" in different forms.

SN 329,981. Henry Manufacturing Co., Inc., Bowling Green, Ohio. Filed June 18, 1969.

JANITOR DUMP

For Filters for Liquids Basically for Industrial and Commercial Use and Parts Therefor (Int. Cl. 11).

First use Jan. 8, 1964.

SN 333,430. Pako Corporation, Minneapolis, Minn. Filed July 24, 1969.

SUPER LIFE

The term "Super" is disclaimed apart from the mark as shown.

For Water Filter and Replacement Cartridges Therefor for Photographic Processing Equipment (Int. Cl. 11).

First use Dec. 3, 1964.

SN 353,365. Donaldson Company, Inc., Minneapolis, Minn. Filed Mar. 9, 1970.

CYCLOFLOW

Owner of Reg. No. 708,409.

For Air Cleaners Having Replaceable Filters (Int. Cl. 11).
First use at least as early as Oct. 2, 1969.

SN 354,264. Puritan Industries, Inc., Chicago, Ill. Filed Mar. 17, 1970.

PURITAN

For Commercial Dry Cleaning Machine Filters and Parts Therefor (Int. Cl. 7).

First use Aug. 3, 1968.

SN 298,824. Slyd-In Products, Greensboro, N.C. Filed May 22, 1968.

SLYD-IN

For Adjustable Shelf Partitions and Table Displayers (Int. Cl. 20).

First use November 1953.

SN 330,918. Eclipse Sleep Products Inc., Brooklyn, N.Y. Filed June 25, 1969.



Owner of Reg. Nos. 257,977, 612,538, and 744,816.
For Mattresses, Box Springs, Studio Couches, Convertible Chairs and Beds (Int. Cl. 20).

First use Apr. 10, 1969.

SN 336,718. W. & J. Sloane, Inc., New York, N.Y. Filed Aug. 29, 1969.

Cambridge

For Upholstered Sofas, Sleep-Sofas, and Chairs (Int. Cl. 20).

First use Aug. 4, 1968.

SN 341,828. Mastercraft, Inc., Denver, Colo. Filed Oct. 27, 1969.



For Cabinets for Kitchens and Bathrooms Including Related Structure Such as Lazy Susans (Int. Cl. 20).

First use on or about Mar. 1, 1960.

SN 342,054. La-Z-Boy Chair Company, Monroe, Mich. Filed Oct. 29, 1969.

SOFETTE

For Chair (Int. Cl. 20).
First use Apr. 17, 1969.

SN 347,751. JG Furniture Company, Inc., New York, N.Y. Filed Jan. 5, 1970.

SN 290,834. Eclipse Fuel Engineering Co., Rockford, Ill. Filed Feb. 12, 1968.

REVEAL

For Desks (Int. Cl. 20).
First use Nov. 28, 1969.

SN 348,332. Pyramid International, Inc., Newton, Mass. Filed Jan. 12, 1970.

BO-PEEP

For Crib Mattresses (Int. Cl. 20).
First use Sept. 20, 1941.

SN 348,668. Lectrabel Corp., Los Angeles, Calif. Filed Jan. 15, 1970.

Bed-a-Matic

For Electrically Operated Adjustable Beds (Int. Cl. 20).
First use Dec. 2, 1969.

SN 349,365. Metalstand Company, Philadelphia, Pa. Filed Jan. 22, 1970.

HI-LO

For Typewriter Stand (Int. Cl. 16).
First use Oct. 1, 1948.

SN 349,927. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Jan. 29, 1970.

AIR GLIDE

Owner of Reg. No. 261,625.
For Mattresses (Int. Cl. 20).
First use Feb. 1, 1929.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 281,825. Stoddy Company, Whittier, Calif. Filed Sept. 27, 1967.

BORWELD

For Welding Wire—Namely, Wire for Use in Metal Welding (Int. Cl. 6).
First use Sept. 16, 1966.

SN 281,900. L'Air Liquide, Société Anonyme pour l'Etude et l'Exploitation des Procédés Georges Claude, Paris, France. Filed Oct. 5, 1967.

GAZAL

Owner of French Reg. No. 412,656, dated June 7, 1951 (Paris); Natl. Inst. No. 495,290.
For Fluxing Compound Producing Gaseous Products for Use in Furnaces in the Refining of Metals (Int. Cl. 1).

GAS-PAK

For Gas Burner Assemblies of the Type That Is Packaged as a Self-Contained Unit for Shipping Purposes, Serves as a Medium for Firing Incinerators, Ovens, Small Furnaces and Boilers, and Comprises a Gas Burner Proper With Gas Feed Means Therefor, a Motor-Driven Blower for Supplying Air Under Pressure to the Burner Proper, and Automatic Control Devices (Int. 11).

First use during September 1949.

SN 304,082. Fedders Corporation, Edison, N.J. Filed Aug. 1, 1968.

ADAPTOPAK

For Heavy Duty Combination Gas Heating and/or Electric Cooling Modules (Int. Cl. 11).

First use at least as early as 1965.

SN 319,791. Air Reduction Company, Incorporated, New York, N.Y. Filed Feb. 24, 1969.

BUSYBEE

Owner of Reg. No. 507,524.
For Welding Machines (Int. Cl. 7).
First use Dec. 3, 1945.

SN 321,149. Arvin Industries, Inc., Columbus, Ind. Filed Mar. 10, 1969.

ARVIN

Owner of Reg. Nos. 507,593, 746,641, and others.
For Humidifiers (Int. Cl. 11).
First use July 1, 1964.

SN 321,449. American Enclosures Company, Novi, Mich. Filed Mar. 12, 1969.

RANGE GUARD

Applicant disclaims the word "Range" apart from the mark as shown.

For Protective Structural Panels for Preventing Flow of Fluent Materials Between Open Areas Surrounding Cooking Ranges and the Like (Int. Cl. 11).

First use Jan. 31, 1969.

SN 334,481. Magic Chef, Inc., Cleveland, Tenn. Filed Aug. 5, 1969.

Warming Chef

The word "Warming" is disclaimed apart from the mark as shown.

For Warming Compartment on Kitchen Ranges (Int. Cl. 11).

First use Apr. 1, 1969.

SN 334,926. E. D. Green Corp., Forest Park, Ga. Filed Aug. 11, 1969.



For Industrial Air Dryer Units and Heat Exchangers and Components Thereof; Heat Transfer Units—Namely, After Cooler and Oil Coolers; and Components Thereof (Int. Cl. 11). First use at least as early as September 1968.

SN 335,480. Wehr Corporation, Milwaukee, Wis. Filed Aug. 15, 1969.

CARNES

Owner of Reg. Nos. 334,651 and 670,937.
For Air Handling and Heat Transfer Equipment—Namely, Diffusers, Ventilators, Fans, Registers, Grilles, Residential Outlets, Mixing Boxes, Louvers, Dampers, Penthouses, Air Valves, Heat Exchangers, and Humidifiers (Int. Cl. 11). First use Feb. 17, 1968.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 329,184. J. C. Penney Company, Inc., New York, N.Y. Filed June 3, 1969.

BRAVA

The English definition of the word "Brava" is "Brave."
For Automobile Tires (Int. Cl. 12).
First use Mar. 20, 1969.

SN 337,644. Doral Tire & Rubber Co., Inc., Stowe, Ohio. Filed Sept. 11, 1969.

DORAL

For Pneumatic Tires (Int. Cl. 12).
First use July 28, 1969.

SN 337,789. Doral Tire & Rubber Co., Inc., Stowe, Ohio. Filed Sept. 12, 1969.

STRATASTAR

For Pneumatic Tires (Int. Cl. 12).
First use July 28, 1969.

SN 341,377. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Oct. 22, 1969.

LXX

Owner of Reg. No. 873,793.
For Resilient Vehicle Tire and Wheel Assembly (Int. Cl. 12).
First use Sept. 12, 1969.

Class 36 — Musical Instruments and Supplies

SN 241,006. John F. Kuchar, d.b.a. John Kuchar Sales, New Lothrop, Mich. Filed Jan. 17, 1968.

Heligonka

For Accordion (Int. Cl. 15).
First use Mar. 1, 1965.

SN 341,135. Thomas P. Billyeu, Portland, Oreg. Filed Oct. 20, 1969.

MR. JEW'S HARP

Applicant disclaims the words "Jew's Harp" apart from the mark as shown.
For Jew's Harp (Int. Cl. 15).
First use May 1968.

SN 351,504. Minnesota Rubber Company, Minneapolis, Minn. Filed Feb. 16, 1970.

QUAD

For Phonograph Record Player Needle Holders, Parts for Sound Recorders and Producers—Namely, Pinch Rollers and Idler Wheels (Int. Cl. 9).
First use in 1953.

SN 352,125. Flint West Production, Inc., New York, N.Y. Filed Feb. 24, 1970.

VISION

For Phonograph Records (Int. Cl. 9).
First use Jan. 2, 1970.

SN 352,354. Little David Record Co., Inc., New York, N.Y. Filed Feb. 25, 1970.



For Grooved Phonograph Records (Int. Cl. 9).
First use Feb. 2, 1970.

SN 353,834. Notable Productions, Inc., New York, N.Y. Filed Mar. 12, 1970.

NOTABLE RECORDS

The word "Records" is disclaimed except in conjunction with the other features of the mark.
For Phonograph Records (Int. Cl. 9).
First use Sept. 10, 1969.

Class 37 — Paper and Stationery

SN 302,313. French Paper Company, Niles, Mich. Filed July 9, 1968.



Without relinquishing any of its common law rights, applicant disclaims the word "French" apart from the mark as shown.
For Printing Paper Sold in Wholesale Lots (Int. Cl. 16).
First use in 1960.

SN 317,219. GAF Corporation, New York, N.Y. Filed Jan. 22, 1969.

SHELBY

For Paper Business Forms and Envelopes, Business Form Covers, Desk Pads, and Sales Books (Int. Cl. 16).
First use at least as early as Oct. 5, 1910, on paper business forms and sales books.

SN 321,290. Thomas R. Smith, Newton, Conn. Filed Mar. 10, 1969.



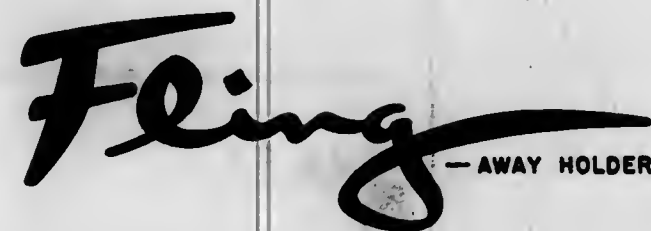
Applicant disclaims the representation of the goods but reserves the common law rights in the representation of the goods as it appears.
For Looseleaf Binder Assemblies Using Special Plastic Binding Elements (Int. Cl. 16).
First use on or about Oct. 22, 1965.

SN 323,742. Top Flight Paper Products, Inc., Chattanooga, Tenn. Filed Apr. 4, 1969.

BORDER

For Notebook Fillers, Composition Books and Wirebound School Writing Paper (Int. Cl. 16).
First use Feb. 19, 1969.

SN 324,098. Royal Development Incorporated, Nashua, N.H. Filed Apr. 9, 1969.



The word "Holder" is disclaimed apart from the mark.
For Disposable Autographic Register Holders Containing Register Forms (Int. Cl. 16).
First use Jan. 29, 1969.

SN 324,855. Vumark Industries, Inc., Yonkers, N.Y. Filed Apr. 17, 1969.

VUMARK

For Pens and Marking Pens (Int. Cl. 16).
First use Apr. 8, 1969.

SN 324,950. Vumark Industries, Inc., Yonkers, N.Y. Filed Apr. 18, 1969.

VAGABOND

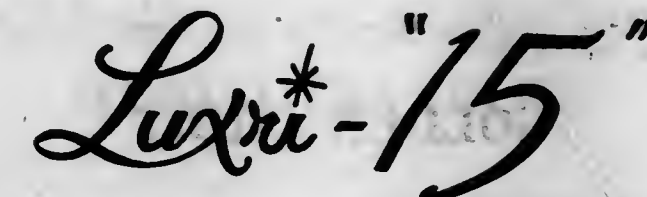
For Pens and Marking Pens (Int. Cl. 16).
First use Apr. 8, 1969.

SN 326,163. Wisconsin Tissue Mills, Menasha, Wis. Filed May 1, 1969.

LUXRI "10"

Owner of Reg. No. 835,495.
For Paper Napkins (Int. Cl. 16).
First use May 2, 1967.

SN 326,271. Wisconsin Tissue Mills, Menasha, Wis. Filed May 2, 1969.



Owner of Reg. No. 835,495.
For Paper Napkins (Int. Cl. 16).
First use on or about Apr. 3, 1969.

SN 330,087. American Can Company, New York, N.Y. Filed June 16, 1969.

Z-22

For Plastic Candy Wrapping Film (Int. Cl. 16).
First use May 21, 1969.

SN 330,981. Consolidated-Bathurst Limited, Montreal, Quebec, Canada. Filed June 25, 1969.

LAURENTIAN

For Newsprint (Int. Cl. 16).
First use 1961; in commerce 1961.

SN 333,964. Textron Inc., Pittsfield, Mass. Filed July 29, 1969.

RAPID-REFERENCE

For Blank Record Books (Int. Cl. 16).
First use May 9, 1969.

SN 334,869. Scott Paper Company, Boston, Mass. Filed Aug. 8, 1969.

FLOKOTE

For Printing Paper (Int. Cl. 16).
First use July 25, 1969.

SN 335,124. Day-Timers, Inc., Allentown, Pa. Filed Aug. 12, 1969.

MYFAR

For Forms for Use in Connection With Personal Financial Affairs (Int. Cl. 16).
First use June 18, 1969.

SN 335,601. The Northwest Paper Company, Cloquet, Minn. Filed Aug. 18, 1969.

VINTAGE

For Coated Printing, Writing and Converting Paper (Int. Cl. 16).
First use July 17, 1969.

SN 348,480. Maloney Enterprises, Inc., Bloomington, N.J. Filed Jan. 14, 1970.

SILVER ORBIT

For Pen Caps (Int. Cl. 16).
First use Nov. 7, 1969.

SN 348,481. Maloney Enterprises, Inc., Bloomington, N.J. Filed Jan. 14, 1970.

GOLDEN ORBIT

For Pen Caps (Int. Cl. 16).
First use Sept. 30, 1969.

Class 38—Prints and Publications

SN 305,294. Aerojet-General Corporation, El Monte, Calif. Filed Aug. 16, 1968.

COORDINATED AEROSPACE SUPPLIER EVALUATION



The drawing is lined for pink. No claim is made to the representation of the map of the United States nor to the color pink nor to the words "Coordinated Aerospace Supplier Evaluation," apart from the mark as shown.

For Quarterly Register Which Indicates the Capabilities of Suppliers of Products, Processes, and Services in the Aerospace Field (Int. Cl. 16).
First use Mar. 1, 1967.

SN 324,066. Hoskyns Systems Research Limited, London, England. Filed Apr. 9, 1969.

FORMATTER

For Punched Cards and Manuals for Computers (Int. Cl. 16).
First use on or about Dec. 9, 1968; in commerce on or about Dec. 9, 1968.

SN 324,659. Shedd-Brown, Inc., Minneapolis, Minn. Filed Apr. 16, 1969.

JOT 'N SHOP

For Calendars Containing Printed Shopping Lists (Int. Cl. 16).
First use Mar. 19, 1969.

SN 326,112. Marquis-Who's Who, Inc., Chicago, Ill. Filed May 1, 1969.

WORLD WHO'S WHO IN SCIENCE

Owner of Reg. Nos. 696,098, 769,205, and others.
For Biographical Dictionary of Notable Scientists Published From Time to Time (Int. Cl. 16).
First use on or about Sept. 30, 1968; 1899 as to the words "Who's Who."

SN 330,086. Ambassador College, Pasadena, Calif. Filed June 16, 1969.

The Good News of TOMORROW'S WORLD

Owner of Reg. No. 791,994.
For Monthly Magazine Devoted to Religious Instruction and Analysis of Associated National and International Events (Int. Cl. 16).
First use June 1969.

SN 332,433. All Clear Incorporated, Paramus, N.J. Filed July 14, 1969.

ALL CLEAR

For Bimonthly Magazine (Int. Cl. 16).
First use June 25, 1969.

SN 333,186. Scan-A-Tab Systems, Inc., New York, N.Y. Filed July 22, 1969.

SCAN-A-TAB

For Machine Scannable Tags, Strips and Labels (Int. Cl. 16).
First use July 11, 1969.

SN 334,090. The Jewish Society of America, Inc., New York, N.Y. Filed July 31, 1969.

IDEAS

For Periodically Issued Journal of Conservative Thought (Int. Cl. 16).
First use Aug. 5, 1968.

SN 338,135. Continental Oil Company, Ponca City, Okla. Filed Sept. 17, 1969.

CRITICAL PATHFINDER

For Newsletter (Int. Cl. 16).
First use on about Feb. 14, 1969.

SN 338,438. Charles Scribner's Sons, New York, N.Y. Filed Sept. 19, 1969.

EMBLEM EDITIONS

The exclusive use of the word "Editions" is disclaimed apart from the mark as a whole.
For Books Published From Time to Time (Int. Cl. 16).
First use June 12, 1969.

SN 338,807. Parke, Davis & Company, Detroit, Mich. Filed Sept. 24, 1969.

THERAPEUTIC NOTES ILLUSTRATED

Owner of Reg. No. 376,495.
For Medical Journal (Int. Cl. 16).
First use on or before Apr. 1, 1969.

SN 338,827. Western Publishing Company, Inc., Racine, Wis. Filed Sept. 24, 1969.

GOLDEN PRESS

Owner of Reg. No. 625,412.
For Books—Namely, Juvenile Books; Children's Activity Books; Paperback Books; Guidebooks; Handbooks; Hobby Books; Cookbooks; Art Books; Craft Books; Encyclopedias; Educational Books; Atlases; Dictionaries; and Bibles (Int. Cl. 16).
First use as early as 1958.

SN 341,296. The Tribune Company, Tampa, Fla. Filed Oct. 21, 1969.

THE TAMPA TRIBUNE

Owner of Reg. No. 268,995.
For Daily Newspaper (Int. Cl. 16).
First use 1958.

SN 341,500. Alaska Northwest Publishing Company, Edmonds, Wash. Filed Oct. 23, 1969.

ALASKA

Owner of Reg. Nos. 846,293 and 846,294.
For Magazine (Int. Cl. 16).
First use about August 1969; about November 1958 in a different display.

SN 341,932. Lion Uniform, Inc., Dayton, Ohio. Filed Oct. 28, 1969.

THE DEALER OUTLOOK

For Magazine Published From Time to Time (Int. Cl. 16).
First use Sept. 15, 1969.

SN 342,260. Geyer Guides, Incorporated, St. Louis, Mo. Filed Oct. 31, 1969.



For Travel Publications—Namely, Maps and Travel Guidebooks (Int. Cl. 16).
First use May 7, 1969.

SN 342,893. Alexander Graham Bell Association for the Deaf, Inc., Washington, D.C. Filed Nov. 3, 1969.

WORLD TRAVELER

For Magazine (Int. Cl. 16).
First use Oct. 10, 1969.

SN 342,857. The Thomas More Association, Chicago, Ill. Filed Nov. 4, 1969.

CONTEXT

For Religious Newsletter Published Periodically (Int. Cl. 16).
First use Oct. 13, 1969.

SN 342,698. Ceco Publishing Company, Detroit, Mich. Filed Nov. 5, 1969.

INNER CIRCLE

Owner of Reg. Nos. 371,304 and 697,145.
For Magazine Published From Time to Time (Int. Cl. 16).
First use Sept. 25, 1969.

SN 343,074. Brite Industries Inc., Providence, R.I. Filed Nov. 10, 1969.

CAL-A-BAND

For Calendar Attachment for Watch Bands and the Like (Int. Cl. 16).
First use on or about Nov. 3, 1969.

SN 343,218. Lane Magazine & Book Company, Menlo Park, Calif. Filed Nov. 12, 1969.

COUNTRY LIVING IN THE WEST

For Magazine Feature Appearing From Time to Time (Int. Cl. 16).
First use Feb. 1, 1957.

SN 343,959. Educational Technology Publications, Inc., Englewood Cliffs, N.J. Filed Nov. 19, 1969.

EDUCATIONAL TECHNOLOGY

Owner of Reg. No. 841,819.
For Magazine (Int. Cl. 16).
First use Jan. 15, 1966.

SN 345,843. H. Clifton Morse & Associates, Inc., Chicago, Ill. Filed Dec. 10, 1969.

"SLIDE-SHOWS"

For Pocket Size Computer Slide Charts (Int. Cl. 16).
First use Sept. 4, 1967.

SN 348,766. E. J. Delaney Corporation, Whitman, Mass. Filed Jan. 16, 1970.

SKIERS BIBLE

For Directory of Ski Areas (Int. Cl. 16).
First use Dec. 1, 1969.

SN 348,909. Designware Industries, Inc., Minneapolis, Minn. Filed Jan. 19, 1970.

COMBINATOR

For Charts for Use in Selecting Hardware (Int. Cl. 16).
First use Sept. 3, 1969.

SN 349,076. Richard A. Hourigan, d.b.a. Casualty Adjuster's Guide, Minneapolis, Minn. Filed Jan. 20, 1970.



For Insurance Industry Claims Guide and Directory (Int. Cl. 16).
First use Feb. 24, 1959.

SN 349,181. Hawaii Universal Services, Ltd., Honolulu, Hawaii. Filed Jan. 21, 1970.

GUEST GUIDE

For Magazines Containing Tourist Information (Int. Cl. 16).
First use Oct. 15, 1969.

SN 349,422. College Seal & Crest Company, Inc., Cambridge, Mass. Filed Jan. 23, 1970.

COLLEGE CHUCKLERS

For Greeting Cards (Int. Cl. 16).
First use at least as early as October 1969.

SN 349,498. Ralph W. Neighbour, Elyria, Ohio. Filed Jan. 23, 1970.

SPIRITUAL VITAMINS

For Leaflet Issued From Time to Time (Int. Cl. 16).
First use Dec. 15, 1969.

SN 349,989. Solomon M. Malkin, Newark, N.J. Filed Jan. 29, 1970.

ANTIQUARIAN BOOKMAN

For Classified Section in a Magazine for the Book Trade (Int. Cl. 16).
First use June 5, 1967; Jan. 3, 1948, on related goods.

SN 350,160. The Forecaster Publishing Company, Inc., Los Angeles, Calif. Filed Jan. 28, 1970.

THE FORECASTER

For Newsletter (Int. Cl. 16).
First use Feb. 5, 1964.

SN 352,721. Diversified Industries, Inc., St. Louis, Mo. Filed Mar. 2, 1970.



Reports Issued to Stockholders and Other Interested Parties From Time to Time (Int. Cl. 16).
First use Jan. 30, 1970.

Class 39 - Clothing

SN 299,593. Southwestern Apparel Inc., Garland, Tex. Filed June 3, 1968.



For Ladies' Slacks, Blouses, Skirts, Dresses, and Jackets (Int. Cl. 25).
First use Feb. 28, 1968.

SN 315,942. Munsingwear, Inc., Minneapolis, Minn. Filed Jan. 6, 1969.

PENGUIN

Owner of Reg. No. 673,912.
For Slacks, Walking Shorts, Sport Shirts, and Jackets (Int. Cl. 25).
First use June 1967.

SN 316,427. The Gazebo, Inc., Memphis, Tenn. Filed Jan. 13, 1969.



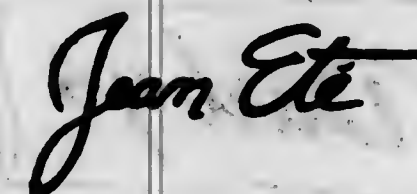
For Women's Clothing and Accessories—Namely, Hosiery, Footwear, Headwear, Neckwear, Swimwear, Sportswear, Rainwear, Sleepwear, Millinery, Lingerie, Skirts, Sweaters, Dresses, Gowns, Blouses, Shirts, Slacks, Shorts, Suits, Coats, Cloaks, and Belts (Int. Cl. 25).
First use Oct. 20, 1966.

SN 321,693. Sternstein Corporation, New York, N.Y. Filed Mar. 13, 1969.

PENNY POCKETS

For Children's Shorts, Pants, Overalls, Coveralls, Jackets, and Coats (Int. Cl. 25).
First use Feb. 27, 1969.

SN 322,258. Berkshire Handkerchief Co., Inc., New York, N.Y. Filed Mar. 20, 1969.



"Jean Eté" is not the name of an individual but is fictitious.
For Scarves (Int. Cl. 25).
First use Dec. 20, 1968.

SN 324,231. Robert-Walters Corp., Chicago, Ill. Filed Apr. 10, 1969.

VIBRATIONS

For Ladies Wearing Apparel—Namely, Dresses, Blouses, Skirts, Tunics, and Slacks (Int. Cl. 25).
First use Mar. 10, 1969.

SN 324,459. Robert P. Huffman, Laguna Beach, Calif. Filed Apr. 14, 1969.

PICKLES

For Bathing Suits and Beach-Wear (Int. Cl. 25).
First use on or before Feb. 1, 1966.

SN 328,421. Dispoz-Sani Products, Ltd., New York, N.Y. Filed May 27, 1969.

SOF-EEZ

by Dispo

Owner of Reg. No. 808,549.
For Disposable Baby Diapers and Shirts (Int. Cl. 25).
First use May 2, 1969.

SN 330,510. Imperial Outfitters to Large Men, Inc., New York, N.Y. Filed June 19, 1969.



NEW YORK

The words "Wear" and "New York" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 711,892, 814,061, and others.
For Sweaters (Int. Cl. 25).
First use 1946.

SN 330,511. Imperial Outfitters to Large Men, Inc., New York, N.Y. Filed June 19, 1969.



NEW YORK

The words "Wear" and "New York" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 711,892, 814,061, and others.
For Slacks (Int. Cl. 25).
First use 1946.

SN 330,579. Newquay Corporation, New York, N.Y., assignee of Bizet Imports, Limited, New York, N.Y. Filed June 20, 1969.



For Ladies' Wearing Apparel—Namely, Dresses and Dress Ensembles, Suits and Pantsuits (Int. Cl. 25).
First use Apr. 11, 1969.

SN 333,275. Intercontinent Shoe Corporation, New York, N.Y. Filed July 23, 1969.

IRISH SQUIRES

The word "Irish" is disclaimed apart from the mark as shown.
For Footwear (Int. Cl. 25).
First use Feb. 19, 1969.

SN 334,656. Wembley, Inc., New Orleans, La. Filed Aug. 6, 1969.

**SUPER
WEMLON**

The word "Super" is disclaimed apart from the mark as shown.

For Men's Neckwear (Int. Cl. 25).
First use May 1, 1969.

SN 336,579. The H. D. Lee Company, Inc., Shawnee Mission, Kans. Filed Aug. 28, 1969.



Owner of Reg. Nos. 180,792, 711,910, and others.
For Waistband Overalls and Jeans (Int. Cl. 25).
First use on or about Aug. 16, 1948; June 1919, as to "Lee" and December 1935, as to "Lee Riders."

SN 338,187. Slumbertogs, Inc., New York, N.Y. Filed Sept. 17, 1969.

SLUMBERAIRE

Owner of Reg. Nos. 746,974, 772,384, and others.
For Women's and Girls' Bathrobes, Lounging Robes, Nightgowns, Lounging Gowns, Pajamas, and Other Sleepwear (Int. Cl. 25).
First use Apr. 14, 1969.

SN 340,414. H. Nasshorn, Inc., New York, N.Y. Filed Oct. 10, 1969.

DANNY BOY

For Men's and Boy's Sweaters and Knitted Shirts (Int. Cl. 25).
First use Sept. 9, 1968.

SN 341,896. Edwards' Shoes, Inc., Philadelphia, Pa. Filed Oct. 28, 1969.

MISS EDWARDS

For Owner of Reg. Nos. 382,403, 887,979, and others.
For Shoes (Int. Cl. 25).
First use Oct. 16, 1969.

SN 343,728. The May Department Stores Company, St. Louis, Mo. Filed Nov. 17, 1969.

ELYSIAN

For Women's High Fashion Nylon Hosiery and Panty Hose (Int. Cl. 25).
First use Aug. 1, 1927.

SN 344,448. Spartans Industries, Inc., New York, N.Y. Filed Nov. 24, 1969.



For Men's and Boys' Shirts (Int. Cl. 25).
First use January 1969.

SN 348,477. Ben Kahn Boutique, Ltd., New York, N.Y. Filed Jan. 14, 1970.

IAK

For Fur Outercoats for Women (Int. Cl. 25).
First use Nov. 26, 1969.

SN 348,839. Hurd Shoe Company, Inc., Utica, N.Y. Filed Jan. 19, 1970.



For Women's and Teenagers' Casual Footwear (Int. Cl. 25).
First use Nov. 3, 1969.

SN 348,840. B. Kuppenheimer & Co., Inc., Chicago, Ill. Filed Jan. 19, 1970.



For Men's and Boys' Suits, Sport Coats, and Outer Coats (Int. Cl. 25).
First use Dec. 17, 1969.

SN 349,550. Joshua Lipman Corporation, d.b.a. Adorable Co. of California, North Hollywood, Calif. Filed Jan. 26, 1970.

ADOR-EASE

For Ladies' and Girls' Panties (Int. Cl. 25).
First use Sept. 16, 1969.

SN 349,912. American Optical Corporation, Southbridge, Mass. Filed Jan. 29, 1970.

BUMP GUARD

For Safety Helmets (Int. Cl. 9).
First use as early as 1968.

SN 350,184. Latest Trends, Inc., Rutherford, N.J. Filed Feb. 2, 1970.

TRISSINE

Owner of Reg. No. 865,805.
For Knit Sportswear, i.e., Tops and Blouses (Int. Cl. 25).
First use Dec. 18, 1969.

Class 40—Fancy Goods, Furnishings, and Notions

SN 342,824. Monica Simone Cosmetics, Inc., Brooklyn, N.Y. Filed Oct. 31, 1969.

MONICA SIMONE

"Monica Simone" is not the name of a particular living individual. Owner of Reg. No. 884,418.
For False Eyelashes, Artificial Finger Nails and Eyelash Adhesive and Adhesive for Artificial Nails (Int. Cl. 8).
First use 1965.

SN 347,067. Johnson & Johnson, New Brunswick, N.J. Filed Dec. 24, 1969.

STYLE QWIK

For Hair Set Tape (Int. Cl. 26).
First use Nov. 18, 1969.

SN 349,544. Curiel Products Corporation, Scottsdale, Ariz. Filed Jan. 28, 1970.



For Coiffure Accessory Consisting of Battery Operated Lighted Optical Fibers (Int. Cl. 26).
First use Jan. 5, 1970.

SN 350,812. Cournoyer Industries, Inc., Hialeah, Fla. Filed Feb. 9, 1970.

INSTA LOCK

For Eyelash Applicators (Int. Cl. 26).
First use Oct. 15, 1969.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 322,668. Jefferson Surplus Sales Co., Chicago, Ill. Filed Mar. 24, 1969.

FLOOR GUARD

The word "Floor" is disclaimed apart from the mark as shown.
For Indoor and Outdoor Carpets, and Runners (Int. Cl. 27).
First use on or about Jan. 19, 1968.

SN 342,284. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 31, 1969.

PORALIN

Owner of Reg. No. 508,233.
For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Jan. 30, 1941.

SN 342,699. Deering Milliken, Inc., New York, N.Y. Filed Nov. 5, 1969.

LUSTRE SHADOWS

For Textile Rugs, Carpets and Carpeting (Int. Cl. 27).
First use in or about January 1969.

SN 347,682. Deering Milliken, Inc., New York, N.Y. Filed Jan. 5, 1970.

LACY DAISY

For Textile Fabrics Made of Wool, Cotton and Synthetic Fibers and Combinations Thereof (Int. Cl. 24).
First use Dec. 10, 1969.

SN 347,683. Deering Milliken, Inc., New York, N.Y. Filed Jan. 5, 1970.

ALL ABOARD

For Textile Fabrics Made of Wool, Cotton and Synthetic Fibers and Combinations Thereof (Int. Cl. 24).
First use Dec. 10, 1969.

SN 348,831. Deering Milliken, Inc., New York, N.Y. Filed Jan. 19, 1970.

MILLIKEN

Owner of Reg. Nos. 535,064 and 548,641.
For Textile Rugs and Carpets (Int. Cl. 27).
First use January 1969.

SN 349,102. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

CHAMBALLOU

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,103. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

CLASSIC TOUCH

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,104. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

CONTEMPRA

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,106. E. T. Barwick Industries, Inc., Chamblee, Ga.
Filed Jan. 21, 1970.

FASHIONWALL

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 352,710. E. T. Barwick Industries, Inc., Chamblee, Ga.
Filed Mar. 2, 1970.

LUNARITE

For Carpets (Int. Cl. 27).
First use Feb. 24, 1970.

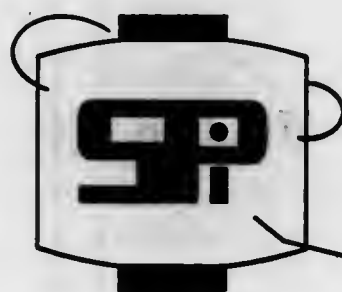
Class 43—Thread and Yarn

SN 339,073. Dow Badische Company, Williamsburg, Va.
Filed Sept. 29, 1969.

ZEFSTAT

Owner of Reg. Nos. 647,642, 740,099, and others.
For Yarns (Especially Metallic Yarns) for Use as Anti-static Agents in Tufted, Woven, or Knitted Fabrics (Int. Cl. 23).
First use Sept. 22, 1969.

SN 349,806. Sheerspan Products, Inc., Burlington, N.C.
Filed Jan. 28, 1970.



For Elastic Yarns (Int. Cl. 23).
First use January 1969.

Class 44—Dental, Medical, and Surgical Appliances

SN 325,281. Beam-Matic Hospital Supply, Inc., Long Island City, N.Y. Filed Apr. 23, 1969.

SORENSEN

For Medical Suction Apparatus, Cardiac Arrest Vehicles and Heart-Lung Resuscitators (Int. Cl. 10).
First use on or about Jan. 1, 1969.

SN 325,515. Harold J. Searer, d.b.a. Searer Rubber Company, Akron, Ohio. Filed Apr. 24, 1969.

CHEMIFLEX

For Nursing Nipples (Int. Cl. 10).
First use on or about Apr. 4, 1969.

Class 45—Soft Drinks and Carbonated Waters

SN 342,751. Malone & Hyde, Inc., Memphis, Tenn. Filed Nov. 5, 1969.



Owner of Reg. Nos. 792,669, 877,851, and others.
For Soft Drinks, Dietary and Otherwise (Int. Cl. 32).
First use Aug. 25, 1969.

SN 348,526. General Foods Corporation, White Plains, N.Y. Filed Jan. 14, 1970.

CAPTAIN'S PARADISE

For Non-Alcoholic Cocktail Mix (Int. Cl. 32).
First use Sept. 24, 1969.

Class 46—Foods and Ingredients of Foods

SN 290,321. Geo. I. Pettit, Inc., Doylestown, Ohio. Filed Feb. 5, 1968.



No claim is made to the exclusive right to the use of the word "Foods" separate and apart from the mark as shown. For Frozen Foods—Namely, Frozen Chicken Pot Pies (Int. Cl. 30).
First use Sept. 25, 1967; Sept. 16, 1957, as to "Pettit."

SN 293,677. Akira, d.b.a. Ace Distributing Co., Oakland, Calif. Filed Mar. 20, 1968.



The words "Yee Fu Men" comprise a misspelling or equivalent of the common descriptive name of a noodle preparation and are disclaimed apart from the mark shown in the drawing.
For Flavored Imitation Chinese Style Noodle (Int. Cl. 30).
First use Mar. 1, 1963.

SN 296,972. Mexican Gulf Fisheries, Inc., Coden, Ala. Filed Apr. 30, 1968.

CAPTAIN HAAB'S

The name "Haab's" represent Mr. Adam Haab, whose consent is of record.
For Raw and Frozen Oysters (Int. Cl. 29).
First use Sept. 1, 1962.

SN 301,469. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed June 26, 1968.



The word "Cards" is disclaimed apart from the mark as shown, without disclaiming any common law rights therein. For Combination Package Consisting of Chewing Gum and Novelty Cards (Int. Cl. 30).
First use Apr. 10, 1968.

SN 311,083. Veroba Realty Corporation, New York, N.Y. Filed Oct. 31, 1968.

MESSING

For Passover Cakes (Int. Cl. 30).
First use on or about Nov. 5, 1924.

SN 315,113. Star-Kist Foods, Inc., Terminal Island, Calif. Filed Dec. 23, 1968.

CHARLIE

Owner of Reg. No. 573,928.
For Canned Fish (Int. Cl. 29).
First use Sept. 22, 1961.

SN 315,954. H. G. Parks, Inc., Baltimore, Md. Filed Jan. 6, 1969.



Owner of Reg. Nos. 620,961, 749,468, and others.
For Refrigerated and/or Frozen Food Products—Namely, Pork Sausage, Fresh Sausage, Smoked Sausage, Cooked Sausage, Scrapple, Cooked Chitterlings, Chopped Beef With Barbecue Sauce, Chopped Pork With Barbecue Sauce, and Chili (Int. Cl. 29).
First use Oct. 8, 1954.

SN 317,331. Fearn International Inc., Franklin Park, Ill. by change of name from Fearn Foods Inc., Franklin Park, Ill. Filed Jan. 23, 1969.



The lines shown in the drawing are part of the mark and not a representation of color lining.
For Frozen Meats and Frozen Meat Food Products—Namely, Beef Steaks and Cuts, Beef Patties, Ground Beef, Pork Steaks and Chops, Veal Steaks, Lamb Chops and Patties, Meat Balls, Meat Loaf, Stuffed Peppers and Barbecue Sauce (Int. Cls. 29 and 30).
First use 1962.

SN 319,408. U.S. Sugar Company, Inc., Buffalo, N.Y. Filed Feb. 17, 1969.

U.S.

For Refined Sugar (Int. Cl. 30).
First use Jan. 1, 1960.

SN 322,695. Miracle Pet Products, Inc., Jersey City, N.J. Filed Mar. 26, 1969.

MIRACLE

Owner of Reg. Nos. 647,468 and 863,509.
For Fish Food, Hamster and Gerbil Food, and Canary Seed (Int. Cl. 31).
First use June 21, 1966.

SN 323,673. Barberio Cheese Houses, Inc., Minneapolis, Minn. Filed Apr. 4, 1969.



For Meat Sausages (Int. Cl. 29).
First use on or about Feb. 5, 1959.

SN 324,059. The Fasweet Company, Jonesboro, Ark. Filed Apr. 9, 1969.



For Concentrated Non-Calorific Sweetener for Foods and Food Beverages (Int. Cl. 1).
First use Dec. 18, 1968.

SN 325,894. A. H. Robins Company, Incorporated, Richmond, Va. Filed Apr. 22, 1969.

NUTTY FINGERS

For Popped Popcorn (Int. Cl. 30).
First use Apr. 1, 1969.

SN 325,583. Continental Coffee Company, Chicago, Ill. Filed Apr. 25, 1969.

COOL 'N LITE

For Prepared Dairy Mix for Making Chilled, Whipped Dessert (Int. Cl. 30).
First use on or about Apr. 10, 1969.

SN 325,790. Runciman & Runciman, Exeter, Calif. Filed Apr. 28, 1969.



For Fresh Grapes (Int. Cl. 31).
First use Nov. 12, 1953.

SN 325,955. Burger Chef Systems, Inc., Indianapolis, Ind. Filed Apr. 30, 1969.

BEEF CHEF

The word "Beef" is disclaimed apart from the mark as a whole. Owner of Reg. Nos. 745,577 and 796,027.
For Ready-To-Eat Beef Sandwiches (Int. Cl. 29).
First use Feb. 14, 1969.

SN 327,761. Heublein, Inc., Hartford, Conn. Filed May 20, 1969.

MARTIAN

For Mustard and Sauce for Meats (Int. Cl. 30).
First use Mar. 12, 1969.

SN 327,930. The Kroger Co., Cincinnati, Ohio. Filed May 21, 1969.



Applicant disclaims the word "Fresh" apart from the mark as shown. Owner of Reg. No. 874,250.

For Fresh Produce—Namely, Apples, Oranges, Pears, Grapefruit, Lemons, Limes, Onions, Tangeloes, Tangerines, Temple Oranges, Corn, and Squash (Int. Cl. 31).
First use at least as early as Nov. 26, 1968.

SN 328,306. L. Karp & Sons, Inc., Chicago, Ill. Filed May 26, 1969.

karp's

For Jams, Jellies, Pie Fillings, Fudge Bases, Ready-To-Use Fudge Icings, Syrups for Bakery Product Use, Sweet Dough, Doughnut Mixes, Cake Mixes, French Cruller Mixes, Danish and Sweet Dough Mixes, Cookie Mixes and Bread Mixes and Fudge Bases for Bakery Product Use (Int. Cls. 29 and 30).
First use May 5, 1967.

SN 328,682. Executive Chef, Inc., Westport, Conn. Filed May 29, 1969.



For Cooked and Uncooked Frozen Meats; Meat and Poultry and Sea Food Casseroles, Cooked and Uncooked Frozen Fish and Shell Fish; Vegetable Stews, Cooked and Uncooked Frozen Fruit; Cream Desserts; Frozen Ready To Bake Hors d'Oeuvres and Frozen Canopies (Int. Cl. 29).
First use Mar. 15, 1969.

SN 329,070. Fler Corp., Philadelphia, Pa. Filed June 4, 1969.

NINA

For Chewing Gum (Int. Cl. 30).
First use May 16, 1969.

SN 329,370. Long Island Macaroni Co., Inc., Deer Park, N.Y. Filed June 6, 1969.

LA REGINA

The mark "La Regina" consists of two words of the Italian language which translated into English mean "the queen."
For Dried and Canned Spaghetti, Macaroni and Egg Noodles (Int. Cl. 30).
First use Feb. 9, 1968.

SN 329,866. James R. Kennedy, d.b.a. J. R. Kennedy & Co., Denver, Colo. Filed June 12, 1969.



The wording "But-R-Salt" is disclaimed apart from the mark shown. The drawing is lined for the colors green and yellow.
For Food Condiment—Namely, Flavored Salt (Int. Cl. 30).
First use on or about Mar. 28, 1969.

SN 330,126. Four Star Candy Co., Inc., Newark, N.J. Filed June 16, 1969.

DEAR HEARTS

The word "Hearts" is disclaimed apart from the mark as shown.
For Candy (Int. Cl. 30).
First use Nov. 1, 1966.

SN 330,348. Albert M. Briggs Company, Washington, D.C. Filed June 18, 1969.



For Beef Bulk Mix, and Beef Patties (Int. Cl. 29).
First use July 8, 1967.

SN 330,548. Coleman & Company Limited, Norwich, England. Filed June 19, 1969.

VITA-CUP

Owner of British Reg. No. 545,010, dated Oct. 3, 1933.
For Chocolate Flavoured Food Beverages (Int. Cl. 30).

SN 330,771. The Pillsbury Company, Minneapolis, Minn. Filed June 28, 1969.

HUNGRY JACK

Owner of Reg. Nos. 339,297, 844,695, and others.
For Frozen, Precooked Chicken (Int. Cl. 29).
First use May 1, 1969.

SN 330,963. Taylor Food Products, Inc., El Segundo, Calif. Filed June 25, 1969.



The drawing is lined for the colors red, violet and yellow but no claim is made to the colors so named.
For Beef and Pork Polish Sausage (Int. Cl. 29).
First use May 29, 1969.

SN 331,545. Sterno Industries, Inc., Harrison, N.J. Filed July 1, 1969.

BITE 'A BITS

For Freeze Dried Food for Fish (Int. Cl. 31).
First use May 1, 1969.

SN 331,555. Troyer Potato Products, Inc., Waterford, Pa. Filed July 1, 1969.



Applicant disclaims the representation of the potato chip per se apart from the mark as shown.
For Potato Chips (Int. Cl. 29).
First use July 10, 1967.

TM 875 O.G.—2

SN 333,344. Chas. Pfizer & Co., Inc., New York, N.Y. Filed July 24, 1969.

CLINICARE

Owner of Reg. Nos. 303,164 and 370,770.
For Dietary Animal Food for Small Animals—Namely, Dogs and Cats (Int. Cl. 31).
First use Jan. 14, 1969.

SN 336,064. Mar-Kes Foods, Compton, Calif. Filed Aug. 25, 1969.

MAR-KES

For Frozen Foods—Namely, Meat-Containing Tacos, Meat-Containing Burritos, Meatless and Meat-Containing Enchiladas, Meat-Containing Taquitos, Meat-Containing Chili Concentrate, and Meatless and Meat-Containing Sauces (Int. Cl. 30).
First use at least as early as January 1956.

SN 337,140. The Quaker Oats Company, Chicago, Ill. Filed Sept. 5, 1969.

Aunt Jemima HOMESTYLE

The name "Aunt Jemima" is fanciful. Without waiver of any common law rights in its mark as a whole or any portion thereof, applicant disclaims the word "Homestyle" except as a part of its mark. Owner of Reg. Nos. 17,825, 864,584, and others.

For Prepared Baking Mixes—Namely, Cookie Mix and Pancake Mix (Int. Cl. 30).
First use Apr. 23, 1969.

SN 338,727. Morton International, Inc., Chicago, Ill. Filed Sept. 24, 1969.

MORTON BREAKFAST RACK

Owner of Reg. Nos. 509,883, 877,411, and others.
For Jellies and Honey (Int. Cls. 29 and 30).
First use on or about Feb. 25, 1969.

SN 341,224. Tootsie Roll Industries, Inc., Chicago, Ill. Filed Oct. 20, 1969.

TOOTSIE POP DROPS

"Pop Drops" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 62,179, 292,927, and others.
For Candy (Int. Cl. 30).
First use at least as early as Sept. 25, 1969.

SN 341,383. McCormick & Company, Incorporated, Cockeysville, Md. Filed Oct. 22, 1969.

5th SEASON

For Spices and Flavorings in Extract Form Used for Seasoning Foods (Int. Cl. 30).
First use Aug. 18, 1969.

SN 341,396. Kellogg Company, Battle Creek, Mich. Filed Oct. 22, 1969.

FOUR LEAF CLOVERS

For Cereal-Derived Food Product To Be Used as a Breakfast Food, Snack Food and Confection (Int. Cl. 30).
First use Oct. 17, 1969.

SN 341,407. The Nestlé Company, Inc., White Plains, N.Y. Filed Oct. 22, 1969.

NESCAFE GOLD

For Freeze-Dried Coffee (Int. Cl. 30).
First use Dec. 14, 1966.

SN 341,917. Delta Food Processing Corporation, Moorhead, Minn. Filed Oct. 28, 1969.

REGAL HARVEST

For Canned Vegetables (Int. Cl. 29).
First use Sept. 15, 1969.

SN 341,944. Reddi-Wip, Inc., Los Angeles, Calif. Filed Oct. 28, 1969.

REDDI-EGG

Owner of Reg. No. 808,921.
For Pasteurized Dried Eggs (Int. Cl. 29).
First use May 18, 1969.

SN 342,892. Pierce Pre-Cooked Foods, Inc., Moorefield, W. Va. Filed Nov. 6, 1969.

ROMANO-CHIK

Owner of Reg. Nos. 791,494 and 846,068.
For Frozen Pre-Cooked Chicken Parts (Int. Cl. 29).
First use Oct. 31, 1969.

SN 342,893. Pierce Pre-Cooked Foods, Inc., Moorefield, W. Va. Filed Nov. 6, 1969.

HIP-CHIK

Owner of Reg. Nos. 791,494 and 846,068.
For Frozen Pre-Cooked Chicken Parts (Int. Cl. 29).
First use Oct. 31, 1969.

SN 344,135. Philip Morris Incorporated, New York, N.Y. Filed Nov. 20, 1969.

COLORICOS

For Candy (Int. Cl. 30).
First use Nov. 5, 1969.

SN 344,225. Duffy-Mott Company, Inc., New York, N.Y. Filed Nov. 21, 1969.

Surfstix

For Frozen Seafood Sticks (Int. Cl. 29).
First use Nov. 10, 1969.

SN 344,321. Borden, Inc., New York, N.Y. Filed Nov. 24, 1969.

ZOODLES

For Chocolate Covered, Creme Filled Cake Product (Int. Cl. 30).
First use on or before June 13, 1969.

SN 345,060. Albert M. Briggs Company, Washington, D.C. Filed Dec. 2, 1969.

TENDER-RITE

For Beef Bulk Mix, Beef Patties, Cooked Beef, Beef Rolls, Sliced Boneless Stuffed Pork Loin, Beef for Roasting, Ham and Chicken Bulk Mix (Int. Cl. 29).
First use July 3, 1967.

SN 351,377. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 16, 1970.

EVANGELINE

Owner of Reg. Nos. 515,311, 868,450, and others.
For Hot Sauces, Worcestershire Sauce, Barbeque Sauce, Ground Peppers, Pickled Peppers, Bottled Peppers, Canned Vegetables, Gumbo File, Mustard, and Vinegar (Int. Cls. 29 and 30).
First use Dec. 1, 1912.

SN 351,766. Ralston Purina Company, St. Louis, Mo. Filed Feb. 19, 1970.



The drawing is lined for the colors brown and gold, but no claim is made as to color.
For Dog Food (Int. Cl. 31).
First use Jan. 15, 1970.

SN 351,767. Ralston Purina Company, St. Louis, Mo. Filed Feb. 19, 1970.



THE GRUMPY DOG

The drawing is lined for the colors brown and gold, but no claim is made as to color.
For Dog Food (Int. Cl. 31).
First use Jan. 15, 1970.

Class 47 - Wines

SN 324,298. Michigan Wineries, Inc., Paw Paw, Mich. Filed Apr. 11, 1969.

COLD PIGEON

For Wine (Int. Cl. 33).
First use Mar. 14, 1969.

SN 324,301. Michigan Wineries, Inc., Paw Paw, Mich. Filed Apr. 11, 1969.

COLD SWAN

For Wine (Int. Cl. 33).
First use Mar. 14, 1969.

SN 338,498. United Vintners, Inc., d.b.a. Lejon Champagne Cellars, San Francisco, Calif. Filed Sept. 22, 1969.

LEJON
Waikiki Duck

Owner of Reg. Nos. 401,266, 828,388, and others.
For Blend of Champagne and Sparkling Burgundy (Int. Cl. 33).
First use July 8, 1969.

SN 350,031. Paul Masson, Inc., d.b.a. Paul Masson Vineyards, San Francisco, Calif. Filed Jan. 30, 1970.

PAUL MASSON

"Paul Masson" is not the name of a particular living individual. Owner of Reg. Nos. 590,865, 809,035, and others.
For Wine (Int. Cl. 33).
First use in or about 1887.

Class 49 - Distilled Alcoholic Liquors

SN 333,566. The Highland Distilleries Company Limited, Glasgow, Scotland. Filed July 25, 1969.

BUNNAHABHAIN

Owner of British Reg. No. B856,958, dated Nov. 23, 1963.
For Scotch Whisky (Int. Cl. 33).

SN 339,011. Glenmore Distilleries Company, Louisville, Ky. Filed Sept. 26, 1969.

MASTER'S RARE

No exclusive claim is made to the word "Rare" apart from the mark as shown.
For Bourbon Whiskey (Int. Cl. 33).
First use Sept. 2, 1969.

Class 50 - Merchandise Not Otherwise Classified

SN 340,919. Heyer Inc., Chicago, Ill. Filed Oct. 16, 1969.

STAND-OUT

For Signs (Int. Cl. 20).
First use February 1969.

Class 51 - Cosmetics and Toilet Preparations

SN 294,267. Dupon Laboratories Pty. Limited, Marrickville, New South Wales, Australia. Filed Mar. 27, 1968.

COBB & CO.

For After Shave and Pre-Shave Lotion, Cologne Lotion, Talcum Powder, Shaving Cream and Foam, Personal Deodorants, Hair Cream, Hair Spray, and Hair Tonic. (Int. Cls. 3 and 5).
First use June 1, 1966; in commerce Mar. 5, 1968.

SN 313,705. S. C. Johnson & Son, Inc., Racine, Wis. Filed Dec. 5, 1968.

EDGE

Owner of Reg. No. 845,151.
For Shave Cream (Int. Cl. 3).
First use on or about Aug. 21, 1968.

SN 327,995. Totizo, Inc., Beverly Hills, Calif. Filed Apr. 24, 1969.



For Perfume, Cologne, Toilet Water and Eau de Parfum (Int. Cl. 3).
First use Nov. 27, 1968.

SN 327,996. Totizo, Inc., Beverly Hills, Calif. Filed Apr. 24, 1969. SN 336,580. Les Parfums de Dana, Inc., d.b.a. Dana, New York, N.Y. Filed Aug. 28, 1969.



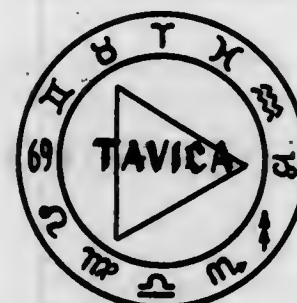
For Perfume, Cologne, Toilet Water and Eau de Parfum (Int. Cl. 3).
First use Nov. 27, 1968.

SN 327,997. Totizo, Inc., Beverly Hills, Calif. Filed Apr. 24, 1969.



For Perfume, Cologne, Toilet Water and Eau de Parfum (Int. Cl. 3).
First use Nov. 27, 1968.

SN 327,999. Totizo, Inc., Beverly Hills, Calif. Filed Apr. 24, 1969.



For Perfume, Cologne, Toilet Water and Eau de Parfum (Int. Cl. 3).
First use Nov. 27, 1968.

SN 331,751. Holiday Magic, San Rafael, Calif. Filed July 3, 1969.

JUST-IN-CASE

For Cosmetic Kits Containing Skin Toner, Night Cream, Skin Cleanser and Moisture Cream (Int. Cl. 3).
First use May 14, 1969.

SN 335,431. Countess Da Vinci, Inc., New York, N.Y. Filed Aug. 15, 1969.

Countess
daVinci

For Astringent (Int. Cl. 3).
First use June 2, 1969.

SN 336,580. Les Parfums de Dana, Inc., d.b.a. Dana, New York, N.Y. Filed Aug. 28, 1969.

ETUDE

For Cologne, Perfume and Dusting Powder (Int. Cl. 3).
For Cologne, Perfume and Dusting Powder (Int. Cl. 3).
First use Aug. 18, 1969.

SN 336,624. Waverly Beauty Products Inc., Brooklyn, N.Y. Filed Aug. 28, 1969.

ALTA

For Hair Conditioner (Int. Cl. 3).
First use July 1, 1969.

SN 337,175. Johnson & Johnson, New Brunswick, N.J. Filed Sept. 5, 1969.

SUPERSIL

For Lotions (Int. Cl. 3).
First use Aug. 8, 1969.

SN 337,535. GR-20 Hair Products, Inc., Chicago, Ill. Filed Sept. 10, 1969.

GR-20

For Hairdressing (Int. Cl. 3).
First use January 1968.

SN 341,706. Monica Simone Cosmetics, Inc., Brooklyn, N.Y. Filed Oct. 24, 1969.

MONICA SIMONE

The name "Monica Simone" is not the name of a particular individual. Owner of Reg. No. 834,418.
For Liquid Make-Up, Nail Polish, Nail Polish Remover, Nail Polish Remover Pads Impregnated With Remover and Make-Up Remover Pads Impregnated With Cosmetic Cleanser, and Pressed Powder Compacts (Int. Cl. 3).
First use in 1965.

Class 52 - Detergents and Soaps

SN 284,494. J. I. Morris Company, Southbridge, Mass. Filed Nov. 9, 1967.

SPEC-SPRAY

Owner of Reg. No. 616,649.
For Eyeglass Cleaner (Int. Cl. 3).
First use Oct. 30, 1967.

SN 323,613. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 3, 1969.

TONIC

For Liquid Alkaline Cleaning Composition Particularly Useful in the Food Industry (Int. Cl. 3).
First use Oct. 17, 1968.

SN 323,879. Economics Laboratory, Inc., St. Paul, Minn. Filed Apr. 4, 1969.

ACID-KLENZ

For Acid Detergent To Be Used for Cleaning of Equipment in Farm Dairy and Food Processing Plants (Int. Cl. 3).
First use July 1942.

SN 324,257. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 10, 1969. SN 334,085. The Hosiery Mate Company, Chicago, Ill. Filed July 31, 1969.

LEDICAR

For Cleaning Composition for Use on Railroad Equipment (Int. Cl. 3).
First use May 23, 1968.

SN 328,558. Lanewood Laboratories, Inc., Framingham, Mass. Filed May 28, 1969.

MEDI-MAID

For Combined Cleaner and Disinfectant for Use on Hard Surfaces (Int. Cl. 3).
First use May 10, 1969.

SN 328,559. Lanewood Laboratories, Inc., Framingham, Mass. Filed May 28, 1969.

METAL-MAID

For Combined Cleaner and Disinfectant for Use on Institutional Equipment (Int. Cl. 3).
First use May 10, 1969.

SN 328,560. Lanewood Laboratories, Inc., Framingham, Mass. Filed May 28, 1969.

MAN FRIDAY

For Combined Office Cleaner and Disinfectant (Int. Cl. 3).
First use May 10, 1969.

SN 330,082. Allergan Pharmaceuticals, Santa Ana, Calif. Filed June 16, 1969.

VANSEB

For Hair Shampoo (Int. Cl. 3).
First use Mar. 12, 1969.

SERVICE MARKS

Class 100 - Miscellaneous

SN 258,738. Veda Incorporated, Ann Arbor, Mich. Filed Nov. 15, 1966.

VEDA

For Analytic Services to the Government, Military and Commercial Markets in the Nature of Systems Analysis and Engineering, Control System Analysis and Design, Operations Research and Related Analyses, and Professional Evaluation Services in the Nature of Identifying Systems-Oriented Personnel by Appropriate Testing Procedures (Int. Cl. 42).
First use Nov. 5, 1962.

SN 282,281. Manuel Page Lapas, d.b.a. General Jackson's Dixie Fried Chicken, Columbus, Ga. Filed Oct. 11, 1967.

GENERAL JACKSON'S

"General Jackson" is the nickname of "William Congreave Jackson," a living individual whose consent is of record.
For Restaurant Services (Int. Cl. 42).
First use on or about Sept. 29, 1966.

HOSIERY MATE

Applicant disclaims the word "Hosiery" apart from the mark as shown.
For Preparation for Washing Hosiery (Int. Cl. 3).
First use Jan. 11, 1962.

SN 337,492. Williams Cosmetics, Inc., St. Louis, Mo. Filed Feb. 24, 1969.



For Hair Shampoo (Int. Cl. 3).
First use Dec. 15, 1967.

SN 339,499. Conklin Company, Inc., Minneapolis, Minn. Filed Oct. 2, 1969.



For Fuel System Cleaner (Int. Cl. 3).
First use on or about Oct. 8, 1965.

SN 284,418. Swift Industries, Inc., Elizabeth, Pa. Filed Nov. 9, 1967.



SWIFT INDUSTRIES, INC.

The mark consists of a stylized letter "S."
For Rendering Architectural and Engineering Services in Connection With the Construction, Maintenance, and Repair of Homes (Int. Cl. 42).
First use Sept. 10, 1965.

SN 288,896. Universal Oil Products Company, Des Plaines, Ill. Filed Jan. 15, 1968.

SAFARI SERVICE

Applicant disclaims the word "Service" apart from the mark as shown.
For Providing On-the-Site Technical Consultation and Advisory Services Relative to the Erection of Structural Steel Structures (Int. Cl. 42).
First use July 14, 1967.

SN 301,212. Dunkin' Donuts of America, Inc., Quincy, Mass. Filed June 24, 1968.



The word "Donuts" is disclaimed apart from the mark as a whole. Owner of Reg. Nos. 692,491, 755,690, and others. For Restaurant Services (Int. Cl. 42). First use Jan. 9, 1967.

SN 307,950. Franchek, Inc., Atlanta, Ga. assignee of Sizzling Steer Franchise, Inc., Chattanooga, Tenn. Filed Sept. 23, 1968.



For Restaurant Services (Int. Cl. 42). First use on or about Oct. 1, 1965.

SN 310,567. Land O'Lakes Creameries, Inc., Minneapolis, Minn. Filed Oct. 25, 1968.

BRIDGEMAN

Owner of Reg. Nos. 791,524 and 877,099. For Dispensing Prepared Foods Through Establishments in the Nature of Soda Fountains or Ice Cream Parlors (Int. Cl. 42). First use Oct. 1, 1933.

SN 313,293. Harvey Service Systems, Inc., Los Angeles, Calif. Filed Nov. 29, 1968.

HARVEY SERVICE SYSTEMS

Applicant disclaims the words "Service Systems" apart from the mark as shown. For Private Detective Investigation and Property Surveillance Services (Int. Cl. 42). First use on or before Aug. 11, 1967.



Exclusive rights to the expression "Chili-Inn" are disclaimed apart from the mark as shown. For Restaurant Services (Int. Cl. 42). First use Dec. 15, 1967.

SN 316,014. Marriott Corporation, Washington, D.C. Filed Jan. 7, 1969.

SIRLOIN & SADDLE

No registration rights are claimed for the word "Sirloin" apart from the mark as shown, but applicant waives none of its common law rights therein or any feature thereof. For Restaurant and Related Food and Beverage Service (Int. Cl. 42). First use March 1959.

SN 318,023. American Type Culture Collection, Rockville, Md. Filed Jan. 31, 1969.

AMERICAN TYPE CULTURE COLLECTION

For Research, Preservation, and Distribution of Biological Cultures (Int. Cl. 42). First use 1925.

SN 319,391. Louis Stohl, d.b.a. Stohl's Coney Island Restaurant, North Miami Beach, Fla. Filed Feb. 17, 1969.



The words "Franks, Burgers, Roast Beef and Fountain" are merely descriptive words and all right, title and interest to said words are hereby disclaimed. The representation of the human body is merely fanciful and does not identify any particular individual.

For Restaurant Services (Int. Cl. 42). First use Aug. 1, 1968.

SN 320,794. Challenger Research Inc., Rockville, Md. Filed Mar. 5, 1969.



The drawing is lined for the color blue. For Services Performed for Others in Defining and Solving Systems Engineering Problems in Fields of Anti-Submarine Warfare, Hydronautics, Oceanographics and Management (Int. Cl. 42). First use Nov. 29, 1965.

SN 825,241. Travelers Automobile Association, Inc., West Palm Beach, Fla. Filed Apr. 22, 1969.



No claim is made to the words "Travelers Automobile Association" apart from the mark without waiving any common law rights therein. For Automobile Club Services (Int. Cl. 42). First use Oct. 31, 1964.

SN 335,672. American Optical Corporation, Southbridge, Mass. Filed Aug. 19, 1969.



Owner of Reg. Nos. 268,217 and 855,168. For Laboratory Service—Namely, Ophthalmic Prescription Service and Artificial Eye Implant Service (Int. Cl. 42). First use as early as 1946.

Class 101—Advertising and Business

SN 288,328. K-H Associates of Evansville, Inc., Evansville, Ind. Filed Jan. 8, 1968.

GREAT STATES PERSONNEL SYSTEM

Applicant disclaims the wording "Personnel System" apart from the mark as shown. For Employment Placement Services (Int. Cl. 35). First use July 1, 1967.

SN 290,013. Process Operators, Inc., Houston, Tex. Filed Jan. 31, 1968.



The mark consists of the letters "P" and "O" and design. For Employment Placement Services—Namely, Providing Highly Trained and Experienced Specialists for the Operation and Maintenance of Process Plants and Power Plants in the Petroleum, Petrochemical and Chemical Industries (Int. Cl. 35). First use Jan. 15, 1965.

APS

For Photocomposition Printing Services (Int. Cl. 35). First use December 1967.

SN 305,931. Econotax of Mississippi, Inc., Jackson, Miss. Filed Aug. 26, 1968.



The drawing is lined for the colors blue and red. For Preparation of Individual Federal and State Tax Returns (Int. Cl. 35). First use Jan. 2, 1966.

SN 306,648. Data Automation Company, Inc., Dallas, Tex. Filed Sept. 5, 1968.



For Buying, Selling, Leasing, and Trading in Data Processing Equipment, Unit Record Equipment, and Related Equipment (Int. Cl. 35). First use on or before May 21, 1968.

SN 309,102. Request, Inc., Tulsa, Okla. Filed Oct. 7, 1968.

REQUEST

For Mail Order Services for Women's Clothing (Int. Cl. 35). First use Sept. 10, 1968.

SN 309,413. South Carolina Tricentennial Commission, Columbia, S.C. Filed Oct. 11, 1968.



For Operation and Supervision of an Exposition and Providing Facilities for Exhibitions and for Distributing Information in Connection With the South Carolina Tricentennial Celebrations, and Making Available to the Public Publications and Other Informational Material in Connection With Those Activities (Int. Cl. 35). First use February 1968.

SN 311,008. A. C. Nielsen Company, Chicago, Ill. Filed Nov. 8, 1968.

TELEMATIC

For Shoppers' Guide Services—Namely, Referring Shoppers to Outlets Where Specifically Requested Goods Can Be Purchased and Notifying Advertisers and Media of Names and Addresses of Interested Shoppers (Int. Cl. 35).
First use Aug. 28, 1968.

SN 317,263. Russell G. Stutting, d.b.a. Bear River Manufacturing Co., Maquoketa, Iowa. Filed Jan. 22, 1969.

FUR-LIKE FASHION

For Retail Home Demonstration Sales Services of Sundry Household and Accessory Items (Int. Cl. 35).
First use on or about Nov. 15, 1966.

SN 321,276. Rogers Wholesalers, Inc., Jamaica, N.Y. Filed Mar. 10, 1969.



For Accounting Services for Retail Pharmacies (Int. Cl. 35).
First use Jan. 2, 1969.

SN 321,451. Associometrics, Incorporated, Dallas, Tex. Filed Mar. 12, 1969.



The mark consists of the letters "A" and "I" in stylized form.
For Computer Programming Services (Int. Cl. 35).
First use Feb. 10, 1969.

SN 322,621. Real Estate Central, Inc., Washington, D.C. Filed Mar. 24, 1969.



For Real Estate Brokerage Services (Int. Cl. 35).
First use Apr. 5, 1967.

SN 324,337. Fine Impressions, Inc., Columbus Junction, Iowa. Filed Apr. 14, 1969.

GENUINE IM-GRAVING

The word "Genuine" is disclaimed apart from its association with the mark as used.
For Printing Services (Int. Cl. 35).
First use May 1, 1968.

SN 324,732. R. H. Macy & Co., Inc., New York, N.Y. Filed Apr. 16, 1969.

DIGS LTD.

For Retail Department Store Selling Services for Women's and Men's Apparel and Accessories (Int. Cl. 35).
First use on or about Nov. 7, 1968.

SN 325,417. Wendale Corporation, d.b.a. Best Equipment Company, Philadelphia, Pa. Filed Apr. 23, 1969.

COIN FAIR

Applicant disclaims the word "Coin" apart from the mark as shown.
For Consulting, Promotional, Managing, and Design Services in Respect to the Establishment and Operation of Coin-Operated Laundries and Dry Cleaning Businesses (Int. Cl. 35).
First use Mar. 5, 1969.

SN 325,870. Hero City U.S.A. Restaurant Corp., New York, N.Y. Filed Apr. 29, 1969.

HERO CITY U.S.A.

For Involving the Technical Assistance of Franchised Restaurant Operators Including Consultation, Supplying of Information on Procedure of Operation, Cooking of Foods, and the Like (Int. Cl. 35).
First use Apr. 19, 1966.

SN 339,007. The Franklin Mint, Inc., Yeadon, Pa. Filed Sept. 26, 1969.

BIG GAME

For Promoting the Sale of Goods or Services of Others through Providing materials and Advertising Matter Designed for a Promotional Contest (Int. Cl. 35).
First use Sept. 24, 1969.

Class 102—Insurance and Financial

SN 302,224. Computer Credit Systems, Inc., Atlanta, Ga. Filed July 8, 1968.



No registration rights are claimed for the words "All Credit Cards Welcome Here" nor for the words "Computer Credit Systems Inc." apart from the mark as shown, but applicant waives none of its common law rights therein.

For Credit Services—Namely, Extension of Credit Through Any Credit Card to Customers Who Patronize Subscribing Retail Establishments; Providing Centralized Billing to Such Customers; and Arranging for Payment for Goods and Services Purchased From Subscribing Retail Establishments (Int. Cl. 36).
First use Sept. 15, 1967.

SN 304,292. American Financial Planning Corporation, Baltimore, Md. Filed Aug. 5, 1968.

INCOMPUTER

For Estate and Investment Planning Services (Int. Cl. 36).
First use June 12, 1968.

SN 321,747. Assumption Mutual Life Insurance Company, Moncton, New Brunswick, Canada. Filed Mar. 14, 1969.



Priority claimed under Sec. 44(d) on Canadian application, filed Nov. 26, 1968; Reg. No. 186,425, dated Nov. 21, 1969.
For Underwriting Life, Accident, and Health Insurance (Int. Cl. 36).

Class 103—Construction and Repair

SN 318,204. Custom Flo, Inc., Chicago, Ill. Filed Feb. 4, 1969.

CUSTOM FLO

For Custom Fabricating, Installing, Removing and Cleaning Services for Roof Drain Systems, Gutters, and Downspouts (Int. Cl. 37).
First use Jan. 8, 1969.

SN 342,985. Lien Chemical Company, Franklin Park, Ill. Filed Nov. 7, 1969.



The drawing is lined for the colors red and blue. Owner of Reg. Nos. 585,575, 615,446, and others.
For Building Cleaning Service, Restroom Cleaning, Sanitizing and Air Freshening Service, and Pest Control Service (Int. Cl. 37).
First use Apr. 11, 1968.

Class 105—Transportation and Storage

SN 312,004. American Sightseeing Association, Inc., New York, N.Y. Filed Nov. 13, 1968.

AMERICAN SIGHTSEEING

Owner of Reg. No. 670,406.
For Sightseeing Services Rendered by Bus, Automobile, Boat, and Other Means of Transportation (Int. Cl. 39).
First use on or about Feb. 18, 1947.

SN 316,095. Global Van Lines, Inc., Anaheim, Calif. Filed Jan. 8, 1969.



Owner of Reg. Nos. 661,709 and 668,889.
For Packing, Storing, and Transporting Goods for Others (Int. Cl. 39).
First use on or about May 26, 1968.

SN 327,709. Young World Corporation, Washington, D.C. Filed May 19, 1969.



For Travel Agency Services (Int. Cl. 39).
First use Feb. 7, 1969.

Class 106—Material Treatment

SN 317,705. Avco Corporation, Westboro, Mass. Filed Jan. 28, 1969.

CoPaC

For Applying Ceramic Coatings to the Goods of Others by Thermal Spraying (Int. Cl. 40).
First use on or about Jan. 19, 1968.

Class 107—Education and Entertainment

SN 315,503. Florence Schale Reading Systems, Ltd., Chicago, Ill. Filed Jan. 2, 1969.

2-R OR-ALERT

For Education and Teaching Services, Particularly for Speed Reading (Int. Cl. 41).
First use Nov. 15, 1968.

SN 335,200. The Christian Science Board of Directors of the Mother Church, The First Church of Christ, Scientist, in Boston, Massachusetts, Boston, Mass. Filed Aug. 13, 1969.

CHRISTIAN SCIENCE

For Library Services—Namely, Providing and Maintaining Reading Rooms Where Religious and Related Writings, Publications and Recordings Are Available (Int. Cl. 41).
First use 1892.

SN 335,924. George E. Mattson Enterprises, Inc., Boston, Mass. Filed Aug. 22, 1969.



For Operation of Physical Fitness Training and Exercise Studios (Int. Cl. 41).
First use 1958.

SN 341,894. Dallas Cowboys Football Club, Inc., Dallas, Tex. Filed Oct. 28, 1969.

COWBOYS

Owner of Reg. No. 841,044.
For Entertainment Services—Namely, Football Exhibitions Rendered Live in Stadium and Through the Media of Radio and Television Broadcasts (Int. Cl. 41).
First use Apr. 1, 1960.

SN 345,137. Cognitive Systems Incorporated, Beverly Hills, Calif. Filed Dec. 3, 1969.

mentorex

For Providing a Testing System Involving the Preparation and Distribution of Optional Questions for Testing Students in Various Courses and Scoring and Analyzing the Test Results (Int. Cl. 41).
First use Sept. 20, 1969.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 325,154. American Travelers Motor Club, Inc., Salt Lake City, Utah. Filed Apr. 22, 1969.



The drawing is lined for the colors red and blue. Without waiving any common law rights to the combination of words comprising the mark, applicant disclaims any right to the words "Motor Club" except as part of the mark as shown.
For Indicating Membership in Applicant.
First use on or about Mar. 5, 1968.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials Class 6—Chemicals and Chemical Compositions

- 891,850. Tanco. Tantalum Mining Corporation of Canada Limited. SN 291,649. Pub. 12-24-68. Filed 2-21-68.
- 891,851. KENDALL. The Kendall Company. MULTIPLE CLASS (Classes 1, 2, 5, 16, 18, 22, 23, 29, 31, 39, 42, 44, and 52). SN 298,011. Pub. 3-17-70. Filed 5-13-68.
- 891,852. FALCON. Pfister & Vogel Tanning Company, Inc. SN 326,121. Pub. 3-17-70. Filed 5-1-69.
- 891,853. CELEX. Uniroyal, Inc. SN 326,266. Pub. 3-17-70. Filed 5-2-69.
- 891,854. ZEFRA II. Dow Badische Company. SN 336,515. Pub. 3-17-70. Filed 8-28-69.
- 891,855. BONSAL AND TRIANGLE DESIGN. The W. R. Bonsal Company. SN 338,079. Pub. 3-17-70. Filed 9-17-69.
- 891,856. WYNENE. Standard Oil Company. SN 340,893. Pub. 3-17-70. Filed 10-16-69.
- 891,868. CHIPTOX. Rhodia Inc. SN 310,358. Pub. 3-17-70. Filed 10-23-68.
- 891,869. XKE. Sun Chemical Corporation. SN 312,348. Pub. 3-17-70. Filed 11-15-68.
- 891,870. SUPER CEROXYLON. Markem Corporation. SN 313,318. Pub. 3-17-70. Filed 11-29-68.
- 891,871. LESTOIL'S MAGIC WHITENER. Noxell Corporation, assignee, by means assignment, of Standard International Corporation. SN 313,613. Pub. 2-3-70. Filed 12-4-68.
- 891,872. W INDIAN WITH BOW (DESIGN). Wyandotte Chemicals Corporation. SN 318,264. Pub. 3-17-70. Filed 2-3-69.
- 891,873. KELLY-SPRINGFIELD AND KS DESIGN. The Kelly-Springfield Tire Company. MULTIPLE CLASS (Classes 6, 21, and 35). SN 318,554. Pub. 3-17-70. Filed 2-6-69.

Class 2—Receptacles

- 891,851. (See Class 1 for this trademark.)
- 891,857. WABCO AND W-TRIANGLE DESIGN. Westinghouse Air Brake Company. MULTIPLE CLASS (Classes 2, 13, 23, 26, 31, and 35). SN 301,580. Pub. 3-17-70. Filed 6-28-68.
- 891,858. GROEN AND DESIGN. Dover Corporation. MULTIPLE CLASS (Classes 2, 13, 23, 31, and 34). SN 307,437. Pub. 3-17-70. Filed 9-16-68.
- 891,859. FLYER. Holman and Holman. SN 309,385. Pub. 3-17-70. Filed 10-10-68.
- 891,860. CRISMAR. John C. Swingle. SN 310,867. Pub. 3-17-70. Filed 10-23-68.
- 891,861. "BRYMAX." BryMax, Inc. SN 322,209. Pub. 3-17-70. Filed 3-19-69.
- 891,862. EASYWAY. Plasworld, Inc. SN 323,472. Pub. 3-17-70. Filed 4-2-69.
- 891,863. BORD-SEAL. Westvaco Corporation. SN 332,875. Pub. 3-17-70. Filed 7-17-69.
- 891,874. HOUSEHOLD DELIGHT. Certified Grocers of Illinois, Inc. MULTIPLE CLASS (Classes 6 and 52). SN 321,100. Pub. 3-17-70. Filed 3-10-69.
- 891,875. ATLAS. Atlas Supply Company. SN 322,140. Pub. 3-17-70. Filed 3-19-69.
- 891,876. GROOVYFRUITY. Sol Barnett, d.b.a. Barnett Lighting Company and Barnett Manufacturing Co. SN 326,743. Pub. 3-17-70. Filed 5-8-69.
- 891,877. SELECRON. Ciba Limited. SN 327,741. Pub. 3-17-70. Filed 5-20-69.
- 891,878. BONSAL AND TRIANGLE DESIGN. The W. R. Bonsal Company. SN 338,081. Pub. 3-17-70. Filed 9-17-69.

Class 7—Cordage

- 891,879. ELEPHANT ETC. AND DESIGN. John Shaw Limited. SN 319,360. Pub. 3-17-70. Filed 2-17-69.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 891,864. THE EXECUTIVE VIEWPOINT IN LUGGAGE. Roebbing Luggage Corporation. SN 315,336. Pub. 3-17-70. Filed 12-27-68.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 891,880. LAREDO. Brown & Williamson Tobacco Corporation. SN 340,311. Pub. 3-17-70. Filed 10-10-69.

Class 5—Adhesives

- 891,851. (See Class 1 for this trademark.)
- 891,865. FINILEC. Aerochem N.V. SN 316,118. Pub. 3-17-70. Filed 1-8-69.
- 891,866. SEALOX. National Beryllia Corp. SN 328,189. Pub. 3-17-70. Filed 5-23-69.
- 891,867. BONSAL AND TRIANGLE DESIGN. The W. R. Bonsal Company. SN 338,080. Pub. 3-17-70. Filed 9-17-69.

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 891,881. SPACE GENERAL AND LETTER G. Aerojet-General Corporation. MULTIPLE CLASS (Classes 9, 19, 21, 26, and 100). SN 276,493. Pub. 3-17-70. Filed 7-21-67.
- 891,882. COMBAT. Nu-Vita Products, Inc. SN 303,062. Pub. 3-17-70. Filed 7-18-68.
- 891,883. HI-SHOK. Federal Cartridge Corporation. SN 321,207. Pub. 3-17-70. Filed 3-10-69.

Class 10—Fertilizers

891,884. NATIONAL BEAUTIFICATION. Seaboard Seed Company. SN 323,800. Pub. 3-17-70. Filed 4-3-69.

Class 11—Inks and Inking Materials

891,885. DMS. American Cyanamid Company. SN 311,348. Pub. 3-17-70. Filed 11-5-68.

Class 12—Construction Materials

891,886. LIGNIFORM. J. A. Richards Company. MULTIPLE CLASS (Classes 12 and 23). SN 305,067. Pub. 3-17-70. Filed 8-18-68.

891,887. QUICKBEAM. Bliss & Laughlin Industries, Incorporated. SN 331,148. Pub. 3-17-70. Filed 6-27-69.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

891,857. (See Class 2 for this trademark.)

891,858. (See Class 2 for this trademark.)

891,888. PADDOCK. Paddock of California, Inc. MULTIPLE CLASS (Classes 13, 23, and 103). SN 308,415. Pub. 3-17-70. Filed 9-30-68.

891,889. GC AND DESIGN. Gemini Corporation. SN 318,573. Pub. 3-17-70. Filed 12-4-68.

891,890. SPIRAX. Spirax-Sarco Limited. MULTIPLE CLASS (Classes 13, 26, and 31). SN 318,106. Pub. 3-17-70. Filed 1-31-69.

891,891. LUSTREGARD. Price-Pfister Brass Mfg. Co. SN 328,336. Pub. 3-17-70. Filed 5-26-69.

891,892. E-Z PRES. Fairway Plastics, Inc. SN 332,003. Pub. 3-17-70. Filed 7-8-69.

Class 14—Metals and Metal Castings and Forgings

891,893. TI-LOY. Chemalloy Company, Inc. SN 283,983. Pub. 11-12-68. Filed 11-2-67.

891,894. MERCATAL. Societe Generale du Magnesium. SN 295,379. Pub. 3-17-70. Filed 4-10-68.

891,895. DS. Sherritt Gordon Mines Limited. SN 305,162. Pub. 3-17-70. Filed 8-14-68.

891,896. SOLAR TINT AND DESIGN. Charles H. Malone & Co. Inc. SN 310,903. Pub. 3-17-70. Filed 10-30-68.

891,897. KUT-A-KEY. DeVan-Johnson Co., d.b.a. Kut-A-Key Division. SN 326,521. Pub. 3-17-70. Filed 5-6-69.

891,898. MOTOR. E. L. Post & Co., Inc. SN 326,425. Pub. 3-17-70. Filed 5-5-69.

891,899. CUSTOM 455. Carpenter Technology Corporation. SN 326,498. Pub. 3-17-70. Filed 5-6-69.

Class 15—Oils and Greases

891,900. MAI-KAI. Mai-Kai, Inc. MULTIPLE CLASS (Classes 15 and 34). SN 321,396. Pub. 3-17-70. Filed 3-11-69.

Class 16—Protective and Decorative Coatings

891,851. (See Class 1 for this trademark.)

891,901. SUPER PRO. E. C. Rieck Paint Co., Inc. SN 305,370. Pub. 8-5-69. Filed 8-19-68.

891,902. MAGIC-FOIL. Hoboken Paints, Inc. SN 308,582. Pub. 3-17-70. Filed 10-3-68.

891,903. MAGIC LUX. Hoboken Paints, Inc. SN 308,583. Pub. 3-17-70. Filed 10-3-68.

891,904. SNOWLUX. Hoboken Paints, Inc. SN 308,586. Pub. 3-17-70. Filed 10-3-68.

891,905. TINT-N-TONE. Hoboken Paints, Inc. SN 308,587. Pub. 3-17-70. Filed 10-3-68.

891,906. TOTE-KOTE. SCM Corporation. SN 312,229. Pub. 3-17-70. Filed 11-14-68.

891,907. SS-99. Product Research & Development Corp. SN 320,740. Pub. 11-18-69. Filed 3-4-69.

891,908. BONSAL AND TRIANGLE DESIGN. The W. R. Bonsal Company. SN 338,082. Pub. 3-17-70. Filed 9-17-69.

Class 18—Medicines and Pharmaceutical Preparations

891,851. (See Class 1 for this trademark.)

891,909. PRO-SHO. Rico Sales Corporation. SN 311,519. Pub. 3-17-70. Filed 11-6-68.

891,910. PRO-START. Rico Sales Corporation. SN 311,520. Pub. 3-17-70. Filed 11-6-68.

891,911. PRO-VIDE. Rico Sales Corporation. SN 311,521. Pub. 3-17-70. Filed 11-6-68.

891,912. AMINODUR. Cooper Laboratories, Inc. SN 312,659. Pub. 3-17-70. Filed 11-20-68.

891,913. ZOOVITE. Garden Laboratories Incorporated. SN 328,975. Pub. 3-17-70. Filed 6-3-69.

891,914. FLOXAPEN. Beecham Inc. SN 335,736. Pub. 3-17-70. Filed 3-20-69.

Class 19—Vehicles

891,881. (See Class 9 for this trademark.)

891,915. ASA AND DESIGN. Atomic Space Age Transfer, Inc. SN 304,296. Pub. 3-17-70. Filed 8-5-68.

891,916. S-S-S. Ernest Aasen, d.b.a. S-S-S Co. SN 304,746. Pub. 3-17-70. Filed 8-9-68.

891,917. TERRA-CAT. Rankin Manufacturing, Inc. SN 322,189. Pub. 3-17-70. Filed 3-19-69.

891,918. PUSHNEE. Borg-Warner Corporation. SN 326,340. Pub. 3-17-70. Filed 5-5-69.

891,919. STREET SCAMP. Fox Corporation, assignee, by mesne assignment, of Fox Corporation. SN 327,253. Pub. 3-17-70. Filed 5-14-69.

891,920. TRAIL TRAMP. Fox Corporation, assignee, by mesne assignments, of Fox Corporation. SN 327,254. Pub. 3-17-70. Filed 5-14-69.

891,921. SNO COUPE. Innovar, Inc. SN 327,726. Pub. 3-17-70. Filed 5-20-69.

891,922. 14 AND DESIGN. Coast Catamaran Corporation. SN 329,061. Pub. 3-17-70. Filed 6-4-69.

891,923. BRIDGESTONE 100 G/P. Bridgestone Tire Company Limited. SN 329,794. Pub. 3-17-70. Filed 6-12-69.

891,924. BRIDGESTONE 100 TMX. Bridgestone Tire Company Limited. SN 329,796. Pub. 3-17-70. Filed 6-12-69.

Class 20—Linoleum and Oiled Cloth

891,925. SURE-STIK. GAF Corporation. SN 335,406. Pub. 3-17-70. Filed 8-15-69.

Class 21—Electrical Apparatus, Machines, and Supplies

891,873. (See Class 6 for this trademark.)

891,881. (See Class 9 for this trademark.)

891,926. TRUE TEMP. C. Wayne True, d.b.a. True Service & Supply. SN 240,126. Pub. 10-24-67. Filed 3-3-66.

891,927. WELTRON. Womack Electronics, Inc. SN 249,874. Pub. 4-30-68. Filed 6-30-66.

891,928. SKIL CRAFT AND DESIGN. Skil-Craft Playthings Co., assignee of Skil Craft Playthings, Inc. MULTIPLE CLASS (Classes 21 and 26). SN 281,398. Pub. 7-1-69. Filed 9-28-67.

891,929. WELLS FARGO AND DESIGN. Baker Industries, Inc. CONSOLIDATED CERTIFICATE. SN 285,716. Pub. 2-24-70, filed 11-22-67, Cl. 21; SN 284,148. Pub. 9-16-69, filed 11-6-67, Cls. 100 and 103.

891,930. ALMELEC. Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Societe Anonyme. SN 284,782. Pub. 3-17-70. Filed 11-14-67.

891,931. AGATROL. W. B. Snook Mfg. Co., Inc. SN 287,837. Pub. 3-25-69. Filed 12-29-67.

891,932. WEST-BOND. Charles Fredrick Miller, d.b.a. C. F. Miller & Associates. SN 290,633. Pub. 3-17-70. Filed 2-8-68.

891,933. ORBLITE. The Pyle-National Company. SN 293,399. Pub. 3-27-68. Filed 3-15-68.

891,934. SAFEGUARD AND DESIGN. Safeguard Manufacturing Corp. SN 296,720. Pub. 3-17-70. Filed 4-26-68.

891,935. EI. Electromagnetic Industries, Inc. SN 298,817. Pub. 3-17-70. Filed 5-22-68.

891,936. SONIC. Southern Stores, Inc. SN 300,314. Pub. 9-10-68. Filed 6-12-68.

891,937. SUPER SONIC. Southern Stores, Inc. SN 300,315. Pub. 9-10-68. Filed 6-12-68.

891,938. ULTRA SONIC. Southern Stores, Inc. SN 300,316. Pub. 9-10-68. Filed 6-12-68.

891,939. CONELCO. North American Philips Corporation, by change of name from Consolidated Electronics Industries Corp. SN 303,774. Pub. 3-17-70. Filed 7-29-68.

891,940. CORTEM. Consolidated Spring Corp. SN 308,276. Pub. 3-17-70. Filed 9-26-68.

891,941. TREASURE PROBE. Bertwin Inc. SN 308,864. Pub. 3-17-70. Filed 10-4-68.

891,942. NOBEX AND DESIGN. Lloyd A. Griffith, d.b.a. Griffith Plastic Products Company. SN 311,144. Pub. 3-17-70. Filed 11-1-68.

891,943. TUNISTOR. The Marconi Company Limited. SN 313,178. 3-17-70. Filed 11-27-68.

891,944. MRX. Memorex Corporation. MULTIPLE CLASS (Classes 21 and 26). SN 314,748. Pub. 3-17-70. Filed 12-18-68.

891,945. MEMO-Q AND DESIGN. Century Strand, Inc., assignee of Century Lighting, Inc. SN 314,872. Pub. 3-17-70. Filed 12-19-68.

891,946. PHILIPS. N.V. Philips' Gloeilampenfabrieken. SN 315,253. Pub. 3-17-70. Filed 12-26-68.

891,947. FLAR. Natvar Corporation. SN 315,464. Pub. 5-6-69. Filed 12-31-68.

891,948. DAYTROL. The Hobart Manufacturing Company. SN 319,602. Pub. 3-17-70. Filed 2-19-69.

891,949. LASER SENTRY. Laser Systems Corporation. SN 319,919. Pub. 3-17-70. Filed 2-24-69.

891,950. VERTIGON. Flight Products, Inc. SN 320,054. Pub. 3-17-70. Filed 3-25-69.

891,951. CARTRIFILE. Tri-Data. SN 320,876. Pub. 3-17-70. Filed 3-5-69.

891,952. TD AND DESIGN. Tri-Data. SN 320,878. Pub. 3-17-70. Filed 3-5-69.

891,953. PRO-TEC-TEL. Acoustics Development Corporation. SN 324,872. Pub. 3-17-70. Filed 4-18-69.

891,954. MISCELLANEOUS DESIGN. Rulo Industries, Inc. MULTIPLE CLASS (Classes 21 and 23). SN 326,486. Pub. 3-17-70. Filed 5-6-69.

891,955. REVERE 1801 AND DESIGN. Revere Copper and Brass Incorporated. SN 329,762. Pub. 3-17-70. Filed 6-11-69.

891,956. OSTER. John Oster Manufacturing Co. SN 333,340. Pub. 3-17-70. Filed 7-10-69.

891,957. LAMIGARD. Superior Continental Corporation. SN 334,250. Pub. 3-17-70. Filed 8-1-69.

891,958. DECORDER. T.A.D. Avant, Inc. SN 340,337. Pub. 3-17-70. Filed 10-10-69.

Class 22—Games, Toys, and Sporting Goods

891,851. (See Class 1 for this trademark.)

891,959. TEXAS SPECIAL. Hazel Marie Flake. SN 294,831. Pub. 3-17-70. Filed 4-3-68.

891,960. DURETHANE. The Chicago Roller Skate Company. SN 301,708. Pub. 3-17-70. Filed 7-1-68.

891,961. PETAL PEOPLE. Unacda Doll Co., Inc. SN 302,650. Pub. 3-17-70. Filed 7-12-68.

891,962. PRESIDENTIAL HALL OF FAME. The Franklin Mint, Inc. SN 303,154. Pub. 3-17-70. Filed 7-19-68.

891,963. ORBATRON. Diversified Products Corporation. SN 310,218. Pub. 3-17-70. Filed 10-23-68.

891,964. BUSYBABY. Topper Corporation, by change of name from De Luxe Topper Corporation. SN 314,779. Pub. 3-17-70. Filed 12-18-68.

891,965. CHROMINOES. Products of the Behavioral Sciences, Inc. SN 325,073. Pub. 3-17-70. Filed 4-21-69.

891,966. MPC AND DESIGN. Model Products Corporation. SN 330,103. Pub. 3-17-70. Filed 9-29-68.

891,967. PUDGY-FUDGY. Mattel, Inc. SN 339,396. Pub. 3-17-70. Filed 10-1-69.

891,968. HAPPY GO-ROUND. Mattel, Inc. SN 339,397. Pub. 3-17-70. Filed 10-1-69.

891,969. FOOT-MOBILE. Mattel, Inc. SN 339,398. Pub. 3-17-70. Filed 10-1-69.

891,970. THE SPOILERS. Mattel, Inc. SN 339,399. Pub. 3-17-70. Filed 10-1-69.

891,971. GALLIVANTER. Mattel, Inc. SN 339,509. Pub. 3-17-70. Filed 10-2-69.

891,972. GOOEY CHOOEY. Mattel, Inc. SN 340,318. Pub. 3-17-70. Filed 10-10-69.

891,973. WET NOODLES. Mattel, Inc. SN 340,324. Pub. 3-17-70. Filed 10-10-69.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

891,851. (See Class 1 for this trademark.)

891,857. (See Class 2 for this trademark.)

891,858. (See Class 2 for this trademark.)

891,886. (See Class 12 for this trademark.)

891,888. (See Class 13 for this trademark.)

891,954. (See Class 21 for this trademark.)

891,974. CARTRAC AND DESIGN. Borgs Fabriks Aktiebolag. SN 272,467. Pub. 4-22-69. Filed 5-26-67.

891,975. WAYNE. Dresser Industries, Inc., by merger from Huntington Wayne Corporation. MULTIPLE CLASS (Classes 23 and 26). SN 282,747. Pub. 3-17-70. Filed 10-31-67.

891,976. AMUT. Amut S.p.A. SN 296,497. Pub. 3-17-70. Filed 4-25-68.

891,977. KOCO. Kousel Industrial Co., Ltd. SN 298,130. Pub. 3-17-70. Filed 5-14-68.

891,978. MORRISON TRAILBLAZER. Morrison and Morrison. SN 301,636. Pub. 3-17-70. Filed 6-28-68.

891,979. GK. FMC Corporation. SN 302,884. Pub. 3-17-70. Filed 7-17-68.

- 891,980. COPILBO. Welty-Way Products Incorporated. SN 303,722. Pub. 3-17-70. Filed 7-26-68.
- 891,981. HYDROFORMER. J. M. Voith Gesellschaft mit beschränkter Haftung. SN 303,944. Pub. 4-15-69. Filed 7-30-68.
- 891,982. MAGI CARPET ALADDIN. Keltec, Inc. SN 307,791. Pub. 3-17-70. Filed 8-21-68.
- 891,983. UTILI-PAK. K-M Products, Inc. SN 317,061. Pub. 3-17-70. Filed 1-21-69.
- 891,984. TOLERATOR. Farrington Business Machines Corporation. SN 317,940. Pub. 3-17-70. Filed 1-30-69.
- 891,985. TRIM. The W. E. Bassett Company. MULTIPLE CLASS (Classes 23 and 44). SN 319,569. Pub. 3-17-70. Filed 2-19-69.
- 891,986. T-TOKER. Lowell Corporation. SN 319,715. Pub. 3-17-70. Filed 2-20-69.
- 891,987. MONOCON. Republic Corporation. SN 321,852. Pub. 3-17-70. Filed 3-14-69.
- 891,988. SELECTRO-MATIC. Star-New Era, Inc., by change of name from Powers & Eaton Industries, Inc. SN 322,740. Pub. 3-17-70. Filed 3-25-69.
- 891,989. POWER-VAC. Lear Siegler, Inc. SN 322,879. Pub. 3-17-70. Filed 3-26-69.
- 891,990. FRESH-FLO AND DESIGN. Fresh-Flo Corporation. SN 325,027. Pub. 3-17-70. Filed 4-21-69.
- 891,991. FEMCO AND DESIGN. The Falls Engineering & Machine Co. SN 325,858. Pub. 3-17-70. Filed 4-29-69.
- 891,992. NEW IDEAL. The New Home Sewing Machine Company, Inc. SN 327,161. Pub. 3-17-70. Filed 5-13-69.
- 891,993. PAN AMERICAN. The New Home Sewing Machine Company, Inc. SN 327,162. Pub. 3-17-70. Filed 5-13-69.
- 891,994. "K-MATIC." Kaspar Wire Works, Incorporated. SN 327,909. Pub. 3-17-70. Filed 5-21-69.
- 891,995. SEXAUER PRODUCTS AND DESIGN. J. A. Sexauer Mfg. Co., Inc. SN 328,597. Pub. 3-17-70. Filed 5-28-69.
- 891,996. HYDRASONIC. Hudson Industries, Inc. SN 329,357. Pub. 3-17-70. Filed 6-6-69.
- 891,997. FIBREKING. Wm. W. Meyer & Sons, Inc. SN 329,373. Pub. 3-17-70. Filed 6-6-69.
- 891,998. NUGGETIZER. Williams Patent Crusher and Pulverizer Co., Inc. SN 331,461. Pub. 3-17-70. Filed 6-30-69.

Class 24 — Laundry Appliances and Machines

- 891,999. KORREKT KOLLAR. John G. Weingarten. SN 320,409. Pub. 3-17-70. Filed 3-3-69.

Class 26 — Measuring and Scientific Appliances

- 891,857. (See Class 2 for this trademark.)
- 891,861. (See Class 9 for this trademark.)
- 891,890. (See Class 13 for this trademark.)
- 891,928. (See Class 21 for this trademark.)
- 891,944. (See Class 21 for this trademark.)
- 891,975. (See Class 23 for this trademark.)
- 892,000. CRS. Infotronics Corporation. SN 245,197. Pub. 7-2-68. Filed 5-9-66.
- 892,001. THREE-BAR DESIGN. The National Cash Register Company. SN 299,370. Pub. 3-17-70. Filed 5-29-68.
- 892,002. GOLAY ETC. AND DESIGN. Bernard Golay S.A. MULTIPLE CLASS (Classes 26 and 27). SN 302,826. Pub. 3-17-70. Filed 7-16-68.
- 892,003. EXAMAT. Exaphot Optik GmbH. SN 310,873. Pub. 3-17-70. Filed 10-30-68.
- 892,004. DYNATECH. Dynatech Corporation. SN 320,460. Pub. 3-17-70. Filed 3-8-69.

- 892,005. HALLTIPLIER. Esterline Corporation, assignee of Scientific Columbus, Inc. SN 323,372. Pub. 3-17-70. Filed 4-1-69.
- 892,006. STROBE MASTER. Spiratone, Inc. SN 324,689. Pub. 3-17-70. Filed 4-28-69.
- 892,007. INSTAMATIC. Fedtro, Inc. SN 328,169. Pub. 3-17-70. Filed 5-23-69.

Class 27 — Horological Instruments

- 892,002. (See Class 26 for this trademark.)

Class 29 — Brooms, Brushes, and Dusters

- 891,851. (See Class 1 for this trademark.)
- 892,008. AUTO-WHIS-KIT. New Broom, Inc. SN 313,190. Pub. 3-17-70. Filed 11-27-68.
- 892,009. CLOSE-UP. Lever Brothers Company. SN 340,093. Pub. 3-17-70. Filed 10-8-69.
- 892,010. TWICE AS NICE. Lever Brothers Company. SN 340,095. Pub. 3-17-70. Filed 10-8-69.

Class 31 — Filters and Refrigerators

- 891,851. (See Class 1 for this trademark.)
- 891,857. (See Class 2 for this trademark.)
- 891,858. (See Class 2 for this trademark.)
- 891,890. (See Class 13 for this trademark.)
- 892,011. CHEMICATOR. Universal Oil Products Company. SN 262,081-A. Pub. 5-14-68. Filed 1-9-67.
- 892,012. BARSCO BARBECK REFRIGERATION SUPPLY CO. AND DESIGN. Barbeck Refrigeration Supply Company of Dallas, Inc. SN 276,803. Pub. 7-29-69. Filed 7-26-67.
- 892,013. VIRTU-CIRCLE. Robert Conrad, d.b.a. Skim-Lite Mfg. SN 322,559. Pub. 3-17-70. Filed 3-24-69.

Class 32 — Furniture and Upholstery

- 892,014. HALE. Hale Company, Inc. SN 154,026. Pub. 11-12-63. Filed 9-27-62.
- 892,015. NEK-KER. Florence Smith, assignee of Elizabeth Stowall and Florence Smith (joint venture), d.b.a. Nek-Ker Pillows. SN 314,859. Pub. 8-19-69. Filed 12-19-68.
- 892,016. XTRU. Flex-O-Lators, Inc. SN 323,849. Pub. 3-17-70. Filed 4-7-69.
- 892,017. CAPITOL FURNITURE AND DESIGN. G. W. Onthank Company. SN 329,883. Pub. 3-17-70. Filed 6-12-69.
- 892,018. EZE-ARM. Hamilton Cosco, Inc. SN 332,103. Pub. 3-17-70. Filed 7-9-69.
- 892,019. BH AND DESIGN. Independent Stave Company, Inc., d.b.a. Benjamin Harrison Furniture. SN 332,105. Pub. 3-17-70. Filed 7-9-69.
- 892,020. PILOREST. Schnadig Corporation. SN 332,147. Pub. 3-17-70. Filed 7-9-69.
- 892,021. HEAVENLY REST. Howard Damron, d.b.a. Sleepaire Mattress Co. SN 332,460. Pub. 3-17-70. Filed 7-14-69.
- 892,022. THE MANOR. Howard Damron, d.b.a. Sleepaire Mattress Co. SN 332,461. Pub. 3-17-70. Filed 7-14-69.
- 892,023. TOWN-HOUSE. The Englander Company, Inc. SN 332,611. Pub. 3-17-70. Filed 7-15-69.
- 892,024. INST-A-MATIC. Harris-Hub Company, Inc. SN 332,823. Pub. 3-17-70. Filed 7-17-69.
- 892,025. FEATHER-GLIDE. The Berkline Corporation. SN 333,086. Pub. 3-17-70. Filed 7-22-69.

- 892,026. LO-CUBE-PAC. The Berkline Corporation. SN 333,087. Pub. 3-17-70. Filed 7-22-69.
- 892,027. ILLUMINO. Illumino Devices, Inc. SN 335,867. Pub. 3-17-70. Filed 8-21-69.
- 892,028. LITE SHIELD ROYALE. National Coronet, Inc., d.b.a. Illinois Shade Division of National Coronet, Inc. SN 337,677. Pub. 3-17-70. Filed 9-11-69.

Class 33 — Glassware

- 892,029. FLORAL DESIGN. Corning Glass Works. SN 181,964. Pub. 3-15-66. Filed 11-27-63.
- 892,030. FLORAL DESIGN. Corning Glass Works. SN 181,965. Pub. 3-8-66. Filed 11-27-63.
- 892,031. PERMANNEAL. Glass Containers Corporation. SN 315,753. Pub. 3-17-70. Filed 1-3-69.
- 892,032. VERTIGLAS. PPG Industries, Inc. SN 341,114. Pub. 3-17-70. Filed 10-20-69.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 891,858. (See Class 2 for this trademark.)
- 891,900. (See Class 15 for this trademark.)
- 892,033. MT MT MT. Mobil Temp, Inc. SN 291,171. Pub. 3-17-70. Filed 2-15-68.
- 892,034. PERMAGLAZED. Plastics, Inc. SN 297,212. Pub. 3-17-70. Filed 5-2-68.
- 892,035. ECONO-DRI. E. P. Adams Company, Inc. SN 299,923. Pub. 3-17-70. Filed 6-7-68.
- 892,036. AIRESEARCH. The Garrett Corporation. SN 313,926. Pub. 3-17-70. Filed 12-9-68.
- 892,037. COMPOWER AND DESIGN. Combustion and Power Equipment Ltd. SN 315,734. Pub. 3-17-70. Filed 1-3-69.
- 892,038. STEAM-FLO. Sioux Steam Cleaner Corporation. SN 318,719. Pub. 3-17-70. Filed 2-10-69.
- 892,039. REDYHOT. Sheller-Globe Corporation. SN 323,374. Pub. 3-17-70. Filed 4-1-69.
- 892,040. KWILTHERM. Oakland Metal Fabricators, Inc. SN 327,163. Pub. 3-17-70. Filed 5-13-69.
- 892,041. ZINAL. Matthlessen & Hegeler Zinc Company. SN 332,765. Pub. 3-17-70. Filed 7-16-69.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 891,857. (See Class 2 for this trademark.)
- 891,873. (See Class 6 for this trademark.)
- 892,042. PERFORMER. American Biltrite Rubber Co., Inc. SN 316,064. Pub. 3-17-70. Filed 1-8-69.
- 892,043. LE HAVRE. Concorde Rubber Company, Inc. SN 318,757. Pub. 3-17-70. Filed 2-10-69.
- 892,044. RAY BELT. The Hercules Tire & Rubber Company. SN 328,052. Pub. 3-17-70. Filed 5-22-69.
- 892,045. MICHELIN. Michelin Tire Corporation. SN 329,256. Pub. 3-17-70. Filed 6-5-69.
- 892,046. UNION 76 AND DESIGN. Union Oil Company of California. SN 331,455. Pub. 3-17-70. Filed 6-30-69.

Class 36 — Musical Instruments and Supplies

- 892,047. MEDITAPE. Sieber & McIntyre, Inc. MULTIPLE CLASS (Classes 36 and 38). SN 246,517. Pub. 3-17-70. Filed 5-25-66.

- 892,048. THE JOYFUL SOUND. C. William Randolph. SN 288,232. Pub. 3-17-70. Filed 1-5-68.

- 892,049. FRAMUS. Frankische Musikinstrumentenherzeugung Fred Wilfer, KG. SN 317,548. Pub. 3-17-70. Filed 1-27-69.

- 892,050. MARBLE ARCH AND DESIGN. Pye Records Limited. SN 320,970. Pub. 3-17-70. Filed 3-6-69.

- 892,051. HINGER. Fred D. Hinger. SN 321,935. Pub. 3-17-70. Filed 3-17-69.

- 892,052. TOUCH-TONE. Fred D. Hinger. SN 321,936. Pub. 3-17-70. Filed 3-17-69.

- 892,053. A AND DESIGN. Audiomasters Corporation. SN 327,346. Pub. 3-17-70. Filed 5-15-69.

Class 37 — Paper and Stationery

- 892,054. OBLIQUE. Societe d'Exploitation de la S.A. Henri Malsert. SN 322,626. Pub. 3-17-70. Filed 3-24-69.
- 892,055. FLEXFORM. Standard Packaging Corporation. SN 337,143. Pub. 3-17-70. Filed 9-5-69.
- 892,056. NEYPACO AND DESIGN. Neypaco Paper Corporation. SN 337,756. Pub. 3-17-70. Filed 9-12-69.

Class 38 — Prints and Publications

- 892,047. (See Class 36 for this trademark.)
- 892,057. TENNIS U.S.A. United States Lawn Tennis Association. SN 279,879. Pub. 3-17-70. Filed 9-7-67.
- 892,058. WRITER'S DIGEST. F & W Publishing Corporation. SN 297,052. Pub. 3-17-70. Filed 5-1-68.
- 892,059. TEXABIND. E.B.S., Inc. SN 298,928. Pub. 3-17-70. Filed 5-23-68.
- 892,060. HANG-UPS. Norcross, Inc. SN 298,952. Pub. 3-17-70. Filed 5-23-68.
- 892,061. VISA. Shield International Corporation. SN 301,971. Pub. 3-17-70. Filed 7-3-68.
- 892,062. KEY-LAB. Schoolhouse Industries, Inc. SN 306,077. Pub. 3-17-70. Filed 8-27-68.
- 892,063. THE BACCHUS JOURNAL. John Danenbower and Ethel Mitchell Danenbower (partnership). SN 307,315. Pub. 3-17-70. Filed 9-13-68.
- 892,064. STUDIO ONE. Renselaar Corporation. SN 309,900. Pub. 12-9-69. Filed 10-17-68.
- 892,065. DYNACHART. Charles Bouman, d.b.a. Applications Programming Co. SN 315,533. Pub. 3-17-70. Filed 1-2-69.
- 892,066. THE CULTURAL LIBRARY. Parents' Magazine Enterprises, Inc. SN 321,399. Pub. 3-17-70. Filed 3-11-69.
- 892,067. SACO-LOWELL REPLACEMENT PARTS NEWS. Maremont Corporation, d.b.a. Saco-Lowell and Saco-Lowell Maremont. SN 325,982. Pub. 3-17-70. Filed 4-30-69.
- 892,068. WIGGLE CARD. Dexter Press, Inc. SN 327,008. Pub. 3-17-70. Filed 5-12-69.
- 892,069. INNOVATION. Technology Communication, Inc. SN 327,970. Pub. 3-17-70. Filed 5-21-69.
- 892,070. COOKING CAN BE FUN. Independent Grocers' Alliance Distributing Co. SN 330,387. Pub. 3-17-70. Filed 6-18-69.
- 892,071. CC (DESIGN). Cord Communications Corporation. SN 332,410. Pub. 3-17-70. Filed 7-14-69.
- 892,072. YOU. The Thomas More Association. SN 340,576. Pub. 3-17-70. Filed 10-13-69.
- 892,073. AMERICAN AGENT & BROKER. Commerce Publishing Company. SN 340,654. Pub. 3-17-70. Filed 10-14-69.
- 892,074. NEW WINE. Holy Spirit Teaching Mission, Inc. SN 340,790. Pub. 3-17-70. Filed 10-15-69.

Class 39—Clothing

- 891,851. (See Class 1 for this trademark.)
- 892,075. IVY CLASSICS. Standard Garments, Inc. SN 255,027. Pub. 3-17-70. Filed 9-25-68.
- 892,076. CROWNS. Rickie Tickle, Inc., assignee of Donald R. Kracke, d.b.a. Rickie Tickle Sticks. SN 304,000. Pub. 3-17-70. Filed 7-31-68.
- 892,077. RANDY. Randolph Manufacturing Co., Inc. (Delaware corporation), assignee of Randolph Manufacturing Co., Inc. (Massachusetts corporation). SN 304,122. Pub. 3-17-70. Filed 8-1-68.
- 892,078. MR. JAX "FOR MEN YOUNG." De Wan Manufacturing Corporation. SN 314,055. Pub. 3-17-70. Filed 12-10-68.
- 892,079. KIKI. Kiki Undies Corp. SN 314,480. Pub. 3-17-70. Filed 12-17-68.
- 892,080. PUCKER-UP. Penn-Dale Knitting Mills, Inc. SN 314,813. Pub. 3-17-70. Filed 12-18-68.
- 892,081. THINGS BY BARAD. Barad Lingerie Co. SN 314,866. Pub. 3-17-70. Filed 12-19-68.
- 892,082. DESIGN OF A GIRDLE CONTAINER AND FEMALE DESIGN. International Playtex Corporation. SN 316,628. Pub. 3-17-70. Filed 12-30-68.
- 892,083. SAHARA. L. B. Evans' Son Company. SN 317,020. Pub. 3-17-70. Filed 1-21-69.
- 892,084. BRANCUSI AND DESIGN. Comain Development Corporation. SN 318,755. Pub. 3-17-70. Filed 2-10-69.
- 892,085. GAY KICKS. Caribbean Shoe Corporation. SN 320,030. Pub. 3-17-70. Filed 2-25-69.
- 892,086. DEFENDER. Defender, Inc. SN 320,448. Pub. 3-17-70. Filed 3-3-69.
- 892,087. THE NOBLEMAN SO AND DESIGN. The Suit Outlet, Inc. SN 323,333. Pub. 3-17-70. Filed 4-1-69.
- 892,088. BIG DEALS. Jofranst Corporation. SN 323,822. Pub. 3-17-70. Filed 4-7-69.
- 892,089. CESARE LARINI E FIGLIO. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 325,604. Pub. 3-17-70. Filed 4-25-69.
- 892,090. THE GROUP. The Williams Manufacturing Company. SN 326,162. Pub. 3-17-70. Filed 5-1-69.
- 892,091. YOUNG BAZAAR. Young Bazaar Corp. SN 327,186. Pub. 3-17-70. Filed 5-13-69.
- 892,092. KIRKLAND B/W ETC. AND DESIGN. Eagle Clothes, Inc. SN 327,609. Pub. 3-17-70. Filed 5-19-69.
- 892,093. JOHNSON'S REGENCY. Gunston, Inc. SN 327,892. Pub. 3-17-70. Filed 5-21-69.
- 892,094. CALIFORNIA COBBLERS ARE MORE LOVE THAN LEATHER. Cobblers, Inc. SN 328,532. Pub. 3-17-70. Filed 5-28-69.
- 892,095. PELHAM. G. C. Murphy Company. SN 331,229. Pub. 3-17-70. Filed 6-27-69.
- 892,096. P AND DESIGN. Carter & Churchill Company, Inc. SN 333,815. Pub. 3-17-70. Filed 7-29-69.
- 892,097. RINK'S. Rink's Department Stores, Inc. SN 335,262. Pub. 3-17-70. Filed 8-13-69.
- 892,098. RINK'S HI-CODE. Rink's Department Stores, Inc. SN 335,264. Pub. 3-17-70. Filed 8-18-69.
- 892,099. CASTOES AND DESIGN. Nancy T. Dubuque. SN 335,557. Pub. 3-17-70. Filed 8-18-69.
- 892,100. SPORTS GIRL WHITE STAG AND DESIGN. White Stag Manufacturing Co. SN 338,500. Pub. 3-17-70. Filed 9-22-69.
- 892,101. SURFDIGGER WHITE STAG AND DESIGN. White Stag Manufacturing Co. SN 338,507. Pub. 3-17-70. Filed 9-22-69.
- 892,102. SURF ROLLER WHITE STAG AND DESIGN. White Stag Manufacturing Co. SN 338,514. Pub. 3-17-70. Filed 9-22-69.
- 892,103. DERRINGER. Hat Corporation of America. SN 339,280. Pub. 3-17-70. Filed 9-30-69.

Class 40—Fancy Goods, Furnishings, and Notions

- 892,104. YOUR OWN THING. Trend Imports Corp. SN 330,790. Pub. 3-17-70. Filed 6-23-69.
- 892,105. ASTRALON. Fashion Tress, Inc. SN 338,718. Pub. 3-17-70. Filed 9-24-69.

Class 42—Knitted, Notted, and Textile Fabrics, and Substitutes Therefor

- 891,851. (See Class 1 for this trademark.)
- 892,106. AMERICAN INDIAN. Klopman Mills, Inc. SN 308,493. Pub. 3-17-70. Filed 9-30-68.
- 892,107. SUPERLON. Heidenberg Textile Fabrics Co., Inc. SN 316,563. Pub. 6-10-69. Filed 1-15-69.
- 892,108. DOUBLE PLAY. The Okonite Company. SN 328,012. Pub. 3-17-70. Filed 5-22-69.
- 892,109. ACTIVA. Owens-Corning Fiberglass Corporation. SN 332,737. Pub. 3-17-70. Filed 7-16-69.
- 892,110. VERATERRY. Scarves by Vera, Inc. SN 336,867. Pub. 3-17-70. Filed 9-2-69.
- 892,111. DESIGN OF LEANING LADY. Klopman Mills, Inc. SN 340,481. Pub. 3-17-70. Filed 10-13-69.

Class 43—Thread and Yarn

- 892,112. ACTIVA. Owens-Corning Fiberglass Corporation. SN 332,041. Pub. 3-17-70. Filed 7-9-69.

Class 44—Dental, Medical, and Surgical Appliances

- 891,851. (See Class 1 for this trademark.)
- 891,985. (See Class 23 for this trademark.)
- 892,113. AQUA SAUNA THERMAPEUTIC POOL BY HOLIDAY POOLS AND DESIGN. Holiday Pools, Inc. SN 292,200. Pub. 3-17-70. Filed 2-29-68.
- 892,114. STEDIBOLE. The Hygienic Dental Manufacturing Company. SN 319,311. Pub. 3-17-70. Filed 2-17-69.
- 892,115. OXY-VAC-CENTER AND DESIGN. Oxygen Equipment and Service Company, d.b.a. Oxequip. SN 331,288. Pub. 3-17-70. Filed 6-30-69.
- 892,116. READI-PADS. Parke, Davis & Company. SN 341,115. Pub. 3-17-70. Filed 10-20-69.

Class 45—Soft Drinks and Carbonated Waters

- 892,117. MR. SWISS. Mr. Swiss of America, Inc. (Delaware corporation), assignee of Mr. Swiss of America, Inc. (Oklahoma corporation). MULTIPLE CLASS (Classes 45 and 46). SN 234,323. Pub. 3-21-67. Filed 12-10-65.
- 892,118. JET. General Mills, Inc. SN 277,756. Pub. 6-18-68. Filed 8-8-67.
- 892,119. CAN-D-STICK POP AND DESIGN. Wm. Scheele & Sons Co., Inc. SN 326,323. Pub. 3-17-70. Filed 5-5-69.

Class 46—Foods and Ingredients of Foods

- 892,117. (See Class 45 for this trademark.)
- 892,120. SCHWEIGERT. Schweigert Meat Co. SN 290,894. Pub. 3-17-70. Filed 2-12-68.
- 892,121. THE NUT HUT AND DESIGN. Mollie Sumner, d.b.a. The Nut Hut. SN 292,306. Pub. 7-8-69. Filed 3-1-68.
- 892,122. SHRIMP FRYS. W. R. Grace & Co. SN 294,836. Pub. 2-4-69. Filed 4-3-68.
- 892,123. TUG BOAT. Seaway Foods, Inc. SN 296,462. Pub. 3-17-70. Filed 4-24-68.
- 892,124. CHATEAU STYLE. General Foods Corporation. SN 301,337. Pub. 1-14-69. Filed 6-25-68.
- 892,125. MISCELLANEOUS DESIGN. Thornton's Flav-O-Rich Bakery, Inc., d.b.a. Thornton's Flav-O-Rich Bakery and Thornton's Bakery. SN 302,778. Pub. 3-17-70. Filed 7-15-68.
- 892,126. C-SENOR. Golden Y Growers, Inc., assignee of Growers Citrus Products, Inc. SN 307,642. Pub. 1-13-70. Filed 9-18-68.
- 892,127. DRICOLD. Wilson & Co., Inc., assignee of Textron Inc. SN 309,192. Pub. 3-17-70. Filed 10-8-68.
- 892,128. CRABWITCH. Duffy-Mott Company, Inc. SN 311,580. Pub. 7-8-69. Filed 11-7-68.
- 892,129. SEAWITCH. Duffy-Mott Company, Inc. SN 311,581. Pub. 7-8-69. Filed 11-7-68.
- 892,130. SURFWITCH. Duffy-Mott Company, Inc. SN 311,582. Pub. 7-8-69. Filed 11-7-68.
- 892,131. CLAMWITCH. Duffy-Mott Company, Inc. SN 311,132. Pub. 7-8-69. Filed 11-7-68.
- 892,132. EZY-MIX. Superior Tea and Coffee Company. SN 311,702. Pub. 7-8-69. Filed 11-8-68.
- 892,133. TYSON'S 28 AND DESIGN. Tyson's Foods, Inc. SN 312,824. Pub. 3-17-70. Filed 11-21-68.
- 892,134. GRAMMYS. Keebler Company. SN 313,307. Pub. 6-17-69. Filed 11-29-68.
- 892,135. CONCORD. W. F. Schrafft & Sons Corporation, d.b.a. Schrafft's. SN 314,461. Pub. 3-17-70. Filed 12-13-68.
- 892,136. WONDEROASTER. Donald G. Larson, d.b.a. Hopkins Food Equipment. SN 314,719. Pub. 3-17-70. Filed 12-17-68.
- 892,137. KERN'S. Kern Foods, Inc. SN 317,575. Pub. 3-17-70. Filed 1-27-69.
- 892,138. TONIO'S AND DESIGN. Lawry's Foods, Inc. SN 318,056. Pub. 3-17-70. Filed 1-31-69.
- 892,139. COFFEE DREAM. Reddi Wip Co. of Phila., Inc., d.b.a. Glen Farms. SN 318,815. Pub. 3-17-70. Filed 2-10-69.
- 892,140. DESIGN OF A MAN. Reddi Wip Co. of Phila., Inc., d.b.a. Glen Farms. SN 318,816. Pub. 3-17-70. Filed 2-10-69.
- 892,141. GLEN FARMS. Reddi Wip Co. of Phila., Inc., d.b.a. Glen Farms. SN 318,817. Pub. 3-17-70. Filed 2-10-69.
- 892,142. FILL 'N CHILL. Duffy-Mott Company, Inc. SN 320,048. Pub. 3-17-70. Filed 2-25-69.
- 892,143. HANDY PAX. Handy Pax, Inc. SN 321,651. Pub. 3-17-70. Filed 3-13-69.
- 892,144. E. MCILHENNY. McIlhenney Company. SN 322,728. Pub. 3-17-70. Filed 3-25-69.
- 892,145. CRESSIDA. Crescent Food Co. SN 322,839. Pub. 3-17-70. Filed 3-26-69.
- 892,146. HERSHEY'S. Hershey Creamery Company. SN 322,866. Pub. 3-17-70. Filed 3-26-69.
- 892,147. DAILY PAKT AND DESIGN. Cal-Tex Citrus Juice, Inc. SN 323,249. Pub. 3-17-70. Filed 4-1-69.
- 892,148. PAGE. The Page Milk Company. SN 323,355. Pub. 3-17-70. Filed 4-1-69.
- 892,149. COLONEL POP. Duncan Enterprise. SN 325,182. Pub. 3-17-70. Filed 4-23-69.
- 892,150. COLONEL BUBBLE. Duncan Enterprise. SN 325,183. Pub. 3-17-70. Filed 4-23-69.
- 892,151. COLONEL KISSES. Duncan Enterprise. SN 325,184. Pub. 3-17-70. Filed 4-23-69.
- 892,152. COLONEL HEARTS. Duncan Enterprise. SN 325,185. Pub. 3-17-70. Filed 4-23-69.
- 892,153. COLONEL EGGS. Duncan Enterprise. SN 325,186. Pub. 3-17-70. Filed 4-23-69.
- 892,154. COLONEL BUNNY. Duncan Enterprise. SN 325,187. Pub. 3-17-70. Filed 4-23-69.
- 892,155. COLONEL CANES. Duncan Enterprise. SN 325,345. Pub. 3-17-70. Filed 4-23-69.
- 892,156. DOUBLE QUARTET. Murray-Allen Imports, Inc. SN 326,115. Pub. 3-17-70. Filed 5-1-69.
- 892,157. DANNY. Beatrice Foods Co. SN 326,987. Pub. 3-17-70. Filed 5-12-69.
- 892,158. SSK AND DESIGN. S. S. Kresge Company. SN 328,061. Pub. 3-17-70. Filed 5-22-69.
- 892,159. K MART AND DESIGN. S. S. Kresge Company. SN 328,062. Pub. 3-17-70. Filed 5-22-69.
- 892,160. PARTY RINGS. Pet Incorporated. SN 328,246. Pub. 3-17-70. Filed 5-26-69.
- 892,161. WASH-N-SHINE. Basic Foods, Inc. SN 329,432. Pub. 3-17-70. Filed 6-9-69.
- 892,162. SWEET-ZIT. Van Brode Milling Co., Inc. SN 329,642. Pub. 3-17-70. Filed 6-10-69.
- 892,163. FRUITIGNAC. Etablissements L. Breton & Fils. SN 329,935. Pub. 3-17-70. Filed 6-13-69.
- 892,164. A TOUCH OF GOLD. Steak n Shake, Inc. SN 330,016. Pub. 3-17-70. Filed 6-13-69.
- 892,165. ISOLAC. Cream Products Company, Inc. SN 331,345. Pub. 3-17-70. Filed 6-30-69.
- 892,166. CHERAW AND INDIAN MAIDEN DESIGN. McCall Farms, Inc. SN 333,231. Pub. 3-17-70. Filed 7-23-69.
- 892,167. HORSE CHARGE. Ralston Purina Company. SN 335,111. Pub. 3-17-70. Filed 8-12-69.
- 892,168. GRAPEFRUIT KING AND DESIGN. Albert Valdora, d.b.a. Valdora Produce Co. SN 336,529. Pub. 3-17-70. Filed 8-28-69.
- 892,169. MAMBO PIE. ITT Continental Baking Company. SN 336,894. Pub. 3-17-70. Filed 9-3-69.
- 892,170. PEPPER PINE AND DESIGN. Pronto Pacific, Inc. SN 339,286. Pub. 3-17-70. Filed 9-30-69.
- 892,171. LOVE BUG. Tootsie Roll Industries, Inc. SN 339,405. Pub. 3-17-70. Filed 10-1-69.
- 892,172. TRIM TIME. Edlo Enterprises, Inc. SN 340,477. Pub. 3-17-70. Filed 10-13-69.
- 892,173. HEINZ AND DESIGN. H. J. Heinz Company. SN 340,714. Pub. 3-17-70. Filed 10-15-69.
- 892,174. AB ADAMS & BROOKS. Adams and Brooks, Inc. SN 340,975. Pub. 3-17-70. Filed 10-17-69.
- 892,175. CALORIE METER. Friendship Dairies, Inc. SN 341,107. Pub. 3-17-70. Filed 10-20-69.
- 892,176. S H E L L - P A K. Ralston Purina Company. SN 341,335. Pub. 3-17-70. Filed 10-22-69.

Class 47—Wines

- 892,177. CASTLE OF SCHOENBRUNN. Brüder Grill OHG. SN 325,034. Pub. 3-17-70. Filed 4-21-69.
- 892,178. RESERO AND DESIGN. Resero, Sociedad Anónima, Industrial, Agropecuaria, Comercial y Financiera. SN 325,393. Pub. 3-17-70. Filed 4-23-69.
- 892,179. PATHMARK. Supermarkets General Corporation. SN 325,522. Pub. 3-17-70. Filed 4-24-69.
- 892,180. FLEUR ROSE. Turret Imports Ltd. SN 334,143. Pub. 3-17-70. Filed 7-31-69.

Class 49—Distilled Alcoholic Liquors

- 892,181. SABRA. The Huntington Creek Corporation. SN 282,372. Pub. 3-17-70. Filed 10-12-67.

Class 50—Merchandise Not Otherwise Classified

- 892,182. . . . "A LITTLE SOMETHING TO HANG ON TO" . . . The Security Blanket Co. SN 326,961. Pub. 3-17-70. Filed 5-12-69.
- 892,183. ELECTRO-BRITE. Forest Mfg. Co. SN 330,494. Pub. 3-17-70. Filed 6-19-69.

Class 51—Cosmetics and Toilet Preparations

- 892,184. DENTEX. Colgate-Palmolive Company. SN 229,205. Pub. 5-31-66. Filed 10-4-65.
- 892,185. GRAND PRIX. Borden, Inc. SN 310,442. Pub. 8-5-69. Filed 10-24-68.
- 892,186. MICHELLE BRYAN. Michelle Bryan Cosmetics, Inc., assignee of Pinnacle Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 316,127. Pub. 1-13-70. Filed 1-8-69.
- 892,187. TREE, APPLE AND HUMAN SILHOUETTE. Michelle Bryan Cosmetics, Inc., assignee of Pinnacle Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 316,128. Pub. 1-13-70. Filed 1-8-69.
- 892,188. SANTOSHA. Holiday Magic. MULTIPLE CLASS (Classes 51 and 52). SN 317,057. Pub. 3-17-70. Filed 1-21-69.
- 892,189. TWIN BEAUTY BY MAZZARELLI. Twin Beauty by Mazzarelli Cosmetics. SN 318,254. Pub. 3-17-70. Filed 2-3-69.
- 892,190. MR. NUBIAN AND FANCIFUL MALE DESIGN. Barbara J. Crockett, d.b.a. House of Styles. SN 326,519. Pub. 3-17-70. Filed 5-6-69.
- 892,191. BABYLANE. Jean d'Albret. MULTIPLE CLASS (Classes 51 and 52). SN 330,042. Pub. 3-17-70. Filed 6-16-69.
- 892,192. NEVER ON SUNDAY. Funel, Societe Anonyme. SN 334,838. Pub. 3-17-70. Filed 8-8-69.
- 892,193. FABERGE F. Faberge, Incorporated. SN 335,563. Pub. 3-17-70. Filed 8-18-69.

Class 52—Detergents and Soaps

- 891,851. (See Class 1 for this trademark.)
- 891,874. (See Class 6 for this trademark.)
- 892,186. (See Class 51 for this trademark.)
- 892,187. (See Class 51 for this trademark.)
- 892,188. (See Class 51 for this trademark.)
- 892,191. (See Class 51 for this trademark.)
- 892,194. CINCH. The Procter & Gamble Company. SN 260,496. Pub. 3-14-67. Filed 12-12-66.
- 892,195. ISCO SAFE SPOTTER AND DESIGN. Industrial Specialties Company. SN 277,667. Pub. 3-17-70. Filed 8-7-67.
- 892,196. CHEM-STEAM. Madison Chemical Corporation. SN 279,311. Pub. 6-25-68. Filed 8-29-67.
- 892,197. MD-X. Soap Products, Inc. SN 311,697. Pub. 3-17-70. Filed 11-8-68.
- 892,198. DASCO STRIP. D. A. Stuart Oil Co., Limited. SN 314,472. Pub. 3-17-70. Filed 12-13-68.
- 892,199. EJEKS. Theodore Herman, d.b.a. Ejeks Company. SN 330,503. Pub. 3-17-70. Filed 6-19-69.
- 892,200. FRIGID-KLEEN. Imoco-Gateway Corporation. SN 334,472. Pub. 3-17-70. Filed 8-5-69.

Service Marks

Class 100—Miscellaneous

- 891,881. (See Class 9 for this trademark.)

- 891,929. CONSOLIDATED CERTIFICATE. See Class 21.
- 892,201. SWING OVER TO ARBY'S. Arby's Inc. SN 290,995. Pub. 3-17-70. Filed 2-14-68.
- 892,202. ENED. Universal Oil Products Company, d.b.a. UOP Fabsteel Division. MULTIPLE CLASS (Classes 100 and 103). SN 291,450. Pub. 3-17-70. Filed 2-19-68.
- 892,203. DESIGN OF STRONG MAN HOLDING TWO SMALLER STRONG MEN. Harry Alter & Sons, Inc. SN 301,812. Pub. 3-17-70. Filed 7-2-68.
- 892,204. THE STONE BALLOON AND DESIGN. Jean Compo Sedlmayr, d.b.a. Stone Balloon. SN 307,058. Pub. 3-17-70. Filed 9-11-68.
- 892,205. MISTER SANDWICH AND DESIGN. Mister Sandwich, Inc. SN 307,850. Pub. 3-17-70. Filed 9-20-68.
- 892,206. ALLIED ETC. AND DESIGN. Ashland Oil & Refining Company. SN 311,564. Pub. 3-17-70. Filed 11-7-68.
- 892,207. HYSTER. Hyster Company. MULTIPLE CLASS (Classes 100, 102, 103, and 107). SN 317,567. Pub. 3-17-70. Filed 1-27-69.
- 892,208. FEMALE HEAD (DESIGN). Sandy's Franchise, Inc. SN 322,749. Pub. 3-17-70. Filed 3-25-69.
- 892,209. AID AND DESIGN. Halliburton Company, d.b.a. Freightmaster. MULTIPLE CLASS (Classes 100 and 103). SN 327,799. Pub. 3-17-70. Filed 7-9-69.
- 892,210. TIMME PLAZA. Timme Motor Inn Corporation. SN 336,527. Pub. 3-17-70. Filed 8-28-69.
- 892,211. JR. HOT SHOPPES AND DESIGN. Marriott Corporation. SN 341,479. Pub. 3-17-70. Filed 10-22-69.

Class 101—Advertising and Business

- 892,212. GREAT MOMENTS IN SPORTS. Glendinning Companies, Inc. SN 271,701. Pub. 3-17-70. Filed 5-17-67.
- 892,213. FAST-TAX. Francis W. Winn, d.b.a. Computer Language Research. SN 305,776. Pub. 3-17-70. Filed 8-22-68.
- 892,214. UPGRADE. Information Management Incorporated. SN 307,480. Pub. 3-17-70. Filed 9-16-68.
- 892,215. WARREN JEWELERS. Marvyn Woronov. SN 313,048. Pub. 10-28-69. Filed 11-25-68.
- 892,216. R CROWN AND CIRCLE DESIGN. Regency Chauffeurs Services, Inc. SN 319,555. Pub. 3-17-70. Filed 2-19-69.
- 892,217. AGRICAREERS, INC. AND DESIGN. Agricareers, Inc. SN 322,242. Pub. 3-17-70. Filed 3-20-69.
- 892,218. NATIONAL MULTI LIST SERVICE NMLS AND DESIGN. The Realty Programming Corporation. SN 333,640. Pub. 3-17-70. Filed 7-28-69.

Class 102—Insurance and Financial

- 892,207. (See Class 100 for this trademark.)
- 892,219. HAPPY SAVER. Joplin Federal Savings and Loan Association. SN 277,864. Pub. 3-17-70. Filed 8-2-67.
- 892,220. UNIBANK. Lincoln Rochester Trust Company. SN 293,153. Pub. 9-9-69. Filed 3-13-68.
- 892,221. INCOMSURANCE. Northwestern National Insurance Company of Milwaukee, Wisconsin. SN 311,617. Pub. 3-17-70. Filed 11-7-68.
- 892,222. THE BANKERS LIFE. Bankers Life Company. SN 321,455. Pub. 3-17-70. Filed 3-12-69.
- 892,223. HEALTH-GARD. Central States Health & Life Co. of Omaha. SN 321,563. Pub. 3-17-70. Filed 4-7-69.
- 892,224. MEDI-GARD. Central States Health & Life Co. of Omaha. SN 321,564. Pub. 3-17-70. Filed 4-7-69.
- 892,225. NEW QUIP. Van Dusen Aircraft Supplies, Incorporated. SN 332,206. Pub. 3-17-70. Filed 7-10-69.
- 892,226. NB (DESIGN). Neuberger & Berman. SN 337,753. Pub. 3-17-70. Filed 9-12-69.
- 892,227. A AND DESIGN. Allied Bank International. SN 339,954. Pub. 3-17-70. Filed 10-7-69.

- 892,228. WOODEN NICKEL CLUB. The First National Bank and Trust Company of Stillwater. SN 340,706. Pub. 3-17-70. Filed 10-15-69.

Class 103—Construction and Repair

- 891,888. (See Class 13 for this trademark.)
- 891,929. CONSOLIDATED CERTIFICATE. See Class 21.
- 892,202. (See Class 100 for this trademark.)
- 892,207. (See Class 100 for this trademark.)
- 892,209. (See Class 100 for this trademark.)
- 892,229. DRY TAMP PROCESS. Nardoni Floor Company. SN 257,069. Pub. 3-17-70. Filed 10-24-66.
- 892,230. PROSALVIA. Salviam. SN 285,681. Pub. 3-17-70. Filed 11-27-67.

Class 104—Communication

- 892,231. TRANSFAX. The Transceiver Corporation. SN 312,167. Pub. 6-10-69. Filed 11-14-68.

Class 105—Transportation and Storage

- 892,232. READING LINES BEE-LINE SERVICE AND DESIGN. Reading Company. SN 321,981. Pub. 3-17-70. Filed 3-17-69.

Class 107—Education and Entertainment

- 892,207. (See Class 100 for this trademark.)
- 892,233. COSMOPOLITAN. Health Studios, Inc., d.b.a. Cosmopolitan Health Studios, Inc., Cosmopolitan Health Clubs, Cosmopolitan Spa Health Clubs, and Cosmopolitan Spa International. SN 308,606. Pub. 3-17-70. Filed 10-1-68.
- 892,234. ITT. International Telephone and Telegraph Corporation. SN 313,473. Pub. 3-17-70. Filed 12-3-68.
- 892,235. CINILLUSION. Magical Productions, Inc. SN 316,445. Pub. 3-17-70. Filed 1-13-69.
- 892,236. "KEY TO BEAUTY." Peoples Drug Stores, Incorporated. SN 316,547. Pub. 3-17-70. Filed 1-14-69.
- 892,237. PZAZZ AND ALL THAT JAZZ, BABY. Hughes Tool Company, d.b.a. The Desert Inn Hotel. SN 340,091. Pub. 3-17-70. Filed 10-8-69.
- 892,238. PZAZZ. Hughes Tool Company, d.b.a. The Desert Inn Hotel. SN 340,092. Pub. 3-17-70. Filed 10-8-69.

Collective Membership Marks

Class 200

- 892,239. REGISTERED NURSE THERAPIST AND DESIGN. National Registry of Registered Nurse Therapists, Inc. SN 318,087. Pub. 3-17-70. Filed 1-31-69.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

- 892,250. Monrovia Nursery Company, Azusa, Calif. SN 323,833. Filed P.R. 4-7-69; Am. S.R. 3-23-70.

MAJESTIC BEAUTY

For Trees (Int. Cl. 31).
First use Feb. 1, 1964.

Class 46—Foods and Ingredients of Foods

- 892,240. S.A.S. Antonio Bertolini, Turin, Italy. SN 290,886. Filed 2-12-68.



The words superimposed upon the words "Lievito Bertolini" are "Antonio Bertolini." Owner of Italian Reg. No. 73,910, dated Apr. 25, 1944.
For Baking Powder (Int. Cl. 80).

- 892,241. (See Class 47 for this trademark.)

CHEF conte

For Spaghetti Sauce With Mushroom, Marinara Sauce, Spaghetti Sauce, Neapolitan Sauce, Pizza Sauce, and Mashed Tomatoes and Tomato Sauces (Int. Cls. 29 and 80).
First use June 18, 1966.

- 892,243. (See Class 52 for this trademark.)
- 892,244. (See Class 51 for this trademark.)
- 892,245. (See Class 52 for this trademark.)
- 892,246. (See Class 49 for this trademark.)

- 892,251. Sunny Farms, Inc., Edison, Calif. SN 328,785. Filed P.R. 6-2-69; Am. S.R. 1-5-70.



For Fresh Potatoes (Int. Cl. 31).
First use about 1945.

Class 47—Wines

892,241. London Winery Limited, London, Ontario, Canada.
SN 293,042. Filed P.R. 3-12-68; Am. S.R. 1-27-70.



Owner of Canadian Reg. No. 153,264, dated Sept. 22, 1967.
For Wines (Int. Cl. 33).

Class 49—Distilled Alcoholic Liquors

892,246. Fettercairn Distillery Limited, Paisley, Scotland.
SN 319,653. Filed P.R. 2-19-69; Am. S.R. 3-26-70.

FETTERCAIRN

Owner of British Reg. No. B661,825, dated Aug. 22, 1947.
For Whisky (Int. Cl. 33).

Class 51—Cosmetics and Toilet Preparations

892,244. Hask Toiletries, Inc., Great Neck, N.Y. SN 316,645.
Filed P.R. 1-15-69; Am. S.R. 3-9-70.

BODY DUST

For Spray Powder Deodorant for Personal Use (Int. Cl. 5).
First use Jan. 9, 1969.

892,247. Chesebrough-Pond's Inc., New York, N.Y. SN 323,630. Filed P.R. 4-4-69; Am. S.R. 3-30-70.

TOTAL CARE

For Hair Conditioner (Int. Cl. 3).
First use Mar. 12, 1969.

892,248. Chesebrough-Pond's Inc., New York, N.Y. SN 323,633. Filed P.R. 4-4-69; Am. S.R. 3-30-70.

TWICE A WEEK

For Non-Medicated After Shampoo Preparation for the
Hair (Int. Cl. 3).
First use Mar. 12, 1969.

892,249. Chesebrough-Pond's Inc., New York, N.Y. SN 323,758. Filed P.R. 4-7-69; Am. S.R. 3-30-70.

NATURAL FINISH

For Hair Dressing (Int. Cl. 3).
First use Mar. 12, 1969.

892,250. (See Class 1 for this trademark.)

892,251. (See Class 46 for this trademark.)

892,252. Aloe Creme Laboratories, Inc., Fort Lauderdale,
Fla. SN 335,649. Filed P.R. 8-19-69; Am. S.R. 2-27-70.

TUT TUT RED

For Lipstick (Int. Cl. 3).
First use Oct. 24, 1962.

Class 52—Detergents and Soaps

892,243. Lever Brothers Company, New York, N.Y. SN 314,800. Filed P.R. 12-18-68; Am. S.R. 3-11-70.

"The Strong Yet Gentle Detergent"

For Detergent for General Washing and Cleansing (Int. Cl. 3).
First use Dec. 12, 1968.

892,245. Lever Brothers Company, New York, N.Y. SN 316,799. Filed P.R. 1-16-69; Am. S.R. 2-24-70.

I clean with strength yet I make your wash feel soft.

For Laundry Detergent (Int. Cl. 3).
First use Dec. 2, 1968.

TRADEMARK REGISTRATIONS RENEWED

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| 34,235. RECKITT'S PARIS BLUE. Cl. 6 (Int. Cl. 3). 2-27-1900. | 270,512. DAREX. Cl. 6 (Int. Cl. 1). 5-6-30. |
| 76,344. REPRESENTATION OF CROCODILE. Cl. 23 (Int. Cl. 8). 1-4-10. | 271,211. KNOX ETC. AND REPRESENTATION OF COAT OF ARMS. Cl. 42 (Int. Cl. 24). 5-27-30. |
| 76,554. LINIMENTO DE SLOAN ETC. AND PORTRAIT. Cl. 18 (Int. Cl. 5). 1-25-10. | 271,245. KNOX. Cl. 42 (Int. Cl. 24). 5-27-30. |
| 77,154. CONCEIT. Cl. 51 (Int. Cl. 3). 3-15-10. | 272,503. SIMPLEX. Cl. 13 (Int. Cl. 6). 7-8-30. |
| 78,218. EVENTUALLY AND DESIGN. Cl. 46 (Int. Cl. 30). 5-31-10. | 272,651. EAGLE SEAL. Cl. 23 (Int. Cl. 7). 7-8-30. |
| 265,784. BUESCHER. Cl. 36 (Int. Cl. 15). 1-7-30. | 273,217. CHAPOLA ETC. AND DESIGN. Cl. 51 (Int. Cl. 3). 7-22-30. |
| 267,624. MARBROOKE. Cl. 39 (Int. Cl. 25). 2-25-30. | 273,610. STYLE MANOR. Cl. 39 (Int. Cl. 25). 8-5-30. |
| 267,817. SUPRAFELT. Cl. 39 (Int. Cl. 25). 3-4-30. | 273,876. LURE AND SLEEP. Cl. 32 (Int. Cl. 20). 8-19-30. |
| 268,217. AO. Cl. 26 (Int. Cl. 9). 3-11-30. | 273,937. BIG SISTER. Cl. 38 (Int. Cl. 16). 8-19-30. |
| 268,219. ESKILTUNA ETC. AND DESIGN. Cl. 23 (Int. Cl. 8). 3-11-30. | 443,985. EXTANE. Cl. 6 (Int. Cl. 5). 5-16-50. |
| 268,220. AO. Cl. 26 (Int. Cl. 9). 3-11-30. | 444,029. POLAR WHITE. Cl. 37 (Int. Cl. 16). 6-18-50. |
| 268,547. TOOLTEX. Cl. 15 (Int. Cl. 4). 3-18-30. | 444,146. BOND CLOTHES. Cl. 39 (Int. Cl. 25). 8-15-50. |
| 268,626. SINGLETTE. Cl. 39 (Int. Cl. 24). 3-18-30. | 514,784. WEST HILLS. Cl. 46 (Int. Cl. 29). 9-6-49. |
| 268,827. WEARTEX. Cl. 35 (Int. Cl. 7). 3-18-30. | 515,111. ATCOTRAN AND DESIGN. Cl. 28 (Int. Cl. 9). 9-13-49. |
| 269,635. SHINOLA AND DESIGN. Cl. 29 (Int. Cl. 21). 4-15-30. | 517,925. OXYPHENINE. Cl. 6 (Int. Cl. 2). 11-22-49. |
| 270,402. CT (MONOGRAM). Cl. 2 (Int. Cl. 21). 5-6-30. | 519,125. BARNSBY. Cl. 3 (Int. Cl. 18). 12-20-49. |
| | 519,652. MANROSS. Cl. 13 (Int. Cl. 6). 1-10-50. |
| | 519,718. COBURN AND DESIGN. Cl. 13 (Int. Cl. 6). 1-10-50. |

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| 520,179. FAMOUS FREDERICK COUNTY LIME AND DESIGN. Cl. 12 (Int. Cl. 19). 1-24-50. | 525,518. BURN'T SUGAR. Cl. 51 (Int. Cl. 3). 5-23-50. |
| 520,751. DE ARMOND. Cl. 21 (Int. Cl. 9). 2-7-50. | 525,630. CALUMET. Cl. 23 (Int. Cl. 7). 5-30-50. |
| 520,998. NYLATINT. Cl. 6 (Int. Cl. 2). 2-14-50. | 525,688. DRY PEN. Cl. 29 (Int. Cl. 16). 5-30-50. |
| 521,161. FOUR WINDS. Cl. 39 (Int. Cl. 25). 2-21-50. | 525,970. WILLIE HOPPE. Cl. 23 (Int. Cl. 28). 6-6-50. |
| 521,638. MISCELLANEOUS DESIGN. Cl. 15 (Int. Cl. 4). 2-28-50. | 526,624. DI-BOND. Cl. 4 (Int. Cl. 7). 6-20-50. |
| 521,665. VALVOLINE AND DESIGN. Cl. 15 (Int. Cl. 4). 2-28-50. | 526,886. ISO-VOL. Cl. 12 (Int. Cl. 19). 6-27-50. |
| 521,666. VALVOLINE X-18 AND DESIGN. Cl. 15 (Int. Cl. 4). 2-28-50. | 526,926. HYPERTUSSIS. Cl. 18 (Int. Cl. 5). 6-27-50. |
| 522,225. THOR. Cl. 7 (Int. Cl. 6). 3-14-50. | 527,070. P.B. AND DESIGN. Cl. 46 (Int. Cl. 31). 7-4-50. |
| 522,236. HAVENSHIRE. Cl. 39 (Int. Cl. 25). 3-14-50. | 527,431. THE MERCHANT'S NEWS LETTER. Cl. 38 (Int. Cl. 16). 7-4-50. |
| 522,325. KEYSTONE. Cl. 45 (Int. Cl. 32). 3-14-50. | 527,432. TODAY'S RETAIL HEADLINES. Cl. 38 (Int. Cl. 16). 7-4-50. |
| 522,346. RED ROD. Cl. 14 (Int. Cl. 6). 3-14-50. | 527,445. WARNER. Cl. 21 (Int. Cl. 7). 7-11-50. |
| 522,415. EXCELSIOR. Cl. 42 (Int. Cl. 24). 3-14-50. | 527,586. H AND DESIGN. Cl. 23 (Int. Cl. 8). 7-11-50. |
| 522,599. THOR. Cl. 15 (Int. Cl. 4). 3-21-50. | 527,599. HALE'S LEADER. Cl. 46 (Int. Cl. 29). 7-11-50. |
| 522,620. GIRARD PERREGAUX. Cl. 27 (Int. Cl. 14). 3-21-50. | 527,626. FLO-RITE. Cl. 1 (Int. Cl. 19). 7-11-50. |
| 522,634. J & L AND DESIGN. Cl. 28 (Int. Cl. 7). 3-21-50. | 527,644. CATALINA. Cl. 23 (Int. Cl. 28). 7-18-50. |
| 522,823. ANCHOR. Cl. 42 (Int. Cl. 24). 3-21-50. | 527,709. SUNSHINE. Cl. 2 (Int. Cl. 21). 7-18-50. |
| 522,825. VICTOR. Cl. 42 (Int. Cl. 24). 3-21-50. | 527,784. GENERACLAS. Cl. 6 (Int. Cl. 4). 7-18-50. |
| 522,826. VIKING. Cl. 42 (Int. Cl. 24). 3-21-50. | 527,787. BULL-MEAT-BRAND. Cl. 46 (Int. Cl. 30). 7-18-50. |
| 522,851. 808 BICYCLE AND DESIGN. Cl. 22 (Int. Cl. 16). 3-21-50. | 527,884. MONITAN. Cl. 18 (Int. Cl. 5). 7-18-50. |
| 523,005. ANCO AND DESIGN. Cl. 28 (Int. Cls. 7 and 8). 3-28-50. | 528,014. PIONEER. Cl. 23 (Int. Cls. 7 and 11). 7-25-50. |
| 523,090. SHIP (DESIGN). Cl. 6 (Int. Cl. 1). 3-28-50. | 528,043. SHEFFIELD INN. Cl. 46 (Int. Cl. 30). 7-25-50. |
| 523,122. REPUBLIC. Cl. 28 (Int. Cl. 8). 3-28-50. | 528,113. DOLE. Cl. 46 (Int. Cl. 29). 7-25-50. |
| 523,133. GUNOOL. Cl. 12 (Int. Cl. 19). 3-28-50. | 528,174. YOU, INC. Cl. 38 (Int. Cl. 16). 8-1-50. |
| 523,301. LOAD KING. Cl. 19 (Int. Cl. 12). 4-4-50. | 528,247. PARADIONE. Cl. 18 (Int. Cl. 5). 8-1-50. |
| 523,317. WATERBURY. Cl. 28 (Int. Cl. 7). 4-4-50. | 528,312. SNAPICOIL. Cl. 21 (Int. Cl. 9). 8-1-50. |
| 523,487. PLASTICRETE. Cl. 34 (Int. Cl. 11). 4-4-50. | 528,382. FYROGAS AND DESIGN. Cl. 6 (Int. Cl. 4). 8-1-50. |
| 523,503. BUFOPTO AND DESIGN. Cl. 18 (Int. Cl. 5). 4-4-50. | 528,373. POSITECT. Cl. 21 (Int. Cl. 9). 8-1-50. |
| 523,623. MISCELLANEOUS DESIGN. Cl. 102 (Int. Cl. 36). 4-4-50. | 528,444. THE STUART AMINO ACIDS AND DESIGN. Cl. 6 (Int. Cl. 1). 8-1-50. |
| 523,681. CHURCHILL COFFEE AND DESIGN. Cl. 46 (Int. Cl. 30). 4-11-50. | 528,599. HI-FORM. Cl. 33 (Int. Cl. 14). 8-8-50. |
| 523,774. INGERSOLL'S. Cl. 46 (Int. Cl. 29). 4-11-50. | 528,732. BEDTIME STORY FASHIONS. Cl. 39 (Int. Cl. 25). 8-8-50. |
| 523,800. A AND DESIGN. Cl. 13 (Int. Cl. 6). 4-11-50. | 528,757. PLASTICRETE. Cl. 12 (Int. Cl. 19). 8-8-50. |
| 523,911. ICE CREAM JOE AND DESIGN. Cl. 46 (Int. Cl. 30). 4-11-50. | 528,954. OAKDEN LINEN AND DESIGN. Cl. 37 (Int. Cl. 16). 8-15-50. |
| 524,038. HOLLAS. Cl. 17 (Int. Cl. 34). 4-11-50. | 529,087. EAGLE-PICHER. Cl. 12 (Int. Cl. 19). 8-15-50. |
| 524,329. LINDY. Cl. 46 (Int. Cl. 29). 4-25-50. | 529,106. PYDRAUL. Cl. 15 (Int. Cl. 1). 8-15-50. |
| 524,364. AMEROCK AND DESIGN. Cl. 13 (Int. Cl. 6). 4-2-50. | 529,373. EXECUTIVE. Cl. 23 (Int. Cl. 16). 8-22-50. |
| 524,422. SUE BRETT AND DESIGN. Cl. 39 (Int. Cl. 25). 4-25-50. | 529,518. TUFFY. Cl. 39 (Int. Cl. 25). 8-22-50. |
| 524,515. CAR-MAC. Cl. 13 (Int. Cl. 6). 4-25-50. | 529,562. LITHOFECT. Cl. 37 (Int. Cl. 16). 8-22-50. |
| 524,632. ARCTIC SUN. Cl. 46 (Int. Cl. 30). 5-2-50. | 529,826. PENN. Cl. 21 (Int. Cl. 9). 8-29-50. |
| 524,771. KMC. Cl. 46 (Int. Cls. 29 and 30). 5-2-50. | 529,828. DEX-MO-LASS. Cl. 46 (Int. Cl. 31). 8-29-50. |
| 525,483. FIX A NIK. Cl. 12 (Int. Cl. 17). 5-23-50. | 529,951. FUSISTOR. Cl. 21 (Int. Cl. 9). 8-29-50. |
| | 529,953. RECTODYNE. Cl. 21 (Int. Cl. 9). 8-29-50. |
| | 530,349. BLUE BELL AND DESIGN. Cl. 39 (Int. Cl. 25). 9-5-50. |
| | 530,350. ESCO. Cl. 14 (Int. Cl. 6). 9-5-50. |
| | 530,361. CORE-LOKT. Cl. 9 (Int. Cl. 13). 9-5-50. |
| | 530,372. MAXECON. Cl. 35 (Int. Cl. 7). 9-5-50. |
| | 530,380. LEGRAIN. Cl. 35 (Int. Cl. 7). 9-5-50. |

TRADEMARK REGISTRATIONS CANCELED

Section 8

- 746,949. JOURNAL OF THE AUDIO ENGINEERING SOCIETY ETC. AND DESIGN. Cl. 38. 3-19-63.
749,208. F AND CHEFF'S HEAD DESIGN. Cl. 46. 5-7-63.
749,393. ST. CL. 28. 5-14-63.
749,993. COASTAL CAL JET AND DESIGN. Cl. 6. 5-28-63.
750,506. PALLETVEYOR. Cl. 23. 6-4-63.

The following registrations issued Apr. 14, 1964

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| 768,053. JUSTRITE. Cl. 1. | 768,096. MM PAINTS IN SHIELD DESIGN. Cl. 16. |
| 768,054. STRIP FLECKES AND DESIGN. Cl. 1. | 768,097. MIL-CRAFT. Cl. 16. |
| 768,056. HUNTING. Cl. 1. | 768,101. SOLACIN. Cl. 18. |
| 768,058. PARAGON. Cl. 1. | 768,102. TITRABELL. Cl. 18. |
| 768,061. SAN-O-FORM. Cl. 2. | 768,107. M AND DESIGN. Cl. 21. |
| 768,065. CHEMCOB AND DESIGN. Cl. 6. | 768,113. NEOLINE. Cl. 21. |
| 768,068. CRESTWOOD. Cl. 6. | 768,114. NEOLINE AND DESIGN. Cl. 21. |
| 768,073. CASTECH AND DESIGN. Cl. 6. | 768,115. PYROSWITCH. Cl. 21. |
| 768,084. DUNG HO! AND DESIGN. Cl. 10. | 768,116. STAR LETTER S AND DESIGN. Cl. 21. |
| 768,086. L & G. Cl. 10. | 768,119. TD AND DESIGN. Cl. 21. |
| 768,088. SAF-T-BRAKE. Cl. 13. | 768,124. MICRO-DUCER. Cl. 21. |
| 768,089. VAN CREST. Cl. 13. | 768,125. S AND DESIGN. Cl. 21. |
| | 768,126. A.B.C. Cl. 21. |
| | 768,134. "OLD HI'S FAVORITE." Cl. 22. |
| | 768,135. PORT-A-PAR. Cl. 22. |
| | 768,143. MILLCO AND DESIGN. Cl. 22. |
| | 768,146. BEAU. Cl. 22. |
| | 768,146. LIBBY LITTLECHAP. Cl. 22. |
| | 768,147. DR. JOHN LITTLECHAP. Cl. 22. |
| | 768,148. THE LITTLECHAP FAMILY. Cl. 22. |
| | 768,151. TRICONE. Cl. 23. |
| | 768,154. DUTCH SHOE. Cl. 23. |

768,155. SWIVEL STEER. Cl. 23.
 768,158. MAC GREGOR. Cl. 23.
 768,159. EDELBROCK ISOMITE AND DESIGN. Cl. 23.
 768,161. HUBERTROL. Cl. 23.
 768,163. PNEUMAPUMP. Cl. 23.
 768,167. SYN-TRAC. Cl. 26.
 768,169. F & M AND DESIGN. Cl. 26.
 768,173. AKRA-SUM. Cl. 26.
 768,180. MARVA-STAR. Cl. 28.
 768,181. MARVELLESCENCE. Cl. 28.
 768,190. TEXOBOND. Cl. 37.
 768,193. COLTAC AND DESIGN. Cl. 37.
 768,195. TRUE MERIT A PRODUCT OF DISTINCTION AND DESIGN. Cl. 37.
 768,197. WYNDIE KRAFT. Cl. 37.
 768,202. DRI-CAL. Cl. 38.
 768,204. WHERE PEOPLE WORK. Cl. 38.
 768,206. ROUND THE LANES AND DESIGN. Cl. 38.
 768,214. FURTIME. Cl. 39.
 768,216. JIMMIE DUGAN. Cl. 39.
 768,218. THE GOLDEN BEAR. Cl. 39.
 768,219. CATHEDRAL STUDIO. Cl. 39.
 768,221. TAILORED BABY AND DESIGN. Cl. 39.
 768,228. EMBASSY. Cl. 39.
 768,230. S AND DESIGN. Cl. 39.
 768,231. LANTILLA. Cl. 39.
 768,233. JET ZIP PED. Cl. 39.
 768,235. PERMACLIP. Cl. 40.

768,239. DECRO-LON. Cl. 42.
 768,243. BLACKBURN-MILLER X-45. Cl. 46.
 768,249. MRS. SNYDER'S. Cl. 46.
 768,252. PERSHELL. Cl. 46.
 768,253. CITRALAGE. Cl. 46.
 768,259. PERZYME. Cl. 46.
 768,262. MOCHA RIO. Cl. 49.
 768,266. RIPPLE-LITE. Cl. 50.
 768,268. BUNNIE. Cl. 51.
 768,271. BUNNY. Cl. 52.
 768,272. SHAKE A LITTLE. Cl. 52.
 768,275. HARRIS-SOL. Cl. 52.
 768,278. JAHN'S. Cl. 100.
 768,285. SALLY OWENS. Cl. 101.
 768,292. ABCD ETC. AND DESIGN. Cl. 105.
 768,294. COUNCIL FOR INDIVIDUAL FREEDOM—TRUTH · UNDERSTANDING · CO-OPERATION AND DESIGN. Cl. 107.
 768,296. STRING-A-LONGS. Cl. 107.
 768,297. HOLOSPAR. Cl. 12.
 768,299. FLOW MEASUREMENTS CORP. AND DESIGN. Cl. 26.
 768,302. WESTERN AEROSPACE. Cl. 38.
 768,305. MARINE PRODUCTS. Cl. 38.
 768,306. SPECIAL REPORT ON ELECTRONICS. Cl. 38.
 768,310. EGG FORMULA "ONE-THREE." Cl. 46.
 768,316. VIOLET-SPRAY. Cl. 103.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

410,745. ATLAS IMPERIAL. Cl. 23. 12-19-44. Atlas Imperial Diesel Engine Co. White Motor Corporation, Cleveland, Ohio. Amended: In the statement, column 1, lines 11 and 12, the description of goods is deleted and *diesel engine parts* is inserted.
 518,819. K AND DESIGN. Cl. 38. 12-13-49. The Kiplinger Washington Agency, Inc. The Kiplinger Washington Editors, Inc., Washington, D.C. Amended: In the statement, column 1, line 7, "weekly newsletter" is deleted and *newsletters* is inserted and in line 12 "newsletter" is deleted and *newsletters* is inserted.
 521,096. SHEAFFER'S. Cl. 11. 2-21-50. W. A. Sheaffer Pen Company. Textron Inc., Fort Madison, Iowa. Amended to appear:

SHEAFFER

522,027. MISCELLANEOUS DESIGN. Cl. 46. 3-7-50. Mars, Incorporated. Wilmington, Del. Amended: In the statement, column 1, after line 20, *The drawing is lined to indicate the colors blue and red, but no claim to the colors is made.* is inserted, and the drawing is amended to appear:



524,900. BRAEMAR. Cl. 39. 5-9-50. Innes Henderson and Company Limited. Braemar Knitwear Limited, Hawick, Scotland. Amended to appear:



781,468. DINGOS AND DESIGN. Cl. 39. 12-8-64. Acme Boot Company, Inc., Clarksville, Tenn. Amended to appear:

DINGO

802,530. THE TINDER BOX. Cls. 8 and 17. 1-25-66. Ed's Pipe Shops, Incorporated. The Tinder Box International, Ltd., Santa Monica, Calif. Amended: In the statement, column 1, after line 1, *now by change of name The Tinder Box International, Ltd.* is inserted.

851,540. EMBASSY AND DESIGN. Cl. 46. 6-25-68. The Southland Corporation, Dallas, Tex. Amended to appear:

Embassy

852,798. RAIN-BREAKER. Cl. 39. 7-16-68. Windbreaker, Incorporated, Danville, Ill. Corrected: In the statement, column 2, line 4, "Oct. 3" both occurrences should be deleted and *June 5* should be inserted.

886,978. TEED. Cl. 6. 3-8-70. Warren-Teed Pharmaceuticals Inc., assignee of S. F. Durst & Company, Inc., Columbus, Ohio. Corrected: In the statement, column 1, before line 1, *Warren-Teed Pharmaceuticals Inc. (Ohio corporation), 582 W. Goodale St., Columbus, Ohio 43215 assignee of* should be inserted.

888,693. NATIONAL SOFT-SERV SCHOOL. Cls. 38 and 107. 3-31-70. Clyde A. Harbin, Whitehaven, Tenn. Corrected: In the statement, column 1, line 4, before "educational" *publications, namely,* should be inserted.

889,735. FLEX-KLEEN. Cl. 31. 4-21-70. Flex-Kleen Corporation, Chicago, Ill. Corrected: In the statement, column 2, line 2, "thereof" should be deleted and *therefor* should be inserted and in line 3, "applicators" should be deleted and *applications* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 7—Cordage

444,037. June 13, 1950. The Linen Thread Co., Inc., New York, N.Y. Pub. by Indian Head Inc., New York, N.Y.

BLUE LABEL

For Twine (Int. Cl. 22).

Class 19—Vehicles

443,317. Aug. 30, 1949. Tidewater Equipment Company, Brunswick, Ga. Pub. by Tidewater Equipment Company, Inc., Brunswick, Ga.

DIXIE LOGGER

For Rubber Tired, Four-Wheeled Logging Carts and Pulpwood Wagons (Int. Cl. 12).

Class 32—Furniture and Upholstery

411,887. Feb. 6, 1945. Rembrandt Lamp Corporation, Chicago, Ill. Pub. by The Scott & Fetzer Company, Lakewood, Ohio.



For Tables Suitable for Use as Occasional Furniture.

Class 39—Clothing

213,637. June 1, 1926. Jantzen Knitting Mills, Portland, Ore. Pub. by Jantzen Inc., Portland, Ore.



For Swimming Suits, Knitted Sweater Coats, Gloves of Leather, Rubber, Fabric, and a Combination Thereof, Suits for Men, Women, and Children; Underwear of Textile Fabric, Robes, Hosiery; Hats for Men, Women and Children, Caps for Men, Women, and Children; Jersey Vests, and Scarfs.

289,140. Nov. 17, 1931. Jantzen Knitting Mills, Portland, Ore. Pub. by Jantzen Inc., Portland, Ore.

SUNAIRE

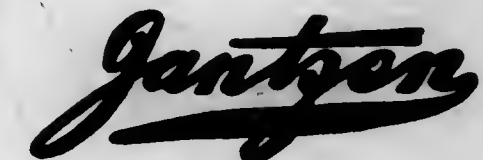
For Swimming Suits.

376,712. Apr. 2, 1940. S. Buchsbaum & Company, Chicago, Ill. Pub. by Cable Raincoat Co., Boston, Mass.

Elasti-Glass

For Apparel Belts, Suspenders, and Hose Supporters.

418,710. Jan. 8, 1946. Jantzen Knitting Mills, Portland,



Oreg. Pub. by Jantzen Inc., Portland, Ore.
 For Swimming Suits, Swimming Trunks, Swimming Caps; Sport Shirts and Shorts; Sun Clothing, etc.

418,729. Jan. 8, 1946. Jantzen Knitting Mills, Portland, Ore. Pub. by Jantzen Inc., Portland, Ore.

SLOPE-MASTER

For Sweaters.

423,812. Sept. 10, 1946. Jantzen Knitting Mills, Portland, Ore. Pub. by Jantzen Inc., Portland, Ore.



For Swimming Trunks, Sweaters, Jerseys, etc.

INDEX OF REGISTRANTS

JUNE 2, 1970

(Registered; Renewed; Canceled; Amended; Disclaimed; Corrected, etc.; New Certificates; 12c Publications.)

- Aasen, Ernest, d.b.a. S-S-S Co., Mayville, N. Dak. 891,916, pub. 3-17-70. Cl. 19.
 Abbott Laboratories, North Chicago, Ill. 528,247, ren. 6-2-70. Cl. 18.
 Acme Boot Co., Inc., Clarksville, Tenn. 781,468, Am. 7(d). Cl. 39.
 Acoustics Development Corp., Northbrook, Ill. 891,953, pub. 3-17-70. Cl. 21.
 Adams & Brooks, Inc., Los Angeles, Calif. 892,174, pub. 3-17-70. Cl. 46.
 Adams, R. P., Co., Inc., Buffalo, N.Y. 892,085, pub. 3-17-70. Cl. 34.
 Aerocem N.V., Curacao, Netherlands Antilles, 891,865, pub. 3-17-70. Cl. 5.
 Aerojet-General Corp., El Monte, Calif. 891,881, pub. 3-17-70. Multiple Class (Classes 9, 19, 21, and 26).
 Agricare, Inc., New Hampton, Iowa. 892,217, pub. 3-17-70. Cl. 101.
 Albright-Nell Co., The, to Chemetron Corp., Chicago, Ill. 528,005, ren. 6-2-70. Cl. 23.
 Allied Bank International, New York, N.Y. 892,227, pub. 3-17-70. Cl. 102.
 Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla. 892,252, Cl. 51.
 Alter, Harry, & Sons, Inc., Davenport, Iowa. 892,208, pub. 3-17-70. Cl. 100.
 American Biltrite Rubber Co., Inc., Chelsea, Mass. 892,042, pub. 3-17-70. Cl. 35.
 American Cabinet Hardware Corp., to Amerock Corp., Rockford, Ill. 523,900, ren. 6-2-70. Cl. 13.
 American Cabinet Hardware Corp., to Amerock Corp., Rockford, Ill. 524,264, ren. 6-2-70. Cl. 13.
 American Cyanamid Co., Wayne, N.J. 891,885, pub. 3-17-70. Cl. 11.
 American Oil Co.: See—
 General Gas Corp.
 American Optical Co., to American Optical Corp., Southbridge, Mass. 268,230, ren. 6-2-70. Cl. 26.
 American Optical Co., to American Optical Corp., Southbridge, Mass. 268,230, ren. 6-2-70. Cl. 70.
 American Perit Crystal Corp., New York, N.Y. 528,599, ren. 6-2-70. Cl. 33.
 Amerock Corp.: See—
 American Cabinet Hardware Corp.
 Amut S.p.A., Novara, Italy. 891,976, pub. 3-17-70. Cl. 23.
 Arby's Inc., Youngstown, Ohio. 892,201, pub. 3-17-70. Cl. 100.
 Arrow Ligneurs Corp., Detroit, Mich. 768,262, can. Cl. 49.
 Ashland Oil & Refining Co.: See—
 Freedom-Valvoline Oil Co.
 Ashland Oil & Refining Co., Ashland, Ky. 892,206, pub. 3-17-70. Cl. 100.
 Associated Dry Goods Corp.: See—
 Stix, Baer & Fuller Co.
 Associated Dry Goods Corp., New York, N.Y. 768,195, can. Cl. 37.
 Associated Spring Corp., Bristol, Conn. 519,652, ren. 6-2-70. Cl. 13.
 Atlas Imperial Diesel Engine Co., White Motor Corp., Cleveland, Ohio. 410,745, Am. 7(d). Cl. 28.
 Atlantic Richfield Co.: See—
 Sinclair Refining Co.
 Atlas Chemical Industries, Inc.: See—
 Stuart Co., The.
 Atlas Supply Co., Springfield, N.J. 891,875, pub. 3-17-70. Cl. 6.
 Atomic Space Age Transfer, Inc., Lake Grove, N.Y. 891,915, pub. 3-17-70. Cl. 19.
 Audio Engineering Society, Inc., New York, N.Y. 746,949, can. Cl. 38.
 Audiomasters Corp., Sepulveda, Calif. 892,053, pub. 3-17-70. Cl. 36.
 Automatic Temperature Control Co., Inc., Philadelphia, to Automatic Timing & Controls, Inc., King of Prussia, Pa. 515,111, ren. 6-2-70. Cl. 26.
 Automatic Timing & Controls, Inc.: See—
 Automatic Temperature Control Co., Inc.
 Avildsen Tools & Machines, Inc.: See—
 Republic Drill & Tool Co.
 Avon Products, Inc., New York, N.Y. 525,513, ren. 6-2-70. Cl. 51.
 Baker Industries, Inc., Newark, N.J. 891,929, pub. 3-16-69. Multiple Class (Classes 21, 100, and 103).
 Balata, Victor & Textile Belting Co., Eaton, Pa. 268,827, ren. 6-2-70. Cl. 35.
 Bankers Life Co., Des Moines, Iowa. 892,222, pub. 3-17-70. Cl. 102.
 Barad Lingerie Co., St. Louis, Mo. 892,081, pub. 3-17-70. Cl. 39.
 Barbeck Refrigeration Supply Co. of Dallas, Inc., Dallas, Tex. 892,012, pub. 7-29-69. Cl. 31.
 Barnett, Sol, d.b.a. Barnett Lighting Co., Barnett Mfg., CA., Los Angeles, Calif. 891,876, pub. 3-17-70. Cl. 6.
 Basic Foods, Inc., Englewood, N.J. 892,161, pub. 3-17-70. Cl. 46.
 Basic Inc.: See—
 Basic Refractories, Inc.
 Basic Refractories, Inc., to Basic Inc., Cleveland, Ohio. 533,133, ren. 6-2-70. Cl. 12.
 Bassett, W. E., Co., The, Derby, Conn. 891,985, pub. 3-17-70. Multiple Class (Classes 23 and 44).
 Beatrice Foods Co., Chicago, Ill. 892,187, pub. 3-17-70. Cl. 44.
 Bedtime Story Fashions, Belton, Mo. 523,732, ren. 6-2-70. Cl. 39.
 Beecham Inc., Clifton, N.J. 891,914, pub. 3-17-70. Cl. 18.
 Berberich Mfg. Co., Sioux City, Iowa, to Lead King Trailer Co., Elk Point, S. Dak. 523,901, ren. 6-2-70. Cl. 16.
 Bergs R. A., Fabriks Aktiebolag, Eskilstuna, Sweden. 268,219, ren. 6-2-70. Cl. 23.
 Berkline Corp., The, West Springfield, Mass. 892,025-6, pub. 3-17-70. Cl. 32.
 Bertwin Inc., Lakewood, N.J. 891,941, pub. 3-17-70. Cl. 21.
 Billingtons Handels Aktiengesellschaft, Zug, Switzerland. 768,193, can. Cl. 37.
 Blackburn-Miller Feed Service, Mendon, Ill. 768,243, can. Cl. 48.
 Bliss & Laughlin Industries, Inc., Oakbrook, Ill. 891,887, pub. 3-17-70. Cl. 12.
 Blue Bell, Inc., to Blue Bell, Inc., Greensboro, N.C. 530,349, ren. 6-2-70. Cl. 39.
 Blum, Rubin, d.b.a. Havenahire Knitwear Co., to Havenahire Knitwear Co., Inc., New York, N.Y. 523,236, ren. 6-2-70. Cl. 39.
 Bond Stores, Inc.: See—
 Stutz, Rudolph, Co.
 Bond Stores, Inc., New York, N.Y. 444,146, ren. 6-2-70. Cl. 39.
 Bonnal, W. R., Co., The, Lilesville, N.C. 891,855, pub. 3-17-70. Cl. 1.
 Bonnal, W. R., Co., The, Lilesville, N.C. 891,867, pub. 3-17-70. Cl. 5.
 Bonnal, W. R., Co., The, Lilesville, N.C. 891,873, pub. 3-17-70. Cl. 6.
 Bonnal, W. R., Co., The, Lilesville, N.C. 891,908, pub. 3-17-70. Cl. 16.
 Borden, Inc., New York, N.Y. 892,185, pub. 3-5-69. Cl. 51.
 Borgs Fabriks Aktiebolag, Norrköping, Sweden. 891,974, pub. 4-22-69. Cl. 23.
 Borg-Warner Corp., Chicago, Ill. 891,918, pub. 3-17-70. Cl. 19.
 Bouman, Charles, d.b.a. Applications Programming Co., Morristown, N.J. 892,065, pub. 3-17-70. Cl. 38.
 Bourjois, Inc.: See—
 Woodworth, C. B., Sons Co., The.
 Brand, R. A., & Co. Ltd., Fendleton, Manchester, England. 768,190, can. Cl. 37.
 Brett, Sue, Inc., New York, N.Y. 524,422, ren. 6-2-70. Cl. 39.
 Bridgestone Tire Co. Ltd., Tokyo, Japan. 891,923-4, pub. 3-17-70. Cl. 19.
 Brown & Williamson Tobacco Corp., Louisville, Ky. 891,880, pub. 3-17-70. Cl. 8.
 Bruder Grill OHG, Fels am Wagram, Austria. 892,177, pub. 3-17-70. Cl. 47.
 Brunswick Corp.: See—
 Brunswick-Balke Collender Co., The.
 Brunswick-Balke Collender Co., The, to Brunswick Corp., Chicago, Ill. 525,970, ren. 6-2-70. Cl. 22.
 Bryan, Michelle, Cosmetics, Inc., from Pinnacle Products, Inc., Arlington Heights, Ill. 892,186-7, pub. 1-13-70. Multiple Class (Classes 61 and 52).
 Brymax, Inc., Baton Rouge, La. 891,861, pub. 3-17-70. Cl. 2.
 Buchbaum, S., & Co., Chicago, Ill., by Cable Raincoat Co., Boston, Mass. 376,712, 12(c) pub. 6-2-70. Cl. 39.
 Buescher Band Instrument Co., Elkhart, to The Magnavox Co., Fort Wayne, Ind. 265,784, ren. 6-2-70. Cl. 36.
 CF & I Steel Corp.: See—
 Colorado Fuel & Iron Corp., The.
 CPC International Inc.: See—
 2 in 1-Shinola-Bixby Corp.
 Cable Raincoat Co.: See—
 Buchbaum, S., & Co.
 Ferrara, Caffè A., Inc., New York, N.Y. 749,208, can. Cl. 46.
 Calahan Co., Grand Rapids, Mich. 768,204, can. Cl. 38.
 California-Western States Life Insurance Co., Sacramento, Calif. 528,174, ren. 6-2-70. Cl. 38.
 Cal-Tex Citrus Juice, Inc., Houston, Tex. 892,147, pub. 3-17-70. Cl. 48.
 Campbell, Harry T., Sons' Corp., Towson, Md., to The Flintkote Co., White Plains, N.Y. 527,626, ren. 6-2-70. Cl. 1.
 Carey-McFall Co., Philadelphia, Pa. 524,515, ren. 6-2-70. Cl. 13.
 Caribbean Shoe Corp., Miami, Fla. 892,085, pub. 3-17-70. Cl. 39.
 Carpenter Technology Corp., Reading, Pa. 891,899, pub. 3-17-70. Cl. 14.
 Carter & Churchill Co., Inc., West Lebanon, N.H. 892,096, pub. 3-17-70. Cl. 39.
 Carter Products, Inc., New York, N.Y. 768,101, can. Cl. 18.
 Castech, Inc., Tulsa, Tex. 768,073, can. Cl. 6.
 Castle & Cooke, Inc.: See—
 Hawaiian Pineapple Co., Ltd.

Celanese Coatings Co.: See—
Devoe & Reynolds Co., Inc.
Central Press Association, Inc., to The Hearst Corp., New York, N.Y. 278,937, ren. 6-2-70. Cl. 38.
Central States Health & Life Co. of Omaha, Omaha, Nebr. 892,223-4, pub. 3-17-70. Cl. 102.
Century Lighting, Inc.: See—
Century Strand, Inc.
Century Strand, Inc., from Century Lighting, Inc., Clifton, N.J. 891,945, pub. 3-17-70. Cl. 21.
Certified Grocers of Illinois, Inc., Chicago, Ill. 891,874, pub. 3-17-70. Multiple Class (Classes 6 and 52).
Chainveyor Corp., Los Angeles, Calif. 750,506, can. Cl. 23.
Chap Stick Co.: See—
Johnson, Dorothy E.
Charlot Publishing Co., Stamford, Conn. 768,306, can. Cl. 38.
Chemalloy Co., Inc., Philadelphia, Pa. 891,893, pub. 11-12-68. Cl. 14.
Chemtron Corp.: See—
Allbright-Neil Co., The.
Chemtron Corp., Chicago, Ill. 768,068, can. Cl. 6.
Chemical Corp. of America, Gardfield, N.J. 768,065, can. Cl. 6.
Cheesebrough-Pond's Inc., New York, N.Y. 892,247-9, Cl. 51.
Chicago Roller Skate Co., The, Chicago, Ill. 891,960, pub. 3-17-70. Cl. 22.
Chilton Co., Philadelphia, Pa. 768,305, can. Cl. 38.
Christie Electric Corp.: See—
McColpin-Christie Corp., Ltd.
Churchill, Inc., Miami, Fla. 523,681, ren. 6-2-70. Cl. 46.
Ciba Ltd., Basel, Switzerland. 517,925, ren. 6-2-70. Cl. 6.
Ciba Ltd., Basel, Switzerland. 891,877, pub. 3-17-70. Cl. 6.
Cincinnati Tool Co., The, Norwood, to The Cincinnati Tool Co., Cincinnati, Ohio. 527,538, ren. 6-2-70. Cl. 23.
Clark, Dudley B., d.b.a. Clark Electronics Laboratories, Palm Springs, Calif. 768,124, can. Cl. 21.
Clark, J. L., Mfg. Co., to J. L. Clark Mfg. Co., Rockford, Ill. 270,402, ren. 6-2-70. Cl. 2.
Clinton Industries, Inc., Clinton, Iowa, to Standard Brands Inc., New York, N.Y. 529,828, ren. 6-2-70. Cl. 46.
Coast Catamaran Corp., Capistrano Beach, Calif. 891,922, pub. 3-17-70. Cl. 19.
Coastal Chemical Corp., Garfield, N.J. 749,993, can. Cl. 6.
Cobblers, Inc., Los Angeles, Calif. 892,094, pub. 3-17-70. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 892,184, pub. 5-31-68. Cl. 51.
Colorado Fuel & Iron Corp., The, to CF&I Steel Corp., Denver, Colo. 519,713, ren. 6-2-70. Cl. 13.
Comal Development Corp., New York, N.Y. 892,084, pub. 3-17-70. Cl. 39.
Combustion & Power Equipment Ltd., Montreal, Quebec, Canada. 892,037, pub. 3-17-70. Cl. 34.
Commerce Publishing Co., St. Louis, Mo. 892,073, pub. 3-17-70. Cl. 38.
Concorde Rubber Co., Inc., Boston, Mass. 892,043, pub. 3-17-70. Cl. 35.
Connecticut National Bank, The: See—
First National Bank & Trust Co. of Bridgeport, The.
Conrad, Robert, d.b.a. Skim-Lite Mfg., Burbank, Calif. 892,013, pub. 3-17-70. Cl. 31.
Consolidated Electronics Industries Corp.: See—
North American Philips Corp.
Consolidated Spring Corp., Brooklyn, N.Y. 891,940, pub. 3-17-70. Cl. 21.
Conte & Sons Packing Co., Palm, Pa. 892,242, Cl. 46.
Continental Oil Co., Ponca City, Okla. 521,638, ren. 6-2-70. Cl. 15.
Cook Chemical Co., Kansas City, Mo. 443,985, ren. 6-2-70. Cl. 6.
Cooper Laboratories, Inc., Bedford Hills, N.Y. 891,912, pub. 3-17-70. Cl. 18.
Cord Communications Corp., New York, N.Y. 892,071, pub. 3-17-70. Cl. 38.
Corning Glass Works, Corning, N.Y. 892,029-30, pub. 3-15-66. Cl. 33.
Council for Individual Freedom, Inc., Portland, Ind. 768,294, can. Cl. 107.
Cream Products Co., Inc., Cicero, Ill. 892,165, pub. 3-17-70. Cl. 46.
Crescent Brass & Pin Co., Detroit, Mich., to Simplex Nail & Mfg. Corp., Americus, Ga. 272,503, ren. 6-2-70. Cl. 13.
Crescent Food Co., Los Angeles, Calif. 892,145, pub. 3-17-70. Cl. 46.
Crockett, Barbara J., d.b.a. House of Styles, Oakland, Calif. 892,190, pub. 3-17-70. Cl. 51.
Curtis 1000 Inc., St. Paul, Minn. 444,029, ren. 6-2-70. Cl. 37.
Cutter Laboratories, to Cutter Laboratories, Inc., Berkeley, Calif. 526,926, ren. 6-2-70. Cl. 18.
D'Albret, Jean, Paris, France. 892,191, pub. 3-17-70. Multiple Class (Classes 51 and 52).
Damron, Howard, d.b.a. Sleepaire Mattress Co., Santa Monica, Calif. 892,021-2, pub. 3-17-70. Cl. 32.
Danenhowe, John, & Ethel Mitchell, Danenhowe, Old Lyme, Conn. 892,093, pub. 3-17-70. Cl. 38.
Dap, Inc.: See—
Webb Products Co.
De Armond, Harry, to Rowe Industries Inc., Toledo, Ohio. 520,751, ren. 6-2-70. Cl. 21.
Defender, Inc., Philadelphia, Pa. 892,086, pub. 3-17-70. Cl. 39.
De Luxe Topper Corp.: See—
Topper Corp.
Denver Chemical Mfg. Co., The, Stamford, Conn. 768,102, can. Cl. 13.
Devan-Johnson Co., d.b.a. Kut-A-Key Division, Aurora, Ill. 891,897, pub. 3-17-70. Cl. 14.
Devoe & Reynolds Co., Inc., to Celanese Coatings Co., New York, N.Y. 526,886, ren. 6-2-70. Cl. 12.
De Wan Mfg. Corp., Milwaukee, Wis. 892,078, pub. 3-17-70. Cl. 39.
Dewey & Almy Chemical Co., North Cambridge, to W. R. Grace & Co., Cambridge, Mass. 270,512, ren. 6-2-70. Cl. 6.
Dexter Press, Inc., West Nyack, N.Y. 892,068, pub. 3-17-70. Cl. 38.
Diamond Fruit Growers, Inc.: See—
Washington Cannery Cooperative.
Display Corp. of America, Philadelphia, Pa. 768,202, can. Cl. 38.
Diversified Products Corp., Opelika, Ala. 891,963, pub. 3-17-70. Cl. 22.
Dover Corp., New York, N.Y. 891,858, pub. 3-17-70. Multiple Class (Classes 2, 13, 23, 31, and 84).
Dow Badische Co., Williamsburg, Va. 891,854, pub. 3-17-70. Cl. 1.
Dreher Leather Mfg. Corp., New York, N.Y. 768,056, can. Cl. 1.
Dresser Industries, Inc., Dallas, Tex., from Symington Wayne Corp., Salisbury, Md. 891,975, pub. 3-17-70. Multiple Class (Classes 23 and 26).
Dubuque, Nancy T., Greenwich, Conn. 892,099, pub. 3-17-70. Cl. 39.
Duffy-Mott Co., Inc., New York, N.Y. 892,128-31, pub. 7-8-69. Cl. 46.
Duffy-Mott Co., Inc., New York, N.Y. 892,142, pub. 3-17-70. Cl. 46.
Duncan Enterprises, Kokomo, Ind. 892,149-55, pub. 3-17-70. Cl. 46.
Dwek, Salomon A., d.b.a. A.B.C. Import & Export Co., New York, N.Y. 768,126, can. Cl. 21.
Dynatech Corp., Cambridge, Mass. 892,004, pub. 3-17-70. Cl. 26.
E. B. S., Inc., Lynbrook, N.Y. 892,059, pub. 3-17-70. Cl. 38.
Eagle Clothes, Inc., New York, N.Y. 892,092, pub. 3-17-70. Cl. 39.
Eagle-Picher Co., The, to Eagle-Picher Industries, Inc., Cincinnati, Ohio. 529,087, ren. 6-2-70. Cl. 12.
Eagle-Picher Industries, Inc.: See—
Eagle-Picher Co., The.
Edelbrock Equipment Co., Los Angeles, Calif. 768,159, can. Cl. 23.
Edlo Enterprise, Inc., San Francisco, Calif. 892,172, pub. 3-17-70. Cl. 46.
Ed's Pipe Shops, Inc. The Tindler Box International, Ltd., Santa Monica, Calif. 802,530, Am. 7(d). Multiple Class (Classes 8 and 17).
Electric Steel Foundry, to Esco Corp., Portland, Ore. 530,350, ren. 6-2-70. Cl. 14.
Electromagnetic Industries, Inc., Sayville, N.Y. 891,935, pub. 3-17-70. Cl. 21.
Englander Co., Inc., The, New York, N.Y. 892,023, pub. 3-17-70. Cl. 32.
Esco Corp.: See—
Electric Steel Foundry.
Eskimo Pie Corp., Richmond, Va. 524,832, ren. 6-2-70. Cl. 46.
Esterline Corp., New York, N.Y., from Scientific Columbus, Inc., Columbus, Ohio. 892,005, pub. 3-17-70. Cl. 26.
Etablissements L. Breton & Fils, Barbezieux (Charente), France. 892,163, pub. 3-17-70. Cl. 46.
Evans, L. B., Son Co., Wakefield, Mass. 892,083, pub. 3-17-70. Cl. 39.
Exaphot Optik GmbH, Berlin, Germany. 892,003, pub. 3-17-70. Cl. 26.
F & M Scientific Corp., Avondale, Pa. 768,169, can. Cl. 26.
FMC Corp., San Jose, Calif. 891,979, pub. 3-17-70. Cl. 23.
F & W Publishing Corp., Cincinnati, Ohio. 892,058, pub. 3-17-70. Cl. 38.
Faberge, Inc., New York, N.Y. 892,193, pub. 3-17-70. Cl. 51.
Fairway Plastics, Inc., Port Lavaca, Tex. 891,892, pub. 3-17-70. Cl. 13.
Falls Engineering & Machine Co., The, Cuyahoga Falls, Ohio. 891,991, pub. 3-17-70. Cl. 23.
Farrington Business Machines Corp., Springfield, Va. 891,984, pub. 3-17-70. Cl. 23.
Fashion Trees, Inc., Hialeah, Fla. 892,105, pub. 3-17-70. Cl. 40.
Federal Cartridge Corp., Minneapolis, Minn. 891,883, pub. 3-17-70. Cl. 9.
Fedtro, Inc., Rockville Centre, N.Y. 892,007, pub. 3-17-70. Cl. 26.
Fetterclair Distillery Ltd., Paisley, Scotland. 892,246, Cl. 49.
Fine Products Co., Inc.: See—
Fine Products Corp.
Fine Products Corp., to Fine Products Co., Inc., Augusta, Ga. 528,043, ren. 6-2-70. Cl. 46.
First National Bank & Trust Co. of Bridgeport, The, to The Connecticut National Bank, Bridgeport, Conn. 523,623, ren. 6-2-70. Cl. 102.
First National Bank & Trust Co. of Stillwater, Stillwater, Okla. 892,228, pub. 3-17-70. Cl. 102.
Flake, Hazel M., Houston, Tex. 891,959, pub. 3-17-70. Cl. 22.
Fleetwood Sportswear, Inc., New York, N.Y. 768,231, can. Cl. 39.
Flex-Kleen Corp., Chicago, Ill. 889,735, cor. Cl. 31.
Flex-O-Lators, Inc., Carthage, Mo. 892,016, pub. 3-17-70. Cl. 32.
Flight Products, Inc., Moonachie, N.J. 891,950, pub. 3-17-70. Cl. 21.
Flintkote Co., The: See—
Grove, M. J., Lime Co. of Frederick County, The.
Campbell, Harry T., Sons' Corp.
Flow Measurements Corp., Kensington, Md. 768,299, can. Cl. 26.
Forest Mfg. Co., Cleveland, Ohio. 892,183, pub. 3-17-70. Cl. 50.
Fox Corp., from Fox Corp., Janesville, Wis. 891,919-20, pub. 3-17-70. Cl. 19.

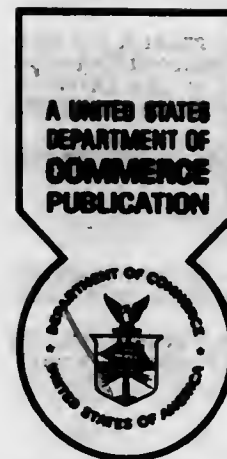
Frankische Musikinstrumentenherzeugung Fred Wilfer KG, Bubenreuth, Erlangen, Germany. 892,049, pub. 3-17-70. Cl. 34.
Franklin Mint, Inc., The, Yeadon, Pa. 891,962, pub. 3-17-70. Cl. 22.
Freedom-Valvoline Oil Co., Freedom, Pa., to Ashland Oil & Refining Co., Ashland, Ky. 521,606-8, ren. 6-2-70. Cl. 15.
French, R. T., Co., The, Rochester, N.Y. 768,053, can. Cl. 1.
Fresh-Ko Corp., Adel, Wis. 891,990, pub. 3-17-70. Cl. 23.
Friendship Dairies, Inc., Friendship, N.Y. 892,175, pub. 3-17-70. Cl. 46.
Funel, Societe Anonyme, Le Cannet, Alpes-Maritimes, France. 892,192, pub. 3-17-70. Cl. 51.
Fyrogas Co., Springfield, Mo. 528,332, ren. 6-2-70. Cl. 6.
GAF Corp., New York, N.Y. 891,925, pub. 3-17-70. Cl. 20.
Garden Laboratories Inc., Hackensack, N.J. 891,913, pub. 3-17-70. Cl. 18.
Gardent, Paul E., Jr., Boston, Mass. 768,058, can. Cl. 1.
Garrett Corp., The, Los Angeles, Calif. 892,036, pub. 3-17-70. Cl. 34.
Gemini Corp., Rosemont, Ill. 891,889, pub. 3-17-70. Cl. 13.
General Foods Corp., White Plains, N.Y. 892,124, pub. 1-14-69. Cl. 46.
General Gas Corp., Baton Rouge, La., to American Oil Co., Chicago, Ill. 527,784, ren. 6-2-70. Cl. 6.
General Mills, Inc.: See—
Washburn Crosby Co.
General Mills, Inc., Minneapolis, Minn. 892,118, pub. 6-18-68. Cl. 46.
Gladding, B. F., & Co. Inc., to Gladding Corp., South Otselec, N.Y. 527,844, ren. 6-2-70. Cl. 22.
Gladding Corp.: See—
Gladding, B. F., & Co. Inc.
Glass Containers Corp., Fullerton, Calif. 892,031, pub. 3-17-70. Cl. 38.
Glendinning Companies, Inc., Westport, Conn. 892,212, pub. 3-17-70. Cl. 101.
Golay, Bernard, S.A., Cossonay, Vaud, Switzerland. 892,002, pub. 3-17-70. Multiple Class (Classes 26 and 27).
Golden Y Growers, Inc., from Growers Citrus Products, Inc., Yuma, Ariz. 892,126, pub. 1-13-70. Cl. 46.
Goodrich, B. F., Co., The: See—
I.T.S. Co., The.
Goodrich, B. F., Co., The, Akron, Ohio. 530,372, ren. 6-2-70. Cl. 35.
Goodrich, B. F. Co., The, Akron, Ohio. 530,380, ren. 6-2-70. Cl. 35.
Gordon Sherritt Mines Ltd., Toronto, Ontario, Canada. 891,895, pub. 3-17-70. Cl. 14.
Grace, W. R., & Co.: See—
Dewey & Almy Chemical Co.
Grace, W. R., & Co., New York, N.Y. 892,122, pub. 2-4-69. Cl. 46.
Graef, Jean R., Inc., New York, N.Y., to Girard Perregaux & Cie, S.A., La Chaux-de-Fonds, Switzerland. 522,620, ren. 6-2-70. Cl. 27.
Green Giant Co.: See—
Minnesota Valley Canning Co.
Greubel, Joseph F., d.b.a. Valley Dairy Stores, Latrobe, Pa. 523,911, ren. 6-2-70. Cl. 46.
Griffith, Lloyd A., d.b.a. Griffith Plastic Products Co., Burlingame, Calif. 891,942, pub. 3-17-70. Cl. 21.
Grove, M. J., Lime Co. of Frederick County, The, Lime Kiln, Md., to The Flintkote Co., White Plains, N.Y. 520,179, ren. 6-2-70. Cl. 12.
Growers Citrus Products, Inc.: See—
Golden Y Growers, Inc.
Gunston, Inc., Richmond, Va. 892,093, pub. 3-17-70. Cl. 39.
H.R.C., Inc., Los Angeles, Calif. 768,235, can. Cl. 40.
Hale Co., Inc., East Arlington, Vt. 892,014, pub. 11-12-63. Cl. 32.
Hale-Halsell Co., Tulsa, Okla. 527,559, ren. 6-2-70. Cl. 46.
Hall, Robert, Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 892,089, pub. 3-17-70. Cl. 39.
Halliburton Co., St. Duncan, Okla. 892,209, pub. 3-17-70. Multiple Class (Classes 100 and 103).
Hamilton Cosco, Inc., Columbus, Ind. 892,018, pub. 3-17-70. Cl. 32.
Handy Pax, Inc., Boston, Mass. 892,143, pub. 3-17-70. Cl. 46.
Harbin, Clyde A., Whitehaven, Tenn. 888,698, cor. Multiple Class (Classes 38 and 107).
Hardinge Co., Inc., York, Pa. 768,151, can. Cl. 23.
Harris-Hub Co., Inc., Harvey, Ill. 892,024, pub. 3-17-70. Cl. 32.
Hask Toilettries, Inc., Great Neck, N.Y. 892,244, Cl. 51.
Hat Corp. of America: See—
Knox Hat Co., Inc.
Hat Corp. of America, New York, N.Y. 892,103, pub. 3-17-70. Cl. 39.
Havenshire Knitwear Co., Inc.: See—
Blum, Rubin.
Hawaiian Pineapple Co., Ltd., to Castle & Cooke, Inc., d.b.a. Dole Co., Honolulu, Hawaii. 528,113, ren. 6-2-70. Cl. 46.
Health Studios, Inc., d.b.a. Cosmopolitan Health Studios, Inc., Nashville, Tenn. 892,233, pub. 3-17-70. Cl. 107.
Hearst Corp., The: See—
Central Press Association, Inc.
Heldenberg Textile Fabrics Co., Inc., New York, N.Y. 892,107, pub. 6-10-69. Cl. 42.
Heins, H. J., Co., Pittsburgh, Pa. 892,173, pub. 3-17-70. Cl. 46.
Heller, B., & Co., Chicago, Ill. 527,787, ren. 6-2-70. Cl. 48.
Henderson Innes & Co. Ltd., to Braemar Knitwear Ltd., Hawick, Scotland. 524,900, Am. 7(d). Cl. 39.
Hercules Tire & Rubber Co., The, Findlay, Ohio. 892,044, pub. 3-17-70. Cl. 35.
Harman, Theodore, d.b.a. Ejeks Co., Jersey City, N.J. 892,199, pub. 3-17-70. Cl. 52.
Hershey Creamery Co., Harrisburg, Pa. 892,146, pub. 3-17-70. Cl. 46.
Hers Mfg. Corp., New York, to Sanita Paper Products Co., Inc., Hicksville, N.Y. 527,709, ren. 6-2-70. Cl. 3.
Higginbotham-Balley Co., Dallas, Tex. 768,316, can. Cl. 39.
Hinger, Fred D., Fort Lee, N.J. 892,051-2, pub. 3-17-70. Cl. 36.
Hobart Mfg. Co., The, Troy, Ohio. 891,948, pub. 3-17-70. Cl. 21.
Hoboken Paints, Inc., Lodi, N.J. 891,902-5, pub. 3-17-70. Cl. 16.
Holiday Magic, San Rafael, Calif. 892,188, pub. 3-17-70. Multiple Class (Classes 51 and 52).
Holiday Pools, Inc., Spokane, Wash. 892,133, pub. 3-17-70. Cl. 44.
Holman & Holman, Portland, Ore. 891,859, pub. 3-17-70. Cl. 2.
Holy Spirit Teaching Mission, Inc., Fort Lauderdale, Fla. 892,074, pub. 3-17-70. Cl. 38.
Hoover Soil Service, Inc., d.b.a. Specialty Products Co., Latty, Ohio. 768,086, can. Cl. 10.
Horrocks-Ibbotson Co., Utica, N.Y. 768,134, can. Cl. 22.
Huber, J. M., Corp., Borger, Tex. 768,161, can. Cl. 23.
Hudson Industries, Inc., Detroit, Mich. 891,996, pub. 3-17-70. Cl. 23.
Hughes Tool Co., d.b.a. The Desert Inn Hotel, South Las Vegas, Nev. 892,237-8, pub. 3-17-70. Cl. 107.
Humble Oil & Refining Co., Houston, Tex. 768,285, can. Cl. 101.
Huntington Creek Corp., The, New York, N.Y. 892,181, pub. 3-17-70. Cl. 49.
Hygienic Dental Mfg. Co., The, Akron, Ohio. 892,114, pub. 3-17-70. Cl. 44.
Hyster Co., Portland, Ore. 892,207, pub. 3-17-70. Multiple Class (Classes 100, 102, 103, and 107).
I.T.S. Co., The, Elyria, to The B. F. Goodrich Co., Akron, Ohio. 529,518, ren. 6-2-70. Cl. 39.
ITT Continental Baking Co., Elyria, N.Y. 892,169, pub. 3-17-70. Cl. 46.
Illumino Devices, Inc., New York, N.Y. 892,027, pub. 3-17-70. Cl. 32.
Imoco-Gateway Corp., Chicago, Ill. 892,200, pub. 3-17-70. Cl. 52.
Independent Grocers' Alliance Distributing Co., Chicago, Ill. 892,070, pub. 3-17-70. Cl. 38.
Independent Pneumatic Tool Co., Chicago, to Thor Power Tool Co., Aurora, Ill. 522,225, ren. 6-2-70. Cl. 7.
Independent Pneumatic Tool Co., Chicago, to Thor Power Tool Co., Aurora, Ill. 522,599, ren. 6-2-70. Cl. 15.
Independent Stave Co., Inc., d.b.a. Benjamin Harrison Furniture, Lebanon, Mo. 892,019, pub. 3-17-70. Cl. 32.
Indian Head Inc.: See—
Linen Thread Co., Inc., The.
Industrial Specialties Co., Dayton, Ohio. 892,195, pub. 3-17-70. Cl. 52.
Information Management Inc., San Francisco, Calif. 892,214, pub. 3-17-70. Cl. 101.
Infotronics Corp., Houston, Tex. 892,000, pub. 7-2-68. Cl. 26.
Ingersoll Products Corp., Winchester, to William Underwood Co., Watertown, Mass. 523,774, ren. 6-2-70. Cl. 46.
Innovar, Inc., Dunnell, Minn. 891,921, pub. 3-17-70. Cl. 19.
International Playtex Corp., Dover, Del. 892,082, pub. 3-17-70. Cl. 39.
International Telephone & Telegraph Corp., New York, N.Y. 892,234, pub. 3-17-70. Cl. 107.
Ives Laboratories Inc.: See—
Ives-Cameron Co., Inc.
Ives-Cameron Co., Inc., to Ives Laboratories Inc., New York, N.Y. 527,884, ren. 6-2-70. Cl. 18.
Jabes Cliff & Co. Ltd., Walsall, England. 519,125, ren. 6-2-70. Cl. 3.
Jahn's Since 1897, Inc., Brooklyn, N.Y. 768,278, can. Cl. 100.
Jantzen Inc.: See—
Jantzen Knitting Mills.
Jantzen Knitting Mills, by Jantzen Inc., Portland, Ore. 213,637, 12(c) pub. 6-2-70. Cl. 39.
Jantzen Knitting Mills, by Jantzen Inc., Portland, Ore. 289,140, 12(c) pub. 6-2-70. Cl. 39.
Jantzen Knitting Mills, by Jantzen Inc., Portland, Ore. 418,710, 12(c) pub. 6-2-70. Cl. 39.
Jantzen Knitting Mills, by Jantzen Inc., Portland, Ore. 418,729, 12(c) pub. 6-2-70. Cl. 39.
Jantzen Knitting Mills, by Jantzen Inc., Portland, Ore. 423,812, 12(c) pub. 6-2-70. Cl. 39.
Jimenez, Hector, d.b.a. Jimenez Travel Agency, San Francisco, Calif. 768,292, can. Cl. 105.
Joanna Western Mills Co., Chicago, Ill. 522,415, ren. 6-2-70. Cl. 42.
Joanna Western Mills Co., Chicago, Ill. 522,825, ren. 6-2-70. Cl. 42.
Jofranst Corp., Los Angeles, Calif. 892,088, pub. 3-17-70. Cl. 39.
Johnson, Dorothy E., Detroit, Mich., to Chap Stick Co., Lynchburg, Va. 273,217, ren. 6-2-70. Cl. 51.
Jones & Lamson Machine Co., Springfield, Vt., to Textron Inc., Providence, R.I. 522,634, ren. 6-2-70. Cl. 23.
Joplin Federal Savings & Loan Association, Joplin, Mo. 892,219, pub. 3-17-70. Cl. 102.
K-M Products, Inc., Troy, Mich. 891,983, pub. 3-17-70. Cl. 23.
Kaspar Wire Works, Inc., Shiner, Tex. 891,994, pub. 3-17-70. Cl. 28.

Keobler Co., Elmhurst, Ill. 892,184, pub. 6-17-69. Cl. 46.
 Kelly-Springfield Tire Co., The, Cumberland, Md. 891,873, pub. 8-17-70. Multiple Class (Classes 6, 21, and 35).
 Keltec, Inc., Elkhart, Ind. 891,982, pub. 3-17-70. Cl. 23.
 Kendall Co., The, Walpole, Mass. 891,881, pub. 3-17-70. Multiple Class (Classes 1, 2, 6, 16, 18, 22, 23, 29, 31, 39, 42, 44, and 52).
 Kern Foods, Inc., City of Industry, Calif. 892,137, pub. 3-17-70. Cl. 46.
 Keystone Cooperative Grape Association, North East, Pa. 822,325, ren. 6-2-70. Cl. 45.
 Kiki Undies Corp., New York, N.Y. 892,078, pub. 3-17-70. Cl. 39.
 Kimberly-Clark Corp., Neenah, Wis. 529,562, ren. 6-2-70. Cl. 37.
 Kiplinger Washington Agency, Inc., The. The Kiplinger Washington Editors, Inc., Washington, D.C. 518,819. Am. 7(d). Cl. 38.
 Klopman Mills, Inc., Rockleigh, N.J. 892,106, pub. 3-17-70. Cl. 42.
 Klopman Mills, Inc., Rockleigh, N.J. 892,111, pub. 3-17-70. Cl. 42.
 Knoebel Mercantile Co., Denver, Colo. 524,771, ren. 6-2-70. Cl. 46.
 Knox Hat Co., Inc., to Hat Corp. of America, New York, N.Y. 271,311, ren. 6-2-70. Cl. 42.
 Knox Hat Co., Inc., to Hat Corp. of America, New York, N.Y. 271,345, ren. 6-2-70. Cl. 42.
 Kousel Industrial Co., Ltd., Tokyo, Japan. 891,977, pub. 3-17-70. Cl. 23.
 Kracke, Donald R.: See—
 Rickle Tickle, Inc.
 Kresge, S. S., Co., Detroit, Mich. 892,158-9, pub. 3-17-70. Cl. 46.
 Kysor Industrial Corp.: See—
 Stone Machinery Co.
 Land O'Lakes Creameries, Inc., Minneapolis, Minn. 768,810, can. Cl. 46.
 Lane Ltd., New York, N.Y. 524,033, ren. 6-2-70. Cl. 17.
 Larson, Donald G., d.b.a. Hopkins Food Equipment, Hopkins, Minn. 892,136, pub. 3-17-70. Cl. 46.
 Laser Systems Corp., Ann Arbor, Mich. 891,949, pub. 3-17-70. Cl. 21.
 Lashin, David M., Bridgeport, Conn. 768,206, can. Cl. 38.
 Lawry's Foods, Inc., Los Angeles, Calif. 892,138, pub. 3-17-70. Cl. 46.
 Lear Siegler, Inc., Salem, Ill. 891,989, pub. 3-17-70. Cl. 23.
 Leggett & Platt Inc.: See—
 Leggett & Platt Spring Bed & Mfg. Co.
 Leggett & Platt Spring Bed & Mfg. Co., to Leggett & Platt Inc., Carthage, Mo. 278,876, ren. 6-2-70. Cl. 32.
 Lever Brothers Co., New York, N.Y. 892,009-10, pub. 3-17-70. Cl. 29.
 Lever Brothers Co., New York, N.Y. 892,243. Cl. 52.
 Lever Brothers Co., New York, N.Y. 892,245. Cl. 52.
 Lincoln Rochester Trust Co., Rochester, N.Y. 892,220, pub. 9-4-69. Cl. 102.
 Linsen Thread Co., Inc., The, by Indian Head Inc., New York, N.Y. 444,057, 12(c) pub. 6-2-70. Cl. 7.
 Load King Trailer Co.: See—
 Berberich Mfg. Co.
 London Winery Ltd., London, Ontario, Canada. 892,241. Cl. 47.
 Lowell Corp., Worcester, Mass. 891,986, pub. 3-17-70. Cl. 23.
 Macgregor Men's Toilettries, Inc., New York, N.Y. 768,158, can. Cl. 28.
 Madison Chemical Corp., Maywood, Ill. 892,196, pub. 6-25-69. Cl. 52.
 Magical Productions, Inc., Los Angeles, Calif. 892,235, pub. 3-17-70. Cl. 107.
 Magnavox Co., The: See—
 Buescher Band Instrument Co.
 Mal-Kal, Inc., Fort Lauderdale, Fla. 891,900, pub. 3-17-70. Multiple Class (Classes 15 and 34).
 Malone, Charles H., & Co., Inc., New York, N.Y. 891,896, pub. 3-17-70. Cl. 14.
 Mann, Robert, New York, N.Y. 768,084, can. Cl. 10.
 Marconi Co. Ltd., The, London, England. 891,943, pub. 3-17-70. Cl. 21.
 Maremont Corp., d.b.a. Saco-Lowell & Saco-Lowell Maremont, Chicago, Ill. 892,067, pub. 3-17-70. Cl. 38.
 Markem Corp., Keene, N.H. 891,870, pub. 3-17-70. Cl. 6.
 Markwell Mfg. Co., Inc., New York, N.Y. 525,988, ren. 6-2-70. Cl. 29.
 Markwell Mfg. Co., Inc., New York, N.Y. 529,373, ren. 6-2-70. Cl. 23.
 Marquette Corp.: See—
 Marquette Mfg. Co., Inc.
 Marquette Mfg. Co., Inc., Minneapolis, to Marquette Corp., St. Paul, Minn. 522,346, ren. 6-2-70. Cl. 14.
 Marriott Corp., Washington, D.C. 892,211, pub. 3-17-70. Cl. 100.
 Mara, Inc., Wilmington, Del. 522,027. Am. 7(d). Cl. 46.
 Martindale, Ralph & Co., Ltd., Birmingham, England. 76,844, ren. 6-2-70. Cl. 23.
 Marvella Inc., New York, N.Y. 768,180-1, can. Cl. 28.
 Master Made Paints, Inc., Joplin, Mo. 768,096, can. Cl. 16.
 Mattel, Inc., Hawthorne, Calif. 891,967-73, pub. 3-17-70. Cl. 23.
 Matthiessen & Hegeler Zinc Co., La Salle, Ill. 892,041, pub. 3-17-70. Cl. 34.
 May, Fannie, Candy Shops, Inc., Chicago, Ill. 768,249, can. Cl. 46.
 May, Stephen C., Atlanta, Ga. 768,219, can. Cl. 39.
 McCall Farms, Inc., Effingham, S.C. 892,166, pub. 3-17-70. Cl. 46.
 McColpin-Christie Corp. Ltd., to Christie Electric Corp., Los Angeles, Calif. 529,953, ren. 6-2-70. Cl. 21.
 McCormack & De Cordova, Plainview, Tex. 768,296, can. Cl. 107.
 McIlhenny Co., Avery Island, La. 892,144, pub. 3-17-70. Cl. 46.
 Memorex Corp., Santa Clara, Calif. 891,944, pub. 3-17-70. Multiple Class (Classes 21 and 26).
 Meyer, Wm. W., & Sons, Inc., Skokie, Ill. 891,997, pub. 3-17-70. Cl. 23.
 Michelin Tire Corp., Lake Success, N.Y. 892,045, pub. 3-17-70. Cl. 35.
 Milico Mfg. Co., Libertyville, Ill. 768,143, can. Cl. 22.
 Miller, Charles Frederick, d.b.a. C. F. Miller & Associates, Anaheim, Calif. 891,932, pub. 3-17-70. Cl. 21.
 Milway, Inc., Milwaukee, Wis. 768,097, can. Cl. 16.
 Miniquip, Inc., Reno, Nev. 768,107, can. Cl. 21.
 Minnesota Valley Canning Co., to Green Giant Co., Le Sueur, Minn. 524,329, ren. 6-2-70. Cl. 46.
 Mister Sandwich, Inc., Sarasota, Fla. 892,205, pub. 3-17-70. Cl. 100.
 Mr. Swiss of America, Inc., from Mr. Swiss of America, Inc., Oklahoma City, Okla. 892,117, pub. 3-21-67. Multiple Class (Classes 45 and 46).
 Mixermobile Manufacturers, Inc., Portland, Ore. 768,155, can. Cl. 23.
 Mobil Temp, Inc., Brighton, Mich. 892,083, pub. 3-17-70. Cl. 34.
 Model Products Corp., Mt. Clemens, Mich. 891,966, pub. 3-17-70. Cl. 23.
 Monrovia Nursery Co., Azusa, Calif. 892,250. Cl. 1.
 Monsanto Chemical Co., to Monsanto Co., St. Louis, Mo. 529,106, ren. 6-2-70. Cl. 15.
 Monsanto Co.: See—
 Monsanto Chemical Co.
 Morse, Thomas, Association, The, Chicago, Ill. 892,072, pub. 3-17-70. Cl. 38.
 Morrison & Morrison, The Dallas, Ore. 891,978, pub. 3-17-70. Cl. 23.
 Murphy G. C., Co., McKeesport, Pa. 892,095, pub. 3-17-70. Cl. 39.
 Murray-Allen Imports, Inc., New Rochelle, N.Y. 892,156, pub. 3-17-70. Cl. 46.
 N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. 891,946, pub. 3-17-70. Cl. 21.
 Nardoni Floor Co., Southfield, Mich. 892,229, pub. 3-17-70. Cl. 103.
 National Beryllia Corp., Haskell, N.J. 891,866, pub. 3-17-70. Cl. 5.
 National Cash Register Co., The, Dayton, Ohio. 892,001, pub. 3-17-70. Cl. 26.
 National Coronet, Inc., d.b.a. Illinois Shade Division of National Coronet, Inc., Chicago Heights, Ill. 892,028, pub. 3-17-70. Cl. 32.
 National Registry of Registered Nurse Therapists, Inc., Minneapolis, Minn. 892,289, pub. 3-17-70. Cl. 200.
 Natvar Corp., Woodbridge, N.J. 891,947, pub. 5-6-69. Cl. 21.
 Neoline, Inc., Cornwall Bridge, Conn. 768,113-14, can. Cl. 21.
 Neuberger & Berman, New York, N.Y. 892,226, pub. 3-17-70. Cl. 102.
 New Broom, Inc., Asheboro, N.C. 892,008, pub. 3-17-70. Cl. 29.
 New Home Sewing Machine Co., Inc., The, Santa Monica, Calif. 891,992-3, pub. 3-17-70. Cl. 28.
 Newway Engineering Co., Newway, Mich. 768,163, can. Cl. 23.
 Neypac Paper Corp., New York, N.Y. 892,056, pub. 3-17-70. Cl. 37.
 Nicwood Corp., Finleyville, Pa. 768,135, can. Cl. 22.
 Norcor, Inc., New York, N.Y. 892,060, pub. 3-17-70. Cl. 38.
 Norsk Hydro A.S.: See—
 Norsk Hydro-Elektrisk Kvaestofabriksselskab
 Norsk Hydro-Elektrisk Kvaestofabriksselskab, to Norsk Hydro A.S., Oslo, Norway. 523,090, ren. 6-2-70. Cl. 6.
 North American Philips Corp., from Consolidated Electronics Industries Corp., New York, N.Y. 891,939, pub. 3-17-70. Cl. 21.
 Northwestern National Insurance Co. of Milwaukee, Wisconsin, Milwaukee, Wis. 892,221, pub. 3-17-70. Cl. 102.
 Noxell Corp., Baltimore, Md., from Standard International Corp., Andover, Mass. 891,871, pub. 2-3-70. Cl. 6.
 Nu-Vita Products, Inc., Pittsburgh, Pa. 891,882, pub. 3-17-70. Cl. 9.
 Oakland Metal Fabricators, Inc., Warren, Mich. 892,040, pub. 3-17-70. Cl. 34.
 Okonite Co., The, Passaic, N.J. 892,108, pub. 3-17-70. Cl. 42.
 Onthank, G. W., Co., Des Moines, Iowa. 892,017, pub. 3-17-70. Cl. 32.
 Oster, John, Mfg. Co., Milwaukee, Wis. 891,956, pub. 3-17-70. Cl. 21.
 Owens-Corning Fiberglass Corp., Toledo, Ohio. 892,109, pub. 3-17-70. Cl. 42.
 Owens-Corning Fiberglass Corp., Toledo, Ohio. 892,112, pub. 3-17-70. Cl. 48.
 Oxygen Equipment & Service Co., d.b.a. Ozequip, Chicago, Ill. 892,115, pub. 3-17-70. Cl. 44.
 PPG Industries, Inc., Pittsburgh, Pa. 892,032, pub. 3-17-70. Cl. 35.
 Paddock of California, Inc., Albany, N.Y. 891,888, pub. 3-17-70. Multiple Class (Classes 13, 23, and 103).
 Page Milk Co., The, Tulsa, Okla. 892,148, pub. 3-17-70. Cl. 46.
 Parents' Magazine Enterprises, Inc., New York, N.Y. 892,068, pub. 3-17-70. Cl. 38.
 Parke, Davis & Co., Detroit, Mich. 892,116, pub. 3-17-70. Cl. 44.

Pechiney, Compagnie de Produits Chimiques et Electro-metallurgiques, Societe Anonyme, Paris, France. 891,930, pub. 3-17-70. Cl. 21.
 Penn Controls, Inc.: See—
 Penn Electric Switch Co.
 Penn Electric Switch Co., Goanen, Ind., to Penn Controls, Inc., Oak Brook, Ill. 529,826, ren. 6-2-70. Cl. 21.
 Penn-Dale Knitting Mills, Inc., Sinking Spring, Pa. 892,080, pub. 3-17-70. Cl. 39.
 Peoples Drug Stores, Inc., Washington, D.C. 892,236, pub. 3-17-70. Cl. 107.
 Perfect Knit Togs, Inc., New York, N.Y. 768,233, can. Cl. 39.
 Perreault, Girard, & Cie, S.A.: See—
 Graef, Jean H., Inc.
 Pet Inc., St. Louis, Mo. 892,160, pub. 3-17-70. Cl. 46.
 Peterson-Biddick Co., Wadena, Minn. 527,070, ren. 6-2-70. Cl. 46.
 Pfister & Vogel Tanning Co., Inc., Milwaukee, Wis. 891,852, pub. 3-17-70. Cl. 1.
 Pfister, Chas., & Co., New York, N.Y. 768,259, can. Cl. 46.
 Pinnacle Products, Inc.: See—
 Bryan, Michelle, Cosmetics, Inc.
 Pioneer Engineering Works, Inc., Minneapolis, Minn., to Portec, Inc., Oak Brook, Ill. 528,014, ren. 6-2-70. Cl. 23.
 Plasticrete Corp., Hamden, Conn. 523,487, ren. 6-2-70. Cl. 34.
 Plasticrete Corp., Hamden, Conn. 523,757, ren. 6-2-70. Cl. 12.
 Plastics, Inc., St. Paul, Minn. 892,084, pub. 3-17-70. Cl. 34.
 Plasworld, Inc., Santa Ana, Calif. 891,862, pub. 3-17-70. Cl. 2.
 Pollak, Henry, Inc., New York, N.Y. 267,817, ren. 6-2-70. Cl. 39.
 Polymer Corp., The, Reading, Pa. 520,998, ren. 6-2-70. Cl. 6.
 Potage, Inc.: See—
 Pioneer Engineering Works, Inc.
 Post, E. L., & Co., Inc., New York, N.Y. 891,898, pub. 3-17-70. Cl. 14.
 Powers & Eaton Industries, Inc.: See—
 Star-New Bra, Inc.
 Pratt & Whitney Aircraft Co., The, Hartford, to United Aircraft Corp., East Hartford, Conn. 272,651, ren. 6-2-70. Cl. 33.
 Pre-O-Form Corp., Warsaw, Ind. 768,061, can. Cl. 2.
 Price-Plaster Brass Mfg. Co., Pacolma, Calif. 891,891, pub. 3-17-70. Cl. 13.
 Procter & Gamble Co., The, Cincinnati, Ohio. 892,194, pub. 3-14-67. Cl. 52.
 Product Research & Development Corp., Blue Bell, Pa. 891,907, pub. 11-18-69. Cl. 16.
 Products of the Behavioral Sciences Inc., Campbell, Calif. 891,965, pub. 3-17-70. Cl. 22.
 Professional Pharmaceutical Co. Inc., San Antonio, Tex. 523,508, ren. 6-2-70. Cl. 18.
 Pronto Pacific, Inc., Moses Lake, Wash. 892,170, pub. 3-17-70. Cl. 46.
 Pye Records Ltd., London, England. 892,050, pub. 3-17-70. Cl. 36.
 Pyle-National Co., The, Chicago, Ill. 891,933, pub. 3-27-68. Cl. 21.
 Pyrotek Corp., Mamaroneck, N.Y. 768,115, can. Cl. 21.
 Ralston Purina Co., St. Louis, Mo. 892,167, pub. 3-17-70. Cl. 46.
 Ralston Purina Co., St. Louis, Mo., 892,176, pub. 3-17-70. Cl. 46.
 Randolph, C. William, Chattanooga, Tenn. 892,048, pub. 3-17-70. Cl. 36.
 Randolph Mfg. Co., Inc., from Randolph Mfg. Co., Inc., Randolph, Mass. 892,077, pub. 3-17-70. Cl. 38.
 Rankin Mfg., Inc., Swains Creek, Mich. 891,917, can. Cl. 19.
 Reading Co., Philadelphia, Pa. 892,232, pub. 3-17-70. Cl. 105.
 Realty Programming Corp., The, St. Louis, Mo. 892,218, pub. 3-17-70. Cl. 101.
 Reckitt & Colman (Overseas) Ltd.: See—
 Reckitt & Colman Ltd.
 Reckitt & Colman Ltd., New York, N.Y. to Reckitt & Colman (Overseas) Ltd., Hull, England. 84,235, ren. 6-2-70. Cl. 6.
 Reddi Wig Co. of Phila., Inc., d.b.a. Glen Farms, Philadelphia, Pa. 892,139-41, pub. 3-17-70. Cl. 46.
 Regency Chauffeurs Services, Inc., Bronx, N.Y. 892,216, pub. 3-17-70. Cl. 101.
 Rembrandt Lamp Corp., Chicago, Ill., by Scott & Fetzer Co., The, Lakewood, Ohio. 411,857, 12(c) pub. 6-2-70. Cl. 82.
 Remco Industries, Inc., Harrison, N.J. 768,146-8, can. Cl. 22.
 Remington Arms Co., Inc., Bridgeport, Conn. 530,361, ren. 6-2-70. Cl. 9.
 Rensselaer Corp., Norristown, Pa. 892,064, pub. 12-9-69. Cl. 38.
 Re-Nu Mfg. Co., Inc., San Jose, Calif. 768,154, can. Cl. 23.
 Republic Corp., Chatsworth, Calif. 891,987, pub. 3-17-70. Cl. 28.
 Republic Drill & Tool Co., Chicago, Ill., to Avildsen Tools & Machines, Inc., New York, N.Y. 523,122, ren. 6-2-70. Cl. 28.
 Resero, Sociedad Anonima, Industrial, Agropecuaria, Comercial y Financiera, Buenos Aires, Argentina. 892,178, pub. 3-17-70. Cl. 47.
 Retail News Bureau, New York, N.Y. 527,481-2, ren. 6-2-70. Cl. 38.
 Revere Copper & Brass Inc., New York, N.Y. 891,955, pub. 3-17-70. Cl. 21.
 Revere Knitting Mills, Inc., Wakefield, Mass. 768,218, can. Cl. 39.
 Rhodia Inc., New Brunswick, N.J. 891,868, pub. 3-17-70. Cl. 6.
 Richards, J. A., Co., Kalamazoo, Mich. 891,886, pub. 3-17-70. Multiple Class (Classes 12 and 28).
 Rickle Tickle, Inc., Rolling Hills Estates, Calif., from Donald R. Kracke, d.b.a. Rickle Tickle Sticks, Long Beach, Calif. 892,076, pub. 3-17-70. Cl. 39.
 Rico Sales Corp., Aliceville, Ala. 891,900-11, pub. 3-17-70. Cl. 15.
 Rieck, E. C., Paint Co., Inc., Chicago, Ill. 891,901, pub. 3-5-69. Cl. 16.
 Rink's Department Stores, Inc., Cleveland, Ohio. 892,097-3, pub. 3-17-70. Cl. 39.
 Rockland Bleach & Dye Works Co., The, Baltimore, Md. 768,239, can. Cl. 42.
 Roebbing Luggage Corp., New York, N.Y. 891,864, pub. 3-17-70. Cl. 3.
 Rowe Industries Inc.: See—
 De Armond, Harry.
 Rule Industries, Inc., Beverly Farms, Mass. 891,954, pub. 3-17-70. Multiple Class (Classes 21 and 23).
 S.A.S. Antonio Bertolini, Turin, Italy. 892,240. Cl. 48.
 S & C Electric Co., Chicago, Ill. 523,573, ren. 6-2-70. Cl. 21.
 S & C Electric Co., Chicago, Ill. 523,551, ren. 6-2-70. Cl. 21.
 SCM Corp., Cleveland, Ohio. 891,906, pub. 3-17-70. Cl. 18.
 Safeguard Mfg. Corp., Atlanta, Ga. 891,984, pub. 3-17-70. Cl. 21.
 Saf-T-Brake Valve Co., Cuyahoga Falls, Ohio. 768,088, can. Cl. 13.
 Salviam, Paris, France. 892,230, pub. 3-17-70. Cl. 103.
 Sandy's Franchise, Inc., Kewanee, Ill. 892,208, pub. 3-17-70. Cl. 100.
 Sanitary Paper Products Co., Inc.: See—
 Hers Mfg. Corp.
 Schaffner, Hart & Marx, Chicago, Ill. 521,161, ren. 6-2-70. Cl. 39.
 Scarves by Vera, Inc., New York, N.Y. 892,110, pub. 3-17-70. Cl. 42.
 Scheele, Wm. & Sons Co., Inc., Fort Wayne, Ind. 892,119, pub. 3-17-70. Cl. 45.
 Schenck Corp., Chicago, Ill. 892,020, pub. 3-17-70. Cl. 32.
 Schoolhouse Industries, Inc., Farmingdale, N.Y. 892,042, pub. 3-17-70. Cl. 38.
 Schrafft, W. F., & Sons Corp., d.b.a. Schrafft's, Boston, Mass. 892,135, pub. 3-17-70. Cl. 46.
 Schwabert Meat Co., Minneapolis, Minn. 892,130, pub. 3-17-70. Cl. 46.
 Scientific Columbus, Inc.: See—
 Esterline Corp.
 Scott & Fetzer Co., The: See—
 Rembrandt Lamp Corp.
 Seaboard Seed Co., Bristol, Ill. 891,884, pub. 3-17-70. Cl. 10.
 Seaway Foods, Inc., Bedford Heights, Ohio. 892,123, pub. 3-17-70. Cl. 46.
 Security Blanket Co., The, Malibu, Calif. 892,183, pub. 3-17-70. Cl. 50.
 Sedlmayr, Jean Compo, d.b.a. Stone Balloon One Queen Cross, Christianstad, St. Croix, Virgin Islands. 892,204, pub. 3-17-70. Cl. 100.
 Sexaner, J. A., Mfg. Co., Inc., White Plains, N.Y. 891,995, pub. 3-17-70. Cl. 23.
 Shaw, John, Ltd., Worksop, England. 891,879, pub. 3-17-70. Cl. 7.
 Sheaffer, W. A., Pen Co., to Textron Inc., Fort Madison, Iowa. 521,096, Am. 7(d). Cl. 11.
 Shell Oil Co., New York, N.Y. 768,252, can. Cl. 46.
 Sheller-Globe Corp., Toledo, Ohio. 892,039, pub. 3-17-70. Cl. 34.
 Shield International Corp., Washington, D.C. 892,061, pub. 3-17-70. Cl. 38.
 Sieber & McIntyre, Inc., Chicago, Ill. 892,047, pub. 3-17-70. Multiple Class (Classes 36 and 38).
 Sitronics, Inc., Pittsburgh, Pa. 768,178, can. Cl. 26.
 Simplex Nail & Mfg. Corp.: See—
 Crescent Brass & Fin Co.
 Sinclair Refining Co., New York, N.Y., to Atlantic Richfield Co., Philadelphia, Pa. 268,547, ren. 6-2-70. Cl. 15.
 Singer Co., The, New York, N.Y. 768,125, can. Cl. 21.
 Sioux Steam Cleaner Corp., Beresford, S. Dak. 892,038, pub. 3-17-70. Cl. 34.
 Skill Craft Playthings, Inc.: See—
 Skill-Craft Playthings Co.
 Skill-Craft Playthings Co., from Skill Craft Playthings, Inc., Chicago, Ill. 891,928, pub. 7-1-69. Multiple Class (Classes 21 and 26).
 Sloan, Earl S., Boston, Mass., to Standard Laboratories, Inc., Morris Plains, N.J. 76,554, ren. 6-2-70. Cl. 18.
 Smith, A. O., Harvestore Products, Inc., Arlington Heights, Ill. 768,253, can. Cl. 46.
 Smith Bros. Mfg. Co., Carthage, Mo. 768,230, can. Cl. 39.
 Smith, Florence, from Elizabeth Stowall and Florence Smith, d.b.a. Nek-ker Pillows, St. Petersburg, Fla. 892,015, pub. 3-19-69. Cl. 32.
 Snook, W. B., Mfg. Co., Inc., Palo Alto, Calif. 891,831, pub. 3-25-69. Cl. 21.
 Soap Products, Inc., North Hollywood, Calif. 892,197, pub. 3-17-70. Cl. 52.
 Societe d'Exploitation de la S.A. Henry Malsert, Lyon (Rhone), France. 892,064, pub. 3-17-70. Cl. 37.
 Societe Generale du Magnesium, Paris, France. 891,894, pub. 3-17-70. Cl. 14.
 Southern Stores, Inc., Jacksonville, Fla. 891,936-8, pub. 9-10-68. Cl. 21.
 Southland Corp., The, Dallas, Tex. 851,540. Am. 7(d). Cl. 46.
 Sperry Rand Corp.: See—
 Vickers, Inc.
 Spiratone, Inc., Flushing, N.Y. 892,006, pub. 3-17-70. Cl. 26.
 Splax-Sarco Ltd., Cheltenham, England. 891,890, pub. 3-17-70. Multiple Class (Classes 13, 26, and 31).

- Standard Brands Inc.: See—
Clinton Industries, Inc.
Standard Garments, Inc., Baltimore, Md. 892,075, pub. 3-17-70. Cl. 39.
Standard International Corp.: See—
Nozell Corp.
Standard Laboratories, Inc.: See—
Sloan, Earl S.
Standard Oil Co., Flemington, N.J. 891,856, pub. 3-17-70. Cl. 1.
Standard Packaging Corp., Stamford, Conn. 892,055, pub. 3-17-70. Cl. 37.
Star-New Era, Inc. from Powers & Eaton Industries, Inc., South Hackensack, N.J. 891,988, pub. 3-17-70. Cl. 23.
Star-Tronics, Inc., Georgetown, Mass. 768,116, can. Cl. 21.
Steak n Shake, Inc., Bloomington, Ill. 892,164, pub. 3-17-70. Cl. 46.
Stix, Baer & Fuller Co., St. Louis, Mo., to Associated Dry Goods Corp., New York, N.Y. 267,624, ren. 6-2-70. Cl. 39.
Stone Machinery Co., Manlius, N.Y., to Kysor Industrial Corp., Cadillac, Mich. 526,624, ren. 6-2-70. Cl. 4.
Stowall, Elizabeth: See—
Smith, Florence.
Stuart Co., The, Pasadena, Calif., to Atlas Chemical Industries, Inc., Wilmington, Del. 528,444, ren. 6-2-70. Cl. 6.
Stuart, D. A., Oil Co., Ltd., Chicago, Ill. 892,198, pub. 3-17-70. Cl. 52.
Stulis, Rudolph, Co., St. Louis, Mo., to Bond Stores, Inc., New York, N.Y. 273,610, ren. 6-2-70. Cl. 39.
Suit Outlet, Inc., The, Graham, N.C. 892,087, pub. 3-17-70. Cl. 39.
Sultime Inc., New York, N.Y. 768,214, can. Cl. 39.
Summer, Mollie, d.b.a. The Nut Hut, New York, N.Y. 892,121, pub. 7-8-69. Cl. 46.
Sun Chemical Corp., New York, N.Y. 891,869, pub. 3-17-70. Cl. 6.
Sunny Farms, Inc., Edison, Calif. 892,251. Cl. 46.
Superior Continental Corp., Hickory, N.C. 891,957, pub. 3-17-70. Cl. 21.
Superior Tea & Coffee Co., Chicago, Ill. 892,132, pub. 7-8-69. Cl. 46.
Supermarkets General Corp., Cranford, N.J. 892,179, pub. 3-17-70. Cl. 47.
Swingle, John C., Medina, Ohio. 891,860, pub. 3-17-70. Cl. 2.
Symington Wayne Corp.: See—
Dresser Industries, Inc.
Syntronics, Inc., Canoga Park, Calif. 768,167, can. Cl. 26.
T.A.D. Avanti, Inc., Paramount, Calif. 891,958, pub. 3-17-70. Cl. 21.
Tailored Baby Inc., Van Nuys, Calif. 768,221, can. Cl. 39.
Tantalum Mining Corp. of Canada Ltd., Toronto, Ontario, Canada. 891,850, pub. 12-24-68. Cl. 1.
Technology Communication, Inc., New York, N.Y. 892,069, pub. 3-17-70. Cl. 38.
Terminal Designs, Inc., Brooklyn, N.Y. 768,119, can. Cl. 21.
Textron Inc.: See—
Jones & Lamson Machine Co.
Thor Power Tool Co.: See—
Independent Pneumatic Tool Co.
Thornton's Flav-O-Rich Bakery, Inc., d.b.a. Thornton's Flav-O-Rich Bakery and Thornton's Bakery, Memphis, Tenn. 892,125, pub. 3-17-70. Cl. 46.
Thorpe, Harrison M., Jr., d.b.a. Harris-Sol Products, Natick, Mass. 768,275, can. Cl. 52.
Tidewater Equipment Co., by Tidewater Equipment Co., Inc., Brunswick, Ga. 443,317, 12(c) pub. 6-2-70. Cl. 19.
Tinnam Motor Inn Corp., Wilmington, N.C. 892,210, pub. 3-17-70. Cl. 100.
Toepfer, S., Inc., New York, N.Y. 749,393, can. Cl. 28.
Tootsie Roll Industries, Inc., Chicago, Ill. 892,171, pub. 3-17-70. Cl. 46.
Topper Corp., from De Luxe Topper Corp., Elizabeth, N.J. 891,964, pub. 3-17-70. Cl. 22.
Transceiver Corp., The, Dallas, Tex. 892,231, pub. 6-10-69. Cl. 104.
Trend Imports Corp., New York, N.Y. 892,104, pub. 3-17-70. Cl. 40.
Tri-Data, Mountain View, Calif. 891,951-2, pub. 3-17-70. Cl. 21.
True, C. Wayne, Watertown, S. Dak. 891,926, pub. 10-24-67. Cl. 21.
Turret Imports Ltd., New York, N.Y. 892,180, pub. 3-17-70. Cl. 47.
Twin Beauty by Mazzarelli Cosmetics, Granada Hills, Calif. 892,189, pub. 3-17-70. Cl. 51.
2 In 1-Shinola-Bixby Corp., New York, N.Y. to CPC International Inc., Englewood Cliffs, N.J. 269,636, ren. 6-2-70. Cl. 29.
Tyson's Foods, Inc., Springdale, Ark. 892,133, pub. 3-17-70. Cl. 46.
Underwood, William, Co.: See—
Ingersoll Products Corp.
- Uneda Doll Co., Inc., Brooklyn, N.Y. 768,145, can. Cl. 22.
Uneda Doll Co., Inc., Brooklyn, N.Y. 891,961, pub. 3-17-70. Cl. 22.
Union Bag-Camp Paper Corp., New York, N.Y. 768,197, can. Cl. 37.
Union Oil Co. of California, Los Angeles, Calif. 892,046, pub. 3-17-70. Cl. 35.
Uniroyal, Inc., New York, N.Y. 891,853, pub. 3-17-70. Cl. 1.
Unistrut Corp., Wayne, Mich. 768,297, can. Cl. 12.
United Aircraft Corp.: See—
Pratt & Whitney Aircraft Co., The.
United States Lawn Tennis Association, New York, N.Y. 892,057, pub. 3-17-70. Cl. 38.
United States Playing Card Co., The, to The United States Playing Card Co., Cincinnati, Ohio. 522,851, ren. 6-2-70. Cl. 22.
Universal Oil Products Co., Des Plaines, Ill. 892,011, pub. 5-14-68. Cl. 31.
Universal Oil Products Co., d.b.a. UOP Fabsteel Division, Des Plaines, Ill. 892,202, pub. 3-17-70. Multiple Class (Classes 100 and 103).
Universal Plastics Co., Seattle, Wash. 768,054, can. Cl. 1.
Valdora, Albert, d.b.a. Valdora Produce Co., Riverside, Calif. 892,168, pub. 3-17-70. Cl. 46.
Valley Paper Co., Holyoke, Mass. 528,954, ren. 6-2-70. Cl. 37.
Van Brode Milling Co., Inc., Clinton, Mass. 892,162, pub. 3-17-70. Cl. 46.
Vance Industries, Inc., Chicago, Ill. 768,089, can. Cl. 13.
Van Dusen Aircraft Supplies, Inc., Minneapolis, Minn. 892,225, pub. 3-17-70. Cl. 102.
Van Raalte Co. Inc., to Van Raalte Co. Inc., New York, N.Y. 268,626, ren. 6-2-70. Cl. 39.
Vickers, Inc., d.b.a. Waterbury Tool Division, Waterbury, Conn., to Sperry Rand Corp., Troy, Mich. 523,317, ren. 6-2-70. Cl. 23.
Voith J. M. Gesellschaft Mit Beschränkter Haftung, Heidenheim, Germany. 891,981, pub. 4-15-69. Cl. 23.
Wallens & Co., Inc., Cincinnati, Ohio. 768,316, can. Cl. 103.
Warner Electric Brake & Clutch Co.: See—
Warner Electric Brake Mfg. Co.
Warner Electric Brake Mfg. Co., to Warner Electric Brake & Clutch Co., South Beloit, Ill. 527,445, ren. 6-2-70. Cl. 21.
Warren-Teed Pharmaceuticals, Inc., Assignee of S. F. Durst & Co., Inc., Columbus, Ohio. 886,978, cor. Cl. 6.
Washburn Crosby Co., to General Mills, Inc., Minneapolis, Minn. 78,218, ren. 6-2-70. Cl. 46.
Washington Cannery Cooperative, Vancouver, Wash., to Diamond Fruit Growers, Inc., Hood River, Oreg. 514,764, ren. 6-2-70. Cl. 46.
Webb Products Co., San Bernardino, Calif. to Dap, Inc., Dayton, Ohio. 525,483, ren. 6-2-70. Cl. 12.
Weingarten, John G., Springfield, Pa. 891,999, can. Cl. 24.
Weller, B. I., Co., Chicago, to B. I. Weller Co., Inc., East Chicago, Ill. 525,630, ren. 6-2-70. Cl. 23.
Wetly-Way Products Inc., Cedar Rapids, Iowa. 891,980, pub. 3-17-70. Cl. 23.
Western Aviation Magazine, Inc., Los Angeles, Calif. 768,302, can. Cl. 38.
Westinghouse Air Brake Co., Pittsburgh, Pa. 891,857, pub. 3-17-70. Multiple Class (Classes 2, 13, 23, 26, 31, and 35).
Westvaco Corp., New York, N.Y. 891,863, pub. 3-17-70. Cl. 2.
Whink Products Co., Eldora, Iowa. 768,268, can. Cl. 51.
Whink Products Co., Eldora, Iowa. 768,271, can. Cl. 52.
White Stag Mfg. Co., Portland, Oreg. 892,100-2, pub. 3-17-70. Cl. 39.
Williams Mfg. Co., The, Portsmouth, Ohio. 892,090, pub. 3-17-70. Cl. 39.
Williams Patent Crusher & Pulverizer Co., Inc., St. Louis, Mo. 891,998, pub. 3-17-70. Cl. 23.
Wilson & Co., Inc., Chicago, Ill., from Textron Inc., Providence, R.I. 892,127, pub. 3-17-70. Cl. 46.
Windbreaker, Inc., Danville, Ill. 852,798, cor. Cl. 39.
Wind-O-Lite Corp., Brownsville, Tex. 768,266, can. Cl. 50.
Winn, Francis W., d.b.a. Computer Language Research, Dallas, Tex. 892,218, pub. 3-17-70. Cl. 101.
Wiremold Co., The, Hartford, Conn. 528,812, ren. 6-2-70. Cl. 21.
Womack Electronics, Inc., Danville, Va. 891,927, pub. 4-30-68. Cl. 21.
Woodworth, C. B., Sons Co., The, Rochester, to Bourjois, Inc., New York, N.Y. 77,154, ren. 6-2-70. Cl. 51.
Woolworth, F. W., Co., New York, N.Y. 768,228, can. Cl. 39.
Woronov, Marvyn, Pawtucket, R.I. 892,215, pub. 10-28-69. Cl. 101.
Wyandotte Chemicals Corp., Wyandotte, Mich. 891,872, pub. 3-17-70. Cl. 6.
Yazersky, Martin, d.b.a. Medberg Products, Caldwell, N.J. 768,272, can. Cl. 52.
Young Bazaar Corp., New York, N.Y. 892,091, pub. 3-17-70. Cl. 39.

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PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of May 1970

Examiner affirmed	115	D. 214,832	8,450,070	3,475,090	3,482,457
Examiner affirmed in part	17	D. 214,971	8,451,503	3,475,108	3,482,651
Examiner reversed	37	3,149,998	3,453,420	3,475,217	3,482,724
		3,270,185	3,455,000	3,475,274	3,483,003
		3,282,388	3,455,099	3,475,883	3,483,200
		3,312,946	3,455,609	3,475,406	3,483,553
		3,378,549	3,455,825	3,475,682	3,483,875
		3,385,818	3,455,829	3,476,302	3,483,897
		3,393,130	3,455,830	3,476,306	3,484,057
		3,401,196	3,455,882	3,476,937	3,484,192
		3,402,031	3,456,273	3,477,258	3,484,388
		3,403,235	3,458,592	3,478,087	3,484,406
		3,409,579	3,458,919	3,478,157	3,484,515
		3,412,035	3,460,843	3,478,615	3,484,858
		3,412,036	3,460,873	3,478,781	3,485,288
		3,413,433	3,462,876	3,478,921	3,485,358
		3,414,356	3,463,748	3,479,075	3,485,581
		3,417,152	3,464,824	3,479,117	3,485,644
		3,417,327	3,465,339	3,479,243	3,485,942
		3,419,630	3,467,619	3,479,259	3,486,229
		3,422,633	3,467,988	3,479,397	3,486,577
		3,423,010	3,468,201	3,479,433	3,486,899
		3,423,402	3,468,686	3,479,772	3,487,120
		3,428,043	3,468,690	3,480,718	3,487,129
		3,433,654	3,469,151	3,480,857	3,487,131
		3,434,970	3,469,884	3,480,880	3,487,144
		3,434,981	3,469,828	3,481,057	3,487,157
		3,436,625	3,470,253	3,481,068	3,487,321
		3,440,301	3,470,560	3,481,327	3,487,404
		3,442,848	3,470,876	3,481,468	3,487,517
		3,443,950	3,471,774	3,481,528	3,487,986
		3,445,462	3,472,877	3,481,855	3,488,200
		3,446,619	3,473,010	3,481,925	3,488,622
		3,446,824	3,473,887	3,481,979	3,489,387
		3,446,852	3,474,065	3,482,105	3,489,977
		3,447,472	3,474,069	3,482,163	3,490,988
		3,447,937	3,474,343	3,482,302	3,491,165
		3,449,279	3,474,421	3,482,372	3,491,629

United States Delegation to the Diplomatic
Conference on Patent Cooperation Treaty

The Departments of State and Commerce announced on May 8 the membership of the United States Delegation to the Diplomatic Conference to be held in Washington May 25-June 19 on the proposed Patent Cooperation Treaty.

Co-Chairmen of the Delegation are Eugene M. Braderman, Deputy Assistant Secretary of State for Commercial Affairs and Business Activities, and William E. Schnyler, Jr., Commissioner of Patents, Patent Office, U.S. Department of Commerce.

Alternate Co-Chairmen are George R. Clark, General Patent Counsel, Sunbeam Corporation, Chicago, Illinois, and Harvey J. Winter, Acting Chief, Business Practices Division, Department of State.

Senior Advisors are James W. Brennan, International Patent Specialist, Patent Office, U.S. Department of Commerce, and Edward F. McKie, Jr., Patent Attorney, Birch, Swindler, McKie and Beckett, Washington, D.C.

Advisors are Donald W. Banner, General Patent Counsel, Borg-Warner Corporation, Chicago, Illinois; Robert B. Benson, General Patent Attorney, Allis-Chalmers Corporation, Milwaukee, Wisconsin; Pasquale J. Federico, Examiner-in-Chief (retired), U.S. Patent Office; H. Dieter Hoinkes, International Patent Specialist, Patent Office; W. Brown Morton, Jr., Patent Attorney, McLean, Morton and Boustead, Washington, D.C.; Sylvia E. Nilsen, Deputy Assistant Legal Adviser, Department of State; and William A. Smith, III, International Patent Specialist, Patent Office.

Delay in Issuance of Patents

On June 9 and June 16, 1970, only reissue patents, design patents, and trademark registrations will be issued due to circumstances involving the printing of patent specifications. Delays may occur in filling orders for newly issued patents.

WILLIAM E. SCHUYLER, Jr.,
Commissioner of Patents.
May 21, 1970.

New Applications	Received During April 1970
Patents	9009
Designs	599
Plant Patents	0
Reissues	49
	9663

Disclaimers and Dedications

3,348,932.—Ira Kukin, West Orange, N.J. ADDITIVE COMPOSITIONS TO IMPROVE BURNING PROPERTIES OF LIQUID AND SOLID. Patent dated Oct. 24, 1967. Disclaimer and dedication filed Apr. 29, 1970, by the assignee, Apollo Chemical Corp.

Hereby enters this disclaimer to claims 1-9 of said patent and dedicates said patent to the Public.

Issue—June 9, 1970	
Designs	46—No. 217,754 to No. 217,799, incl.
Reissues	7—No. 26,903 to No. 26,909, incl.
Def. Pub.	8—No. T875,006 to No. T875,013, incl.
Total	61

Disclaimers

3,888,838.—Paul A. Marchant, Kansas City, Mo., and Robert A. Coerver, Jr., New York, N.Y. AEROSOL SPRAY CONTAINER FOR RECEIVING A FLUID COMMODITY DISPENSING PRESSURIZED CARTRIDGE. Patent dated June 18, 1968. Disclaimer filed Apr. 13, 1970, by the assignees, Imco Container Company and Precision Valve Corporation.

Hereby enters this disclaimer to claim 1 of said patent.

3,302,927.—James J. Gray, St. Joseph, Mo. PORTABLE AUTOMOBILE LIFT HAVING TRANSVERSELY ADJUSTABLE BUMPER-ENGAGING MEANS AND SEPARATE FRAME-ENGAGING MEANS. Patent Dated Feb. 7, 1967. Disclaimer filed Apr. 27, 1970, by the assignee, Gray Manufacturing Company, Inc.

Hereby enters this disclaimer to claims 4, 5 and 6 of said patent.

3,402,007.—Erwin Gerlach, Stockholm, Sweden. FILM FEEDING MECHANISM. Patent Dated Sept. 17, 1968. Disclaimer filed Apr. 3, 1970, by the assignee, Eastman Kodak Company.

Hereby enters this disclaimer to claim 22 of said patent.

Patents Available for Licensing or Sale

D. 215,183. FLEXIBLE TRANSMISSION FOR THREE-WHEELED VEHICLE. James H. Mayland, 173 Southwood Drive, Old Bridge, N.J., 08857.

D. 217,313. A COMBINED LETTER OPENER AND HOLDER FOR STAMPS OR THE LIKE. Harold C. Dowit, 11835 Sheldon St., Sun Valley, Calif., 91352.

D. 217,308. POSTAGE STAMP SEALER OR THE LIKE. Thomas P. O'Donnell, 220 Highland Blvd., Brooklyn, N.Y., 11207.

3,126,021. GRINDING DEVICE. Mrs. Robert G. May, 493 Hollywood Blvd., Webster, N.Y., 14580.

3,134,336. METHOD AND APPARATUS FOR PRESSURE COUNTERBALANCE IN FLUID MACHINES. Charles K. Muth, Kalamazoo, Mich. Correspondence to: Laurence and Laurence, 1753 Warner Bldg., Washington, D.C., 20004.

3,391,746. HELICOPTER CONTROL SYSTEM. Marc A. Cardosa, Bronx, N.Y. Correspondence to: Elton Industries, Inc., 33 E. 42nd St., New York, N.Y., 10017.

3,198,482. SLIDING GATE VALVE SECTOR-TYPE STORAGE TANK CLOSURE. Josef Bertels, Biersdorf, Germany. Correspondence to: Elton Industries, Inc., 30 E. 42nd St., New York, N.Y., 10017.

3,358,858. UNLOADING SYSTEM FOR BULK MATERIALS. W. P. Zabel, Jr., 671 N. Town and River Drive, Fort Myers, Fla., 33901.

3,495,398. TENNIS BALL PICK-UP AND COLLECTING MACHINE. Peter Kiarhos, 9 Minot Ave., Acton, Mass., 01720.

3,499,267. COOKING KIT FOR CAMPERS AND THE LIKE. Philip L. Carpenter, Rte. 1, Box 282, Buena Vista, Colo., 81211.

3,499,742. METHOD OF PRODUCING CELLULOSE. Kurt Gerull, et al. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York, N.Y., 10017.

3,490,185. SANDING DEVICE. Melvin J. Briggs. Correspondence to: Robert J. Doherty, 5959 S. Cicero Ave., Chicago, Ill., 60638.

3,490,609. PIPE LAYING SLEDS. Norman M. Poole, 16694 Maple St., Fountain Valley, Calif., 92708.

3,498,652. CONTROLLED RELEASE MEDICAMENT. Charles W. Hartman, 1435 G St., NW., Suite 933, Washington Bldg., Washington, D.C., 20005.

3,498,271. ROTARY ENGINE. Dale F. Marean, 1626 First St., Manhattan Beach, Calif., 90266.

3,510,027. DRIPLESS POURER FOR SYRUP OR THE LIKE. Anna J. Falls, 3729 Ashford Ave., Fort Worth, Tex., 76123.

The following 3 patents are offered by John W. Barnd, 32 Hollybrook Road, Paramus, N.J.

3,351,128. MULTI-ZONE TEMPERATURE CONTROL.

3,496,991. FLUID TEMPERATURE REGULATING METHOD AND APPARATUS.

3,515,245. MULTI-ZONE TEMPERATURE CONTROL.

General Motors Corporation is prepared to grant non-exclusive licenses under the following patent upon reasonable terms. Applications for license may be addressed to the Director, Patent Section, General Motors Bldg., 3044 W. Grand Blvd., Detroit, Mich., 48202.

3,368,795. COMPOSITE ROTOR BLADE HAVING HIGH MODAL FREQUENCIES.

General Electric Company is prepared to grant non-exclusive licenses under the following 95 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: Patent Counsel, Metallurgical Products Department, General Electric Company, Box 237, GPO, Detroit, Mich., 48232.

3,426,822. TIRE STUD.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Housewares Division, 1285 Boston Ave., Bridgeport, Conn., 06602.

3,462,585. ELECTRICALLY HEATED BEDCOVER CONTROLLER.

Applications for license under the following patent may be addressed to: Department Patent Counsel, Apollo Systems, General Electric Co., P.O. Box 2500, Daytona Beach, Fla., 32015.

3,466,526. FREQUENCY TO DC CONVERTER.

Applications for license under the following patent may be addressed to: Division Patent Counsel, General Electric Company, Space Division, P.O. Box 8555, Philadelphia, Pa., 19101.

3,488,263. CODEPOSITION OF METALLICS AND NON-METALLICS.

Applications for license under the following patent may be addressed to: Patent Counsel, Communication and Control Devices Department, General Electric Company, Waynesboro, Va., 22980.

3,490,136. METHOD OF ASSEMBLING ONE OBJECT WITHIN ANOTHER.

Applications for license under the following 8 patents may be addressed to: Department Patent Counsel, Apollo Systems, General Electric Company, P.O. Box 2500, Daytona Beach, Fla., 32015.

3,487,269. SLOTTED CORDWOOD MODULE.

3,491,588. STRAIN SENSITIVE TUNNEL DIODE.

3,496,564. DISCRETE DATA INDICATOR.

Applications for license under the following 6 patents may be addressed to: Division Patent Counsel, Power Transmission Division, General Electric Company, 6901 Elmwood Ave., Philadelphia, Pa., 19142.

2,767,371. SATURABLE REACTOR.

2,852,758. LIGHTING UNIT.

2,853,654. LIGHTING CIRCUIT CURRENT REGULATOR.

2,898,525. LIGHT RESPONSIVE SYSTEM.

2,901,659. PRINTED CIRCUIT SURGE RELIEF GAP.

3,328,578. TROUGH-SHAPED LUMINAIRE WITH HOUSING.

Applications for license under the following 10 patents may be addressed to: Patent Counsel, Appliance and Television Group, General Electric Company, Appliance Park, Louisville, Ky., 40225.

3,027,444. HYDRAULIC THERMOSTAT BULB SHIELDING MEANS.

3,172,987. COMBINATION ELECTRIC AND ELECTRONIC OVENS.

3,172,995. SURFACE HEATING UNIT FOR SPILL-PROOF COOKTOP.

3,195,013. POWER SUPPLY SYSTEMS FOR MAGNETRON DEVICES.

3,275,236. HYDROULIC THERMOSTATIC SYSTEM WITH SLAVE PISTON ASSEMBLY.

3,324,273. CONTROL AND POWER SUPPLY NETWORKS FOR MAGNETRONS.

3,430,886. CABINET HAVING REVERSIBLY MOUNTABLE DOORS.

3,463,905. COMBINATION INFINITE HEAT SWITCH AND SOLID-STATE TEMPERATURE CONTROL.

3,482,079. SELF-ADJUSTING HINGE FOR SURFACE HEATING UNIT.

3,495,416. CONTROL CIRCUIT FOR REFRIGERATOR INCLUDING CASE HEATER MEANS.

Applications for license under the following 25 patents may be addressed to: Patent Counsel, Consumer Electronics Division, General Electric Company, Bldg. 1, Room 104, Electronics Park, Syracuse, N.Y., 13201.

3,313,548. PHONOGRAPH WITH AIR HOSE FOR CLEANING RECORDS.

3,336,031. PORTABLE RECORDING APPARATUS.

3,349,198. PORTABLE RECORDING APPARATUS WITH IMPROVED ACTUATING MEANS FOR A SWITCH.

3,364,442. TRANSISTORIZED CAPACITIVE REACTANCE FREQUENCY MODULATOR.

3,365,545. NETWORK TO COUPLE A LOAD TO A TRANSISTORIZED AMPLIFIER.

3,375,011. DUAL DETENT MECHANISM FOR A PORTABLE RECORDER-REPRODUCER.

3,384,719. STEREOPHONIC SPEAKER ARRANGEMENT.

3,386,741. ACTUATING MECHANISM FOR PORTABLE RECORDING APPARATUS.

3,486,744. PHONOGRAPH ADAPTOR.

3,387,849. TONE ARM AND CARTRIDGE COMBINATION.

3,389,226. ELECTROSTATIC LOUDSPEAKER.

3,404,311. INDICATOR LAMP CIRCUITRY FOR A RECORDER.

3,413,007. TURNTABLE BEARING STRUCTURE.

3,416,804. STEREOPHONIC SPEAKER ARRANGEMENT FOR A PHONOGRAPH.

3,432,168. TURNTABLE BRAKING MECHANISM FOR RECORDING APPARATUS.

3,439,106. VOLUME CONTROL APPARATUS FOR A SINGLE-TONE ELECTRONIC MUSICAL INSTRUMENT.

2,958,735. VIDEO TAPE RECORDING SYSTEM.

3,021,385. FLAME OBSERVATION SYSTEM.

D. 201,306. CONSOLE PHONOGRAPH OR THE LIKE.

D. 201,524. PHONOGRAPH OR THE LIKE.

D. 206,906. PORTABLE STEREO PHONOGRAPH.

D. 206,907. PORTABLE PHONOGRAPH OR SIMILAR ARTICLE.

D. 206,908. CONSOLE PHONOGRAPH OR SIMILAR ARTICLE.

D. 209,334. COMBINED COVER AND SPEAKER ENCLOSURE FOR PHONOGRAPH OR THE LIKE.

D. 211,792. CASE FOR A PORTABLE RECORDER OR SIMILAR ARTICLE.

Applications for license under the following 48 patents may be addressed to: Manager-Patent and Technology Marketing Operation, General Electric Company, 1 River Road, Schenectady, N.Y., 12305.

3,115,244. WIRE CONNECTOR ASSEMBLY.

3,131,082. RARE EARTH-IRON GARNET PREPARATION.

3,155,136. APPARATUS FOR FABRICATING WIRE-CONNECTOR ASSEMBLIES.

3,218,431. SELF-FOCUSING ELECTRON APPARATUS.

3,225,252. ELECTROHYDRAULIC SYSTEM AND WORKING FLUIDS THEREFOR.

3,228,880. LUBRICANTS CONTAINING CHARGE TRANSFER COMPLEXES OF IODINE AND AROMATIC COMPOUNDS.

3,233,885. STABILIZATION CIRCUIT FOR ELECTRON BEAM APPARATUS.

3,234,429. ELECTRICAL CIRCUIT FOR ELECTROHYDRAULIC SYSTEM.

3,243,570. AUTOMATIC GAS PRESSURE CONTROL FOR ELECTRON BEAM APPARATUS.

3,265,855. METHOD AND APPARATUS FOR DRILLING SMALL HOLES.

3,265,929. HIGH CURRENT COLD CATHODE GAS TRIODE CONTROL SYSTEM.

3,283,294. APPARATUS FOR AN ELECTROHYDRAULIC SYSTEM.

3,308,346. GROUND CABLE CONTINUITY CHECK CIRCUIT.

3,320,043. A METHOD FOR MAKING THIN FILM GLASS ELEMENTS.

3,320,475. NONTHERMIONIC HOLLOW CATHODE ELECTRON BEAM APPARATUS.

3,332,286. THERMOCOUPLE PRESSURE GAUGE PER EXAMINER.

3,337,512. PRODUCT AND PROCESS FOR PREPARING (POLY(2,6-XYLYLSULFONATES)).

3,389,670. GAS SUPPORTED CAM FOLLOWER SYSTEM.

3,352,007. METHOD FOR PRODUCING HIGH CRITICAL FIELD SUPERCONDUCTING CIRCUITS.

3,354,344. FLUID-WORKING SPARK DISCHARGE ELECTRODE ASSEMBLY.

3,372,395. VLF ANTENNA.

3,373,119. TERNARY METALLIC OXIDE AGGLOMERATE AND METHOD OF PREPARATION.

3,374,117. PROCESS AND APPARATUS FOR REMOVAL OF WIRE ENAMEL INSULATION.

3,384,888. OPTICAL APPARATUS.

3,389,997. PROCESS FOR RECOVERING INTRA-CELLULAR PROTEINS.

3,401,473. APPARATUS FOR MARINE EXCAVATION.

3,402,120. ELECTROHYDRAULIC PURIFICATION APPARATUS.

3,408,474. ELECTRON BEAM WELDING APPARATUS.

3,411,035. MULTI-CHAMBER HOLLOW CATHODE LOW VOLTAGE ELECTRON BEAM APPARATUS.

3,416,128. ELECTRODE FOR ELECTROHYDRAULIC SYSTEMS.

3,428,776. METHOD AND APPARATUS FOR EXTRACTING A CHARGED PARTICLE BEAM INTO A HIGHER PRESSURE ATMOSPHERE.

3,432,846. TRAVELLING SIGN CONTROLLED BY LOGIC CIRCUITRY AND PROVIDING PLURALITY OF VISUAL DISPLAY EFFECTS.

3,433,299. HEAT EXCHANGER OF POROUS METAL.

3,445,568. ELECTROHYDRAULIC PROCESS FOR PRODUCING ANTIGENS.

3,458,417. PREPARATION OF CARBON PARTICLES ELECTROHYDRAULICALLY.

3,477,504. POROUS METAL AND PLASTIC HEAT EXCHANGER.

3,477,523. HYDRAULICALLY OPERATED TOOL FOR OPERATING UNDER NONATMOSPHERIC PRESSURES.

3,479,158. PROCESS FOR ZIRCONIDING AND HAFNIDING BASE METAL COMPOSITIONS.

3,479,159. PROCESS FOR TITANIDING BASE METALS.

3,479,483. ELECTRON BEAM WELDER.

3,482,499. ROTATABLE IMAGE CAMERA UTILIZING AXIALLY ALIGNED IMAGE ROTATING PRISM.

3,486,064. HOLLOW CATHODE NONTHERMIONIC ELECTRON BEAM SOURCE WITH REPLACABLE LINER.

3,489,536. PROCESS FOR SCANDIDING METALS.

3,489,537. ALUMINIDING.

3,489,538. PROCESS FOR YTTRIDING AND RARE EARTHIDING.

3,489,539. MANGANIDING.

3,489,540. PROCESS FOR NICKELIDING, COBALIDING AND IRONIDING BASE METAL COMPOSITIONS.

3,489,559. PROCESS FOR LITHIDING.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner
F. H. BRONAUGH, Deputy Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JUNE 2, 1970

PATENT EXAMINING GROUPS	Actual Filing Date of Oldest New Case Awaiting Action
CHEMICAL EXAMINING GROUPS	
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	5-24-68
GENERAL ORGANIC CHEMISTRY, GROUP 120—J. MARCUS, Director Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	1-12-68
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	8-08-68
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—A. P. KENT, Director Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	5-02-68
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	3-04-68
ELECTRICAL EXAMINING GROUPS	
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—N. ANSHER, Director Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	3-07-69
SECURITY, GROUP 220—S. BOYD, Director Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	7-22-68
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—J. F. COUCH, Director Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	6-03-68
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	9-26-68
PHYSICS, GROUP 280—R. L. EVANS, Director Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	6-04-68
DESIGNS, GROUP 290—S. BOYD, Director Industrial Arts; Household, Personal and Fine Arts.	8-28-69
MECHANICAL EXAMINING GROUPS	
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Sorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	12-24-68
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—D. J. STOCKING, Director Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	8-06-68
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Typewriters; Stationery; Information Dissemination.	10-21-68
HEAT, POWER AND FLUID ENGINEERING, GROUP 340—C. F. GAREAU, Director Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission; Fluid Handling; Lubrication; Joint Packing.	5-21-69
CONSTRUCTIONS, SUPPORTS, TEXTILES, CLEANING, GROUP 350—T. J. HICKEY, Director Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes; Sewing Machines; Winding and Reeling.	2-03-69
Total number of pending applications (excluding Designs).....	184,066
Total number of Design applications pending.....	3,282

Expiration of patents: The patents within the range of numbers indicated below expire during June 1970, except those which may have expired earlier due to shortened terms under the provisions of Public Law 680, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 83rd Congress, approved August 23, 1964 (78 Stat. 764), or which may have had their terms curtailed by disclaimer under the provisions of 35 U.S.C. 253. Other patents, issued after the dates of the range of numbers indicated below, may have expired before the full term of 17 years for the same reasons, or have lapsed under the provisions of 35 U.S.C. 151.

Patents..... Numbers 2,640,195 to 2,644,158, inclusive
Plant Patents..... Numbers 1,191 to 1,200, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ARNON O. SNODDY, FRANCIS L. DIEHL, NORMAN R. SMITH
AND JOSEPH E. CALLEN

No. 8180. Decided January 22, 1970

[57 CCPA —; — F.2d —; 164 USPQ 299]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"DETERGENT COMPOSITION."
The decision of the Board of Appeals, refusing certain claims in an application entitled "Detergent Composition," as unpatentable over the prior art, is reversed.

APPEAL from Patent Office. Serial No. 452,855.

REVERSED.

Richard C. Witte, Thomas H. O'Flaherty, Robert B. Aylor, Watson, Cole, Grindle & Watson, William J. Daniel, for appellants.

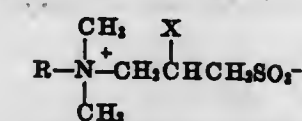
Joseph Schimmel (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before RICH, Acting Chief Judge, GANEY, Judge, sitting by designation, ALMOND, BALDWIN and LANE, Associate Judges

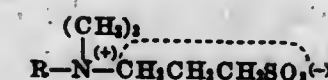
RICH, Acting Chief Judge, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1-9 of application Serial No. 452,855, filed May 3 1965, entitled "Detergent Composition." No claim has been allowed.

The invention relates to synthetic detergent compositions which are particularly effective for laundering fabrics in cool water having a temperature of from about 60° to about 90° F. The claimed compositions comprise from 4% to 35% of a zwitterionic, quaternary ammonium detergent having the formula



wherein R is an alkyl radical containing from 12 to 16 carbon atoms and X is hydrogen or a hydroxyl radical, and from 8% to 90% of an alkaline salt which is capable of "building" the detergency of the zwitterionic detergent and also capable of sequestering calcium and magnesium ions present in hard water. By way of explanation, appellants' brief shows that a "zwitterionic detergent" has both positively and negatively charged substituents, giving it an "inner salt" structure, e.g.,



When the positively and negatively charged groups are quaternary ammonium and carboxylate respectively, the detergent is called a "betaine," and when they are quaternary ammonium and sulfonate, it is called a "sulfobetaine" (also "sultaine").

Claim 1 is representative of the appealed claims and reads:

1. A synthetic detergent composition, for the effective laundering of fabrics in water having a temperature of from about 60° F. to about 90° F., consisting essentially of:

(A) from about 4% to about 35% of a zwitterionic quaternary ammonium compound selected from the group consisting of (1) 3-(N,N-dimethyl-N-

alkylammonio)-propane-1-sulfonates and (2) 3-(N,N-dimethyl-N-alkylammonio)-2-hydroxypropane-1-sulfonates, wherein said alkyl radicals are selected from the group consisting of (a) hexadecyl radicals; (b) mixtures of alkyl radicals containing 14 and 16 carbon atoms; (c) alkyl radicals derived from tallow, and (d) alkyl radicals derived from coconut oil;

(B) from about 8% to about 90% of a detergency builder selected from the group consisting of pyrophosphates, tripolyphosphates, phytates, ethylenediaminetetraacetates and nitrilo triacetates, wherein the cation of said detergency builder is selected from the group consisting of sodium and potassium, and wherein the ratio of (A) to (B) by parts ranges from about 5:1 to about 1:25; and

(C) from 0% to about 88% of an additive selected from the group consisting of water, sodium sulfate and mixtures thereof.

Claims 2-9 all depend from claim 1.

The sole issue is whether the claimed invention would have been obvious within the meaning of 35 U.S.C. 103 in view of the following prior art patents:

Downing, 2,129,264, Sept. 6, 1938.

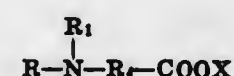
Unilever (British), 751,273, June 27, 1956.

Helberger (German), 1,018,421, Oct. 31, 1957.

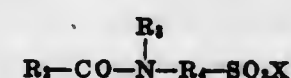
Goff, 2,950,255, Aug. 23, 1960.

Downing and Helberger each disclose classes of sulfobetaines of the same general type as those used by appellants and Helberger discloses at least one species falling within the limited class of sulfobetaines recited in appellants' claims. Downing's sulfobetaines are disclosed as being useful as "wetting, detergent, emulsifying and dispersing agents." Helberger's sulfobetaines are disclosed to have surface activity, cleansing capability, bacteriostatic effect, and good water solubility. Neither Downing nor Helberger mentions detergency builders or the use of their sulfobetaines in laundering operations or compositions.

Unilever discloses detergent compositions which include a mixture of an aliphatic N-substituted aminocarboxylic acid of the formula



and an aliphatic N-acyl aminoalkane sulfonate having the formula



X in these formulae representing a cation which forms a water-soluble salt and the R's variously representing hydrogen, aliphatic hydrocarbon radicals, or alkylene radicals. Unilever's compositions also contain an alkyl sulfate and a builder such as pentasodium tripolyphosphate and tetrasodium pyrophosphate. It is a stated object of Unilever's invention to produce "an 'all purpose' detergent composition" which would satisfy a range of conditions from dishwashing to standard laundering operations.

Goff discloses a hair shampoo containing "[a]ny of the usual ampholytic surface active agents or detergents," and mentions as an example "dodecyl beta-alanine," an N-substituted aminocarboxylic acid also disclosed in Unilever.

The first of two rejections is based on Unilever in view of the three remaining references. The Examiner was of the opinion that the only significant difference between appellants' and Unilever's compositions

is the substitution of one amphoteric (also "ampholytic") detergent for another and that such a substitution would be obvious in view of Helberger and Downing which, in the Examiner's view, "teach that said 'amphoterics' are well known detergents which are employed as are soaps and soap-like products," and Goff "who teaches that both betaines and the 'amphoterics' of the primary reference may be employed in detergent formulations." Appellants' brief informs us that an "amphoteric" detergent is one which can be anionic, cationic, or zwitterionic, depending on the pH of the solution in which it is dissolved.

The second rejection, which appears to be based on Helberger or Downing in view of Unilever, was expressed by the Examiner as follows:

Since it is well known and conventional to add builders to detergents, it would be clearly obvious to add builders to the compounds of Downing et al. or Helberger thus arriving at appellants' compositions. *Even though appellants' results are somewhat better*, such is not controlling when the art clearly suggests what appellants have done. [Emphasis added.]

The Board affirmed both of these rejections essentially for the reasons given by the Examiner.

Appellants have submitted a considerable amount of evidence to demonstrate that their compositions possess an *unexpectedly* high degree of cool water detergency which is not suggested by the prior art. Their specification contains a number of examples comparing the laundering effectiveness of three of their compositions, when forming part of a standardized commercial detergent composition, with "several well known and commonly used hot water detergent compounds" used under the same conditions. It is apparent from the results that appellants' compositions are definitely substantially superior performers in cool water (80° F.).

The record also contains three affidavits comparing a number of the sulfobetaines employed in the claimed compositions with two of the aliphatic N-substituted aminocarboxylic acids of Unilever. In the tests reported in two of the affidavits the detergents being compared were in aqueous solutions containing about one part of detergent per two parts of one of the detergency builders recited in claim 1. In the tests reported in the third affidavit, no builders were added. In sum, the results of these tests lead to the conclusion that while appellants' detergents without the builder perform no better than those of Unilever, appellants' claimed compositions, which include builders, are markedly superior for cool water laundering to those of Unilever used with a detergency builder. This, appellants contend, demonstrates that the superior cool water effectiveness of their compositions is due to the claimed combination of specific zwitterionic detergents and alkaline detergency builders and not "due to some inherent superiority of appellants' detergent compounds," and thus demonstrates that the cool water effectiveness of their compositions was truly unpredictable.

Having carefully considered the prior art and the arguments of record and the evidence of unexpected superiority of the claimed compositions, we do not find any substantial basis for concluding that the claimed subject matter as a whole would have been obvious within the meaning of § 103.

[1] The decision of the Board is therefore reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE ALAN J. LEMIN

No. 8230. Decided January 8, 1970

[57 CCPA —; 419 F.2d 910; 164 USPQ 205]

1. PATENTABILITY—EVIDENCE—COMPARATIVE TESTS—OBVIOUSNESS—HERBICIDES.

"We cannot agree with the Patent Office that the affidavit showings are *** worthless. Inspection of the comparative data readily indicates that N,N-diethyl-3-chlorobenzamide, N,N-diethyl-3,4-dichlorobenzamide, and N-isopropyl-3-chlorobenzamide possess demonstrated herbicidal superiority over 3-chlorobenzamide, N,N-diethyl-2-chlorobenzamide and N,N-dimethyl-3-chlorobenzamide. We think it logical to conclude from this that superiority is due to N-alkyl substitution of 2- and 3-carbon atoms on the 3-chlorobenzamide. We turn to the references to determine whether, on the record before us, such superiority is to be expected. Jones discloses effectiveness for amides of dichlorobenzoic acid but is silent as to N-alkyl substitution. Newcomer fairly discloses N-alkyl substitution of the amide of chlorobenzoic acids, stating, however, that the dichlorobenzoic acids possess no significant herbicidal activity. Neither reference fairly discloses monochlorination. On this basis we are unable to agree that the two references render obvious claims 6, 7 and 9-11 specifically reciting the above-mentioned compounds. We note that Newcomer does attribute effectiveness to the trichlorobenzoic acid and implicitly to its N-alkyl or N,N-dialkyl amides, and we fail to perceive error in the Patent Office's position with respect to claims 1-5 and 8."

2. SAME—COMPOSITION—RECITATION OF INTENDED USE—HERBICIDAL COMPOSITIONS.

"The Examiner also rejected composition claims 2, 4 and 10 as unpatentable over King. Since we have found the compositions of claims 2 and 4 to be obvious in view of Newcomer and Jones, we need only discuss claim 10. King discloses an N,N-dialkyl-3-chlorobenzamide, e.g., N,N-diethyl-3,4-dichlorobenzamide, in a pulverulent composition as being useful as an insecticide. Claim 10 calls for a herbicidal composition of N-isopropyl-3-chlorobenzamide and a granular carrier. We consider this composition to be an obvious variation on those disclosed by King. Although appellant has invented a new use therefor and properly claimed this use as a process, as in claim 9, we find in these circumstances that the word 'herbicidal' in the introduction clause is 'an indication of the broad field of contemplated use and is not a limitation to be considered in the question of patentability.'"

3. SAME—PARTICULAR SUBJECT MATTER—HERBICIDAL PROCESS AND COMPOSITIONS.

The refusal of certain claims to a herbicidal process and compositions, as unpatentable over the prior art, is affirmed as to some of the claims and reversed as to the others.

Appeal from Patent Office. Serial No. 430,483.

MODIFIED.

Carl A. Randles, Jr. (Eugene O. Retter, George T. Johannesen, of counsel) for appellant.

Joseph Schimmel (Leroy B. Randall, Jack E. Armore, of counsel) for the Commissioner of Patents.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN, LANE, Associate Judges, and RAO, Chief Judge, sitting by designation

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1-11 of appellant's application¹ as unpatentable over the prior art under 35 U.S.C. 103. No claim has been allowed.

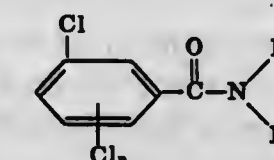
The invention relates to herbicidal compositions comprising N-alkylchlorobenzamides and to a process for preventing germination of undesired plant seeds and controlling the pre-emergence growth of

¹ Serial No. 430,483, filed February 4, 1965, for "Composition and Process."

such plants. It is preferred that the N-alkylchlorobenzamides be N,N-dialkyl-substituted on the amide nitrogen and the N,N-dialkyl-3-chlorobenzamides are said to be particularly efficacious. The herbicidal compositions comprise the active ingredients in dispersed or readily dispersible form and a carrier, with or without adjuvants, and can be interfused with soil by conventional methods. It is said that selective herbicidal activity can be obtained and that substantially complete inhibition of crabgrass, foxtail grass and Johnson grass has been observed with little phytotoxic effect among field crop plants such as corn, wheat, rye, soybeans and peanuts.

Claims 1 and 4 are illustrative:

1. The method of preventing germination of plant seeds and controlling pre-emergence growth of plants which comprises interfusing soil with a herbicidally effective amount of N,N-dialkyl-3-chlorobenzamide represented by the following structural formula:



wherein n is an integer from 0 to 2, inclusive, and R_1 and R_2 are alkyl of from 2 to 3 carbon atoms, inclusive.

4. Herbicidal composition comprising from about 0.25% to about 80% by weight of N,N-dipropyl-2,3,5-trichlorobenzamide and a solid granular carrier therefor having a particle size from about 10 to about 60 mesh.

Claims 5-9 are method claims restricted to species embraced by the formula of claim 1. Claims 2 and 3 define a herbicidal composition comprising N,N-dialkyl-3-chlorobenzamide in which the alkyl is from 2 to 3 carbon atoms, with a solid granular carrier, and in claim 3 additionally a minor amount of a surfactant. The composition of claim 10 utilizes N-isopropyl-3-chlorobenzamide and a solid granular carrier, while claim 11 employs the same active ingredient in an emulsifiable concentrate.

The references are:

Jones, 2,412,510, Dec. 10, 1946.

Newcomer et al., 3,014,965, Dec. 26, 1961.

King, Insecticides and Repellants, U.S.D.A. Handbook No. 69, pp. 4-10, 58-63, May 1954.

Pizey et al., Pre-Emergent Herbicidal Activity of Some Substituted Amides and Related Compounds, J.Sci. Food Agri., vol. 10, pp. 577-584 (1959).

Jones discloses that the amides of benzoic acid, its halogen and nitro substitution products such as 2,4-dichloro-; 2,5-dichloro-; and 3,5-dichloro- benzoic acid are effective herbicides.

Newcomer discloses the use of N,N-dialkylamide of 2,3,5,6-tetrachlorobenzoic acid as an active ingredient of a pre-emergent herbicidal composition. The patent states that field tests have been performed with the derivative N,N-diisopropyl polychlorobenzamide and that "by 'polychloro' is meant a material having a herbicidal amount and, as an active ingredient, the 2,3,5,6-tetrachlorobenzoate isomer of this invention." Data pertinent to herbicidal activity are presented only for benzoic acids although such having varying degrees of chlorination are shown to have high activity.

King discloses the insecticidal activity of a broad spectrum of compounds. Carriers in insecticidal compositions may be pyrophyllite or

snow-white filler. As active ingredients are specifically taught six compounds, all chlorinated benzamides having N,N'-dialkyl substitutions in the amide nitrogen of two or three carbon chain lengths.

Pizey, originally cited by the Examiner but later withdrawn from the rejection, is relied upon by appellant for its disclosure comparing the herbicidal activities of various substituted benzamides. The reference concludes that no general relationship could be drawn between pre-emergent herbicidal activity and chemical structure in view of the complex factors involved in such biological studies.

The Examiner was of the view that claims 1-11 were unpatentable over Newcomer in view of Jones on the ground that employment of the claimed benzamides as herbicides would appear obvious from Newcomer's teaching that the corresponding polychlorobenzamides are known herbicides, especially since it is known that benzamides having less than four chlorines in the ring are herbicidal as taught by Jones. The variation of the number of ring chlorines to obtain the same result was considered by the Examiner to be an obvious extension of the art. With respect to a Rule 132 affidavit of one Swank, Jr., submitted in support of appellant's contention that N,N-dialkyl-3-chlorobenzamides are herbicidally superior to related compounds when the amide nitrogen has an alkyl group of 2- or 3-carbon atoms, the Examiner opined:

*** the comparison of the unsubstituted benzamide in Table I of the Swank, Jr. affidavit is of little probative value as the Newcomer et al. reference is not directed to such compounds, while the diethyl-2-chlorobenzamide compound compared shows selectivity at best as 90% inhibition is attained against Johnson grass. *** [In] the instant disclosure, *** this compound is included as being an effective herbicide. The showing with respect to the dimethyl compound in Table II would not appear to be of any moment here as the prior art contains the aliphatic amides containing two and even more carbon atoms. So, at most, applicant has shown that it is possible to operate within the Newcomer et al. disclosure without obtaining the desired results, which in itself would not prove unobviousness.

Claims 2, 4 and 10 were further rejected by the Examiner as unpatentable over King on the ground that the reference's disclosure of the active ingredients with conventional agricultural carriers rendered the use of other conventional carriers and ratios for such known compounds obvious. The Board affirmed the Examiner's rejections.

The thrust of appellant's arguments in support of the contention that the Board erred in affirming the rejection of claims 1-11 is that his discovery that *meta*-chlorobenzamides, i.e., 3-chlorobenzamides, are particularly effective herbicides when the amide nitrogen is substituted by an alkyl group or groups consisting of two or three carbon atoms, is a surprising result totally unforeseeable in view of the teachings of the prior art. The Patent Office, it is alleged, relied solely upon readily recognizable structural considerations without properly evaluating the comparative showings of the affidavit evidence and the art suggestion of unpredictable activity among chlorobenzamides along with the art teaching away from the specific limited class.

More particularly, appellant points out that Newcomer, while claiming N,N-dialkyl-2,3,5,6-tetrachlorobenzamides, provides no factual data about herbicidal activity of the benzamides—only with respect to benzoic acid. Moreover, the reference states that dichlorobenzoic acid and 2,3,4,5-tetrachlorobenzoic acid possess no significant herbicidal activity. Nowhere, it is contended, does the reference specify the

orientations of the chlorine atoms on the benzene ring nor suggest that the acid should be converted to the N-alkyl amide in order to improve activity. Thus, appellant argues, no basis for rejecting the N-alkyl(ethyl or propyl)-3-chlorobenzamides on the basis of mere variations in numbers of chlorine atoms is provided. Jones, it is further argued, discloses only *unsubstituted* amides of halobenzoic acids with no suggestion of significant differences in activity between N,N-dimethyl amides and those having alkyl groups of two and three carbon atoms. Considering also that pre-emergent herbicidal activity is unpredictable as shown by Pizey and that the affidavit presents evidence of superior herbicidal activity, unobviousness, it is contended, is convincingly established.

The affidavit, apparently originally submitted to rebut the Pizey reference, compares first the herbicidal activity of N-isopropyl-3-chlorobenzamide, 3-chlorobenzamide itself and the N,N-diethyl-2-chlorobenzamide. The first named compound is shown to be superior. Also compared were N,N-dimethyl-3-chlorobenzamide tested by Pizey, N,N-diethyl-3-chlorobenzamide, N,N-diethyl-3,4-dichlorobenzamide and N,N-dipropyl-2,3,5-trichlorobenzamide. The latter three compounds of the invention were found to be significantly more active than the compound of Pizey. From these data, appellant concludes that N-alkyl substitution of 2- and 3-carbon atoms confers unexpected and desirable herbicidal activity to 3-chlorobenzamide, whether there be one, two or three chlorine atoms on the benzene ring.

The Solicitor counters by criticizing the affidavit showings for failure to make comparisons with the closest prior art relied upon by the Examiner and Board, namely, the Newcomer reference. Specifically, he argues that the first comparison includes a compound which was not the basis of any rejection and one which is within the scope of appellant's own disclosure in his specification. The second comparison, it is alleged, shows merely the superiority of three compounds within appellant's disclosure over one within the Pizey disclosure. The Solicitor thus concludes that nothing is shown with regard to Newcomer, which shows, at the minimum, tetrachlorinated benzamides with one chlorine atom always in the three position and further specifically names the N,N-diisopropyl-benzamide. The effectiveness of varying degrees of chlorination on the benzene ring is shown by Newcomer and Jones, he argues.

[1] We cannot agree with the Patent Office that the affidavit showings are so worthless. Inspection of the comparative data readily indicates that N,N-diethyl-3-chlorobenzamide, N,N-diethyl-3,4-dichlorobenzamide, and N-isopropyl-3-chlorobenzamide possess demonstrated herbicidal superiority over 3-chlorobenzamide, N,N-diethyl-2-chlorobenzamide and N,N-dimethyl-3-chlorobenzamide. We think it logical to conclude from this that superiority is due to N-alkyl substitution of 2- and 3-carbon atoms on the 3-chlorobenzamide. We turn to the references to determine whether, on the record before us, such superiority is to be expected. Jones discloses effectiveness for amides of dichlorobenzoic acid but is silent as to N-alkyl substitution. Newcomer fairly discloses N-alkyl substitution of the amide of chlorobenzoic acids, stating, however, that the dichlorobenzoic acids possess no significant herbicidal activity. Neither reference fairly discloses monochlorination. On this basis we are unable to agree that the two references render obvious claims 6, 7 and 9-11 specifically reciting the above-mentioned compounds. We note that Newcomer does attribute effectiveness to

the trichlorobenzoic acid and implicitly to its N-alkyl or N,N-dialkyl amides, and we fail to perceive error in the Patent Office's position with respect to claims 1-5 and 8.

[2] The Examiner also rejected composition claims 2, 4 and 10 as unpatentable over King. Since we have found the compositions of claims 2 and 4 to be obvious in view of Newcomer and Jones, we need only discuss claim 10. King discloses an N,N-dialkyl-3-chlorobenzamide, e.g., N,N-diethyl-3,4-dichlorobenzamide, in a pulverulent composition as being useful as an insecticide. Claim 10 calls for a herbicidal composition of N-isopropyl-3-chlorobenzamide and a granular carrier. We consider this composition to be an obvious variation on those disclosed by King. Although appellant has invented a new use therefor and properly claimed this use as a process, as in claim 9, we find in these circumstances that the word "herbicidal" in the introduction clause is "an indication of the broad field of contemplated use and is not a limitation to be considered in the question of patentability." *In re Hack*, 44 CCPA 954, 245 F.2d 246, 114 USPQ 161; *In re Riden*, 50 CCPA 1411, 318 F.2d 761, 138 USPQ 112; *In re Lemin*, 51 CCPA 942, 326 F.2d 437, 140 USPQ 273.

[3] Accordingly, the decision of the Board is affirmed with respect to claims 1-5, 8 and 10 and reversed with respect to claims 6, 7, 9 and 11.

MODIFIED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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3,106,693. (See 3,093,883.)

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3,251,234. (See 2,789,710.)

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3,463,324. (See 2,967,623.)

3,471,073. (See 3,176,894.)

3,479,975. (See 3,255,722.)

3,490,019, S. J. Popell, ROLLER, CLIP AND COMPOSITION OF MATTER; 3,493,722, same, HAIR CURLER STEAMER AND FACIAL SAUNA DEVICE; 3,493,723, same, ELECTRIC STEAMING APPLIANCE, filed Feb. 10, 1970, D.C., N.D. Ill. (Chicago), Doc. 70c295, *Popell Brothers, Inc. v. Schick Electric Inc.*

3,490,155. (See 3,255,722.)

3,493,722. (See 3,490,019.)

3,493,723. (See 3,490,019.)

Re. 25,834. (See 2,789,710.)

DEFENSIVE PUBLICATIONS

PUBLISHED JUNE 9, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O.G. 687. The abstracts of Defensive Publication applications are identified by distinctly numbered series and are arranged chronologically. The heading of each abstract indicates the number of pages of specification, including claims and sheets of drawings contained in the application as originally filed. The files of these applications are available to the public for inspection and reproduction may be purchased for 30 cents a sheet.

Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

T875,006

POLYMERIZATION PROCESS USING METAL BOROHYDRIDES AS CATALYSTS

Werner S. Zinnat, Wynnewood, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Continuation-in-part of application Ser. No. 408,671, Nov. 3, 1964. This application July 26, 1968, Ser. No. 747,804

Int. Cl. C08f 3/64, 3/76

U.S. Cl. 260—88.7

No Drawing. 11 Pages Specification

A process for the bulk or solution polymerization of acrylic monomers using alkaline metal- and alkaline earth metal borohydrides as catalysts. The process permits control of the steric configuration and physical properties of the resulting polymers.

T875,007

ANCHOR BAND

Robert C. Howard, Wyomissing, Pa., assignor to Wyomissing Corporation, Reading, Pa., a corporation of Pennsylvania

Filed Aug. 13, 1968, Ser. No. 752,205

Int. Cl. D04b 9/46

U.S. Cl. 66—172

3 Sheets Drawings. 14 Pages Specification



The disclosed anchor band 14 is an integrally knitted web having a narrow section 16 of substantially one-way stretch fabric which is designed to be sewn or otherwise attached to a garment or other article, in the present instance the girdle leg. Adjacent the narrow band of one-way stretch fabric, is a section 17 of two-way stretch fabric consisting of a knitted lace and preferably incorporating a decorative pattern. Beyond the two-way stretch section of the fabric is a wide band 18 of substantially one-way stretch fabric having on its inner surface a series of ribs or bands of foamed elastomeric gripping elements which are capable of anchoring the anchor band either to the flesh or to a garment positioned thereunder. Along the free edge of the latter section, a series of apertures 19 is formed during the knitting thereof. The apertures are designed to accommodate suitable fasteners, for example, the hooks 21 of conventional stocking supporters

22, so that one or more fasteners may be selectively engaged at any point along the band. The band is knitted so that the wales extend along the length of the band, with a covered elastomeric yarn incorporated in each wale of the band under a tension sufficient to produce the desired elasticity in the finished band. In the two-way stretch section of the band, any pattern yarns are preferably "textured" yarns which, because of the geometry of the yarn, exhibit the characteristics of being stretchable and capable of bulking when stretched and thereafter relaxed. Any pattern yarns in the substantially one-way stretch sections of the fabric are preferably rigid yarns of the same composition as the textured yarns but lacking the physical characteristics or geometry providing stretch.

T875,008

OFFSHORE UNDERWATER FACILITY

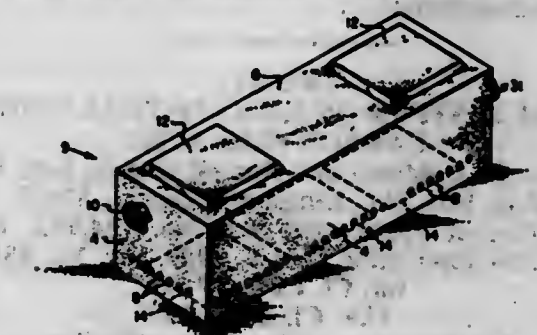
Walter R. Hnot, 1524 Deerpath, Mountainside, N.J. 07092

Filed Apr. 8, 1969, Ser. No. 815,521

Int. Cl. E02d 29/00

U.S. Cl. 61—46

5 Sheets Drawings. 16 Pages Specification



This invention is directed to a marine structure for the underwater storage of oil, or other water-immiscible fluids lighter than water, in offshore areas. The facility comprises a plurality of bottomless concrete receptacles which, due to their weight overcome buoyancy effects, and remain stationary on the sea bed even when filled with oil. The concrete underwater structure has further application as a production platform and as an offshore single point mooring facility.

T875,009

PREPARATION OF 2-CHLOROETHYL PHOSPHONATES

John M. Walts, Clark, N.J., assignor to GAF Corporation, New York, N.Y., a corporation of Delaware

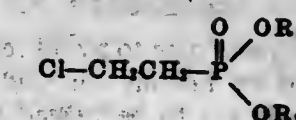
Filed Sept. 10, 1969, Ser. No. 856,832

Int. Cl. C07f 9/40

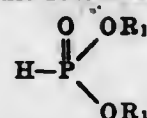
U.S. Cl. 260—970

No Drawing. 8 Pages Specification

A process for the preparation of a bis-(alkyl)-2-chloroethyl phosphonate of the formula:



which comprises reacting vinyl chloride with a bis-(alkyl) hydrogen phosphite of the formula:



wherein R_1 and R_2 are selected from the group consisting of alkyl of 1 to about 4 carbon atoms and chloroalkyl of 2 to about 4 carbon atoms, in the presence of a free-radical catalyst at a temperature of about 125° C. to 200° C.

T875,010

COPOLYESTER MOLDING COMPOSITION

Harry W. Coover, Jr., Newton H. Shearer, Jr., and Thomas H. Wicker, Jr., all of P.O. Box 511, Kingsport, Tenn. 37662

Continuation of application Ser. No. 533,873, Mar. 14, 1966. This application Nov. 20, 1969, Ser. No. 872,444
Int. Cl. C08g 17/08
U.S. Cl. 260—75

No Drawing. 18 Pages Specification

Improved copolyester molding compositions are provided consisting essentially of substantially equimolar amounts of the polymeric residues of (A) one or more dicarboxylic acids or their acid functioning derivatives and (B) a mixture of 20–45 mol percent of 2,2,4,4-tetramethyl-1,3-cyclobutanediol and 80–55 mol percent of 1,4-cyclohexanedimethanol. These compositions have the combination of a heat-distortion temperature, measured at 264 p.s.i. of stress of at least 95° C. and a 23° notched Izod impact strength of at least 13.0 ft. lb. per inch of notch. In a preferred embodiment of this invention, the copolyester molding composition contains equimolar amounts of the polymeric residues of a terephthalate ester and a mixture of 20–35 mol percent of 2,2,4,4-tetramethyl-1,3-cyclobutanediol with the remainder being 1,4-cyclohexanedimethanol.

T875,011

POLYESTERS OF 2,6-NAPHTHALENDI-CARBOXYLIC ACID

John R. Caldwell and Russell Gilkey, both of P.O. Box 511, Kingsport, Tenn. 37662

Continuation of application Ser. No. 704,991, Feb. 13, 1968. This application Dec. 8, 1969, Ser. No. 880,466
Int. Cl. C08g 17/08
U.S. Cl. 260—75

No Drawing. 14 Pages Specification

Highly polymeric, linear polyesters having improved hardness, solubility, and crystallization tendencies and which are useful as films, fibers, and molded objects are prepared from 2,6-naphthalenedicarboxylic acid and 2,2-dialkyl-1,3-propanediols (such as neopentyl glycol).

T875,012

THREADING OF PLASTIC PIPE

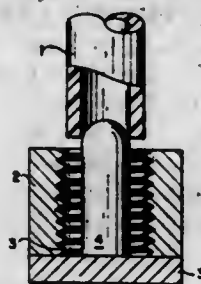
Howard K. Hobbs, Rte. 3, Blountville, Tenn. 37617

Filed Dec. 12, 1969, Ser. No. 884,425

Int. Cl. F16l 9/12, 11/12

U.S. Cl. 138—109

1 Sheet Drawing. 8 Pages Specification



Threading polyethylene pipe to avoid reducing its diameter is accomplished by heating the end portion of the pipe on which threads are to be placed to the softening point and then forcing the softened portion completely

into a closed-end cylindrical mold provided with internal threads of the desired depth, pitch and length. The mold is also provided with an internally disposed mandrel of approximately the same internal diameter of the pipe and rigidly attached to the closed end thereof, providing means whereby the softened plastic of the pipe structure will completely fill the threads of the mold along the length of the mandrel. Upon cooling, the thus threaded pipe can be unscrewed from the mold end and will have the desired threads externally disposed thereon without reduction of the diameter of the pipe and without reduction in its original pressure rating as determined by standard pressure rating tests.

T875,013

SUPERSENSITIZED SILVER HALIDE PHOTOGRAPHIC EMULSIONS

Cynthia G. Ulbing, Fairport, and Mary Jane W. Brizee, Pittsford, N.Y. (both % Kodak Park, Rochester, N.Y. 14650)

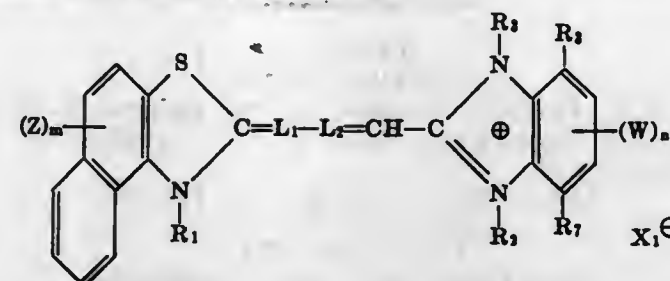
Filed Dec. 12, 1969, Ser. No. 884,703

Int. Cl. G03c 1/28

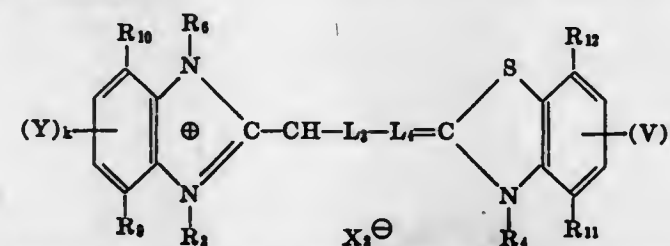
U.S. Cl. 96—104

No Drawing. 18 Pages Specification

Photographic silver halide emulsions are spectrally sensitized with a dye combination comprising (1) a benzimidazolophthalothiacarbocyanine dye and (2) a benzimidazolothiacarbocyanine dye. A preferred dye combination comprises (1) a 4',5'-benzobenzimidazolothiacarbocyanine dye having the formula:



and (2) the benzimidazolothiacarbocyanine dyes having the formula:



wherein n , k and p each represents a positive integer of from 1 to 2; L_1 , L_2 , L_3 , and L_4 each represents a methine linkage; m represents a positive integer of from 1 to 4; R_1 , R_2 , R_3 and R_4 each represents an alkyl group; R_5 and R_6 each represents an unsubstituted lower alkyl group; R_7 , R_8 , R_9 , R_{10} , R_{11} and R_{12} each represents a member selected from the group consisting of a hydrogen atom and a halogen atom; X_1 and X_2 each represents an acid anion; V represents a member selected from the group consisting of a hydrogen atom, a halogen atom, an alkyl group, an alkoxy group and an aryl group; W and Y each represents a member selected from the group consisting of a hydrogen atom, a halogen atom, a cyano group, an alkyl group, an acyl group of a monobasic fatty acid, an alkylaminocarbonyl group, a trifluoroalkyl group and a trifluoroalkylsulfonyl group; and Z represents a member selected from the group consisting of a hydrogen atom, a halogen atom, a sulfo group, an alkyl group, an alkoxy group and an aryl group. A typical example comprises a gelatin silver bromide emulsion containing the dye combination of (1) anhydro-5,6-dichloro-1-ethyl-3-(3-sulfobutyl)-3'-(3-sulfopropyl)-4',5'-benzobenzimidazolothiacarbocyanine hydroxide and (2) 5,5',6-trichloro-1-β-diethylaminoethyl-3,3'-diethylbenzimidazolothiacarbocyanine iodide.

REISSUES

JUNE 9, 1970

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,903

ALLOY STEEL CONTAINING CHROMIUM, NICKEL AND MANGANESE

Paul A. Jennings, Baldwin, Md., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Original No. 3,235,378, dated Feb. 15, 1966, Ser. No. 323,591, Nov. 14, 1963, which is a continuation-in-part of application Ser. No. 68,627, Nov. 14, 1960. Application for reissue May 2, 1968, Ser. No. 736,234

Int. Cl. C22c 39/20

U.S. Cl. 75—128

9 Claims

Alloy steel which is fully austenitic and substantially free of delta-ferrite in the annealed condition as well as the cold-worked condition, which is possessed of a combination of good hot-rolling, good cold-rolling, good welding and good scaling resistance properties, which steel essentially consists of about 8% to 16% manganese, 17.0% to 23% chromium, 5.5% to 9.5% nickel, 20% to 40% nitrogen, carbon not exceeding .05%, and remainder essentially iron. The alloy steel is made available in the form of hot-rolled sheet and strip, cold-rolled sheet and strip, and wire. The alloy steel is suited to the production of a host of articles of ultimate use, including internal combustion engine components for handling exhaust gases. For such devices the silicon content of the alloy should not exceed .25%.

26,904

ARTICLE MANIPULATION APPARATUS

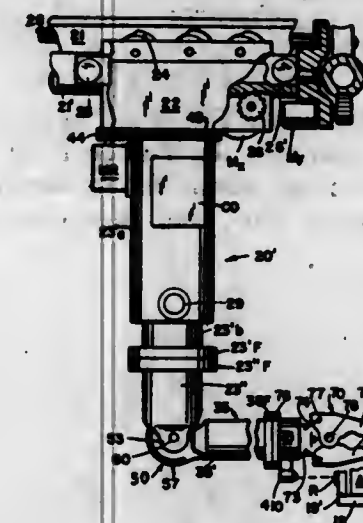
Jerome H. Lemelson, 85 Rector St., Metuchen, N.J. 08840

Original No. 3,272,347, dated Sept. 13, 1966, Ser. No. 251,410, Jan. 14, 1963. Application for reissue Sept. 12, 1968, Ser. No. 796,237

Int. Cl. B25j 9/00

U.S. Cl. 214—1

13 Claims



A manipulating device for performing a plurality of manufacturing functions automatically controlled by a pro-

26,905

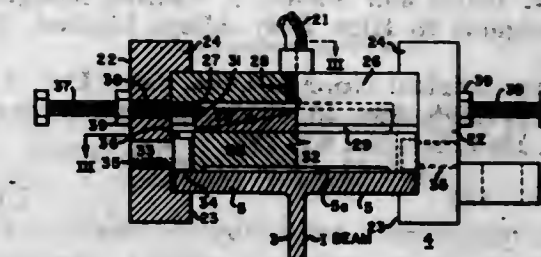
HYDRAULIC GRIPPER FOR DERRICK JACK
Henry B. Chambers and Clair W. Tellefson, Santa Barbara, Calif., assignors to Hydranautics, Santa Barbara, Calif., a corporation of California

Original No. 3,373,971, dated Mar. 19, 1968, Ser. No. 524,041, Feb. 1, 1966. Application for reissue May 6, 1968, Ser. No. 730,210

Int. Cl. B66f 1/00

U.S. Cl. 254—106

13 Claims



A double flanged member such as an I beam is gripped by a pair of smooth jaws on one side of the flanges and by a smooth shoe or shoes on the other side of the flanges, and the shoe and jaws are mechanically interconnected to move together longitudinally but with a universal motion to fit irregularities of the flanged member. A hydraulic motor moves the shoe toward the jaws. The gripper acts as an anchor for pulling or pushing heavy objects supported on the I beam.

26,906

CENTERING AND LIFTING MEANS FOR AN AUTOMATIC CASE LOADER

Theodore L. Barker, Parma, Ohio, by Automatic Sprinkler Corporation of America, Cleveland, Ohio, a corporation of Ohio, assignee

Original No. 3,412,873, dated Nov. 26, 1968, Ser. No. 558,978, June 20, 1966. Application for reissue Apr. 14, 1969, Ser. No. 824,007

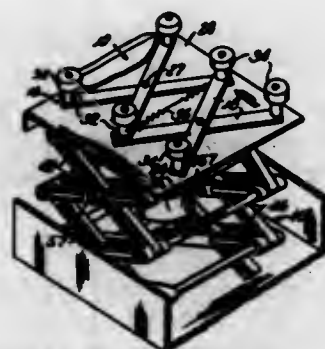
Int. Cl. B65g 69/00

U.S. Cl. 214—1

7 Claims

Apparatus for centering cases to be loaded with containers and including a support means, a tray mounted above the support means, and an expansible frame means which is substantially flat and is operatively positioned between the support means and the tray. Guide members are secured to the frame means and extend upwardly therefrom at the sides of and extending above the tray. Spring means bias portions of the frame means towards each other but adapt the post members to operatively

engage a case on the tray and center it thereon. A pantographic lifting frame means secures the plate means to a



base and fluid actuated piston means engage the pantographic lifting frame means to control movement thereof.

26,907 ALUMINUM ALLOYS AND ARTICLES MADE THEREFROM

William M. Doyle and Stanley J. Ashton, Slough, England, assignors to High Duty Alloys Limited, Slough, England

No Drawing. Original No. 3,414,406, dated Dec. 3, 1968, Ser. No. 482,598, Aug. 25, 1965. Application for reissue May 13, 1969, Ser. No. 830,899

Int. Cl. C22c 21/02

U.S. Cl. 75-142 27 Claims

Copper-, manganese-, and titanium-containing aluminum alloys are given improved working properties and substantially increased creep resistance by inclusion of 0.1 to 0.5 weight percent of magnesium. The addition of silver, from 0.2 to 0.4 weight percent improves the working properties of these alloys.

These novel alloys have the following compositions, by weight:

	Percent
Copper	5 to 7
Titanium	0.01 to 0.3
Manganese	0.01 to 0.5
Silicon	0.1 to 0.35
Magnesium	0.1 to 0.5
Iron	up to 0.4
Silver	up to 0.5
Aluminium (and impurities)	Balance

These alloys are especially adapted for forging, stamping, extrusion and rolling in fabrication of aero-engine components and aircraft skin and structural members. To develop the optimum properties for such service, after working the alloy articles are solution heat-treated for up to 30 hours at 515°-550° C., quenched and thereafter artificially aged for 5-36 hours at 170°-250° C.

26,908 DISPOSAL OF WASTE MATERIAL BY COMBUSTION IN AN INERT FLUIDIZED BED

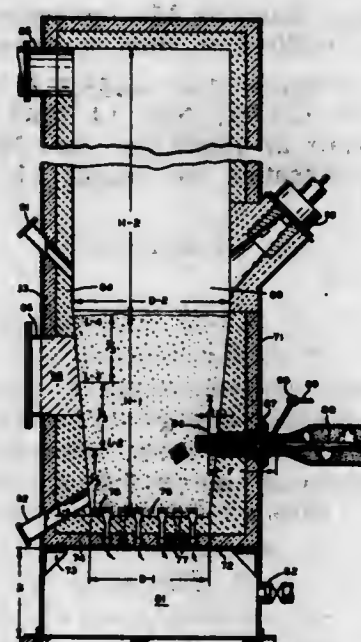
Orris E. Albertson, Norwalk, Conn., and William M. H. Kilmer, Gloucester, Mass., assignors to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Original No. 3,319,587, dated May 16, 1967, Ser. No. 356,211, Mar. 31, 1964. Application for reissue Nov. 1, 1968, Ser. No. 785,819

Int. Cl. F23g 5/00

U.S. Cl. 110-8

12 Claims



Organic waste having a high moisture content is burned in a fluidized bed of inert granular material. The granular bed is contained within chamber walls upwardly flared to compensate for gas expansion.

26,909 SHIP'S HULL

Mario I. Andrea, 8900 Brickyard Road, Potomac, Md. 20854

Original No. 3,439,643, dated Apr. 22, 1969, Ser. No. 638,712, May 12, 1967. Application for reissue May 23, 1969, Ser. No. 835,865

Int. Cl. B63b 1/00, 3/00

U.S. Cl. 114-63

5 Claims



Frames with straight [vertical] upper members and V-shaped lower members, the V-angle from stem aft increasing uniformly from about 0° to about [] 180°, remaining at about 180°, and then decreasing uniformly towards 0°.

DESIGNS

JUNE 9, 1970

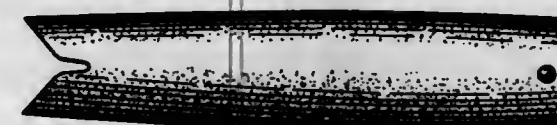
217,754
POWER UNIT FOR BATTERY OPERATED
TOOTH BRUSH
Lavern G. Soper, Eau Claire, Wis., assignor to National Presto Industries, Inc., Eau Claire, Wis., a corporation of Wisconsin

Filed June 11, 1969, Ser. No. 17,627

Term of patent 14 years

Int. Cl. D4-02

U.S. Cl. D4-15



217,755
BRUSH HANDLE
Murray Schotland, New York, N.Y., assignor to Gibson-Thomsen Co., Inc., a corporation of New York

Filed Apr. 2, 1969, Ser. No. 16,556

Term of patent 14 years

Int. Cl. D4-02

U.S. Cl. D4-35



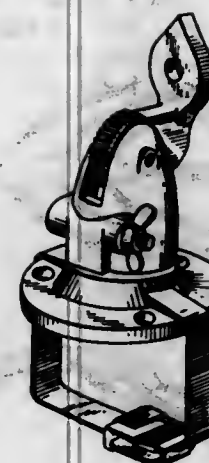
217,756
LOUDSPEAKER STRAPPING BRACKET
OR SIMILAR ARTICLE
Frederick L. Seebinger, Smoke Rise, N.J., assignor to American Trading & Production Corporation, Baltimore, Md., a corporation of Maryland

Filed Mar. 6, 1969, Ser. No. 16,088

Term of patent 14 years

Int. Cl. D8-03

U.S. Cl. D8-234



217,757
BOTTLE
Edward Charles Kozlowski, 74 Columbine Drive, Trumbull, Conn. 06611, and Jack Duncan Campbell, 52 Norwood Ave., Northport, N.Y. 11768

Filed Jan. 6, 1969, Ser. No. 15,223

Term of patent 14 years

Int. Cl. D9-01

U.S. Cl. D9-20



217,758
COMBINED BOTTLE AND CLOSURE THEREFOR
Jay F. Schweickart, Lancaster, Ohio, assignor to Anchor Hocking Corporation, Lancaster, Ohio, a corporation of Delaware

Filed July 29, 1968, Ser. No. 12,935

Term of patent 14 years

Int. Cl. D9-01

U.S. Cl. D9-83



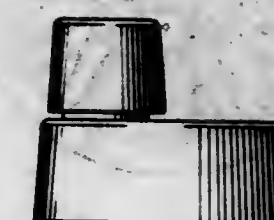
217,759
CLOSURE FOR A CONTAINER
Jay F. Schweickart, Lancaster, Ohio, assignor to Anchor Hocking Corporation, Lancaster, Ohio, a corporation of Delaware

Filed July 29, 1968, Ser. No. 12,934

Term of patent 14 years

Int. Cl. D9-02

U.S. Cl. D9-275



217,760
PREFABRICATED BUILDING

Keith Barry Critchlow, 2 Larkhall Lane,
London SW. 4, England
Filed Apr. 18, 1968, Ser. No. 11,508
Claims priority, application Great Britain Dec. 13, 1967
Term of patent 14 years
Int. Cl. D25—04

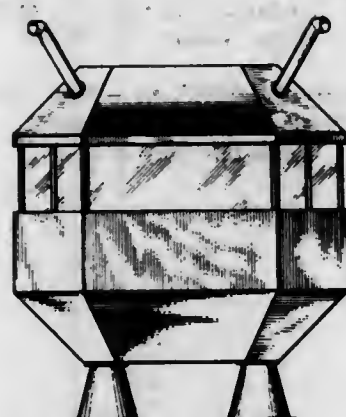
U.S. Cl. D13—1



217,761
BUILDING

Bobby G. Choate, Texarkana, Tex., assignor to Space
Foods, Inc., Texarkana, Tex., a corporation of Texas
Filed Apr. 25, 1969, Ser. No. 16,899
Term of patent 14 years
Int. Cl. D25—04

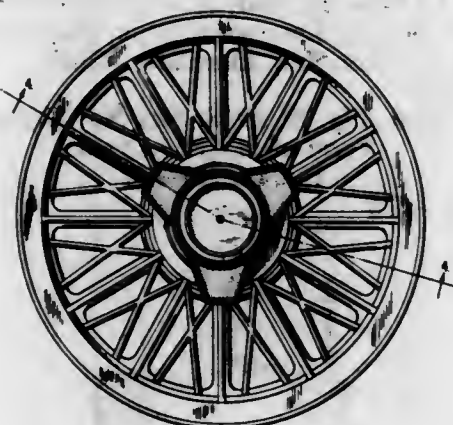
U.S. Cl. D13—1



217,762
COMBINATION SPOKED WHEEL AND HUB CAP
FOR VELOCIPEDES AND THE LIKE

Harry Golden, 250 W. 57th St.,
New York, N.Y. 10019
Filed June 25, 1969, Ser. No. 17,885
Term of patent 14 years
Int. Cl. D12—14

U.S. Cl. D14—30



217,763
FISH LURE

Jack K. Smithwick, P.O. Box 1205,
Shreveport, La. 71102
Filed Mar. 7, 1969, Ser. No. 16,108
Term of patent 14 years
Int. Cl. D22—07

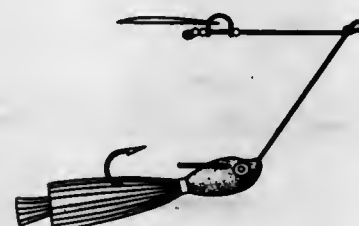
U.S. Cl. D22—27



217,764
FISHING LURE

Clarence S. Turbeville and Ike J. Walker, Gainesville,
Tex., assignors to Bomber Bait Company, Gainesville,
Tex., a corporation of Texas
Filed July 11, 1968, Ser. No. 12,695
Term of patent 14 years
Int. Cl. D22—07

U.S. Cl. D22—29



217,765
SOFT BODIED JIG
James T. Peterson, 3216 Noble Ave.,
Minneapolis, Minn. 55422
Filed July 9, 1969, Ser. No. 18,121
Term of patent 14 years
Int. Cl. D22—07

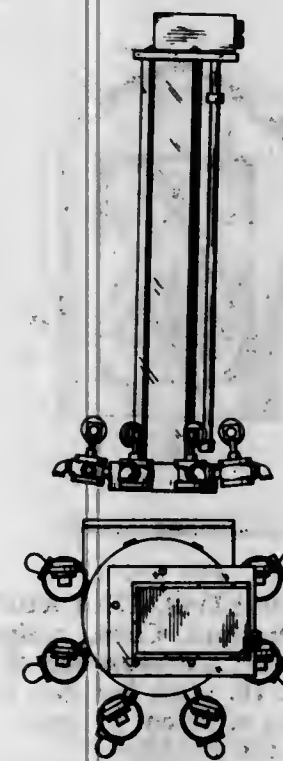
U.S. Cl. D22—30



217,766
COMBINED MIXING AND MEASURING UNIT
FOR LIQUIDS

Edwin N. Lorenzen, Littleton, Colo., assignor to Protex
Industries, Inc., Denver, Colo., a corporation of Colo-
rado
Filed Dec. 16, 1968, Ser. No. 14,995
Term of patent 14 years
Int. Cl. D23—01

U.S. Cl. D23—1



217,767
GRASS GUARD FOR A SPRINKLER
Gaylord J. Harnes, 9051 Amboy St.,
Sun Valley, Calif. 91352
Filed June 9, 1969, Ser. No. 17,605
Term of patent 14 years
Int. Cl. D23—01

U.S. Cl. D23—7



217,768
GRASS GUARD FOR A SPRINKLER
Gaylord J. Harnes, 9051 Amboy St.,
Sun Valley, Calif. 91352
Filed June 9, 1969, Ser. No. 17,610
Term of patent 14 years
Int. Cl. D23—01

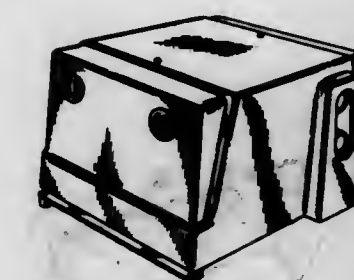
U.S. Cl. D23—7



217,769
ORAL EVACUATOR POWER UNIT

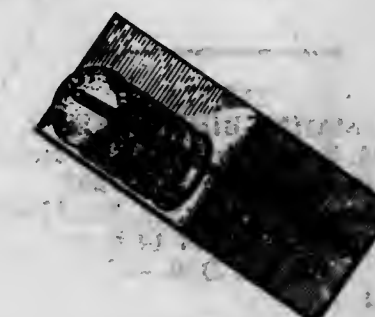
Luis Regalado, St. Paul, Minn., assignor to The Torit
Corporation, St. Paul, Minn., a corporation of Minne-
sota
Filed Apr. 21, 1969, Ser. No. 16,834
Term of patent 14 years
Int. Cl. D24—03

U.S. Cl. D24—1



217,770
MOTIVATIONAL DEVICE FOR MUSIC PRACTICE
Anne C. Goldberg, 5530 South Shore Drive,
Chicago, Ill. 60637
Substituted for abandoned design application Ser. No.
228, Dec. 17, 1965. This application June 24, 1968,
Ser. No. 12,929
Term of patent 14 years
Int. Cl. D19—08

U.S. Cl. D25—1



217,771
PORTABLE VOLT-AMMETER OR THE LIKE
Takeo Kuramoto, Tokyo, Japan, assignor to Kyoritsu
Electrical Instruments Works, Ltd., Tokyo, Japan, a
corporation of Japan
Filed Sept. 18, 1969, Ser. No. 19,202
Term of patent 14 years
Int. Cl. D10—10

U.S. Cl. D26—1

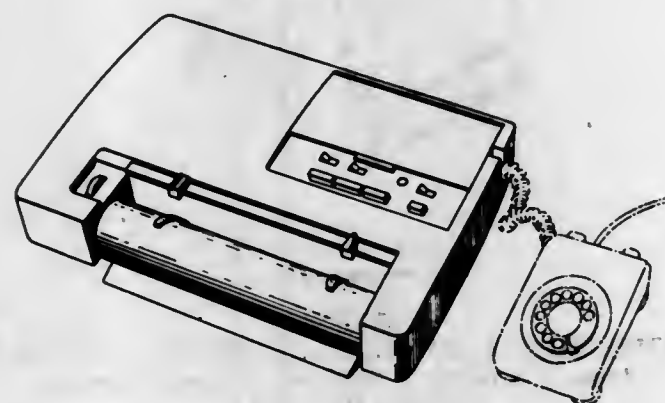


217,772

GRAPHIC TRANSCIVER

John W. Bruce, Wilton, Conn., assignor to Graphic Sciences, Inc., Danbury, Conn.
Filed Apr. 4, 1969, Ser. No. 16,579
Term of patent 14 years
Int. Cl. D14-01

U.S. Cl. D26-14



217,774

FURNITURE PANEL OR THE LIKE

Richard M. Chapin, Charlotte, N.C., assignor to C. B. Atkin Company, Knoxville, Tenn., a corporation of Tennessee
Filed Oct. 14, 1968, Ser. No. 13,957
Term of patent 3½ years
Int. Cl. D6-01

U.S. Cl. D33-1

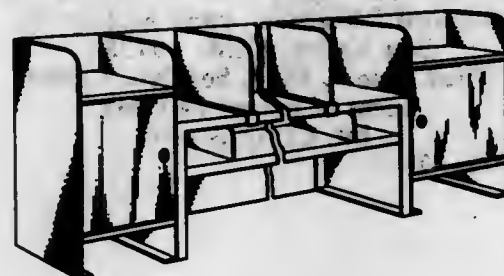


217,775

DESK TOP STORAGE CABINET

Thomas G. Pond, Stratford, Conn., assignor to Lit-Ning Products Company, a corporation of California
Filed Sept. 18, 1968, Ser. No. 13,585
Term of patent 14 years
Int. Cl. D6-01

U.S. Cl. D33-19



217,773

HUMMINGBIRD FEEDER

Harry M. Brown, Jr., 3110 SE. Rex St., Portland, Oreg. 97202
Filed June 18, 1968, Ser. No. 12,406
Term of patent 14 years
Int. Cl. D30-02

U.S. Cl. D30-14

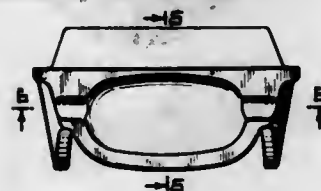
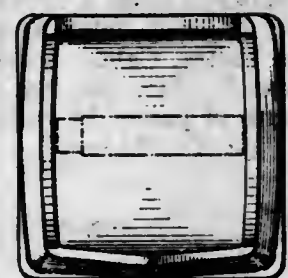


217,776

COMBINED TOILET PAPER HOLDER AND ASH TRAY

Nicholas Solimine, 130 New Road, Apt. 9K, Parsippany, N.J. 07054
Filed Nov. 14, 1968, Ser. No. 14,451
Term of patent 7 years
Int. Cl. D6-01

U.S. Cl. D33-26

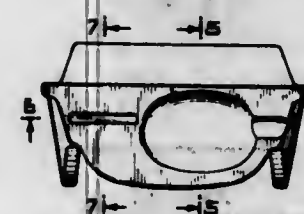
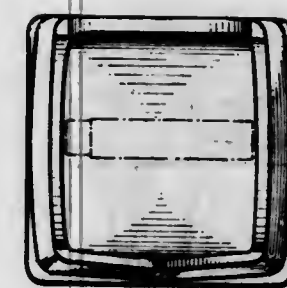


217,777

COMBINED TOILET PAPER HOLDER, MATCH-BOOK HOLDER AND ASH TRAY

Nicholas Solimine, 130 New Road, Apt. 9K, Parsippany, N.J. 07054
Filed Nov. 14, 1968, Ser. No. 14,471
Term of patent 7 years
Int. Cl. D6-01

U.S. Cl. D33-26

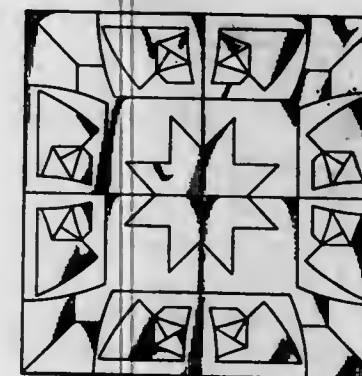


217,778

PUZZLE BOARD

Nathan Herstein, 357 S. Canon, Apt. 2D, Los Angeles, Calif. 90036
Filed Mar. 6, 1969, Ser. No. 16,087
Term of patent 3½ years
Int. Cl. D21-01

U.S. Cl. D34-15



217,779

COMBINED WHISTLE AND BUBBLE TOY PIPE

Charles A. Mueller, Kirkwood, Mo., assignor to Interco, Incorporated, St. Louis, Mo., a corporation of Delaware
Filed July 22, 1969, Ser. No. 18,326
Term of patent 7 years
Int. Cl. D21-02

U.S. Cl. D34-15

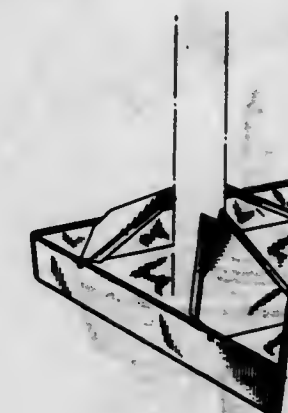


217,780

HOLDER FOR CANDLES, CHRISTMAS TREES, OR THE LIKE

Erik-Arne Lindroth, 37 Ostermorgatan, 85002 Sundsvall, Sweden
Filed Jan. 6, 1969, Ser. No. 15,224
Claims priority, application Sweden July 4, 1968
Term of patent 14 years
Int. Cl. D11-02

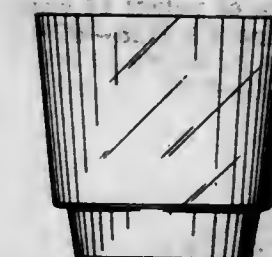
U.S. Cl. D35-3

217,781
TUMBLER

Stanford C. Stone, South St. Paul, Minn., assignor to Plastics, Inc., St. Paul, Minn., a corporation of Delaware

Filed Oct. 2, 1968, Ser. No. 13,811
Term of patent 14 years
Int. Cl. D7-01

U.S. Cl. D36-8



217,782

SUPPORTING CRADLE FOR A SERVING DISH OR THE LIKE

Glenn B. Beckman, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Mar. 21, 1969, Ser. No. 16,374
Term of patent 14 years
Int. Cl. D7-01

U.S. Cl. D44-10



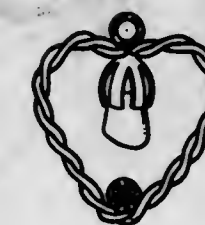
217,783

PENDANT OR SIMILAR ARTICLE

Eugene C. Parrish, 9732 E. Compton Blvd., Bellflower, Calif. 90706, and David W. Jones, 8643 Madison St., Paramount, Calif. 90723

Filed Mar. 6, 1968, Ser. No. 10,878
Term of patent 14 years
Int. Cl. D11-01

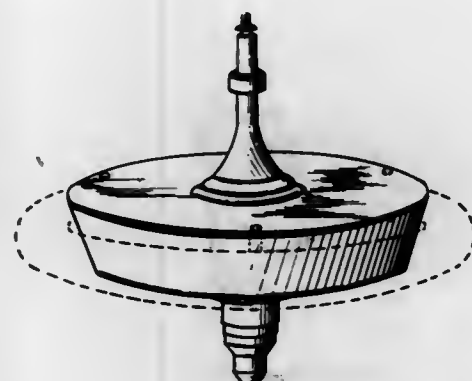
U.S. Cl. D45-17



217,784
CIRCULAR FLUORESCENT UNIT FOR LAMPS AND THE LIKE

Sidney L. Filler, 60th St. and Gunnison Road, Downers Grove, Ill. 60515, and Sidney R. Filler, 342 Beach, La Grange Park, Ill. 60525
Filed Feb. 11, 1969, Ser. No. 15,734
Term of patent 14 years
Int. Cl. D26-99

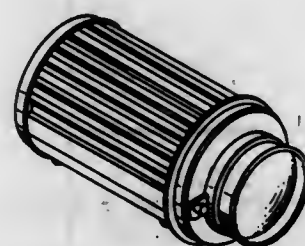
U.S. Cl. D48-7



217,785
HOUSING FOR SPOTLIGHT

Fred M. Wolff, Montclair, N.J., assignor to Century Lighting, Inc., Clifton, N.J., a corporation of New Jersey
Filed Sept. 11, 1968, Ser. No. 13,496
Term of patent 14 years
Int. Cl. D26-02

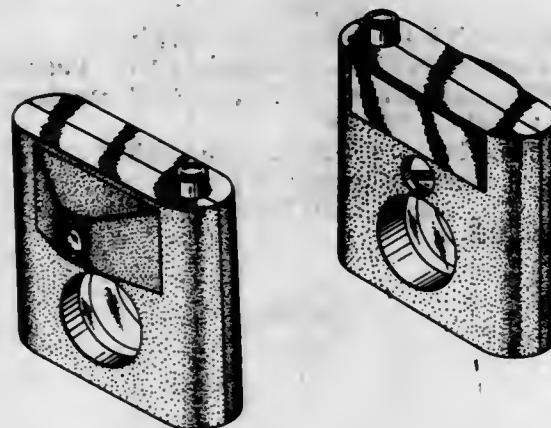
U.S. Cl. D48-20



217,786
ILLUMINATED MAGNIFYING GLASS

Alexander Zalman, 80-39 192nd St., Jamaica, N.Y. 11423
Filed June 9, 1969, Ser. No. 17,594
Term of patent 14 years
Int. Cl. D16-08, 99

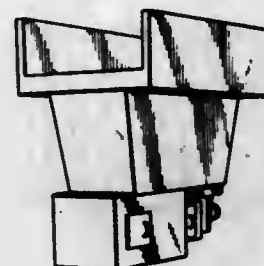
U.S. Cl. 57-1



217,787
CAMERA-PROJECTOR HEAD FOR A PHOTOREPRODUCTION UNIT OR SIMILAR ARTICLE

Joseph H. Wally, Jr., Shawnee Mission, Kans., assignor to Western Blue Print Company, Kansas City, Mo., a corporation of Missouri
Filed Dec. 16, 1968, Ser. No. 15,099
Term of patent 14 years
Int. Cl. D21-05

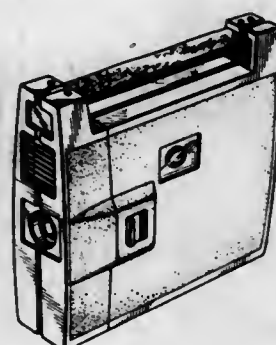
U.S. Cl. D61-1



217,788
MOVIE CAMERA

Masahiro Fukuda, Kawasaki-shi, Japan, assignor to Fuji Shashin Film Kabushiki Kaisha, Minamishigaramachi, Ashigarakami-gun, Kanagawa-ken, Japan, a corporation of Japan
Filed July 18, 1969, Ser. No. 18,276
Claims priority, application Japan Feb. 8, 1969
Term of patent 14 years
Int. Cl. D16-02

U.S. Cl. D61-1



217,789
PENCILHOLDER

Frank A. Oddo, 8460 1/2 Golden Ave., Lemon Grove, Calif. 92045
Filed Mar. 17, 1969, Ser. No. 16,266
Term of patent 3 1/2 years
Int. Cl. D19-02

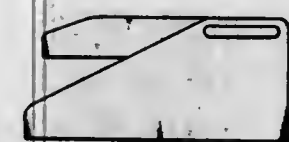
U.S. Cl. D74-5



217,790
DESK TRAY

Frank A. Oddo, 8460 1/2 Golden Ave., Lemon Grove, Calif. 92045
Filed Mar. 17, 1969, Ser. No. 16,281
Term of patent 3 1/2 years
Int. Cl. D19-02

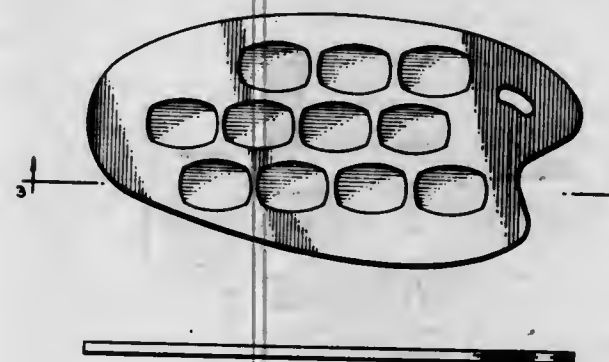
U.S. Cl. D74-9



217,791
DISPLAY BOARD FOR SIDING SHINGLES

Kurt Schwarz, Fair Lawn, N.J., assignor to Supradur Corporation of New York, New York, N.Y., a corporation of New York
Filed May 13, 1968, Ser. No. 11,897
Term of patent 7 years
Int. Cl. D6-01

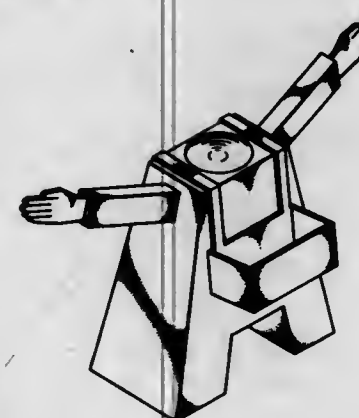
U.S. Cl. D80-5



217,792
DISPLAY STAND

Paul Shrode, Jr., 2159 Fig St., Santa Susana, Calif. 93063
Filed Dec. 23, 1968, Ser. No. 15,076
Term of patent 14 years
Int. Cl. D6-01

U.S. Cl. D80-9



217,793
URINE COLLECTION DEVICE

Charles W. Hochmeister, Evansville, Ind., assignor to Delado, Inc., Evansville, Ind., a corporation
Filed Dec. 18, 1968, Ser. No. 15,048
Term of patent 14 years
Int. Cl. D24-02

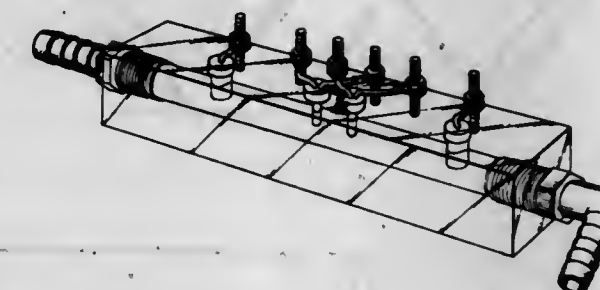
U.S. Cl. D83-1



217,794
FLUID CONCENTRATION MONITOR FOR AN ARTIFICIAL KIDNEY MACHINE

Charles P. Johnson, Seal Beach, Calif., assignor to Western Gear Corporation, Lynwood, Calif., a corporation of Washington
Filed Apr. 21, 1969, Ser. No. 16,838
Term of patent 14 years
Int. Cl. D24-02

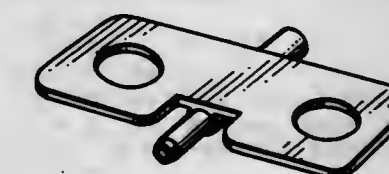
U.S. Cl. D83-1



217,795
WINGED FINGER GRIP MEMBER FOR USE IN ASSEMBLING AN INFUSION SET

George D. Spaven, South Plainfield, Albert J. Volk, Warren, and John Assenza, Basking Ridge, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed May 7, 1969, Ser. No. 17,058
Term of patent 14 years
Int. Cl. D24-02

U.S. Cl. D83-12

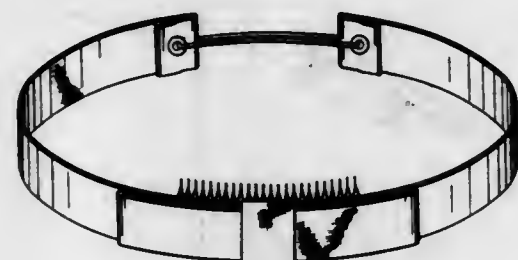


217,796

HAIR BAND

Beatrice D. Schomer, 3445 Thornhill Drive,
Jacksonville, Fla. 32211
Filed May 21, 1968, Ser. No. 12,031
Term of patent 14 years
Int. Cl. D28-02

U.S. Cl. D86-10

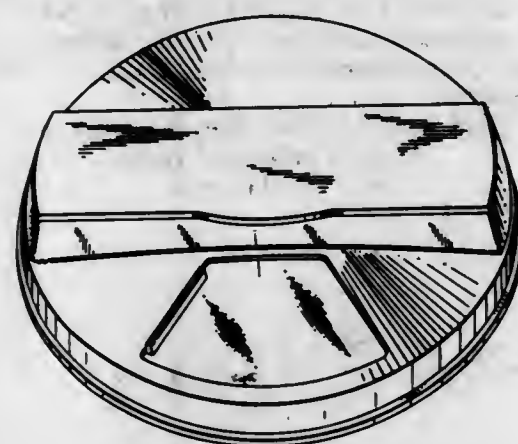


217,797

COSMETIC CASE

Martha A. Flax, 15-56 Bell Blvd.,
Bayside, N.Y. 11709
Filed Oct. 25, 1968, Ser. No. 14,179
Term of patent 14 years
Int. Cl. D28-02

U.S. Cl. D86-10

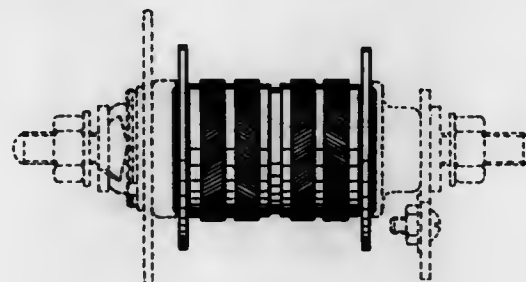


217,798

HUB FOR VELOCIPEDES AND THE LIKE

Frank T. Christian, Elmira, N.Y., assignor to The Bendix
Corporation, a corporation of Delaware
Filed Jan. 21, 1969, Ser. No. 15,417
Term of patent 7 years
Int. Cl. D12-14

U.S. Cl. D90-12



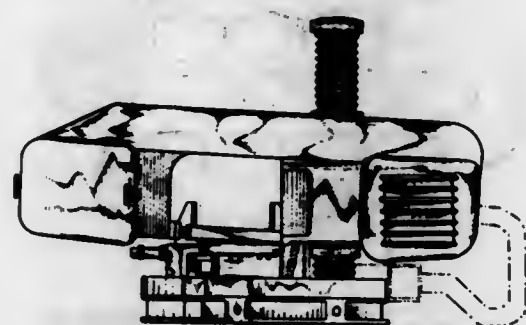
217,799

BAND TYPE CUTOFF SAW OR THE LIKE

Isamu Amada, 23-18 Higashinakano 5-chome,
Nakano-ku, Tokyo, Japan
Continuation-in-part of design application Ser. No. 6,658,
Apr. 12, 1967. This application Mar. 6, 1969, Ser. No.
16,188

Term of patent 14 years
Int. Cl. D15-05

U.S. Cl. D93-3

**LIST OF DEFENSIVE PUBLICATIONS**

APPLICANTS TO WHOM

DEFENSIVE PUBLICATIONS WERE ISSUED ON THE 9TH DAY
OF JUNE, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 18, 1969, 869 O. G. 687.

Brisee, Mary Jane W.: See—
Ulbing, Cynthia G., and Brisee. 875,018.
Caldwell, John R., and E. Gilkey. Polyesters of 2,6-naphthalen-
dicarboxylic acid. 875,011, 6-9-70, Cl. 260-75.
Coover, Harry W., Jr., N. H. Shearer, Jr., and T. H. Wicker,
Jr. Copolyester molding composition. 875,010, 6-9-70,
Cl. 260-75.
Du Pont de Nemours, E. I., and Co.: See—
Zimmt, Werner S. 875,006.
GAF Corp.: See—
Waltz, John M. 875,009.
Gilkey, Russell: See—
Caldwell, John R., and Gilkey. 875,011.
Hnot, Walter R. Offshore underwater facility. 875,008,
6-9-70, Cl. 61-46.
Hobbs, Howard K. Threading of plastic pipe. 875,012, 6-9-70,
Cl. 138-109.
Howard, Robert C., to Wyomissing Corp. Anchor band.
875,007, 6-9-70, Cl. 68-172.
Shearer, Newton H., Jr.: See—
Coover, Harry W., Jr., Shearer, and Wicker. 875,010.
Ulbing, Cynthia G., and M. J. W. Brisee. Supersensitized silver
halide photographic emulsions. 875,013, 6-9-70, Cl.
96-104.
Waltz, John M., to GAF Corp. Preparation of 2-chloroethyl
phosphonates. 875,009, 6-9-70, Cl. 260-970.
Wicker, Thomas H., Jr.: See—
Coover, Harry W., Jr., Shearer, and Wicker. 875,010.
Wyomissing Corp.: See—
Howard, Robert C. 875,007.
Zimmt, Werner S., to E. I. du Pont de Nemours and Co.
Polymerization process using metal borohydrides as cata-
lysts. 875,006, 6-9-70, Cl. 260-88.7.

LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Albertson, Orris E., and W. M. H. Kilmer, to Dorr-Oliver
Inc. Disposal of waste material by combustion in an inert
fluidized bed. Re. 26,908, 6-9-70, Cl. 110-8.
Ashton, Stanley J.: See—
Doyle, William M., and Ashton. Re. 26,907.
Automatic Sprinkler Corp. of America: See—
Barker Theodore L. Re. 26,908.
Barker, Theodore L., to Automatic Sprinkler Corp. of
America. Centering and lifting means for an automatic
case loader. Re. 26,908, 6-9-70, Cl. 214-1.
Chambers, Henry B., and C. W. Tellefson, to Hydranautics.
Hydraulic gripper for derrick jack. Re. 26,905, 6-9-70,
Cl. 254-106.
Dorr-Oliver Inc.: See—
Albertson, Orris E., and Kilmer. Re. 26,908.
Doyle, William M., and S. J. Ashton, to High Duty Alloys
Ltd. Aluminum alloys and articles made therefrom.
Re. 26,907, 6-9-70, Cl. 75-142.
High Duty Alloys Ltd.: See—
Doyle, William M., and Ashton. Re. 26,907.
Hydranautics: See—
Chambers, Henry B., and Tellefson. Re. 26,905.
Jennings, Paul A., to Armco Steel Corp. Alloy steel containing
chromium, nickel and manganese. Re. 26,908, 2-9-70,
Cl. 75-128.
Kilmer, William M. H.: See—
Albertson, Orris E., and Kilmer. Re. 26,908.
Lemelson, Jerome H. Article manipulation apparatus.
Re. 26,904, 6-9-70, Cl. 214-1.
Tellefson, Clair W.: See—
Chambers, Henry B., and Tellefson. Re. 26,905.

LIST OF DESIGN PATENTEEES

Amada, Isamu. Band type cutting saw or the like. 217,799,
6-9-70, Cl. D93-3.
American Trading & Production Corp.: See—
Seebinger, Frederick L. 217,756.
Anchor Hocking Corp.: See—
Schweickart, Jay F. 217,758.
Schweickart, Jay F. 217,759.
Assenza, John: See—
Spaven, George D., Volk, and Assenza. 217,795.
Atkin, C. B., Co.: See—
Chapin, Richard M. 217,774.
Beckman, Glenn B., to Corning Glass Works. Supporting
cradle for a serving dish or the like. 217,782, 6-9-70,
Cl. D44-10.
Beguitristain, Luis, to The Torit Corp. Oral evacuator power
unit. 217,769, 6-9-70, Cl. D24-1.
Bendix Corp., The: See—
Christian, Frank T. 217,798.
Bomber Bait Co.: See—
Turbeville, Clarence S., and Walker. 217,764.
Brown, Harry M., Jr. Hummingbird feeder. 217,773, 6-9-70,
Cl. D80-14.
Bruce, John W., to Graphic Sciences, Inc. Graphic transceiver.
217,772, 6-9-70, Cl. D26-14.
Campbell, Jack D.: See—
Kozlowski, Edward C. 217,757.
Century Lighting, Inc.: See—
Wolf, Fred M. 217,785.
Chapin, Richard M., to C. B. Atkin Co. Furniture panel or
the like. 217,774, 6-9-70, Cl. D33-1.
Choate, Bobby G., to Space Foods, Inc. Building. 217,761,
6-9-70, Cl. D18-1.
Christian, Frank T., to The Bendix Corp. Hub for velocipedes
and the like. 217,798, 6-9-70, Cl. D90-12.
Corning Glass Works: See—
Beckman, Glenn B. 217,782.
Crichtlow, Keith B. Prefabricated building. 217,760, 6-9-70,
Cl. D18-1.
Delado, Inc.: See—
Hachmeister, Charles W. 217,793.
Flax, Martha A. Cosmetic case. 217,797, 6-9-70, Cl. D86-10.
Filer, Sidney L., and S. R. Circular fluorescent unit for lamps
and the like. 217,784, 6-9-70, Cl. D48-7.
Filer, Sidney R.: See—
Filer, Sidney L., and S. R. 217,784.
Fuji Shashin Film Kabushiki Kaisha: See—
Fukuda, Masahiro. 217,788.
Fukuda, Masahiro, to Fuji Shashin Film Kabushiki Kaisha.
Movie camera. 217,788, 6-9-70, Cl. D61-1.
Gibson-Thomsen Co., Inc.: See—
Schotland, Murray. 217,755.
Goldberg, Anne C. Motivation device for music practice.
217,770, 6-9-70, Cl. D25-1.
Golden, Harry. Combination spoked wheel and hub cap for
velocipedes and the like. 217,762, 6-9-70, Cl. D14-30.
Graphic Sciences, Inc.: See—
Bruce, John W. 217,772.
Hachmeister, Charles W., to Delado, Inc. Urine collection
device. 217,793, 6-9-70, Cl. D83-1.
Harness, Gaylord J. Grass guard for a sprinkler. 217,767,
6-9-70, Cl. D23-7.
Harness, Gaylord J. Grass guard for a sprinkler. 217,768,
6-9-70, Cl. D23-7.
Herstam, Nathan. Puzzle board. 217,778, 6-9-70, Cl. D84-15.
Interco, Inc.: See—
Mueller, Charles A. 217,779.
Johnson & Johnson: See—
Spaven, George D., Volk, and Assenza. 217,795.
Johnson, Charles P., to Western Gear Corp. Fluid concen-
tration monitor for an artificial kidney machine. 217,794,
6-9-70, Cl. D83-1.
Jones, David W.: See—
Farrish, Eugene C., and Jones. 217,783.
Kozlowski, Edward C., and J. D. Campbell. Bottle. 217,757,
6-9-70, Cl. D8-20.
Kuramoto, Takeo, to Kyoritsu Electrical Instruments Works,
Ltd. Portable volt-ammeter or the like. 217,771, 6-9-70,
Cl. D26-1.

LIST OF DESIGN PATENTEES

Kyoritsu Electrical Instruments Works, Ltd.: See—
 Kuramoto, Takeo. 217,771.
 Lindroth, Erik-Arne. Holder for candles, Christmas trees, or the like. 217,780, 6-9-70, Cl. D85-3.
 Lit-Ning Products Co.: See—
 Pond, Thomas G. 217,775.
 Lorenzen, Edwin N., to Protex Industries, Inc. Combined mixing and measuring unit for liquids. 217,766, 6-9-70, Cl. D23-1.
 Mueller, Charles A., to Interco, Inc. Combined whistle and bubble toy pipe. 217,779, 6-9-70, Cl. D34-15.
 National Presto Industries, Inc.: See—
 Soper, Lavern G. 217,764.
 Oddo, Frank A. Pencil holder. 217,789, 6-9-70, Cl. D74-5.
 Oddo, Frank A. Desk tray. 217,790, 6-9-70, Cl. D74-9.
 Parrish, Eugene C., and D. W. Jones. Pendant or similar article. 217,783, 6-9-70, Cl. D45-17.
 Peterson, James T. Soft bodied jig. 217,765, 6-9-70, Cl. D22-30.
 Plastics, Inc.: See—
 Stone, Stanford C. 217,781.
 Pond, Thomas G., to Lit-Ning Products Co. Desk top storage cabinet. 217,776, 6-9-70, Cl. D33-19.
 Protex Industries, Inc.: See—
 Lorenzen, Edwin N. 217,766.
 Schemer, Beatrice D. Hair band. 217,796, 6-9-70, Cl. D86-10.
 Schotland, Murray, to Gibson-Thomsen Co., Inc. Brush handle. 217,755, 6-9-70, Cl. D4-35.
 Schwarz, Kurt, to Supradur Corp. of New York. Display board for siding shingles. 217,791, 6-9-70, Cl. D80-5.
 Schweickart, Jay F., to Anchor Hocking Corp. Combined bottle and closure therefor. 217,758, 6-9-70, Cl. D9-83.
 Schweickart, Jay F., to Anchor Hocking Corp. Closure for a container. 217,759, 6-9-70, Cl. D9-275.
 Seebinger, Frederick L., to American Trading & Production Corp. Loudspeaker strapping bracket or similar article. 217,766, 6-9-70, Cl. D8-234.
 Shrode, Paul, Jr. Display stand. 217,792, 6-9-70, Cl. D80-9.
 Smithwick, Jack K. Fish lure. 217,763, 6-9-70, Cl. D22-27.
 Solimine, Nicholas. Combined toilet paper holder and ash tray. 217,776, 6-9-70, Cl. D83-26.
 Solimine, Nicholas. Combined toilet paper holder, matchbook holder and ashtray. 217,777, 6-9-70, Cl. D33-28.
 Soper, Lavern G., to National Presto Industries, Inc. Power unit for battery operated tooth brush. 217,754, 6-9-70, Cl. D4-15.
 Space Foods, Inc.: See—
 Choate, Bobby G. 217,761.
 Spaven, George D., A. J. Volk, and J. Assenza, to Johnson & Johnson. Winged finger grip member for use in assembling an infusion set. 217,795, 6-9-70, Cl. D83-12.
 Stone, Stanford C., to Plastics, Inc. Tumbler. 217,781, 6-9-70, Cl. D86-8.
 Supradur Corp. of New York: See—
 Schwarz, Kurt. 217,791.
 Torit Corp., The: See—
 Beguiristain, Luis. 217,769.
 Turbeville, Clarence S., and I. J. Walker, to Bomber Bait Co. Fishing lure. 217,764, 6-9-70, Cl. D22-29.
 Walker, Ike J.: See—
 Turbeville, Clarence S., and Walker. 217,764.
 Wally, Joseph H., Jr., to Western Blue Print Co. Camera-projector head for a photoreproduction unit or similar article. 217,787, 6-9-70, Cl. D61-1.
 Western Blue Print Co.: See—
 Wally, Joseph H., Jr. 217,787.
 Western Gear Corp.: See—
 Johnson, Charles P. 217,794.
 Wolff, Fred M., to Century Lighting, Inc. Housing for spotlight. 217,765, 6-9-70, Cl. D48-20.
 Zalman, Alexander. Illuminated magnifying glass. 217,786, 6-9-70, Cl. D67-1.

CLASSIFICATION OF PATENTS

ISSUED JUNE 9, 1970

NOTE.—First number, class; second number, subclass; third number, patent number

75-128 : Re.26,903	110- 8 : Re.26,908	114- 63 : Re.26,909	214- 1 : Re.26,904	214- 1 : Re.26,906	254-106 : Re.26,905
142 : Re.26,907					

CLASSIFICATION OF DESIGNS

D 4- 15 : 217,754	D14- 30 : 217,762	D25- 1 : 217,770	D34- 15 : 217,778	D57- 1 : 217,786	D63- 1 : 217,793
35 : 217,755	D22- 27 : 217,763	D26- 1 : 217,771	15 : 217,779	D61- 1 : 217,787	12 : 217,794
D 8-234 : 217,756	29 : 217,764	14 : 217,772	D85- 3 : 217,780	8 : 217,788	12 : 217,796
D 9- 20 : 217,757	30 : 217,765	D30- 14 : 217,773	D86- 8 : 217,781	D74- 5 : 217,789	D86- 10 : 217,796
83 : 217,758	D23- 1 : 217,766	D33- 1 : 217,774	D44- 10 : 217,782	9 : 217,790	9 : 217,797
275 : 217,759	7 : 217,767	19 : 217,775	D45- 17 : 217,783	D80- 5 : 217,791	D90- 12 : 217,798
D13- 1 : 217,760	26 : 217,776	26 : 217,776	D48- 7 : 217,784	9 : 217,792	D93- 3 : 217,799
217,761	D24- 1 : 217,769	217,777	20 : 217,785		

DEFENSIVE PUBLICATIONS APPLICATIONS

(Notice of Dec. 16, 1969, 869 O.G. 687)

61- 46 : T875,008	96-104 : T875,013	260- 75 : T875,010	260- 75 : T875,011	260- 88.7 : T875,006	260-970 : T875,009
66-172 : T875,007	138-109 : T875,012				

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

Alabama.....	1	Kentucky.....	21	Oregon.....	41
Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
American Samoa.....	3	Maine.....	23	Puerto Rico.....	43
Arizona.....	4	Maryland.....	24	Rhode Island.....	44
Arkansas.....	5	Massachusetts.....	25	South Carolina.....	45
California.....	6	Michigan.....	26	South Dakota.....	46
Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
Florida.....	12	Nevada.....	32	Virgin Islands.....	52
Georgia.....	13	New Hampshire.....	33	Washington.....	53
Guam.....	14	New Jersey.....	34	West Virginia.....	54
Hawaii.....	15	New Mexico.....	35	Wisconsin.....	55
Idaho.....	16	New York.....	36	Wyoming.....	56
Illinois.....	17	North Carolina.....	37	U.S. Air Force.....	57
Indiana.....	18	North Dakota.....	38	U.S. Army.....	58
Iowa.....	19	Ohio.....	39	U.S. Navy.....	59
Kansas.....	20	Oklahoma.....	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

6 : Rr.26,905	9 : Rr.26,908	24 : Rr.26,903	24 : Rr.26,909	34 : Rr.26,904	39 : Rr.26,906
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Design Patents

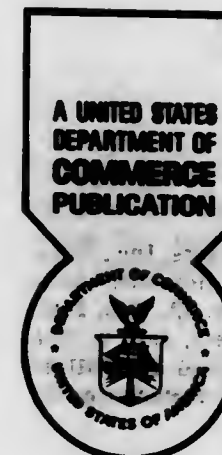
6 : 217,767	6 : 217,794	17 : 217,784	29 : 217,779	36 : 217,755	39 : 217,758
217,768	8 : 217,766	18 : 217,793	34 : 217,756	217,762	217,759
217,778	9 : 217,757	20 : 217,787	217,776	217,782	41 : 217,773
217,783	217,772	22 : 217,763	217,777	217,786	48 : 217,761
217,789	217,775	27 : 217,765	217,785	217,797	217,764
217,790	12 : 217,796	217,769	217,791	217,798	55 : 217,754
217,792	17 : 217,770	217,781	217,795	37 : 217,774	

DEFENSIVE PUBLICATIONS APPLICATIONS

(Notice of Dec. 16, 1969, 869 O.G. 687)

34 : T875,008	36 : T875,013	42 : T875,007	47 : T875,010	47 : T875,011	47 : T875,012
T875,009	42 : T875,006				

PI 4



U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 9, 1970

Volume 875

Number 2

TRADEMARKS NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 225,888 (DAIRY QUEEN BRAND AND DESIGN), American Dairy Queen Corporation, Condensed milk; Reg. No. 249,120 ("DAIRY QUEEN" ETC. AND DESIGN), The Universal Milk Company, Evaporated milk; Reg. No. 700,406 (QUEEN OF TARTS), H. H. Hartman, doing business as Dairy Queen, Frozen ice cream tarts consisting only of ice cream with a fruit or syrup topping; Reg. No. 723,531 (DAIRY QUEEN), McCullough's Dairy Queen, Machine for freezing and dispensing a semi-frozen dairy product; Reg. No. 728,804, same, Ice cream and frozen confections in cone, cup, and bar form; Reg. No. 763,200 (DAIRY QUEEN AND DESIGN), American Dairy Queen Corporation, Ice cream and frozen confections in cone, cup, bar and package form; Reg. No. 776,277 (DAIRY QUEEN), same, Sundae, strawberry short cake, chocolate bars, ice cream or ice milk cones, ice cream sandwiches, parfait sundaes, food stabilizers, pies, tarts, milk shakes, and mixes both liquid and solid for the making of ice milk and ice cream products; Reg. No. 801,437 (QUEEN MILK AND DESIGN), same, Fluid milk; Reg. No. 801,849 (DAIRY QUEEN), same, Semi-frozen ice cream and ice milk dispenser, walk-in cooler, freezing cabinets, refrigerated mix tanks, ice cream and ice milk shake freezers, and cone racks; Reg. No. 804,002 (DAIRY QUEEN AND DESIGN), same, Hamburger and sandwiches, barbeque sandwiches, and hot dog sandwiches; Reg. No. 811,416, same, Flavored carbonated soft drinks; Reg. No. 834,054 (QUEEN'S CHOICE),

same, Ice cream and ice milk—namely, vanilla, chocolate, butterscotch, blackberry, cherry, etc.; and malt and syrup bases for ice cream and ice milk drinks and products; Reg. No. 855,283 (DAIRY QUEEN), same, Rendering technical assistance to operators of frozen custard stores in all phases of their business operation; Reg. No. 858,332, same, Basic mix for semi-frozen milk and ice cream, filed Mar. 5, 1970, D.C., W.D. Ky. (Louisville), Doc. 6525, American Dairy Queen Corporation v. Burger Queen of Middletown, Inc.

Reg. No. 249,120. (See Reg. No. 225,888.)

Reg. No. 516,406 (SALES MANAGEMENT), Sales Management, Inc., Trade magazines and publications circulating among the trade interested in selling and marketing, including man power problems, space and time advertising, promotion, packaging, transportation, market research, and other responsibilities of the sales executive, and containing articles, editorial matter and advertisements of interest to such trade, filed Nov. 7, 1966, D.C., S.D.N.Y., Doc. 66-C-3741, Bill Brothers Publications, Inc. et al. v. The Management Publishing Group, Inc. Stipulation of voluntary dismissal, Feb. 27, 1970.

Reg. No. 523,572 (KAISER), Kaiser Steel Corporation, Steel construction materials—namely, bars for use in reinforcing building structures and structural shapes; Reg. No. 543,583, same, Steel plate and steel ingots; hot rolled strip, cold rolled strip and hot rolled sheet steel; Reg. No. 596,116, same, Continuous weld standard steel pipe and electric weld pipe, filed

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1970

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]..... 24,172
Date of oldest new application..... June 2, 1969
Date of oldest amended application (filing date)..... October 20, 1966

C. M. WENDT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION

	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....	9-17-69	10-2-67
(II) F. H. WETTERBERG, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....	7-9-69	10-20-66
(III) C. R. FOWLER, Classes 19, 21, 23, 26, 31, 34, 35, 36.....	9-4-69	11-2-66
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 26, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....	6-2-69	10-27-67
Renewals (All Classes).....	3-17-70	
Sec. 12(c) Publications (All Classes).....	3-17-70	

Applications filed during the month of April 1970—3,154

Registrations Issued 371—No. 892,253 to No. 892,623
Renewals Issued 120

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, \$20.50 per annum, foreign mailing \$5.75 additional; single copies, 40 cents each.
PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

TM 57

Feb. 12, 1970, D.C. Oreg. (Portland), Doc. C-70-82, *Kaiser Steel Corporation v. Heinz W. Kaiser, etc.*

Reg. No. 543,583. (See Reg. No. 523,572.)

Reg. No. 586,116. (See Reg. No. 523,572.)

Reg. No. 653,217 (CRISTAL AND DESIGN), Nueva Fabrica De Hielo, S.A., doing business as Cerveceria La Tropical, Beer and cereal malt beverages, filed May 15, 1969, D.C., S.D. Fla. (Miami), Doc. 69-588-C-FE, *Maltina Corporation and Julio Blanco-Herrera v. Cawby Bottling Co., Inc.* Dismissed without prejudice to plaintiff, Dec. 29, 1969.

Reg. No. 700,406. (See Reg. No. 225,838.)

Reg. No. 723,531. (See Reg. No. 225,838.)

Reg. No. 723,534. (See Reg. No. 225,838.)

Reg. No. 750,297 (DREAMCLEAN), Arthur B. Leigh, Anti-foggant wiping sheets, filed Jan. 24, 1969, D.C., S.D.N.Y., Doc. 69-282, *Arthur B. Leigh v. Fred S. Karaman*. Stipulation and order discontinuing action, Nov. 14, 1969.

Reg. No. 763,200. (See Reg. No. 225,838.)

Reg. No. 776,277. (See Reg. No. 225,838.)

Reg. No. 801,437. (See Reg. No. 225,838.)

Reg. No. 801,840. (See Reg. No. 225,838.)

Reg. No. 804,002. (See Reg. No. 225,838.)

Reg. No. 811,416. (See Reg. No. 225,838.)

Reg. No. 825,400 (HOMEMAKERS), Homemakers, Inc., Nursing, companionship, visiting, housekeeping, domestic help, maids, cooks, and home maintenance, filed Nov. 12, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c2343, *Homemakers, Inc. v. Chicago Home for the Friendless*. Action dismissed for failure to allege a justifiable controversy within the jurisdiction of the court, Feb. 6, 1970.

Reg. No. 855,283. (See Reg. No. 225,838.)

Reg. No. 858,332. (See Reg. No. 225,838.)

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.103. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 293,973. Ocean Research Equipment, Inc., Falmouth, Mass. Filed Mar. 25, 1968.



The drawing is lined for the color blue, however, no claim is made to color.

Class 21—Electrical Apparatus, Machines, and Supplies

For Acoustic Transponders; Pingers; Telemetry Equipment—Namely, Radio Transmitters and Receivers; Radio and Flashing Light Beacons; and Mooring Release Systems—Namely, an Acoustically Operated System for Remote Release of an Underwater Mooring From Its Anchor (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Wave Height Gages; Geomagnetic Electrokinetographs; Sonar; and Towed Underwater Echo-Sounding Devices (Int. Cl. 9).

First use as early as Nov. 19, 1962.

SN 307,159. Soc. Acc. Sempl. Albino Botto & Figit di Eligio Botto & C., Milan, Italy. Filed Sept. 12, 1968.



Owner of Italian Reg. Nos. 178,352, dated Dec. 5, 1963; and 224,027, dated May 24, 1967.

Class 39—Clothing

For Dresses, Suits, Jackets and Coats, Skirts, Trousers, Shorts, Underwear, Sweaters, Hosiery, Ties, Scarfs, Bathing Suits, Dressing Gowns, Stockings and Socks, Hats and Gloves, for Men, Women and Children (Int. Cl. 25).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Knitted, Netted and Textile Fabrics of Carded and Worsted Wool, Cotton, Linen, Silk, Synthetic Fibers and Mixtures Thereof, Towelling, Velvet and Corduroy (Int. Cl. 24).

Class 43—Thread and Yarn

For Yarns, Including Spun Yarns (Int. Cl. 22).

SN 307,376. The Buehler Corporation, Indianapolis, Ind. Filed Sept. 16, 1968.



Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Marine Power Transmissions; and Components Therefor—Namely, Gears, Shafts, and Housings (Int. Cl. 7). First use Feb. 27, 1968.

Class 103—Construction and Repair

For Electron Beam Welding Services (Int. Cl. 37). First use Sept. 7, 1967.

SN 308,785. Inca Metal Products Corporation, Carrollton, Tex. Filed Oct. 3, 1968.



Class 19—Vehicles

For Metal Carts, Metal Trucks, Shop Trucks, Carts and Parts Thereof (Int. Cl. 12).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Metal Work Benches of All Types, Tool Stands and Parts Therefor (Int. Cl. 20).

Class 32—Furniture and Upholstery

For Metal Cabinets, Metal Tables, Metal Shop Desks, Metal Cabinet Benches, Metal Drawer Case Units, Metal Parts Bins, Steel Shelving, Metal Counter Units, Metal Tire Racks, Tables, Cabinets, Benches, Desks, and Components Thereof (Int. Cl. 20).

First use in or about June 1963.

SN 309,501. Yardley of London, Inc., New York, N.Y. Filed Oct. 14, 1968. SN 318,484. Fence City, Inc., East Amherst, N.Y. Filed Feb. 6, 1969.

YARDLEY

Owner of Reg. Nos. 370,545, 727,573, and 764,428.

Class 51—Cosmetics and Toilet Preparations

For Cosmetics and Toilettries—Namely, Skin Lotions, Creams and Fresheners; Facial Makeup and Masks; Nail Polishes and Conditioners; Colognes and Perfumes; Body Powders and Deodorants; Bath Foams, Oils and Creams; Shaving Preparations; Hair Grooming, Conditioning, and Setting Preparations; and Cosmetic Adhesives (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soaps (Int. Cl. 3).

First use at least as early as 1900.

SN 311,008. Bangor Punta Operations, Inc., New York, N.Y. Filed Oct. 31, 1968.

PAMECO-AIRE

Class 31—Filters and Refrigerators

For Commercial Refrigeration Units and Parts Thereof (Int. Cl. 11).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Domestic and Commercial Air Conditioners and Coolers and Parts Thereof, and Heating Furnaces Using Gas, Electricity and Oil, and Parts Thereof (Int. Cl. 11).

First use Oct. 5, 1965.

SN 315,509. All Star International, Inc., Winnipeg, Manitoba, Canada. Filed Jan. 2, 1969.

ALL STAR FRIED CHICKEN

Priority claimed under Sec. 44(d) on Canadian application filed Sept. 9, 1968; Reg. No. 163,356, dated June 6, 1969. Applicant hereby disclaims the words "Fried Chicken" except as used in the above-captioned trademark, reserving all common law rights.

Class 46—Foods and Ingredients of Foods

For Fried Chicken (Int. Cl. 29).

Class 100—Miscellaneous

For Operation of Restaurants and Take-Out Restaurants (Int. Cl. 42).

SN 316,774. David De Ruitter, d.b.a. Davlin Paint Company, Oakland, Calif. Filed Jan. 16, 1969.

DAVLIN

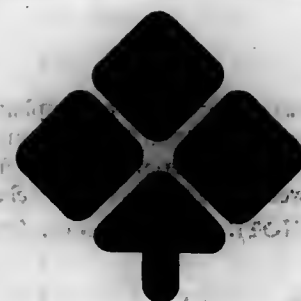
Class 12—Construction Materials

For Seamless Flooring Chips and Clear Liquid Plastic Used Therewith (Int. Cl. 19).

Class 16—Protective and Decorative Coatings

For Interior and Exterior Latex Paints, Stains, Enamels, Interior and Exterior Paints Formulated With Linseed Oil and Other Chemically Compounded Vehicles, and Clear Liquid Plastic Finish for Floors and Walls (Int. Cl. 2).

First use Jan. 6, 1969.



Class 12—Construction Materials

For Wooden Fences and Pre-Fabricated Dog Kennels (Int. Cls. 19 and 20).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Metal Fences (Int. Cl. 6).

First use on or about Jan. 15, 1968.

SN 320,801. Custom Coatings & Adhesives, Inc., Leeds, Ala. Filed Mar. 5, 1969.



The mark consists of the letters "CCA" and design.

Class 5—Adhesives

For Epoxy Resin Adhesive (Int. Cl. 1).

Class 12—Construction Materials

For Epoxy Resin for Bonding, Patching, and Repairing Surfaces (Int. Cl. 19).

First use Dec. 1, 1968.

SN 324,097. Rochester Silo Co., Rochester, Minn. Filed Apr. 9, 1969.

FUS-A-LINER

Class 2—Receptacles

For Complete Concrete Silos (Int. Cl. 19).

Class 12—Construction Materials

For Silo Staves, Silo Liners, and Doors for Silos (Int. Cl. 19).

First use Nov. 10, 1968.

SN 324,879. B & H One Hour Martinizing Management, Inc., Earle, Ark. Filed Apr. 18, 1969.

Bernard Manor

"Bernard Manor" is the name of a fictitious individual.

Class 103—Construction and Repair SN 333,221. H. B. Meyer and Son, Inc., Dallas, Tex. Filed July 22, 1969.

Class 105—Transportation and Storage

For Fur Cold Storage Vault Services (Int. Cl. 39).

First use May 1968.

SN 324,880. B & H One Hour Martinizing Management, Inc., Earle, Ark. Filed Apr. 18, 1969.

Manorizing

Class 103—Construction and Repair

For Laundry Dry Cleaning Services (Int. Cl. 37).

Class 105—Transportation and Storage

For Fur Cold Storage Vault Services (Int. Cl. 39).

First use May 1968.

SN 327,187. Excellon Industries, Torrance, Calif. Filed May 14, 1969.



Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Circuit Board Drilling Machines (Int. Cl. 7).

Class 26—Measuring and Scientific Appliances

For Optical Programming and Inspection Devices for Preparing Tapes for Numerically Controlled Drilling Machines (Int. Cl. 9).

First use in or about July 1967.

SN 327,231. Cartier, Incorporated, New York, N.Y. Filed May 14, 1969.

CARTIER

Owner of Reg. Nos. 411,239, 759,202, and others.

Class 100—Miscellaneous

For Designing Jewelry and Watches to Order and/or Specification of Others, and Leasing Articles of Jewelry (Int. Cl. 42).

Class 103—Construction and Repair

For Repairing Jewelry and Watches (Int. Cl. 37).

First use 1907.



The drawing is lined for the color blue, but no claim is made to color. The words "Reflecting Quality" are disclaimed apart from the mark as shown.

Class 4—Abrasives and Polishing Materials

For Floor Polish (Int. Cl. 8).

Class 6—Chemicals and Chemical Compositions

For Disinfectant and Sanitizer (Int. Cl. 5).

Class 12—Construction Materials

For Concrete Seal and Terrazzo Seal (Int. Cl. 19).

Class 16—Protective and Decorative Coatings

For Floor Finish in the Nature of a Protective Coating (Int. Cl. 2).

Class 52—Detergents and Soaps

For Cleaner-Degreaser, Liquid Hand Soap, and Floor, Wall, and Woodwork Cleaner (Int. Cl. 3).

First use Sept. 5, 1967.

SN 337,240. Southern Stores, Inc., Jacksonville, Fla. Filed Sept. 8, 1969.

DIXIE VIM

Class 101—Advertising and Business

For Retail Convenience Grocery Store Services (Int. Cl. 35).

First use at least as early as December 1962.

Class 103—Construction and Repair

For Retail Gasoline Filling Station Services (Int. Cl. 37).

First use 1927.

SN 341,889. Leon's Fashions, Inc., Waco, Tex. Filed Oct. 28, 1969.

Parnell

Owner of Reg. No. 798,212.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Women's Handbags (Int. Cl. 18).

Class 39—Clothing

For Women's Shoes, Belts, and Hosiery (Int. Cl. 25).
First use Jan. 2, 1962.

SN 343,618. Clairol Incorporated, New York, N.Y. Filed Nov. 14, 1969.

KINDNESS

Owner of Reg. Nos. 819,240, 833,793, and 857,577.

Class 51—Cosmetics and Toilet Preparations

For Personal Deodorant (Int. Cl. 5).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use Oct. 30, 1969.

SN 344,492. Avon Products, Inc., New York, N.Y. Filed Nov. 25, 1969.

BEAUTY SCHEME**Class 51—Cosmetics and Toilet Preparations**

For Cologne and Dusting Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use Oct. 21, 1969.

SN 344,493. Avon Products, Inc., New York, N.Y. Filed Nov. 25, 1969.

MAGIC MINUTES**Class 51—Cosmetics and Toilet Preparations**

For Moisturized Hand Lotion and Moisturized Body Lotion (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use Oct. 28, 1969.

SN 344,494. Avon Products, Inc., New York, N.Y. Filed Nov. 25, 1969.

MEANINGS**Class 51—Cosmetics and Toilet Preparations**

For Cologne and Dusting Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use Oct. 28, 1969.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 311,354. Crow's Hybrid Corn Company, Milford, Ill. Filed Nov. 5, 1968.

STRESS-PROVEN

For Hybrid Corn Seed (Int. Cl. 31).
First use Oct. 17, 1968.

SN 311,355. Crow's Hybrid Corn Company, Milford, Ill. Filed Nov. 5, 1968.

STRESS-TESTED

For Hybrid Corn Seed (Int. Cl. 31).
First use Oct. 17, 1968.

SN 311,356. Crow's Hybrid Corn Company, Milford, Ill. Filed Nov. 5, 1968.

STRESS-PROVED

For Hybrid Corn Seed (Int. Cl. 31).
First use Oct. 17, 1968.

SN 332,338. Fritz Muller Coroplast K.G., Wuppertal-Nachstreck, Germany. Filed July 11, 1969.

COROPLAST

Owner of U.S. Reg. No. 719,206.
For Synthetic Plastics and Wares Fabricated Therefrom—Namely, Tubing, Sheets or Foils and Extruded Sections for Further Fabrication; Shrinkable Synthetic Plastic Tubing; Synthetic Plastic Wrappings for Thermal Insulation, for Protection of Surfaces and for Anti-Corrosion Purposes; Luminescent Foils and Bands of Synthetic Plastic Materials; and Synthetic Plastic Substitutes for Glass (Int. Cl. 17).
First use Oct. 1, 1948; in commerce Oct. 1, 1948.

SN 333,422. Monsanto Company, St. Louis, Mo. Filed July 24, 1969.

SEF

For Plastic Materials in the Form of Fibers, Filaments, and Ribbon-Like Extrusions (Int. Cl. 22).
First use July 14, 1969.

SN 335,853. Dierks Forests, Inc., Hot Springs, Ark. Filed Aug. 21, 1969.

STEAKHOUSE

For Charcoal Briquets (Int. Cl. 4).
First use July 9, 1969.

SN 336,411. CITC Industries Inc., New York, N.Y. Filed Aug. 27, 1969.

VINTARA

For Polymeric or Poromeric Leather Substitutes or Artificial Leather (Int. Cl. 18).
First use Apr. 19, 1968.

SN 337,151. Celanese Corporation, New York, N.Y. Filed Sept. 5, 1969.

CYTREL

For Man-Made Raw Material in the Form of Films, Sheets, Fibers, Tows, and Shredded Material, for Use in the Industrial Arts (Int. Cls. 17 and 22).
First use May 27, 1969.

SN 337,417. Armour and Company, Chicago, Ill. Filed Sept. 9, 1969.

JAYSUN

For Upper Leather (Int. Cl. 18).
First use on or prior to May 6, 1969.

SN 337,418. Armour and Company, Chicago, Ill. Filed Sept. 9, 1969.

LEDERGO

For Upper Leather (Int. Cl. 18).
First use on or prior to Sept. 4, 1968.

SN 337,421. Armour and Company, Chicago, Ill. Filed Sept. 9, 1969.

UNOLEDER

For Upper Leather (Int. Cl. 18).
First use on or prior to May 7, 1969.

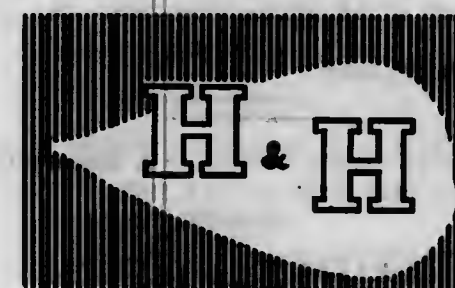
SN 353,819. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 12, 1970.

KYASILL

For Aluminum Silicate Sand (Int. Cl. 19).
First use Feb. 6, 1970.

Class 2—Receptacles

SN 273,497. H & H Plastics Mfg. Co., Grand Rapids, Mich. Filed June 9, 1967.



The lining on the drawing is not for color but to reproduce the lines in the mark on the specimens.
For Plastic Bags (Int. Cl. 20).
First use in or about June 1960.

SN 308,156. Fulgurit-Vertriebsgesellschaft m.b.H., Luthewunstorf, Germany. Filed July 19, 1968.



The drawing is lined for the color red.
Owner of German Reg. No. 719,418, dated Nov. 22, 1957.
For Flower Pots and Flower Boxes of Asbestos-Cement Products (Int. Cl. 21).

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 333,710. Alvin C. Haakenson, Ardmore, Pa. Filed July 28, 1969.

MARIMAC HALL

For Music and Record Carrying Case (Int. Cl. 18).
First use July 24, 1969.

SN 348,382. Alexander Light, Rockville Centre, N.Y. Filed Jan. 13, 1970.



For Ladies' Handbags and Pocketbooks (Int. Cl. 18).
First use at least as early as July 1946.

SN 350,188. H. Porters of Tucson, Tucson, Ariz. Filed Feb. 2, 1970.

BEAR CAT

For Saddles for Animals (Int. Cl. 18).
First use Sept. 19, 1969.

Class 5—Adhesives

SN 333,911. Dispersed Materials Inc., Akron, Ohio. Filed July 30, 1969.

CONCE-TRED

For High Viscosity Cement for Bonding Uncured Rubber (Int. Cl. 1).
First use June 13, 1969.

Class 6—Chemicals and Chemical Compositions

SN 291,797. The Western Company of North America, d.b.a. The Western Company, Fort Worth, Tex. Filed Feb. 23, 1968.

HYDROLUBE

For Polymeric Chemical Substances for Making Street and Sidewalk Surfaces Temporarily Slip for Police and Riot Control and for Making Conduits Temporarily Slip for Cable Pulling and To Create Ice-Like Slippery Surfaces for Sports and the Like (Int. Cl. 1).
First use Oct. 9, 1967.

SN 309,554. Drew Chemical Corporation, New York, N.Y.
Filed Oct. 14, 1968.

AMEROYAL

Owner of Reg. No. 770,182.
For Water Treatment Chemical for Scale and Temperature Control in Fresh Water and Sea Water Distillation Plants (Int. Cl. 1).
First use June 5, 1968.

SN 311,003. Ashland Oil & Refining Company, Ashland, Ky.
Filed Oct. 31, 1968.

HI-SOL

Owner of Reg. No. 574,314.
For Naphthas (Int. Cl. 4).
First use at least as early as Nov. 23, 1945.

SN 315,773. Stanley B. Krutulis, Bridgeport, N.Y. Filed
Jan. 3, 1969.

FORTICYTE

For Medicinal and Biological Preparations for Detecting Rubella in the Human Body for Laboratory Use (Int. Cl. 5).
First use Oct. 7, 1968.

SN 335,252. Pennwalt Corporation, Philadelphia, Pa. Filed
Aug. 13, 1969.

AQUA-VEX

For Herbicide for Use in Water (Int. Cl. 5).
First use June 13, 1966.

SN 353,390. Universal Oil Products Company, Des Plaines, Ill. Filed Mar. 9, 1970.

UOP

Owner of Reg. Nos. 534,802, 884,111, and others.
For Chemicals To Be Used in Water Purification and for the Elimination, Control and/or Prevention of Scale and Corrosion Caused From Hard or Soft Water in Potable Water Systems, Hot Water Heating and Chilled Water Systems, Cooling Water Systems, Hot Water Boilers, Steam Boilers, Steam Generators, Brine Tanks, and the Like (Int. Cl. 1).
First use on or prior to Jan. 13, 1970.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 353,750. Bernard Hochstein, New York, N.Y. Filed Mar. 11, 1970.

Sabre

For Smokers' Products—Namely, Pipes, Lighters, and Tobacco Pouches (Int. Cl. 34).
First use Aug. 29, 1969.

Class 11—Inks and Inking Materials

SN 304,872. Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N.Y. Filed Aug. 8, 1968.



For Typewriter Ribbons, Carbon Paper, Carbon Paper Rolls and Manifold Sets, Consisting of a Hectograph Carbon and a Master Sheet (Int. Cl. 16).
First use July 1, 1948.

Class 12—Construction Materials

SN 313,796. Airoll Burner Company (G.B.) Limited, West Drayton, Middlesex, England. Filed Dec. 6, 1968.

FLAREX

Owner of British Reg. No. 922,501, dated Mar. 15, 1968.
For Sealing Devices Made of Metal or Predominantly of Metal for Chimneys and/or for Chimney Stacks, and Parts Therefor (Int. Cl. 6).

SN 316,139. Sidney Sachs, Paramus, N.J. Filed Jan. 8, 1969.

San-a-Cage

For Permanent Kennels (Int. Cl. 20).
First use Nov. 2, 1968.

SN 319,139. Construction Adhesives Company, Paterson, N.J. Filed Feb. 14, 1969.

CAC

For Simulated Terrazzo Floor Surfacing Material Composed of an Epoxy Compound and Chips and Wall Surfacing Material Composed of an Epoxy Compound and Chips (Int. Cl. 19).
First use Nov. 29, 1968.

SN 321,375. The American Welding & Manufacturing Company, Warren, Ohio. Filed Mar. 11, 1969.

SUPER-CORE

For Metal Doors of the Hollow Metal Type Having Heat Resistant Insulation Therein, and Parts Thereof, and Sold as a Unit With The Doors Themselves (Int. Cl. 6).
First use April 1968.

SN 326,479. Mandoval Limited, London, England. Filed May 6, 1969.

MANDOSEAL

Owner of British Reg. No. 918,808, dated Dec. 20, 1967.
For Premixed Compositions Containing Vermiculite and Portland Cement for Mixing With Water for Use in Protecting and Sealing Rock Faces, Essentially for Subterranean Use (Int. Cl. 19).

SN 333,180. Resin Systems Inc., Woodside, N.Y. Filed July 22, 1969.

CONGARD

For Crystal Clear Polymeric Ester Designed To Seal, Harden and Protect Concrete and Masonry Outdoors and Indoors (Int. Cl. 19).
First use Dec. 30, 1968.

SN 334,514. Brooks & Perkins, Incorporated, Southfield, Mich. Filed Aug. 6, 1969.

TRIDENT

For Plywood Coated With Fiberglass for Use in Packing Cases and the Like (Int. Cl. 19).
First use May 6, 1969.

SN 336,333. Johns-Manville Corporation, New York, N.Y. Filed Aug. 26, 1969.

LPC

For Acoustical Ceiling Panels (Int. Cl. 19).
First use at least on or about Aug. 9, 1968.

SN 336,336. Johns-Manville Corporation, New York, N.Y. Filed Aug. 26, 1969.

PARTICLE-GARD

For Acoustical Ceiling Panels (Int. Cl. 19).
First use at least on or about Aug. 9, 1968.

SN 336,458. S. S. Kresge Company, Detroit, Mich. Filed Aug. 27, 1969.



For Roofing Materials—Namely, Shingles and Asphalt Felt (Int. Cl. 19).
First use on or before July 2, 1969.

SN 336,459. S. S. Kresge Company, Detroit, Mich. Filed Aug. 27, 1969.



For Roofing Materials—Namely, Shingles and Asphalt Felt (Int. Cl. 19).
First use on or before July 2, 1969.

SN 338,177. Playtime U.S.A. Inc., Buffalo, N.Y. Filed Sept. 17, 1969.

POLY-SURF

For Rubber and Synthetic Resin Surfacing Material for Roads, Play Surfaces, and Athletic Fields (Int. Cl. 19).
First use Aug. 1, 1969.

SN 338,212. American Metal Climax, Inc., New York, N.Y. Filed Sept. 18, 1969.

VENTROW

For Windows (Int. Cl. 19).
First use Sept. 9, 1969.

SN 338,246. Huntington Tile, Inc., Westminster, Calif. Filed Sept. 18, 1969.

LAVDEK

For Ceramic Tile (Int. Cl. 19).
First use on or about Dec. 12, 1966.

SN 338,652. Multnomah Plywood Corporation, Portland, Oreg. Filed Sept. 22, 1969.



The word "Ply" is disclaimed apart from the mark as shown.
Owner of Reg. No. 580,762.
For Plywood (Int. Cl. 19).
First use Oct. 8, 1968.

SN 338,994. Butler Manufacturing Company, Kansas City, Mo. Filed Sept. 26, 1969.

mr-24

For Preformed Metal Panels for Buildings and the Like (Int. Cl. 6).
First use on or about Feb. 18, 1969.

SN 339,134. The Carborundum Company, Niagara Falls, N.Y. Filed Sept. 29, 1969.

VARI-FORM

For Refractory Castable Mixes, Comprising Refractory Inorganic Fibers and a Binder for Use in Fabricating Refractory Linings and the Like (Int. Cl. 19).
First use Oct. 22, 1965.

SN 339,324. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Sept. 30, 1969.

SAFECORE

For Urethane Foam Insulation (Int. Cl. 17).
First use at least as early as Aug. 26, 1969.

SN 341,425. Silbrico Corporation, Hodgkins, Ill. Filed Oct. 22, 1969.

PAK-FILL

For Perlite Underlay for Grading Built-Up Roof Decks (Int. Cl. 19).
First use Aug. 12, 1969.

SN 341,534. Major Pool Equipment Corp., Clifton, N.J. Filed Oct. 23, 1969.

MAJOR-DOME

For Domed Enclosure for a Swimming Pool (Int. Cl. 19).
First use Sept. 16, 1969.

SN 351,391. Simpson Timber Company, Seattle, Wash. Filed Feb. 16, 1970.

TRIESTE

For Ceiling Tile (Int. Cl. 19).
First use Dec. 29, 1969.

SN 351,759. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 19, 1970.

LAV-COAT

For Refractory Coating Material (Int. Cl. 19).
First use Jan. 20, 1970.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 312,648. Anchor Post Products, Inc., d.b.a. Afco Fences, Baltimore, Md. Filed Nov. 20, 1968.

"Afcote"

Owner of Reg. No. 607,824.
For Plastic Coated Metallic Chain Link Fabric for Fencing, Including Residential Fencing, Fencing for Industrial Plants, Playgrounds, Athletic Fields, Stadiums, Swimming Pools, Right of Way Fencing Along Highways and Highway Guard Rails and Related Components; Fencing for Security and Decorative Purposes; Area Security Systems of Various Types and for Marking Boundary Lines, Balcony Rails, Protective Netting for Mine Proofs, Safety Nets, and Rock Barriers (Int. Cl. 6).

First use Nov. 1, 1967.

SN 313,937. Illinois Tool Works, Inc., Chicago, Ill. Filed Dec. 9, 1968.

NEW CONCEPTS IN CONSTRUCTION FASTENING

For Fastening Devices—Namely, Cold-Headed Fasteners, Sheet Metal Fasteners, Concrete Fasteners, Plastic Fasteners, Concrete Inserts and Fastener Mounting Systems for Concrete and the Like (Int. Cl. 6).
First use Nov. 8, 1968.

SN 322,826. Bristol Products Corporation, Bristol, Ind. Filed Mar. 26, 1969.



No claim is made to the words "Bristol Products Corp., Bristol, Indiana or "Patent Applied for" apart from the mark as shown.

For Plumbing Unit Insertable in Vent Lines (Int. Cl. 6).
First use Mar. 6, 1969.

SN 323,092. Delro Manufacturing Corporation, Plainview, N.Y. Filed Mar. 28, 1969.

DELRO

For Faucet Seats and Faucet Stems (Int. Cl. 11).
First use Feb. 26, 1968.

SN 328,167. Fedtro, Inc., Rockville Centre, N.Y. Filed May 23, 1969.

EASY FLOW

For Combined Openers and Pouring Spouts for Metal Cans Containing Oil or Other Fluids, for Use in Automotive Engines (Int. Cl. 8).
First use Mar. 19, 1969.

SN 329,049. Truly Tubular Fitting Corporation, Mount Vernon, N.Y. Filed June 4, 1969.

BRAZETYTE

For Tube Fittings (Int. Cl. 6).
First use May 6, 1969.

SN 332,423. Gebr. Schmeing, Weseke, Germany. Filed July 14, 1969.



For Livestock Feeding Equipment Featuring Drinker Valves, Tanks, Troughs, Associated Piping and Fittings Therefor (Int. Cl. 11).
First use in or about 1966; in commerce November 1968.

SN 336,410. Borg-Warner Corporation, Chicago, Ill. Filed Aug. 27, 1969.

PEDAMATIC

For Pedal Flush Toilet (Int. Cl. 11).
First use on or prior to Aug. 1, 1969.

SN 336,456. Kirsch Company, Sturgis, Mich. Filed Aug. 27, 1969.

REDI-HOOK

For Drapery Hooks (Int. Cl. 6).
First use July 31, 1969.

SN 351,683. Conoflow Corporation, Blackwood, N.J. Filed Feb. 18, 1970.

CONOFLOW

Owner of Reg. Nos. 624,768 and 844,567.
For Fire Protection Devices—Namely, Alarm Valves (Int. Cl. 9).
First use Jan. 2, 1970.

SN 353,955. Fastener Systems Corporation, Danbury, Conn. Filed Mar. 13, 1970.

THERMASET

For Fasteners and Related Hardware—Namely, Inserts, Studs, Pins, Rivets, Bushings, Terminals, Bearings, Nuts, and Associated Fasteners (Int. Cl. 6).
First use on or about Feb. 11, 1970.

Class 14—Metals and Metal Castings and Forgings

SN 324,074. Leonard Kurz, Furth, Bavaria, Germany. Filed Apr. 9, 1969.

LUXOR

For Hot Press Stamping Foils for Use in Decorating, Printing or Impregnating Surfaces of Materials or Articles (Int. Cl. 2).
First use 1938; in commerce at least 1956.

SN 332,372. Solar Steel Corporation, Cleveland, Ohio. Filed July 11, 1969.



Owner of Reg. No. 517,531.
For Steel and Iron in Strips, Sheets, Plates, Bars, and Tubes (Int. Cl. 6).
First use Apr. 20, 1948.

SN 345,981. Portec, Inc., Oak Brook, Ill. Filed Dec. 11, 1969.

PORTEC

For Manganese and Alloy Steel Castings (Int. Cl. 6).
First use Sept. 3, 1968.

SN 346,592. Anaconda Aluminum Company, Louisville, Ky. Filed Dec. 18, 1969.

ROYAL CHEF

Owner of Reg. No. 835,733 and others.
For Aluminum Foil (Int. Cl. 6).
First use Nov. 12, 1969.

Class 15—Oils and Greases

SN 297,918. Cristy Chemical Corporation, Worcester, Mass. Filed May 13, 1968.

DRYGAS

Owner of Reg. Nos. 542,006 and 809,426.
For Gasoline Additive Operative as a Water Solvent, Dehydrating Agent, Antifreeze Agent, and Rust and Corrosion Preventative (Int. Cl. 1).
First use at least as early as Feb. 10, 1948.

SN 302,715. Chem-Trend Incorporated, Howell, Mich. Filed July 15, 1968.

SAFETY LUBE

For Water-Base Die Lubricants (Int. Cl. 4).
First use November 1962.

SN 302,716. Chem-Trend Incorporated, Howell, Mich. Filed July 15, 1968.

SAFETY-LUBE-SUPER

For Water-Base Die Lubricants (Int. Cl. 4).
First use November 1962.

SN 332,027. Chemtrust Industries Corp., Maywood, Ill. Filed July 8, 1969.

METREET-MOLY

For Multipurpose Lubricant (Int. Cl. 4).
First use Nov. 4, 1964.

SN 339,990. H. L. Blachford Limited, Montreal, Quebec, Canada. Filed Oct. 7, 1969.

CHEMDRAW

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 8, 1969; Reg. No. 166,969, dated Dec. 19, 1969.
For Wire Drawing Compounds (Int. Cl. 4).
First use June 15, 1969.

Class 16—Protective and Decorative Coatings

SN 320,948. Growco, Inc., Tampa, Fla. Filed Mar. 6, 1969.

SPRA-FLAKE

For Decorative Coating in the Nature of a Paint for Use on Metal, Wood, Plastics, and Fiberglass (Int. Cl. 2).
First use on or about Feb. 15, 1969.

SN 320,981. The Twin Fair, Inc., Depew, N.Y. Filed Mar. 6, 1969.

UNEXCELLED

For Paint Products—Namely, Enamels, Varnishes, Stains, Latex Wall, Latex Semi-Gloss, Oil Base Semi-Gloss Latex, and Oil Base Exterior House Paints (Int. Cl. 2).
First use Jan. 3, 1969.

SN 336,167. Perry-Austen Manufacturing Co., Staten Island, N.Y. Filed Aug. 25, 1969.

TORNESIT

For Paints and Thinners (Int. Cl. 2).
First use 1933.

SN 344,062. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Nov. 20, 1969.

TARTAN-CLAD

For Stains for Use on Vinyl (Int. Cl. 2).
First use at least as early as Dec. 31, 1968.

SN 354,258. Debevoise Company, d.b.a. The Cavandish Company, Brooklyn, N.Y. Filed 3-17-70.

CAVENDISH

For Ready-Mixed Paints (Int. Cl. 2).
First use Apr. 1, 1969.

Class 17—Tobacco Products

SN 304,782. Harald Halberg, Svenborg, Denmark. Filed Aug. 9, 1968.

**MAC BAREN'S DARK
TWIST**

The component "Dark Twist" is disclaimed as such, all common law rights being preserved. Owner of U.S. Reg. No. 782,293.

For Smoking Tobacco, Specifically Pipe Tobacco Mixtures (Int. Cl. 34).

First use May 1, 1955; in commerce Sept. 8, 1964.

SN 318,982. Rothmans of Pall Mall Limited, Zurich, Switzerland. Filed Feb. 12, 1969.



Applicant makes no claim to the expression "Filter Cigarettes" apart from its mark as shown. Owner of Reg. No. 866,722.

For Cigarettes (Int. Cl. 34).

First use Sept. 16, 1968; in commerce Sept. 16, 1968.

SN 321,241. Lane Limited, New York, N.Y. Filed Mar. 10, 1969.

DANISH PRIDE

The word "Danish" is disclaimed apart from the mark as shown without any waiver of common-law rights.

For Smoking Tobacco (Int. Cl. 34).

First use October 1967.

SN 325,893. Godfrey Phillips, Limited, London, England. Filed Apr. 29, 1969.

PAST & PRESENT

Owner of British Reg. No. 927,197, dated June 26, 1968.
For Smoking Tobacco (Int. Cl. 34).

SN 329,350. Alvaro Gonzales Gonzales, d.b.a. Fabrika de Tabacos Alvaro, La Laguna de Tenerife, Islas Canarias, Spain. Filed June 6, 1969.

MARIANOS

"Marianos" is of Spanish origin and in English as a form of the name "Mary Anne."

For Cigars (Int. Cl. 34).

First use at least as early as Mar. 27, 1969; at least as early as Mar. 27, 1969.

SN 329,351. Alvaro Gonzalez Gonzalez, d.b.a. Fabrica de Tabacos Alvaro, La Laguna de Tenerife, Islas Canarias, Spain. Filed June 6, 1969.

FLORETES

The term "Floretes" is of Spanish origin and in English means "small flower."

For Cigars (Int. Cl. 34).

First use at least as early as Mar. 27, 1969; in commerce at least as early as Mar. 27, 1969.

SN 337,483. Alfred Dunhill, Limited, London, England. Filed Sept. 10, 1969.



Applicant disclaims the words "London-Paris-New York." The drawing is lined for the colors red and gold. Owner of British Reg. No. 916,358, dated Oct. 26, 1967; and U.S. Reg. Nos. 155,951, 869,281, and others.

For Cigarettes (Int. Cl. 34).

SN 338,582. Lane Limited, New York, N.Y. Filed Sept. 22, 1969.

MACBETH

For Smoking Tobacco (Int. Cl. 34).
First use July 1969.

SN 338,583. Lane Limited, New York, N.Y. Filed Sept. 22, 1969.

GOLDEN CASTLE

For Smoking Tobacco (Int. Cl. 34).
First use July 1969.

SN 338,871. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Sept. 25, 1969.

TIPAREE

For Cigars (Int. Cl. 34).
First use July 22, 1969.

SN 339,319. Gesty Trading and Manufacturing Corp., New York, N.Y. Filed Sept. 30, 1969.



The drawing is lined for the colors red and brown, but these colors are not claimed as a feature of the mark.

For Pipe Tobacco (Int. Cl. 34).

First use Sept. 17, 1969.

SN 339,607. Svenska Tobaks AB, Stockholm, Sweden. Filed Oct. 2, 1969.

GRIFFIN

Owner of Swedish Reg. No. 121,287, dated Oct. 6, 1967.
For Cigarettes, Cigars, and Pipe Tobacco (Int. Cl. 34).

SN 343,450. Island Matrix, Inc., Sparta, N.J. Filed Nov. 13, 1969.

ISLANDER LEVANT

For Smoking Tobacco (Int. Cl. 34).
First use Apr. 22, 1969.

SN 343,451. Island Matrix, Inc., Sparta, N.J. Filed Nov. 13, 1969.

ISLANDER CARIB

For Smoking Tobacco (Int. Cl. 34).
First use Apr. 22, 1969.

SN 343,452. Island Matrix, Inc., Sparta, N.J. Filed Nov. 13, 1969.

ISLANDER NORDIC

For Smoking Tobacco (Int. Cl. 34).
First use Apr. 22, 1969.

SN 343,453. Island Matrix, Inc., Sparta, N.J. Filed Nov. 13, 1969.

ISLANDER ERIN

For Smoking Tobacco (Int. Cl. 34).
First use Apr. 22, 1969.

HIGHWAYMAN

For Cigars (Int. Cl. 34).
First use Oct. 28, 1969.

SN 344,556. Liggett & Myers Incorporated, New York, N.Y. Filed Nov. 25, 1969.

FRONTIER

For Cigarettes (Int. Cl. 34).
First use Oct. 9, 1969.

SN 344,557. Liggett & Myers Incorporated, New York, N.Y. Filed Nov. 25, 1969.

MENTOR

For Cigarettes (Int. Cl. 34).
First use Oct. 9, 1969.

SN 344,558. Liggett & Myers Incorporated, New York, N.Y. Filed Nov. 25, 1969.

QUEST

For Cigarettes (Int. Cl. 34).
First use Oct. 9, 1969.

SN 344,559. Liggett & Myers Incorporated, New York, N.Y. Filed Nov. 25, 1969.

QUOTA

For Cigarettes (Int. Cl. 34).
First use Oct. 9, 1969.

SN 345,660. Theodorus Niemeyer Inc., Louisville, Ky. Filed Dec. 8, 1969.

MACEDONIAN

For Pipe Tobacco (Int. Cl. 34).
First use Nov. 7, 1969.

SN 347,854. American Brands, Inc., New York, N.Y. Filed Jan. 7, 1970.

SIGNAL

For Twist Tobacco and Cigarettes (Int. Cl. 34).
First use at least as early as Sept. 6, 1917, on twist tobacco.

SN 351,394. Universal Cigar Corporation, New York, N.Y. Filed Feb. 16, 1970.

AS YOU LIKE IT

For Cigars (Int. Cl. 34).
First use 1963.

SN 351,695. A. Gardinkel, Inc., Washington, D.C. Filed Feb. 18, 1970.

"TEMPI"

For Pipe Tobacco, Cigarette Tobacco, and Cigars (Int. Cl. 34).
First use July 1, 1969.

SN 353,123. American Brands, Inc., New York, N.Y. Filed Mar. 5, 1970.

ARCEE

For Cigarettes (Int. Cl. 34).
First use Feb. 13, 1970.

SN 353,124. American Brands, Inc., New York, N.Y. Filed Mar. 5, 1970.

RC

For Cigarettes (Int. Cl. 34).
First use Feb. 13, 1970.

SN 353,125. American Brands, Inc., New York, N.Y. Filed Mar. 5, 1970.

RECON

For Cigarettes (Int. Cl. 34).
First use Feb. 13, 1970.

SN 353,126. American Brands, Inc., New York, N.Y. Filed Mar. 5, 1970.

COLA

For Cigarettes (Int. Cl. 34).
First use Feb. 13, 1970.

SN 354,360. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

TRIO

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,361. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

AMBER

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,362. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

FLING

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,363. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

SPREE

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,364. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

BRITE

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,365. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

BROOKWOOD

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,366. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

CONCEPT

For Cigarettes (Int. Cl. 34).
First use Mar. 11, 1970.

SN 354,367. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Mar. 18, 1970.

CARBOND

For Cigarette Filters Sold Incorporated as a Part of the Cigarette (Int. Cl. 34).
First use Mar. 11, 1970.

Class 18—Medicines and Pharmaceutical Preparations

SN 307,496. Merck & Co., Inc., Rahway, N.J. Filed Sept. 16, 1968.

PORT-A-PAK

For Portable Container Sold Only With Veterinary Medicinal Compounds (Int. Cl. 5).
First use Aug. 22, 1968.

SN 317,406. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 23, 1969.

U-JECT

For Disposable Syringe Containing Pharmaceutical Preparations (Int. Cl. 5).
First use Aug. 26, 1968.

SN 318,333. Schering Aktiengesellschaft, Berlin, Germany. Filed Feb. 4, 1969.

SH 714

For Pharmaceutical Preparation for Hormonal Use (Int. Cl. 5).
First use Oct. 10, 1968; in commerce Oct. 31, 1968.

SN 321,964. Moorman Manufacturing Company, Quincy, Ill. Filed Mar. 17, 1969.

GROSTRONG

Owner of Reg. Nos. 541,394 and 541,395.
For Vitamin and Mineral Feed Supplement for Horses (Int. Cl. 5).
First use Feb. 24, 1969.

SN 324,124. Cummins Pharmaceutical Company, Inc., Beaumont, Tex. Filed Apr. 10, 1969.

bucco

For Preparation for Treatment of Acne and Related Skin Conditions (Int. Cl. 5).
First use Nov. 22, 1968.

SN 324,125. Cummins Pharmaceutical Company, Inc., Beaumont, Tex. Filed Apr. 10, 1969.

bucco

For Preparation for Treatment of Acne and Related Skin Conditions (Int. Cl. 5).
First use Nov. 22, 1968.

SN 332,727. Lemmon Pharmacal Company, Sellersville, Pa. Filed July 16, 1969.

NU'LEVEN

For Digestive Aid (Int. Cl. 5).
First use June 1962.

SN 332,773. Schlicksup Drug Co., Inc., Peoria, Ill. Filed July 16, 1969.

ORAZINC

For Zinc Sulfate Capsules Used as a Drug Preparation (Int. Cl. 5).
First use Aug. 6, 1968.

SN 348,386. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 13, 1970.

CONGESTEX

For Cough Control Product (Int. Cl. 5).
First use Nov. 19, 1969.

SN 348,610. Carter-Wallace, Inc., New York, N.Y. Filed Jan. 15, 1970.

SEA-WAVE

Owner of Reg. No. 565,720.
For Pharmaceutical Preparation—Namely, a Laxative (Int. Cl. 5).
First use Dec. 11, 1969.

SN 348,611. Carter-Wallace, Inc., New York, N.Y. Filed Jan. 15, 1970.

SEA-WAY

Owner of Reg. No. 565,721.
For Pharmaceutical Preparation—Namely, a Laxative (Int. Cl. 5).
First use Dec. 11, 1969.

SN 348,613. Carter-Wallace, Inc., New York, N.Y. Filed Jan. 15, 1970.

LONGULES

Owner of Reg. No. 800,207.
For Pharmaceutical Preparation—Namely, a Laxative (Int. Cl. 5).
First use Dec. 11, 1969.

SN 348,618. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 15, 1970.

INDOFLAM

For Antinflammatory Agent (Int. Cl. 5).
First use Nov. 17, 1969.

SN 348,619. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 15, 1970.

BUPROCIN

For Antinflammatory Agent (Int. Cl. 5).
First use Nov. 17, 1969.

SN 348,620. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 15, 1970.

BUPROCID

For Antinflammatory Agent (Int. Cl. 5).
First use Nov. 17, 1969.

SN 348,720. Carter-Wallace, Inc. New York, N.Y. Filed Jan. 16, 1970.

EYE WITNESS

For Pharmaceutical Preparation—Namely, an Eye Drop (Int. Cl. 5).
First use Dec. 11, 1969.

SN 348,721. Carter-Wallace, Inc., New York, N.Y. Filed Jan. 16, 1970.

MEPROSULE

Owner of Reg. No. 799,753.
For Pharmaceutical Preparation—Namely, a Non-Narcotic Tranquillizer (Int. Cl. 5).
First use Dec. 9, 1969.

SN 348,723. Carter-Wallace, Inc., New York, N.Y. Filed Jan. 16, 1970.

PROTABS

Owner of Reg. No. 528,325.
For Pharmaceutical Preparation—Namely, a Non-Narcotic Tranquillizer (Int. Cl. 5).
First use Dec. 9, 1969.

Class 19—Vehicles

SN 322,287. Globestar Industries, Inc., Elkhart, Ind. Filed Mar. 20, 1969.



The drawing is lined for the colors red and blue, but no claim is made to color. Applicant disclaims the representation of a globe apart from the mark as shown.
For Pick-Up Campers and Travel Trailers (Int. Cl. 12).
First use Apr. 8, 1966.

SN 342,719. Avco Corporation, Tulsa, Okla. Filed Nov. 5, 1969.



For Motor Homes, Mobile Homes, and Travel Trailers (Int. Cl. 12).
First use Aug. 13, 1969.

SN 345,287. American Motors Corporation, Kenosha, Wis. Filed Dec. 4, 1969.



The drawing is lined for the colors red and blue.
For Automobiles and Structural Parts Thereof (Int. Cl. 12).
First use September 1969.

SN 350,376. The Duralite Manufacturing Company, Baltimore, Md. Filed Feb. 3, 1970.

VANLITE

For Truck Bodies (Int. Cl. 12).
First use on or about Jan. 30, 1965.

SN 350,377. The Duralite Manufacturing Company, Baltimore, Md. Filed Feb. 3, 1970.

CHECK THE SPECS

For Truck Bodies (Int. Cl. 12).
First use Oct. 26, 1967.

SN 350,622. Travelmaster, Inc., Elkhart, Ind. Filed Feb. 5, 1970.

TRAVELMASTER

Owner of Reg. No. 763,369.
For Travel Trailers (Int. Cl. 12).
First use on or about Apr. 18, 1963.

SN 350,663. American Photocopy Equipment Company, Evanston, Ill. Filed Feb. 6, 1970.



For Boats (Int. Cl. 12).
First use Nov. 27, 1962.

SN 351,081. Textron Inc., Providence, R.I. Filed Feb. 11, 1970.

VOYAGER

For Snowmobiles and Parts Therefor (Int. Cl. 12).
First use December 1961.

Class 20—Linoleum and Oiled Cloth

SN 322,044. Congoleum Industries, Inc., Kearny, N.J. Filed Mar. 18, 1969.

MURANO

For Plastic Coverings of the Solid Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like, in the Form of Rolls, Rugs and Tiles (Int. Cl. 27).
First use Sept. 23, 1968.

SN 351,653. GAF Corporation, New York, N.Y. Filed Feb. 18, 1970.

AQUAFLEX

For Backing for Vinyl Flooring (Int. Cl. 27).
First use July 1962.

SN 351,654. GAF Corporation, New York, N.Y. Filed Feb. 18, 1970.

RESIFLEX

For Backing for Vinyl Flooring (Int. Cl. 27).
First use December 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 236,851. Standard Kollsman Industries, Inc., Melrose Park, Ill. Filed Jan. 19, 1966.

STANDARD

For Television Tuners and Parts Therefor (Int. Cl. 9).
First use 1946.

SN 303,917. Maro International, Ltd., New York, N.Y. Filed July 30, 1968.

LILIBETH

For Women's Electrical Styling Curling Irons (Int. Cl. 9).
First use July 15, 1968.

SN 320,035. Cyprus Mines Corporation, d.b.a. Rome Cable Division, Rome, N.Y. Filed Feb. 25, 1969.

ROME ADP

Owner of Reg. Nos. 390,205, 626,838, and others.
For Wire and Cable (Int. Cl. 9).
First use May 14, 1963.

SN 320,754. Western New York Hospital Television, Inc., Buffalo, N.Y. Filed Mar. 4, 1969.



For Portable, Closed Circuit Television System (Int. Cl. 9).
First use Feb. 13, 1969.

SN 322,972. Bala Electronics Corp., Conshohocken, Pa., assignee of Conshohocken Chemicals, Inc., Rosemont, Pa. Filed Mar. 27, 1969.



For Electronic Materials—Namely, Cermet Pastes (Int. Cl. 9).
First use Feb. 3, 1969.

SN 323,388. Therma A.G. (Therma S.A.) (Therma Ltd.), Schwanden, Switzerland. Filed Apr. 1, 1969.

THERMASWISS

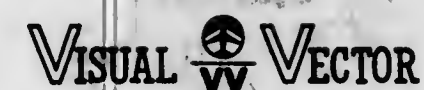
For Electric Warming Plate Sets (Int. Cl. 11).
First use Aug. 10, 1967; in commerce Aug. 10, 1967.

SN 333,608. Shure Brothers Incorporated, Evanston, Ill. Filed July 25, 1969.

POWER MASTER

For Electronic Sound Amplifiers (Int. Cl. 9).
First use June 23, 1969.

SN 333,618. Unifon International Systems, Inc., Hayward, Calif. Filed July 25, 1969.



Applicant disclaims the words "Visual Vector" apart from the mark as shown.
For High Intensity Sequential Airport Approach Lighting Systems (Int. Cl. 9).
First use July 2, 1969.

SN 334,496. Thomson-CSF, Paris, France. Filed Aug. 5, 1969.

"PYROBLOC"

Priority claimed under Sec. 44(d) on French Reg. No. 760,147, dated Mar. 6, 1969.
For Electrodes for Electronic Tubes (Int. Cl. 9).

SN 339,627. Mansfield Aircraftmen Company, Mansfield, Ohio. Filed Oct. 2, 1969.

manairco

For Airport Runway Lighting Systems (Int. Cl. 11).
First use Oct. 19, 1964.

SN 342,385. Allen Electric and Equipment Company, Cleveland, Ohio. Filed Nov. 3, 1969.

LINEBACKER

For Antennas (Int. Cl. 9).
First use Oct. 14, 1968.

SN 342,406. Burton Instrumentation, Inc., Fort Collins, Colo. Filed Nov. 3, 1969.

ADAM

For Downed-Aircraft-Locator Radio Beacons (Int. Cl. 9).
First use Feb. 19, 1969.

SN 344,034. Thomas Industries Inc., Louisville, Ky. Filed Nov. 19, 1969.

U-LUME

For Electric Lighting Fixtures (Int. Cl. 11).
First use on or about Sept. 25, 1969.

SN 345,434. Bourns, Inc., Riverside, Calif. Filed Dec. 5, 1969.

TRIMPACK

Owner of Reg. Nos. 602,968, 609,565, and others.
For Electrical Relays (Int. Cl. 9).
First use Sept. 4, 1969.

SN 352,428. Radio Shack Division, Tandy Corporation, Boston, Mass. Filed Feb. 26, 1970.

PORTAVISION

For Television Receiver (Int. Cl. 9).
First use at least as early as Aug. 15, 1969.

SN 353,136. Intertherm, Inc., St. Louis, Mo. Filed Mar. 5, 1970.

AIR-TEX

For Pre-Assembled Electrical Connector Sets, Including Terminals, Molded Plugs and Molded Sockets (Int. Cl. 9).
First use Feb. 17, 1970.

SN 353,137. Lectrohm, Inc., Chicago, Ill. Filed Mar. 5, 1970.

LECTROHM

For Resistors (Int. Cl. 9).
First use in or about 1955.

Class 22 — Games, Toys, and Sporting Goods

SN 315,145. Solomon Bernstein, Quincy, Mass. Filed Dec. 24, 1968.

LET'S DRIVE

For Equipment Sold as a Unit for Playing a Board Game (Int. Cl. 28).
First use April 1965.

SN 318,238. Spectra Sports, Inc., San Francisco, Calif. Filed Feb. 3, 1969.

SITZSKI

For Bicycle-Like Skiing Device (Int. Cl. 28).
First use Dec. 16, 1968.

SN 319,611. Thaddeus A. Koniecki, d.b.a. Pistol Pool Company, Southfield, Mich. Filed Feb. 19, 1969.

PISTOL POOL

Without prejudice to its rights now existing or hereafter arising, and for the purpose of this registration only, applicant makes no claim to the word "Pool" apart from the mark.

For Game Apparatus Sold as a Unit for Playing a Pool-Type Game, Comprising a Miniature Pool Table, Assorted Cue Sticks, a Pistol Grip Cue Stick Actuating Mechanism, Miniature Pool Balls Consisting of Marbles or the Like, and Parts for the Aforementioned Apparatus (Int. Cl. 28).
First use Jan. 21, 1969.

SN 321,084. Skor-Mor Corporation, Anaheim, Calif. Filed Mar. 7, 1969.

SKY HIGH

For Equipment Sold as a Unit for Playing a Toy Block Balancing Parlor Game (Int. Cl. 28).
First use Sept. 10, 1968.

SN 321,533. Otto Maier Verlag Ravensburg, Ravensburg, Germany. Filed Mar. 12, 1969.

RAVENSBURGER

Priority claimed under Sec. 44(d) on German application filed Sept. 16, 1968; Reg. No. 852,211, dated Nov. 27, 1968. No claim is made of exclusive right to the use of the word "Toys," apart from the mark as shown. Owner of U.S. Reg. Nos. 677,276 and 712,456.

For Toys Made of Wood, Metal, Plastic, Paper, and Paper-board (Int. Cl. 28).

SN 323,258. Frank M. Childers, Bethel Park, Pa. Filed Apr. 1, 1969.

JOG-N-PLACE

For Biped Exercising Platform for Performing or Simulating Fast Walking, Trotting, and/or Running (Int. Cl. 28).
First use Mar. 6, 1969.

SN 323,363. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Apr. 1, 1969.

CLACKITY TRACKS

Applicant disclaims the word "Tracks" apart from the mark as shown.

For Tumble-Action Toy (Int. Cl. 28).
First use at least as early as Feb. 1, 1969.

SN 323,503. Wilson Sporting Goods Co., River Grove, Ill. Filed Apr. 2, 1969.

STRAPLOCK

Owner of Reg. No. 863,060.
For Baseball Glove Hand or Wrist Strap Which Is Incorporated as a Component Part of Said Glove (Int. Cl. 28).
First use 1960.

SN 323,559. Bernard Green, Glen Oaks, N.Y. Filed Apr. 3, 1969.

CONVERSATION MAKER

For Dial Telephone-Type Amusement Device (Int. Cl. 28).
First use Mar. 26, 1969.

SN 327,715. S. H. Barton & Company, Gardena, Calif. Filed Apr. 28, 1969.



Fishing Rods, Fishing Reels, Fishing Line, and Terminal Tackle (Int. Cl. 28).
First use Mar. 1, 1961.

SN 328,926. K. Zysset & Co. AG, Lyss, Bern, Switzerland. Filed June 2, 1969.



Applicant disclaims the right to exclusive use of the word "Super" apart from the mark as shown. Owner of Swiss Reg. No. 225,519, dated Apr. 25, 1967.

For Children's Construction Sets, Comprising Blocks, Cubes and Connectors, for Building Various Models of Vehicles, Buildings, Animals, Trees, and Foliage (Int. Cl. 28).

SN 329,244. Jim-N-E Cricket Bait Co., Inc., East St. Louis, Ill. Filed June 5, 1969.



No claim is made to the word "Cricket" apart from the mark.

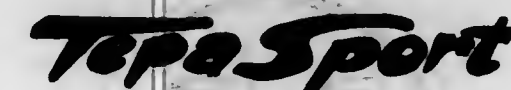
For Crickets Sold for Fish Bait (Int. Cl. 20).
First use Apr. 19, 1969.

SN 329,398. Arden Zinn, Atlanta, Ga. Filed June 6, 1969. SN 343,918. Plastilite Corporation, Omaha, Nebr. Filed Nov. 19, 1969.

MIDRIFITSTIK

For Rod or Staff for Use in Performing Physical Fitness Exercises (Int. Cl. 28).
First use Dec. 1, 1968.

SN 330,627. Recreational Equipment Company of Pennsylvania, Inc., York, Pa. Filed June 20, 1969.



No claim of exclusive right is made to "Sport" for the goods recited.

For Athletic Shoes—Namely, Soccer, Football, Cross-Country, Golf, Ice Skate and Roller Skating Shoes, and Track Shoes With and Without Spikes (Int. Cl. 25).
First use Dec. 1, 1967.

SN 332,015. Marty Gilman, Inc., Gilman, Conn. Filed July 8, 1969.

ACTIONBACK

For Multi-Purpose Offense and Defense Football Training Apparatus (Int. Cl. 28).
First use Jan. 25, 1969.

SN 334,348. S. S. Kresge Company, Detroit, Mich. Filed Aug. 4, 1969.



For Sleeping Bags for Outdoor or Campers' or Sportsmen's Use (Int. Cl. 20).
First use on or before Jan. 17, 1969.

SN 337,232. Mattel, Inc., Hawthorne, Calif. Filed Sept. 8, 1969.

FIRECRACKER

For Toy Miniature Automobiles (Int. Cl. 28).
First use Aug. 8, 1969.

SN 337,234. Mattel, Inc., Hawthorne, Calif. Filed Sept. 8, 1969.

TINGLE DINGLE

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Aug. 8, 1969.



Owner of Reg. Nos. 771,821 and 835,020.
For Fishing Rods (Int. Cl. 28).
First use at least as early as September 1969.

SN 345,557. Mattel, Inc., Hawthorne, Calif. Filed Dec. 8, 1969.

SKELTER HELTER

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Oct. 24, 1969.

SN 345,758. Mattel, Inc., Hawthorne, Calif. Filed Dec. 10, 1969.

FURRY HURRY

For Toy Top (Int. Cl. 28).
First use Oct. 30, 1969.

SN 346,703. Sperco Tool & Mfg. Co. Inc., Minneapolis, Minn. Filed Dec. 19, 1969.

SNO-JOB

For Plastic Snow Shoes (Int. Cl. 25).
First use Nov. 10, 1969.

SN 354,086. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

CALIFORNIA M70

For Toy Miniature Automobile (Int. Cl. 28).
First use Nov. 25, 1969.

SN 354,279. The United States Playing Card Company, Cincinnati, Ohio. Filed Mar. 17, 1970.

QUEEN B

Owner of Reg. Nos. 49,107 and 731,112.
For Playing Cards (Int. Cl. 16).
First use Feb. 27, 1970.

SN 354,346. Paolo Bontempi, d.b.a. Sigma Bontempi di Dott. Ing., Paolo Bontempi, Picena, Macerata, Italy. Filed Mar. 18, 1970.



Owner of Italian Reg. No. 240,349, dated June 18, 1969.
For Toys in the Form of Musical Organs (Int. Cl. 28).

SN 354,355. Mattel, Inc. Hawthorne, Calif. Filed Mar. 18, 1970.

GROWIN' PRETTY

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Nov. 13, 1969.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 298,359. Semco Shipper's Equipment Mfg. Co., Pharr, Tex. Filed May 16, 1968.

SEMCO

For Vacuum Unloaders for Handling Food Products; General Harvesters for Field Crops; Earth Digging Machines; Ice Crushing and Blowing Machines; Vegetable Baggers; Vegetable Sizers; Vegetable Washers; and Mobile Bunker Iceers (Int. Cl. 7).
First use in about 1944.

SN 298,717. Fleming-Potter Company, Inc., Peoria, Ill. Filed May 21, 1968.

BUDWEST

For Machinery for Wine, Liquor and Beverage Manufacturing—Namely, Bottle Fillers, Liquid Pumps, Grape Presses, Crushers, Stemmers, Crowners, Corkers, Wirehooders, Capsule Feeders, Capsule Pleaters, Capsule Spin-On Machines, Capsuling Machines, Foiling and Labelling Machines, Casers and Uncasers, and Bottle Wrapping Machines (Int. Cl. 7).
First use Apr. 1, 1968.

SN 298,719. Fleming-Potter Company, Inc., Peoria, Ill. Filed May 21, 1968.



Applicant disclaims the wording "Established 1872," apart from the mark as shown.

For Machinery for Wine, Liquor and Beverage Manufacturing—Namely, Bottle Fillers, Liquid Pumps, Grape Presses, Crushers, Stemmers, Crowners, Corkers, Wirehooders, Capsule Feeders, Capsule Pleaters, Capsule Spin-On Machines, Capsuling Machines, Foiling and Labelling Machines, Casers and Uncasers, and Bottle Wrapping Machines (Int. Cl. 7).
First use Apr. 1, 1968.

SN 308,249. Kocher Plastic H. Bohmer KG, Laufen am Kocher, Germany. Filed Sept. 26, 1968.

BOTTLE PACK

Applicant disclaims the word "Bottle" apart from the mark as shown.

For Molding and Sealing Machines for Simultaneous Blow Molding of Bottles and the Filling of Same (Int. Cl. 7).

First use on or before Dec. 31, 1962; in commerce on or before Mar. 1, 1968.

SN 313,959. NMS INDUSTRIES, Inc., Chicago, Ill. Filed Dec. 9, 1968.

FIX 'N' SAVE

Owner of Reg. No. 738,556.
For Shop and Hand Tools—Namely, Pliers, Wrenches, Socket Sets, Screwdrivers, Drill Sets, Braces, Hammers, Saws, Files, and Garden Tools (Int. Cl. 8).
First use July 9, 1959.

SN 315,662. Dunham-Bush, Inc., West Hartford, Conn. Filed Dec. 30, 1968.



Owner of Reg. Nos. 771,880 and 779,813.
For Gas Compressors, Motor Compressors, Vacuum Pumps, Condensate Pumps and Centrifugal Pumps (Int. Cl. 7).
First use spring of 1965.

SN 324,244. Societe des Carburateurs Solex, Nanterre, Hauts-de-Seine, France. Filed Apr. 10, 1969.

VIT-KIT

Priority claimed under Sec. 44(d) on French Reg. No. 750,749, dated Oct. 31, 1968.
For Carburetor Repair Kits (Int. Cl. 7).
First use 1962; in commerce 1962.

SN 325,386. Plumbcraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.



For Manual Reaming Tool Especially Adapted for the Repair of Faucet Seats and Repair Parts for Faucets (Int. Cl. 8).
First use January 1965.

SN 325,633. Sunkist Growers, Inc., Los Angeles, Calif. Filed Apr. 25, 1969.

"THE SNACKER FASTEST ORANGE PEELER IN THE WEST"

Exclusive right to the use of the words "Fastest Orange Peeler in the West" apart from the mark shown is not claimed.
For Hand Tools—Namely, Citrus Peelers (Int. Cl. 8).
First use Feb. 26, 1969.

SN 325,913. Zippo Manufacturing Company, Bradford, Pa. Filed Apr. 29, 1969.

ZIPPO

Owner of Reg. No. 810,114.
For Accessory Carried in Golfer's Pocket for Use During His Game for Repairing Ball Marks on Golf Course Greens, Marking Where Golf Balls Fall, and Cleaning Dirt From Golf Shoes and Their Spikes (Int. Cl. 8).
First use Jan. 15, 1969.

SN 327,703. Turbo Machine Company, Lansdale, Pa. Filed May 19, 1969.

SUPERSET

For Machine for Finishing Women's Hosiery and Panty Hosiery (Int. Cl. 7).
First use Jan. 31, 1969.

SN 328,882. Monarch Road Machinery Company, Grand Rapids, Mich. Filed June 2, 1969.



Owner of Reg. No. 782,373.
For Power Hydraulic Control Units and Components Therefor, and Hydraulically Operated Scraper Blade Units (Int. Cl. 7).
First use on or about Oct. 28, 1965.

SN 332,585. Hardware Products Company, Boston, Mass. Filed July 15, 1969.

MAGIC WEEDER

No registration rights are claimed herein for the word "Weeder" apart from the mark as shown, but applicant waives none of its common law rights in said mark or any feature thereof.

For Hand Tools—Namely, Garden Cultivators (Int. Cl. 8).
First use May 9, 1969.

SN 338,961. Shur-Lok Corporation, Santa Ana, Calif. Filed Sept. 25, 1969.

SHUR-KIT

For Structural Fastener Insert Installation Kits Containing Potting Compound and Compound Injection Gun (Int. Cl. 8).

First use on or about Mar. 24, 1969.

SN 342,831. Clopay Corporation, Cincinnati, Ohio. Filed Nov. 6, 1969.

atlas vac machine

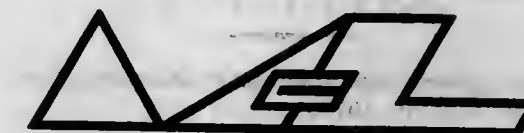
No claim is made to exclusive rights in the word "Machine" apart from the mark as shown. Owner of Reg. No. 819,454.
For Plastic Forming and Packaging Machinery, and Parts Thereof (Int. Cl. 7).
First use June 15, 1969.

SN 342,832. Clopay Corporation, Cincinnati, Ohio. Filed Nov. 6, 1969.



For Plastic Forming and Packaging Machinery, and Parts Thereof (Int. Cl. 7).
First use June 15, 1969.

SN 343,575. McLaughlin Manufacturing Company, Plainfield, Ill. Filed Nov. 14, 1969.



For Earth Boring Machines (Int. Cl. 7).
First use July 1967.

SN 343,576. McLaughlin Manufacturing Company, Plainfield, Ill. Filed Nov. 14, 1969.



For Earth Boring Machines (Int. Cl. 7).
First use Dec. 28, 1965.

SN 346,103. North American Rockwell, Corporation, Pittsburgh, Pa. Filed Dec. 12, 1969.

DELTA WING

For Universal Joints and Component Parts Thereof (Int. Cl. 7).
First use at least as early as April 1969.

SN 346,379. Hunt & Moscrop Limited, Middleton Junction, Lancaster, England. Filed Dec. 16, 1969.

EVASET

For Shrinking Machines Used in the Manufacture and Processing of Textile Piece Goods, and Parts of Such Machines (Int. Cl. 7).
First use July 1, 1950; in commerce July 1, 1955.

SN 352,295. Data Card Corporation, Minneapolis, Minn. Filed Feb. 25, 1970.



The mark comprises the stylized letters "D.C."
For Embossing-Encoding Machines for Plastic Cards (Int. Cl. 7).
First use Nov. 16, 1969.

SN 353,965. Sioux Steam Cleaner Corporation, Beresford, S.D. Filed Mar. 13, 1970.



Owner of Reg. No. 884,082.
For Portable, Multi-purpose Steam Cleaners and High Pressure Washers (Int. Cl. 7).
First use Feb. 17, 1970.

SN 354,101. Towle Manufacturing Company, Newburyport, Mass. Filed Mar. 16, 1970.



Owner of Reg. Nos. 521,685, 841,204, and others.
For Cutlery—Namely, Steak Knives, Steak Knife Sets, Carving Knives, Carving Forks, and Carving Sets (Int. Cl. 8).
First use Apr. 15, 1947.

Class 24—Laundry Appliances and Machines

SN 344,502. Chicago Dryer Company, Chicago, Ill. Filed Nov. 25, 1969.

TITAN

For Ironing Apparatus (Int. Cl. 7).
First use on or about June 11, 1969.

Class 25—Locks and Safes

SN 332,656. Robert Bellanger, Paris 2, France. Filed July 16, 1969.

SPHINX-DOOR

Owner of French Reg. No. 737,545, dated Mar. 8, 1968.
For Electrically Operated Lock Mechanism (Int. Cl. 6).

SN 353,692. Constellation Science and Technology Corporation, Oxon Hill, Md. Filed Mar. 11, 1970.

ULTRALOCK

For Electronic Combination Locks (Int. Cl. 6).
First use Feb. 4, 1970.

Class 26—Measuring and Scientific Appliances

SN 284,911. Paul S. Heltman, d.b.a. Gem-Mounts and Gem-Masks Co., New York, N.Y. Filed Nov. 15, 1967.

COMPARISON-CHART

For Templates Having a Plurality of Optional Slide Cropping Shapes To Be Used in the Selection of Slide Cropping Mounts and Masks (Int. Cl. 9).
First use June 1, 1957.

SN 332,276. Kingly Products Corporation, North Bellmore, N.Y. Filed July 10, 1969.



For Pharmaceutical Measuring Spoon (Int. Cl. 10).
First use May 1968.

SN 344,066. Propper Manufacturing Company, Inc., Long Island City, N.Y. Filed Nov. 20, 1969.

LUMICYTE

For Glass Microscope Slides Having a Blood Counting Chamber (Int. Cl. 9).
First use May 1955.

SN 346,443. American Optical Corporation, Southbridge, Mass. Filed Dec. 17, 1969.

CONTEMPORA

For Ophthalmic Frames (Int. Cl. 9).
First use as early as 1967.

SN 351,647. American Optical Corporation, Southbridge, Mass. Filed Feb. 18, 1970.

CRUXLITE

Owner of Reg. No. 130,610.
For Ophthalmic Lenses (Int. Cl. 9).
First use December 1962.

SN 351,648. American Optical Corporation, Southbridge, Mass. Filed Feb. 18, 1970.

COSMELITE

For Ophthalmic Lenses (Int. Cl. 9).
First use December 1962.

SN 351,649. American Optical Corporation, Southbridge, Mass. Filed Feb. 18, 1970.

CALOLITE

For Ophthalmic Lenses (Int. Cl. 9).
First use December 1962.

Class 27—Horological Instruments

SN 313,112. Kar-Vic Jewelry Co., Inc., New York, N.Y. Filed Nov. 26, 1968.

KAR-VIC

For Watches, Watch Dials, Watch Cases, Watch Movements, and Other Parts of Watches (Int. Cl. 14).
First use June 20, 1946.

SN 317,832. Fabrique des Montres Wyler Societe Anonyme, Bienne, Switzerland. Filed Jan. 29, 1969.

WYLER WATER REX

Priority claimed under Sec. 44(d) on Swiss Reg. No. 233,693, dated Aug. 14, 1968. Owner of U.S. Reg. No. 815,830.
For Watches and Parts of Watches (Int. Cl. 14).

SN 325,033. E. Gluck Trading Company, d.b.a. Precision Watch Company, New York, N.Y. Filed Apr. 21, 1969.



For Watches (Int. Cl. 14).
First use Oct. 28, 1968.

SN 329,076. Jean R. Graef, Inc., New York, N.Y. Filed June 4, 1969.

GYRODATE

Owner of Reg. Nos. 520,288 and 667,401.
For Watches and Components Thereof (Int. Cl. 14).
First use Apr. 27, 1969.

SN 342,056. Longines-Wittnauer Watch Co., Inc., New York, N.Y. Filed Oct. 29, 1969.

SAFEGUARD

For Watches (Int. Cl. 14).
First use Oct. 1, 1969.

Class 28—Jewelry and Precious-Metal Ware

SN 315,968. Warren W. Welch, d.b.a. Will-Aren Originals, Colorado Springs, Colo. Filed Jan. 6, 1969.



For Jewelry—Namely, Collar Clips (Which May Be Used as Tie Substitutes) and Cuff Links (Int. Cl. 14).
First use Nov. 7, 1966.

SN 328,429. Lapponia Jewelry Ltd.-Kruunukoru Oy, Helsinki, Finland, by change of name from Kruunu-Koru Oy, Helsinki, Finland. Filed May 27, 1969.

LAPPONIA

For Rings, Bracelets, Brooches, Cufflinks, Pendants, Tie Clips and Earpieces, All Being Made of Gold (Int. Cl. 14).
First use in 1966; in commerce in 1966.

Class 31—Filters and Refrigerators

SN 277,846. Pharmacia Fine Chemicals, Inc., Piscataway, New Market, N.J. Filed Aug. 8, 1967.

SEPHACEL

Owner of Reg. No. 715,774.
For High Molecular Weight Substance for the Purification of Chemical Substances (Int. Cl. 1).
First use June 29, 1967.

SN 321,064. Kenco Products Corporation, Englewood, N.J. Filed Mar. 7, 1969.

CARBO-CIRC

For Combination Refrigeration, Carbonating and Re-Circulating Units for Soda Fountain Use (Int. Cl. 11).
First use April 1968.

SN 322,310. Master-Bilt Refrigeration Manufacturing Company, New Albany, Miss. Filed Mar. 20, 1969.



For Refrigerated Vertical Merchandiser Cabinets, Counter Top Frozen Food and Ice Cream Refrigerated Cabinets, Refrigerated Merchandiser Cabinets, Refrigerated Dipping Cabinets for Ice Cream, Refrigerated Ice Cream and Syrup Dispenser Cabinets, Refrigerated Cabinets for Milk and Mix Ingredients for Ice Cream, Walk-In Coolers, Step-In Coolers, Reach-In Coolers, and Insulated Shipping Containers (Int. Cl. 11 and 20).
First use as early as 1946.

SN 322,801. H. Bead Miner, Decatur, Ill. Filed Mar. 26, 1969.



The medical caduceus symbol is disclaimed apart from the mark as shown.
For Air Purifier Appliance (Int. Cl. 11).
First use Jan. 19, 1969.

SN 342,921. Zip Zero Corporation, Torrance, Calif. Filed Nov. 6, 1969.

ZIP ZERO

For Refrigerated Shipping Containers (Int. Cl. 11).
First use January 1968.

Class 32 — Furniture and Upholstery

SN 313,753. Wall Tube and Metal Products Company, Beverly, N.J. Filed Dec. 5, 1968.

NEWPORTER

For Casual Furniture—Namely, Chairs, Tables, and Ottomans (Int. Cl. 20).
First use Feb. 2, 1968.

SN 325,719. Clear-View Shade Co., Chicago, Ill. Filed Apr. 28, 1969.

TUFLAR

For Polyester Film, Sold Only as Finished Shades (Int. Cl. 20).
First use October 1965.

SN 329,783. Watkins Cabinet Co., Inc., Germantown, Md. Filed June 11, 1969.



For Kitchen Cabinets and Bathroom Vanity Cabinets (Int. Cl. 20).
First use Nov. 30, 1956.

SN 330,200. Robert John Company, King of Prussia, Pa. Filed June 16, 1969.

ROBERT JOHN

The name "Robert John" is fanciful and is not the name of any particular individual.
For Office Furniture—Namely, Desks, Chairs, Filing Cabinets, Sofas, Tables, Book Cases, and Credenzas (Int. Cl. 20).
First use at least as early as 1956.

SN 330,715. Broyhill Furniture Industries, Lenoir, N.C. Filed June 23, 1969.

COMFORMATIC

For Apparatus for Operating a Reclining Chair and Sold as a Part Thereof (Int. Cl. 20).
First use Apr. 15, 1969.

SN 335,922. Kwik-File, Inc., Minneapolis, Minn. Filed Aug. 22, 1969.



For Office Furniture—Namely, Desks; Desk-Top Partition Shelf Organizers; Desk-Top Organizers; Tray Partitions; and Tray Partitions With Index Tabs (Int. Cl. 20).
First use Sept. 20, 1967.

SN 337,947. Monsanto Company, St. Louis, Mo. Filed Sept. 15, 1969.

EDUCUBE

For Children's Furniture—Namely, Chairs and Desks (Int. Cl. 20).
First use Sept. 3, 1969.

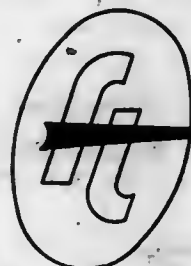
Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 315,789. Schaub Engineering Company, Downers Grove, Ill. Filed Jan. 3, 1969.

ECONOPAK

For Boiler Feed System Including Associated Pumps, Piping, and Controls (Int. Cl. 11).
First use Feb. 7, 1968.

SN 316,971. Automation Industries, Inc., Los Angeles, Calif. Filed Jan. 21, 1969.



For Flexible Air Conditioning Ducting (Int. Cl. 11).
First use July 6, 1961.

SN 320,475. Forney Engineering Company, Dallas, Tex. Filed Mar. 3, 1969.

FORNEY

Owner of Reg. No. 532,536.
For Burner Control Systems and Parts Thereof for Use With Industrial Units (Int. Cl. 11).
First use August 1954; July 1, 1927, on related goods.

SN 327,007. Development Engineering, Inc., Denver, Colo. Filed May 12, 1969.



For Vertical Kilns (Int. Cl. 11).
First use on or about Jan. 3, 1966.

SN 327,752. Dunham-Bush, Inc., Harrisonburg, Va. Filed May 20, 1969.

WHIRLPOWER

For Gas and Oil Burners (Int. Cl. 11).
First use at least as early as Feb. 1, 1962.

SN 331,399. Loren Cook Company, Berea, Ohio. Filed June 30, 1969.

CVD

For Ventilating Equipment, Particularly Centrifugal Blowers (Int. Cl. 11).
First use at least as early as January 1968.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 321,796. Global Tire and Rubber Co., Ltd., Findlay, Ohio. Filed Mar. 14, 1969.



The drawing is lined for blue and red. Applicant disclaims any and all right, title and interest to the exclusive use of the words "World Wide Safety Service" and "Tire & Rubber Co., Ltd."
For Tires, Inner Tubes, and Tread Rubber (Int. Cls. 12 and 17).
First use Jan. 21, 1969.

SN 335,286. Amerate Esna Corporation, New York, N.Y. Filed Aug. 14, 1969.



For Garden Hose (Int. Cl. 17).
First use at least as early as June 1969.

Class 36 — Musical Instruments and Supplies

SN 310,008. Technology Resources Corporation, Pittsburgh, Pa. Filed Oct. 18, 1968.

TRC

For Pre-Recorded Magnetic Tapes (Int. Cl. 9).
First use on or about Dec. 10, 1967.

SN 328,969. Electrodata, Inc., Danbury, Conn. Filed June 3, 1969.



Applicant disclaims "Electrodata" apart from the mark as shown.
For Tape Recorders (Int. Cl. 9).
First use November 1966.

SN 330,290. The Magnavox Company, Fort Wayne, Ind. Filed June 17, 1969.

ELKHART

Owner of Reg. No. 510,931.
For Saxophones, Cornets, Trumpets, Trombones, Alto Horns, Baritone Horns, French Horns, Mellophones, Bass Horns, Clarinets, Oboes, Bassoons, and Flutes (Int. Cl. 15).
First use Sept. 13, 1922.

SN 340,881. A. Cohen & Sons Corporation, New York, N.Y. Filed Oct. 16, 1969.

ELDORADO

Owner of Reg. No. 722,528.
For Phonographs (Int. Cl. 9).
First use at least as early as during 1960.

Class 37 — Paper and Stationery

SN 326,903. Pirelli Sapsa S.p.A., Milan, Italy. Filed May 9, 1969.

REDIALUX

Owner of Italian Reg. No. 211,569, dated June 26, 1967.
For Resin-Coated Papers for Wall Covering (Int. Cl. 27).

SN 338,711. Dennison Manufacturing Company, Framingham, Mass. Filed Sept. 24, 1969.



For Blank or Partially Printed Tabulating Labels (Int. Cl. 16).
First use Mar. 11, 1969.

Class 38 — Prints and Publications

SN 314,996. Yardley of London, Inc., New York, N.Y. Filed Dec. 20, 1968.



The background design is for shading purposes only.
For Newspaper (Int. Cl. 16).
First use Apr. 1, 1966.

SN 337,352. Quarterback Publishing Company of America, New York, N.Y. Filed Sept. 8, 1969.



For Periodical Magazine (Int. Cl. 16).
First use Aug. 13, 1969.

SN 337,353. Quarterback Publishing Company of America, New York, N.Y. Filed Sept. 8, 1969.

QUARTERBACK

For Periodical Magazine (Int. Cl. 16).
First use Aug. 13, 1969.

SN 337,524. Continental Label Company, Detroit, Mich. Filed Sept. 10, 1969.

"PRICE GUARD"

For Printed Paper Labels (Int. Cl. 16).
First use Mar. 3, 1969.

SN 338,263. Presse-Office, Societe Anonyme, Paris, France. Filed Sept. 18, 1969.

LUI

The mark "Lui" in English can mean "him," "her," "it," as well as "from him," "from her," "from it." For Magazine (Int. Cl. 16).
First use at least as early as Oct. 1, 1963; in commerce Oct. 1, 1963.

SN 351,341. Marriott Corporation, Washington, D.C. Filed Feb. 13, 1970.

ROY ROGERS ROUNDUP

"Roy Rogers" is the name of a living individual, whose consent is of record. Owner of Reg. No. 882,909.
For Newsletter (Int. Cl. 16).
First use May 1968.

SN 352,676. Simmons-Boardman Publishing Corporation, New York, N.Y. Filed Feb. 27, 1970.

METROLINES

For Magazine (Int. Cl. 16).
First use July 18, 1969.

Class 39—Clothing

SN 310,203. Becton, Dickinson and Company, East Rutherford, N.J. Filed Oct. 22, 1968.



Applicant claims no registration rights in a representation of a glove, apart from the mark as shown. Owner of Reg. Nos. 560,239, 653,802, and others.

For Gloves (Int. Cl. 25).
First use on or about June 1, 1966; on or about Nov. 3, 1947 in a different form.

SN 330,897. Barco of California, Gardena, Calif. Filed June 25, 1969.

BARCO FROM CALIFORNIA

The words "From California" are disclaimed apart from the mark as a whole.

For Uniforms, Smocks, Shifts, and Dresses for Professional Women Such as Nurses, Research Workers, Pharmacists, Cosmetologists, Medical Assistants; and Shirt Coats, Lab Coats and Jackets for Professional Men Such as Medical Doctors, Interns, Research Workers, Medical Assistants, Pharmacists and Non-Professionals Such as Barbers (Int. Cl. 25).
First use on or about July 1, 1956.

SN 334,526. PepsiCo, Inc., New York, N.Y. Filed Aug. 6, 1969.

SUPER STREEPER

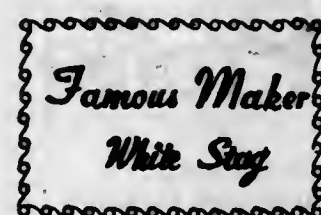
Applicant disclaims the word "Super" apart from the mark as shown.
For Sweat Shirts, T-Shirts, and Racing Jackets (Int. Cl. 25).
First use July 8, 1969.

SN 334,968. Barclay Knitwear Co., Inc., New York, N.Y. Filed Aug. 11, 1969.

BARCLAY

Owner of Reg. No. 515,932.
For Men's, Boys' and Juveniles' Knitted Sweaters, Knitted Shirts, and Polo Shirts (Int. Cl. 25).
First use 1932.

SN 338,509. White Stag Manufacturing Co., Portland, Oreg. Filed Sept. 22, 1969.



No claim is made to the words "Famous Maker" apart from the mark shown. Owner of Reg. Nos. 369,881, 868,238, and others.
For Shirts and Tops (Int. Cl. 25).
First use July 22, 1963.

SN 339,235. Scott Paper Company, Philadelphia, Pa. Filed Sept. 29, 1969.

COVERALLS

For Disposable Diapers (Int. Cl. 25).
First use July 17, 1969.

SN 339,872. Fairfield Glove Company, Fairfield, Iowa. Filed Oct. 6, 1969.

"IDENT-A-PATCH"

For Gloves and Mittens (Int. Cl. 25).
First use Mar. 15, 1968.

SN 342,239. Donmoor, Inc., New York, N.Y. Filed Oct. 31, 1969.

FUNKY

For Boys' Shirts (Int. Cl. 25).
First use July 31, 1969.

SN 346,349. Maidenform, Inc., New York, N.Y. Filed Dec. 16, 1969.

MINI-TRICO

For Foundation Garments, Lingerie, Sleepwear, and Loungewear (Int. Cl. 25).
First use Nov. 21, 1969.

SN 347,409. Interco, Incorporated, St. Louis, Mo. Filed Dec. 30, 1969.

PROTECTOR

Owner of Reg. No. 207,124.
For Shoes for Medical Personnel (Int. Cl. 25).
First use Aug. 18, 1969; 1908 in a different form.

SN 349,752. Cupid Foundations, Inc., New York, N.Y. Filed Jan. 27, 1970.

PANTY HOSE MATE

The generic term "Panty Hose" is disclaimed apart from the mark as shown.
For Panty Girdles (Int. Cl. 25).
First use May 1968.
Subj. to Intf. with SN 336,746.

SN 353,127. Camp and McInnes, Inc., Reading, Pa. Filed Mar. 5, 1970.

FLAIR BY CAMP

For Men's Hosiery (Int. Cl. 25).
First use June 10, 1969.

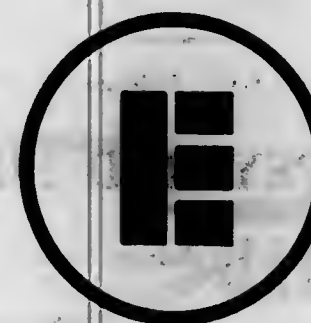
Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 288,278. Deering Milliken, Inc., Spartanburg, S.C., assignee of Callaway Mills Company, La Grange, Ga. Filed Jan. 8, 1968.

EVER-WHER

For Towels (Int. Cl. 24).
First use Nov. 30, 1967.

SN 326,218. Edson, Incorporated, Chicago, Ill. Filed May 2, 1969.



For Draperies and Bedspreads (Int. Cl. 24).
First use December 1968.

SN 329,281. Societe Anonyme: "Rexor," Paris, France. Filed June 5, 1969.

REXOTHERM

Owner of French Reg. No. 735,704, dated Oct. 12, 1967.
For Heat Insulating Sheeting, More Specially Adapted To Be Associated With Fabrics for Clothing, Bedding, and Sport Articles (Int. Cl. 17).

SN 329,845. Eagle-Picher Industries, Inc., Cincinnati, Ohio. Filed June 12, 1969.



Owner of Reg. No. 844,190.
For Tufted Fabric for Use as Floor Coverings, Upholstery Purposes, and the Like (Int. Cl. 24).
First use Dec. 5, 1966.

SN 330,468. American Hospital Supply Corporation, Evanston, Ill. Filed June 19, 1969.

PEARLTONE

For Plastic Sheeting for Use on Hospital Beds, Mattresses, Pillow Cases, and Related Bedding Items (Int. Cl. 24).
First use in or before 1947.

SN 349,112. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

MORTWIST

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,118. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

SHAGFLOR

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,124. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

STARBRIGHT

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

Class 43—Thread and Yarn

SN 314,922. Spinnerin Yarn Co., Inc., South Hackensack, N.J. Filed Dec. 19, 1968.

MYSTIQUE

For Yarns for Hand Knitting of Synthetic Fibers and Mixtures Thereof (Int. Cl. 23).
First use Nov. 25, 1968.

Class 44—Dental, Medical, and Surgical Appliances

SN 321,895. Becton, Dickinson and Company, East Rutherford, N.J. Filed Mar. 17, 1969.

SAFEDWEL

For Catheter Needles and Obdurators (Int. Cl. 10).
First use on or about Apr. 25, 1968.

SN 327,411. Revlon, Inc., New York, N.Y. Filed May 15, 1969.

GOLDILOCK

For Tweezers for Cosmetic Use (Int. Cl. 8).
First use November 1966.

SN 330,195. Pyramid International, Inc., Ravenna, Ohio. Filed June 16, 1969.

SUPREME

For Nursers Comprising Nursing Bottles, Screw Caps, Seal Discs, and Nipples (Int. Cl. 10).
First use at least as early as Apr. 28, 1964.

SN 332,136. Popper & Sons, Inc., New York, N.Y. Filed July 9, 1969.

MEDICAL SEAL

For Clinical Thermometers (Int. Cl. 9).
First use 1961.

SN 333,945. Popper & Sons, Inc., New York, N.Y. Filed July 30, 1969.

MICROMATIC

Owner of Reg. Nos. 663,097 and 692,884.
For Interchangeable Syringes (Int. Cl. 10).
First use 1967.

SN 340,313. Seymour B. London, d.b.a. Circulation Monitoring Systems-Monitor Instruments, Miami Beach, Fla. Filed Oct. 10, 1969.

SENTROMETER

For Central Venous Pressure Monitoring Equipment (Int. Cl. 10).
First use Jan. 15, 1968.

SN 340,314. Seymour B. London, d.b.a. Circulation Monitoring Systems-Monitor Instruments, Miami Beach, Fla. Filed Oct. 10, 1969.

PHANTOM LEVEL

Applicant disclaims exclusive right to the use of the word "Level," apart from the mark as shown.

For Central Venous Pressure Monitoring Equipment (Int. Cl. 10).
First use July 1, 1969.

SN 348,057. Philip Morris Incorporated, New York, N.Y. Filed Nov. 10, 1969.

TEMPLUS II

For Clinical Thermometers (Int. Cl. 9).
First use Sept. 18, 1969.

SN 348,218. Johnson & Quin, Inc., Chicago, Ill. Filed Jan. 12, 1970.

KWIKSERT

Owner of Reg. No. 868,206.
For Mounting and Viewing Charts for Dental X-rays (Int. Cl. 5).
First use Oct. 15, 1969.

SN 352,908. Johnson & Johnson, d.b.a. Personal Products Company, New Brunswick, N.J. Filed Mar. 3, 1970.

TAKE CARE

For Sanitary Napkins (Int. Cl. 5).
First use Jan. 5, 1970.

SN 353,007. Johnson & Johnson, d.b.a. Personal Products Company, New Brunswick, N.J. Filed Mar. 4, 1970.

SILHOUETTE

For Sanitary Napkins (Int. Cl. 5).
First use Jan. 5, 1970.

Class 45—Soft Drinks and Carbonated Waters

SN 307,840. Helms Beverages, Inc., Los Angeles, Calif. Filed Sept. 20, 1968.



For Non-Alcoholic Cocktail Mixes (Int. Cl. 32).
First use November 1960.

SN 318,244. Theonett & Co., Chicago, Ill. Filed Feb. 3, 1969.

TOPSY RED POP

No registration rights are claimed for the words "Red Pop" apart from the mark shown, but applicant waives none of its common law rights in the mark shown or any feature thereof. Owner of Reg. No. 207,517.

For Soft Drink Beverages and Flavoring Concentrates Therefor (Int. Cl. 32).
First use on or prior to Dec. 3, 1968.

SN 319,904. Meister Brau, Inc., Chicago, Ill., assignee of Jero Products Company, Chicago, Ill. Filed Feb. 24, 1969.

SN 350,618. The Seven-Up Company, St. Louis, Mo. Filed Feb. 5, 1970.

THE UNCOLA

For Soft Drinks (Int. Cl. 32).
First use Dec. 20, 1967.

Class 46—Foods and Ingredients of Foods

SN 299,935. Amuröl Products Company, Naperville, Ill. Filed June 7, 1968.

Amuröl

Owner of Reg. Nos. 690,630 and 545,249.
For Chewing Gum, Candy, and Cookies (Int. Cl. 30).
First use Jan. 12, 1950.

SN 306,270. Oxford Pickle Co., Inc., Cambridge, Mass. Filed Aug. 29, 1968.

OXFORD

For Pickles, Relishes, Excluding Fruit Relishes, Peppers, Olives, and Mayonnaise (Int. Cls. 29 and 30).
First use at least as early as 1935.

SN 307,244. Standard Chemical Manufacturing Company, Omaha, Nebr. Filed Sept. 12, 1968.



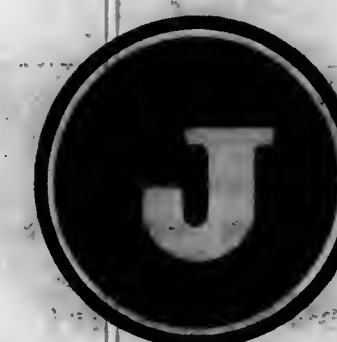
Applicant disclaims the words "Feed," "Quality," and "Premixes" apart from the mark as shown. Owner of Reg. No. 372,102.

For Feed Premixes Containing Proteins for Livestock, including Sheep, Cattle, Cows, Hogs, Poultry, and Mink; and Livestock Feed Preservatives (Int. Cl. 31).
First use at least as early as Apr. 1, 1967.

SN 309,288. One-O-One Corporation, Mount Laurel, N.J. Filed Oct. 9, 1968.



For Machine Vendable Frankfurter Sandwiches (Int. Cl. 29).
First use Sept. 18, 1968.



For Non-Alcoholic Cocktail Mixes and Flavored Syrups for Making Mixed Alcoholic Drinks (Int. Cl. 32).
First use 1936.

SN 319,905. Meister Brau, Inc., Chicago, Ill., assignee of Jero Products Company, Chicago, Ill. Filed Feb. 24, 1969.

Château Jero

Owner of Reg. No. 884,219.
For Non-Alcoholic Mixes for Cocktails and Mixed Drinks, and Flavored Syrups for Making Mixed Alcoholic Drinks (Int. Cl. 32).
First use 1933.

SN 319,907. Meister Brau, Inc., Chicago, Ill., assignee of Jero Products Company, Chicago, Ill. Filed Feb. 24, 1969.

Limosa

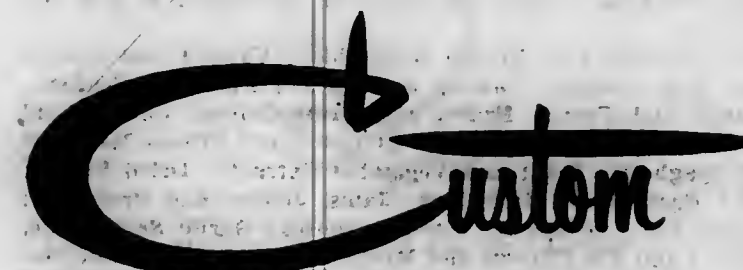
For Non-Alcoholic Cocktail Mixes (Int. Cl. 32).
First use 1933.

SN 319,908. Meister Brau, Inc., Chicago, Ill., assignee of Jero Products Company, Chicago, Ill. Filed Feb. 24, 1969.

Lemosa

For Non-Alcoholic Cocktail Mixes (Int. Cl. 32).
First use 1933.

SN 325,727. Custom Beverage Packers, Inc., Aurora, Ohio. Filed Apr. 28, 1969.



For Carbonated Soft Drinks (Int. Cl. 32).
First use Jan. 1, 1962.

SN 815,958. A. H. Robins Company, Incorporated, Richmond, Va. Filed Jan. 8, 1969.

SN 326,473. American Home Products Corporation, New York, N.Y. Filed May 6, 1969.

THINGS

For Packaged Snack Foods—Namely, Crackers, Cookies, and Cracker and Cookie Sandwiches (Int. Cl. 30).
First use Oct. 1, 1968.

SN 316,003. DiMare Brothers, Inc., Boston, Mass. Filed Jan. 7, 1969.



Owner of Reg. No. 885,968.
For Fresh Garlic, Peaches, Pears, Potatoes, Tomatoes, Apricots, Prunes, and Popping Corn (Int. Cls. 30 and 31).
First use March 1967.

SN 319,909. Meister Brau, Inc., Chicago, Ill., assignee of Jero Products Company, Chicago, Ill. Filed Feb. 24, 1969.

FOAM HEAD

For Special Processed Sugar Used To Impart a Head of Foam to Mixed Drinks (Int. Cl. 30).
First use 1939.

SN 321,652. N. K. Hurst Company, Inc., Indianapolis, Ind. Filed Mar. 13, 1969.



The drawing is lined for the color blue. Owner of Reg. No. 832,265.
For Cooked Dried Beans (Int. Cl. 29).
First use on or about Jan. 1, 1969.

The drawing is lined for the colors red and green. Owner of Reg. Nos. 436,809 and 807,854.

For Food Products—Namely, Prepared or Partially Prepared and Cartoned, Canned and Frozen Combinations of Meats, Poultry, Fish and Cheese With Vegetables, Sauces, Flavorings and Allimentary Pastes; Allimentary Pastes; Cheeses; Sauces and Sauce Mixes; Gravies; Seasonings Consisting of Spices, Herbs, Salts, Fruits and Vegetables in Powder, Paste and Liquid Forms, Sold Alone or in Combination With Each Other; Canned Soups; Cartoned Frozen Pizza; and Cartoned Pizza Mixes (Int. Cls. 29 and 30).
First use on or about Apr. 15, 1965.

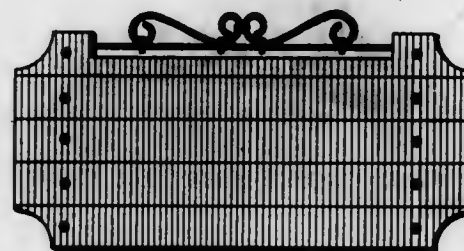
SN 329,933. Alfie's Fish & Chips, Inc., Houston, Tex. Filed June 13, 1969.



Without relinquishing any of its common law rights, applicant disclaims the words "Authentic English Fish & Chips" apart from the mark as a whole.

For Ready-To-Eat Fish and Chips (Fried Fish and Fried Potatoes) and Cole Slaw (Int. Cls. 29 and 31).
First use at least as early as Nov. 24, 1968.

SN 330,812. American Inn Foods, Inc., Waukesha, Wis. Filed June 24, 1969.



The drawing is lined for the color red. Owner of Reg. No. 770,453.

For Canned and Frozen Vegetables; Canned and Frozen Meat and Poultry; Canned and Frozen Fish and Seafood; Canned and Frozen Fruits and Fruit Juices; Canned and Frozen Soups and Soup Bases; Canned and Frozen Macaroni and Spaghetti; Fruit and Vegetable Extracts; Dried Fruits; Dried Eggs; Salad Dressings; Jams, Jellies, and Preserves; Coffee; Tea; Syrups for Food Purposes; Garlic Salt; Cake, Custard and Pie Fillings and Mixes; Flour and Vegetable and Animal Shortening; Sugar; Gelatin Dessert Powder; Canned Nuts and Nut Meats; Molasses; and Vinegar (Int. Cls. 29, 30, and 32).
First use January 1960.

SN 330,935. Interstate Bakeries Corporation, Kansas City, Mo. Filed June 25, 1969.

SN 341,137. H. C. Brill Company, Inc., Cedar Grove, N.J. Filed Oct. 20, 1969.

PUP CAKES

The term "Cakes" is disclaimed apart from the mark as shown.

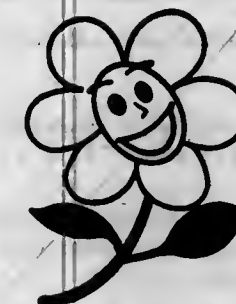
For Cup Cakes (Int. Cl. 30).
First use June 9, 1969.

SN 333,869. American Home Products Corporation, New York, N.Y. Filed July 30, 1969.

TATERINOS

For Snack Food Primarily Consisting of Cooked Potato Flour Ready To Be Eaten (Int. Cl. 30).
First use June 30, 1969.

SN 334,279. Morning Fresh Dairy, Inc., Minneapolis, Minn. Filed Aug. 4, 1969.



For Dairy Products—Namely, Fresh Milk, Cream, Sour Cream Dips, Cottage Cheese, Butter and Ice Cream; Fresh Orange Juice, Fresh Eggs, Margarine, and Frozen Confections on a Stick (Int. Cls. 29, 30, and 32).
First use Mar. 8, 1966.

SN 337,215. Barilla G. e R. F.lli S.p.A., Parma, Italy. Filed Sept. 5, 1969.



Owner of Italian Reg. No. 231,675, dated Aug. 8, 1968.
For Pasta (Int. Cl. 30).

SN 340,718. Gold Cup Baking, Inc., d.b.a. Ruane's Bakery, Chicago, Ill. Filed Oct. 15, 1969.

RUANE'S

For Complete Line of Cookies and Cakes (Int. Cl. 30).
First use Mar. 9, 1960.

SN 340,838. Sunkist Growers, Inc., Los Angeles, Calif. Filed Oct. 15, 1969.



Exclusive right to the use of the reproduction of a lemon is not claimed, apart from the mark as shown. Owner of Reg. No. 866,897.

For Fresh Lemons and Lemon Juice (Int. Cls. 31 and 32).
First use Apr. 3, 1969.

HALF TIME

Owner of Reg. Nos. 852,000 and 864,627.
For Product Used in the Making of Bakery Products—Namely, Fermentation Base Used in Making Breads, Rolls, Donuts, Sweet Doughs, and All Yeast Leavened Products (Int. Cl. 30).
First use Aug. 27, 1969.

SN 342,358. General Mills, Inc., Minneapolis, Minn. Filed Nov. 3, 1969.

FLEET

For Pet Foods for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,363. General Mills, Inc., Minneapolis, Minn. Filed Nov. 3, 1969.

HAPPY DAY

For Pet Food for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,365. General Mills, Inc., Minneapolis, Minn. Filed Nov. 3, 1969.

KEEN

For Pet Foods for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 343,590. SCM Corporation, d.b.a. Durkee Famous Foods, Cleveland, Ohio. Filed Nov. 14, 1969.

DAFFY-DILLS

For Pickles (Int. Cl. 29).
First use Oct. 21, 1969.

SN 343,767. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Nov. 17, 1969.

STA-O-PAQUE

For Food Starch (Int. Cl. 30).
First use Oct. 30, 1969.

SN 343,831. Eskimo Pie Corporation, Richmond, Va. Filed Nov. 18, 1969.

SKI-MO

Owner of Reg. No. 764,032 and others.
For Flavored Coatings for Frozen Desserts (Int. Cl. 30).
First use Sept. 5, 1969.

SN 344,208. Baird-Neece Packing Corporation, Porterville, Calif. Filed Nov. 21, 1969.

AZALEA

For Fresh Citrus Fruits (Int. Cl. 31).
First use 1939.

SN 346,347. General Mills, Inc., Minneapolis, Minn. Filed Dec. 16, 1969.



For Candy, Ice Cream, and Pies (Int. Cl. 30).
First use on or about July 28, 1969.

SN 346,446. Arkansas Grain Corporation, Stuttgart, Ark. Filed Dec. 17, 1969.



For Vegetable Oil (Int. Cl. 29).
First use Nov. 26, 1969.

SN 352,905. Lever Brothers Company, New York, N.Y. Filed Mar. 3, 1970.

FANTOASTIC

For Margarine (Int. Cl. 29).
First use Feb. 19, 1970.

SN 353,373. Mar-Kes Foods, Compton, Calif. Filed Mar. 9, 1970.



For Frozen Foods—Namely, Meat-Containing Tacos, Meat-Containing Burritos, Meatless and Meat-Containing Enchiladas, Meat-Containing Taquitos, Meat-Containing Chili Concentrate, and Meatless and Meat-Containing Sauces (Int. Cls. 29 and 30).

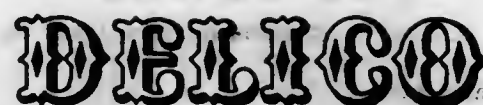
First use at least as early as November 1969.

SN 353,379. Pet Incorporated, St. Louis, Mo. Filed Mar. 9, 1970.

NACS

For Corn Chips (Int. Cl. 29).
First use July 1, 1943.

SN 353,621. Kolb-Lena Cheese Co., Lena, Ill. Filed Mar. 10, 1970. Filed Mar. 10, 1970.



For Bulk Cheese, Lunch Cheese and Package Cheese (Int. Cl. 29).
First use Sept. 10, 1910.

SN 354,076. General Mills, Inc., Minneapolis, Minn. Filed Mar. 16, 1970.

BALANCE

For Ready To Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Mar. 5, 1970.

SN 354,077. General Mills, Inc., Minneapolis, Minn. Filed Mar. 16, 1970.

CHEERI-BITS

Owner of Reg. Nos. 282,079, 414,338, and 684,152.
For Ready To Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Mar. 5, 1970.

SN 354,078. General Mills, Inc., Minneapolis, Minn. Filed Mar. 16, 1970.

RATIO

For Ready To Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Mar. 5, 1970.

Class 47—Wines

SN 329,974. A. Goodman and Sons, Inc., Long Island City, N.Y. Filed June 13, 1969.

GOODMAN'S

Owner of Reg. Nos. 202,216, 791,498, and others.
For Wine (Int. Cl. 33).
First use Mar. 1, 1969.

Class 48—Malt Beverages and Liquors

SN 325,618. Avelino Maldonado, d.b.a. Laciolla Food Products Co., Chicago, Ill. Filed Apr. 25, 1969.

MALTA CRIOLLA

The word "Malta" translated from Spanish means "malt"; and the word "Criolla" translated from Spanish means "a native of any Latin American country." Subject to his rights at common law, applicant does not claim exclusive rights in and to the word "Malta" apart from the mark as shown. Owner of Reg. Nos. 742,445 and 849,929.

For Malt Beverage—Namely, Non-Alcoholic Beverage Prepared From Malt, Barley, Syrup, and Hops (Int. Cl. 32).
First use Mar. 16, 1967.

SN 327,275. G. Helleman Brewing Company, Inc., La Crosse, Wis. Filed May 14, 1969.



Without waiving any of its common law rights, applicant hereby disclaims exclusive right to use of the words "Brewed in Our Old World Style From the Choicest Hops, Purest Water and Select Grain" apart from the mark shown. Owner of Reg. Nos. 376,419, 803,199, and others.
For Beer (Int. Cl. 32).
First use Mar. 24, 1969; Jan. 1, 1882, in a different form.

Class 50—Merchandise Not Otherwise Classified

SN 324,430. Durolith Corporation, Easton, Md. Filed Apr. 14, 1969.

LC-2

For Lithographic Plates (Int. Cl. 16).
First use Oct. 3, 1968.

SN 337,378. Jack Webb Corporation, Bondville, Vt. Filed Sept. 8, 1969.

WEBWOOD

For Plaques (Int. Cl. 20).
First use July 17, 1969.

SN 339,402. Carolyn E. Spillers, d.b.a. Custom Crafts, Austin, Tex. Filed Oct. 1, 1969.

CAPPLIQUE

For Hobby Craft Kits Consisting of Patterns, Instructions, and Material for Making Decorative Designs for Plaques and Related Items (Int. Cl. 20).
First use at least as early as May 17, 1969.

Class 51—Cosmetics and Toilet Preparations

SN 285,189. Avon Products, Inc., New York, N.Y. Filed Nov. 20, 1967.

AVON ULTRA-DRY

Applicant disclaims the words "Ultra-Dry" apart from the mark as shown.
For Personal Deodorant (Int. Cl. 5).
First use Feb. 11, 1966.

SN 307,846. Laboratoire Lachartre S.A., Paris, France. Filed Sept. 20, 1968.

Mila

The translation of the mark "Mila" is "thousands." Owner of French Reg. No. 481,745, dated July 10, 1959; (Seine) Natl. Inst. No. 129,045.
For Face Cream and Hand Cream (Int. Cl. 3).

SN 322,405. Century Creations, Incorporated, Venice, Calif. Filed Mar. 21, 1969.

ROSE KISS

The word "Rose" is disclaimed apart from the mark as shown, without waiving any common law rights therein and without prejudice to the right of registration thereof on another application.
For Hand and Body Cream (Int. Cl. 3).
First use Jan. 31, 1969.

SN 330,197. Ravel Perfume Corporation, d.b.a. Van Pell, New York, N.Y. Filed June 16, 1969.

WHITE ENCHANTMENT

For Perfumes, Colognes and Toilet Waters (Int. Cl. 3).
First use June 15, 1966.

SN 352,743. Union Carbide Corporation, New York, N.Y. Filed Mar. 2, 1970.

STILL

For Personal Deodorant (Int. Cl. 5).
First use on or about Feb. 18, 1970.

SN 352,911. Johnson & Johnson, New Brunswick, N.J. Filed Mar. 3, 1970.

FEMSKIN

For Hand Lotion (Int. Cl. 3).
First use Feb. 5, 1970.

SN 354,067. Carter-Wallace, Inc., New York, N.Y. Filed Mar. 16, 1970.

EASY DAY

Owner of Reg. No. 876,370.
For Feminine Deodorant for Use in the External Vaginal Region (Int. Cl. 5).
First use June 27, 1969.

SN 354,068. Carter-Wallace, Inc., New York, N.Y. Filed Mar. 16, 1970.

DIAPER-TIME

Owner of Reg. No. 787,925.
For Baby Oil (Int. Cl. 3).
First use Feb. 3, 1970.

Class 52—Detergents and Soaps

SN 335,053. The Nicholas Pittas Company, Inc., Hyattsville, Md. Filed Aug. 11, 1969.



For Carpet Stain Remover (Int. Cl. 3).
First use February 1969.

SN 336,098. The Drackett Company, Cincinnati, Ohio. Filed Aug. 25, 1969.

SWEEP

For Toilet Bowl Cleaner (Int. Cl. 3).
First use July 28, 1969.

SN 336,412. L. E. Carpenter & Company, Wharton, N.J. Filed Aug. 27, 1969.

VICRWASH

Owner of Reg. Nos. 778,433, 809,667, and others.
For Wall Covering Adhesive Remover (Int. Cl. 3).
First use on or about June 25, 1969.

SN 337,055. JBI, Inc., Jenkintown, Pa. Filed Sept. 4, 1969.
For Toilet Cleaner and Deodorizer (Int. Cl. 3).

BIO-JOHN

First use Aug. 27, 1969.

SN 337,323. David Joseph, d.b.a. Electronics Distributors, Brooklyn, N.Y. Filed Sept. 8, 1969.

STEAMAGIC

For Soap and Detergents Used in Steam Cleaning Machines and Equipment (Int. Cl. 3).
First use Nov. 1, 1968.

SN 339,547. Bristol-Myers Company, New York, N.Y. Filed Oct. 2, 1969.

CLEARLY YOURS

Owner of Reg. No. 787,286.
For Toilet Soap (Int. Cl. 3).
First use July 2, 1969.

SN 340,570. Malco Products, Inc., Barberton, Ohio. Filed Oct. 13, 1969.



For Laundry Compound and Car Wash Compound (Int. Cl. 3).
First use at least as early as January 1965.

SN 340,787. General Foods Corporation, White Plains, N.Y. Filed Oct. 15, 1969.

OPTA-BRITE

For Laundry Detergent (Int. Cl. 3).
First use May 29, 1969.

SN 341,260. Astor Products Inc., Jacksonville, Fla. Filed Oct. 21, 1969.

GOLDEN ARROW

Owner of Reg. Nos. 798,177, 797,984, and others.
For Toilet Soap (Int. Cl. 3).
First use June 1969.

SN 341,662. Hysan Products Company, Chicago, Ill. Filed Oct. 24, 1969.

AERO-BOL

For Toilet Bowl Cleaner (Int. Cl. 3).
First use Oct. 7, 1969.

SN 342,524. Sentry Hardware Corporation, Cleveland, Ohio. Filed Nov. 3, 1969.

NU-DECOR

Owner of Reg. No. 760,900.
For Paint and Varnish Remover (Int. Cl. 3).
First use Feb. 1, 1969.

SN 353,392. Universal Oil Products Company, Des Plaines, Ill. Filed Mar. 9, 1970.

UOP

Owner of Reg. Nos. 534,802, 884,111, and others.
For Descalers (Int. Cl. 3).
First use on or prior to Jan. 24, 1970.

SERVICE MARKS**Class 100—Miscellaneous**

SN 318,909. Inter-Varsity Christian Fellowship of the United States of America, Chicago, Ill. Filed Feb. 11, 1969.

NCF

For Promotion of Religious Awareness Among Nurses and Nursing Students by Organization and Guidance of Inter-Denominational Christian Groups (Int. Cl. 42).
First use June 21, 1962.

SN 327,991. Winchell Donut House, Inc., South El Monte, Calif. Filed May 21, 1969.



For Restaurant and Snack Bar Services (Int. Cl. 42).
First use on or about Feb. 10, 1969.

SN 327,992. Winchell Donut House, Inc., South El Monte, Calif. Filed May 21, 1969.



For Restaurant and Snack Bar Services (Int. Cl. 42).
First use on or about Feb. 10, 1969.

SN 328,893. Pizza Place Restaurants, Inc., Kansas City, Mo. Filed June 2, 1969.



For Restaurant Services (Int. Cl. 42).
First use July 1968.

SN 331,165. James L. Crawford, d.b.a. Watchbird Systems Company, Wichita, Kans. Filed June 27, 1969.

WATCHBIRD

For Security and Protection Type Services Which Utilize Closed Circuit Television for Monitoring Surveillance, and Alarms (Int. Cl. 42).
First use Apr. 15, 1969.

SN 331,384. It's Unbelievable, Inc., East Rochester, N.Y. Filed June 30, 1969.



For Restaurant Service (Int. Cl. 42).
First use on or about Apr. 15, 1969.

SN 331,396. Lefrak Organization, Inc., Forest Hills, N.Y. Filed June 30, 1969.



Owner of Reg. No. 690,676.
For Design, Consulting and Engineering Services Performed in the Building Construction Industry (Int. Cl. 42).
First use July 14, 1958; July 1965 as to "Lefrak."

SN 332,012. GAF Corporation, New York, N.Y. Filed July 8, 1969.

SHELBY

For Design and Preparation of Business forms for Others (Int. Cl. 42).
First use Mar. 26, 1967.

SN 332,197. Arcoa, Inc., Phoenix, Ariz. Filed July 10, 1969.
Owner of Reg. No. 746,082.

KAR-GO

For Rental of Automobile Freight Trailers (Int. Cl. 42).
First use Nov. 1, 1955.

SN 333,337. Hotel Corporation of America, Boston, Mass. Filed July 24, 1969.

SONESTA

For Hotel, Restaurant, and Bar Services (Int. Cl. 42).
First use Mar. 28, 1969.

SN 333,340. International Minerals & Chemical Corporation, Skokie, Ill. Filed July 24, 1969.

WEATHER-BEATER

For Service of Spreading Fertilizer (Int. Cl. 42).
First use February 1969.

SN 336,425. Continental Telephone Corporation, St. Louis, Mo. Filed Aug. 27, 1969.



Owner of Reg. Nos. 881,884 and 882,758.
For Furnishing Design, Testing, Evaluation, Consultation, and Engineering Services for Others Within the Communication Field (Int. Cl. 42).
First use July 24, 1969.

SN 338,007. Applied Geodata Systems, Inc., Cambridge, Mass. Filed Sept. 16, 1969.



The logo may be interpreted as a fanciful lowercase "a" and "g."
For Computer Software Services Providing Engineering Data for Civil Engineers for Use in Connection With Construction Jobs (Int. Cl. 42).
First use at least as early as June 1969.

SN 342,500. Multicon, Columbus, Ohio. Filed Nov. 3, 1969.

MULTICON

For Renting Apartments (Int. Cl. 42).
First use Jan. 1, 1964.

SN 345,700. Aeronautical Research Associates of Princeton, Inc., Princeton, N.J. Filed Dec. 9, 1969.

A.R.A.P.

For Consulting Services in Fields of Aeronautical and Astronautical Engineering Computer Science, Physics, Properties and Testing of Materials (Int. Cl. 42).
First use November 1954.

SN 346,807. Host Enterprises, Inc., East Lampeter Township, Pa. Filed Dec. 22, 1969.

HOST FARM

For Motel Services (Int. Cl. 42).
First use February 1964.

SN 347,053. American Express Company, New York, N.Y. Filed Dec. 24, 1969.

Space Bank



For Hotel, Motel and Rental Car Reservation Services (Int. Cl. 42).
First use June 2, 1969.

SN 347,054. American Express Company, New York, N.Y. Filed Dec. 24, 1969.

SPACE BANK

For Hotel, Motel and Rental Car Reservation Services (Int. Cl. 42).
First use June 2, 1969.

SN 347,158. Tittle Tattle, Ltd., New York, N.Y. Filed Dec. 29, 1969.

TITTLE TATTLE

For Restaurant Services (Int. Cl. 42).
First use Sept. 8, 1969.

SN 347,545. American Textile Manufacturers Institute, Inc., Charlotte, N.C. Filed Jan. 2, 1970.



The drawing is lined for the colors blue and red.
For Institute Services—Namely, Promoting the Interest of Textile Manufacturers (Int. Cl. 42).
First use about Oct. 1, 1962.

SN 347,556. Marriott Corporation, Washington, D.C. Filed Jan. 2, 1970.



Owner of Reg. Nos. 815,612, 840,991, and others.
For Motel Services (Int. Cl. 42).
First use at least as early as September 1969.

SN 347,557. Marriott Corporation, Washington, D.C. Filed Jan. 2, 1970.



Owner of Reg. Nos. 815,612, 840,991, and others.
For Motel Services (Int. Cl. 42).
First use at least as early as September 1969.

SN 347,558. Marriott Corporation, Washington, D.C. Filed Jan. 2, 1970.

MUCH MORE THAN THE REST

Owner of Reg. Nos. 815,612, 840,991, and others.
For Motel Services (Int. Cl. 42).
First use at least as early as September 1969.

SN 351,168. Clyde, Inc., Washington, D.C. Filed Feb. 12, 1970.



For Restaurant and Carryout Food Services, Bar Services, and Catering Services (Int. Cl. 42).
First use Aug. 12, 1968.

SN 353,135. Grizzly Bear, Inc., Ontario, Oreg. Filed Mar. 5, 1970.

GRIZZLY BEAR

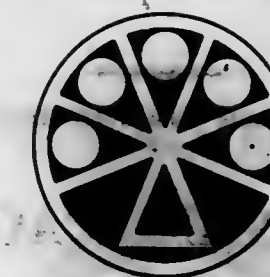
For Pizza Parlor Restaurant Services (Int. Cl. 42).
First use at least as early as Nov. 20, 1969.

SN 353,371. ITT Sheraton Corporation of America, Boston, Mass. Filed Mar. 9, 1970.



Applicant disclaims the words "Motor Inn" apart from the mark as shown. Owner of Reg. Nos. 552,070, 755,226, and others.
For Hotel, Motel, and Restaurant Services (Int. Cl. 42).
First use Oct. 11, 1969.

SN 354,350. General Mills, Inc., Minneapolis, Minn. Filed Mar. 18, 1970.



COUNTERWEIGHT

Owner of Reg. No. 778,270.
For Planning, Executing and Supervising Weight Control Programs (Int. Cl. 42).
First use on or about Nov. 9, 1969.

Class 101—Advertising and Business

SN 322,900. PAT Corporation, Pierre, S. Dak. Filed Mar. 26, 1969.

TINY TIGER

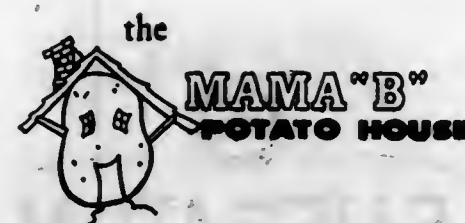
For Retail Variety Store Services (Int. Cl. 35).
First use on or about Aug. 28, 1968.

SN 324,256. W. E. Walker Stores, Inc., Columbia, Miss. Filed Apr. 10, 1969.



Applicant disclaims the word "Store's" apart from the mark as shown.
For Retail General Merchandise Store Services (Int. Cl. 41).
First use Feb. 1, 1961.

SN 327,048. Potato House, Inc., Montgomery, Ala. Filed May 12, 1969.



The words "Potato House" are disclaimed apart from the mark as shown.
For Technical Aid in the Establishment and/or Operation of Restaurants for Others (Int. Cl. 35).
First use on or about Mar. 3, 1969.

SN 328,417. Cartier, Incorporated, New York, N.Y. Filed May 27, 1969.

CARTIER

Owner of Reg. Nos. 411,239, 759,202, and others.
For Retail Jewelry Store Services, Jewelry Mail Order Services, Jewelry Appraisal Services, and Jewelry Brokerage Services (Int. Cl. 35).
First use 1907.

SN 330,381. Glendinning Companies, Inc., Westport, Conn. Filed June 18, 1969.

MAN IN SPACE

For Promoting the Sale of Goods and/or Services of Others Through the Distribution of Printed Materials and Advertising Designed for Promotional Games (Int. Cl. 35).
First use May 20, 1969.

SN 332,708. Glendinning Companies, Inc., Westport, Conn. Filed July 16, 1969.

SAV-A-CHEK

For Promoting the Sale of Goods and/or Services of Others Through the Distribution of Printed Materials and Advertising Designed for Promotional Games (Int. Cl. 35).
First use July 10, 1969.

SN 335,836. Horse of a Different Color, Ltd., Chicago, Ill. Filed July 24, 1969.

HORSE OF A DIFFERENT COLOR

For Retail and Mail Order Services in the Field of Clothing, Furnishings and Accessories Therefor (Int. Cl. 35).
First use in or about September 1968.

SN 334,029. Edgar B. Rumble, d.b.a. Michigan Hanger Company, Campbell, Ohio. Filed July 31, 1969.

M-CO

For Distributorship Services in the Field of Commercial and Industrial Hardware and Plumbing and Sprinkler System Supplies (Int. Cl. 35).
First use at least as early as January 1967.

SN 336,801. Simplified Updated Computer Controlled Editing Systems Service, Inc., Fair Lawn, N.J. Filed Aug. 26, 1969.

S.U.C.C.E.S.S. IS CONTROL

For Providing Computer Bookkeeping and Automobile Service Record Systems (Int. Cl. 35).
First use Apr. 1, 1969.

SN 339,973. United Refrigerated Vendors Corp., Pittsburgh, Pa. Filed Oct. 7, 1969.

FROSTY JACK'S

For Ice Cube Vending Machine Services (Int. Cl. 35).
First use Sept. 5, 1969.

SN 344,646. Wonderland, Inc., Newton, Mass. Filed Nov. 26, 1969.

WONDERLAND

For Retail Store Services Selling Toys and Sporting Goods (Int. Cl. 35).
First use Oct. 17, 1969.

SN 347,373. Datapoint Corporation, New York, N.Y. Filed Dec. 30, 1969.

DATAPPOINT

For Parts Inventory Control and Accounting Services for Automobile Dealers (Int. Cl. 35).
First use June 3, 1969.

SN 347,996. For You, Inc., Van Nuys, Calif. Filed Jan. 8, 1970.

FOR YOU

For Employment Agency Services (Int. Cl. 35).
First use Jan. 5, 1969.

SN 350,182. Harrison Services, Inc., New York, N.Y. Filed Feb. 2, 1970.



For Preparing Sales and Promotional Materials for Retail Establishments, Including Catalogues, Brochures and Booklets (Int. Cl. 35).
First use October 1968.

Class 102 - Insurance and Financial

SN 305,758. Chargex Ltd.-Chargex Ltee., Ottawa, Ontario, Canada, assignee of The Royal Bank of Canada, Montreal, Quebec, Canada. Filed Aug. 22, 1968.

CHARGE X

Priority claimed under Sec. 44(d) on Canadian Application filed Mar. 21, 1968; Reg. No. 158,115, dated Aug. 30, 1968.
For Credit Financing Services Including Administering Consumer Credit Plans (Int. Cl. 36).

SN 310,067. Commercial State Life Insurance Company, St. Louis, Mo. Filed Oct. 21, 1968.

PROFITECTOR

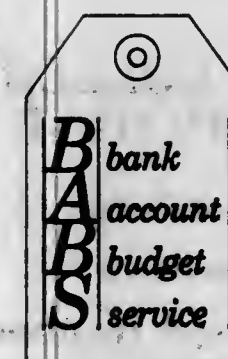
For Life Insurance Underwriting Services (Int. Cl. 36).
First use June 15, 1966.

SN 313,361. Travelers Express Company, Inc., Minneapolis, Minn. Filed Nov. 29, 1968.



Owner of Reg. Nos. 670,029, 786,163, and others.
For Money Transferring for Others by Money Orders (Int. Cl. 36).
First use Apr. 22, 1968.

SN 316,618. Lawrence G. Chait & Co., Inc., New York, N.Y. Filed Jan. 15, 1969.



Applicant disclaims "Bank Account Budget Service" apart from the mark as shown.
For Automatically Paying Bills for Depositors From Their Accounts, Including Making Loans to Pay Bills, When Insufficient Money is on Account (Int. Cl. 36).
First use Dec. 4, 1968.

SN 320,441. Convesto, Seattle, Wash. Filed Mar. 8, 1969.



For Investment Services—Namely, Real Estate Syndication Services (Int. Cl. 36).
First use August 1967.

SN 327,639. Legal Security Life Insurance Company, Dallas, Tex. Filed May 19, 1969.

LESLICO

For Underwriting Life Insurance, Accident and Health Insurance, Hospitalization Insurance, Endowment Insurance, and Group Insurance (Int. Cl. 36).
First use on or about Aug. 1, 1965.

SN 329,498. National Association Plans, Inc., New York, N.Y. Filed June 9, 1969.

VALIDATOR

For Insurance Brokerage Services (Int. Cl. 36).
First use Mar. 21, 1969.

SN 331,716. The Bank of Virginia, Richmond, Va. Filed July 8, 1969.

CAREFREE 65

For Checking Account Services (Int. Cl. 36).
First use Nov. 21, 1967.

SN 331,870. Continental Illinois National Bank and Trust Company of Chicago, Chicago, Ill. Filed July 7, 1969.



For Providing a Full Line of Banking Services (Int. Cl. 36).
First use May 29, 1969.

SN 349,537. Associated Insurers Corporation, Providence, R.I. Filed Jan. 26, 1970.



The mark consists of a fanciful representation of the letters "AI."
For Underwriting of Life, Accident and Health Insurance (Int. Cl. 36).
First use July 1969.

SN 349,783. Continental Casualty Company, Chicago, Ill. Filed Jan. 27, 1970.

HOSPITAL MONEY PLAN

Owner of Reg. No. 818,071.
For Underwriting Hospital Insurance (Int. Cl. 36).
First use June 1964.

Class 103—Construction and Repair

SN 316,669. National Home Inspection Service, Inc., Baltimore, Md. Filed Jan. 15, 1969.



For Inspection of Completed and Partially Completed Houses and Buildings To Determine if They are Constructed as Represented or Being Constructed According to Plans and Specifications (Int. Cl. 37).
First use Jan. 7, 1969.

SN 322,814. Beech Aircraft Corporation, Wichita, Kans. Filed Mar. 26, 1969.

BEECH

Owner of Reg. Nos. 418,379, 759,556, and 759,557.
For Aircraft Repair and Maintenance Service (Int. Cl. 37).
First use June 1962.

SN 323,943. Cyber-Tronics, Inc., New Hyde Park, N.Y. Filed Apr. 8, 1969.



Owner of Reg. No. 803,230.
For Installation and Maintenance of Computers (Int. Cl. 37).
First use Apr. 28, 1960.

SN 324,126. Electro Painters, Inc., Indianapolis, Ind. Filed Apr. 10, 1969.

ELECTRO PAINTERS

For Painting, Refinishing and Retopping Metal Furniture and Metal Equipment (Int. Cl. 37).
First use March 1963.

SN 327,295. Raymond Services, Inc., Atlanta, Ga. Filed May 14, 1969.



For Testing, Adjusting and Balancing of Heating and Air Conditioning Systems (Int. Cl. 37).
First use Mar. 1, 1968.

Class 105—Transportation and Storage

SN 326,842. Braniff Airways, Incorporated, Dallas, Tex. Filed May 9, 1969.

BI AIRGO

Owner of Reg. Nos. 534,469 and 534,799.
For Air Freight Services (Int. Cl. 39).
First use April 1969.

SN 326,843. Braniff Airways, Incorporated, Dallas, Tex. Filed May 9, 1969.

BRANIFF AIRGO

Owner of Reg. Nos. 534,469 and 534,799.
For Air Freight Services (Int. Cl. 39).
First use April 1969.

SN 332,517. Penn Central Transportation Company, Philadelphia, Pa., by change of name from Penn Central Company, Philadelphia, Pa. Filed July 14, 1969.

TURBOSERVICE

For Railroad Passenger Services (Int. Cl. 39).
First use June 9, 1969.

SN 340,883. Inter-Collegiate Holidays, Ltd., Oceanside, N.Y. Filed Oct. 16, 1969.

INTER COLLEGIATE HOLIDAY

For Services for Organizing and Arranging Travel Tour Packages (Int. Cl. 39).
First use at least since January 1967.

Class 106—Material Treatment

SN 308,397. Putnam-Hersl Finishing Company, Inc., New York, N.Y. Filed Sept. 27, 1968.

GUAR-A-BOND

For Bonding, Dyeing, Printing, and Finishing of Fabrics (Int. Cl. 40).
First use December 1967.

SN 332,312. Champion Spark Plug Company, Toledo, Ohio. Filed July 11, 1969.



For Metal Working Services—Namely, Shearing or Cutting Metal Bars of all Shapes for Customers from Stock Supplied by Such Customers (Int. Cl. 40).
First use Oct. 29, 1968.

SN 345,753. Everlube Corporation of America, d.b.a. Everlube Corp., North Hollywood, Calif. Filed Dec. 10, 1969.
Owner of Reg. No. 668,899.

EVERLUBE

For Custom Application of Solid Film Lubricant Compositions to Metal Parts (Int. Cl. 40).
First use at least as early as 1952.

Class 107—Education and Entertainment

SN 299,854. Milo Baughman Design, Inc., Wellesley, Mass. Filed June 6, 1968.

COMMUNICATIONS WORKSHOP

For Production of Documentary, Commercial and Educational Sound/Slide Films for Other Persons (Int. Cl. 41).
First use on or about Feb. 1, 1967.

SN 325,084. Jack B. Sigler, Sr., Tampa, Fla. Filed Apr. 21, 1969.

MERCY

For Entertainment Services—Namely, Musical Renditions Performed Personally or on Recordings (Int. Cl. 41).
First use Oct. 27, 1967.

SN 325,191. Galmen Production Corporation, New York, N.Y. Filed Apr. 22, 1969.

EL TRIO CONTINENTAL

For Vocal Group Providing Voice Entertainment and Instrumental Music (Int. Cl. 41).
First use Jan. 10, 1968.

SN 327,347. Avco Broadcasting Corporation, Cincinnati, Ohio. Filed May 15, 1969.

BE FEMININE

For Entertainment Services Rendered Through the Medium of Television—Namely, Presentation of Methods and Exercises for Body Conditioning (Int. Cl. 41).
First use Nov. 18, 1968.

SN 328,330. Pacific Northwest Sports, Inc., Seattle, Wash. Filed May 26, 1969.

SEATTLE PILOTS

Applicant disclaims the word "Seattle" apart from the mark as shown.

For Entertainment Services—Namely, Baseball Exhibitions Rendered Live in Stadia and Through the Media of Radio and Television Broadcasts (Int. Cl. 41).
First use Dec. 27, 1968.

SN 342,214. Voss Enterprises, Inc., San Francisco, Calif. Filed Oct. 31, 1969.

THE LADYBIRDS

For Popular Musical Entertainment Services Rendered by a Group (Int. Cl. 41).
First use Nov. 1, 1966.

SN 350,653. Computer Learning and Systems Corporation, Rockville, Md. Filed Feb. 6, 1970.



Owner of Reg. No. 599,788.
For Conducting Educational Courses in Secretarial Instruction and Training (Int. Cl. 41).
First use July 1968.

SN 350,994. The Better Way, Inc., Boston, Mass. Filed Feb. 10, 1970.

BETTER WAY

For Musical Entertainment Services Rendered by a Vocal and Instrumental Group (Int. Cl. 41).
First use at least as early as June 24, 1969.

SN 351,169. Computer Learning and Systems Corporation, Rockville, Md. Filed Feb. 12, 1970.



For Conducting Educational Courses in Secretarial Instruction and Training (Int. Cl. 41).
First use July 1968.

SN 352,728. International Famous Agency, New York, N.Y. Filed Mar. 2, 1970.



The mark is a representation of the letters "IFA."
For Services as a Talent Agency (Int. Cl. 41).
First use October 1969.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 311,174. Phi Lambda Sigma National Fraternity, Inc., Auburn, Ala. Filed Nov. 1, 1968.



For Indicating Membership in Applicant.
First use Mar. 30, 1966.

SN 317,086. National Antracom Association, Denver, Colo. Filed Jan. 21, 1969.

ANTRACOM

For Indicating Membership in Applicant.
First use Jan. 2, 1969.

TM 98

SN 341,123. Alpha Sigma Tau Sorority, St. Louis, Mo. Filed Oct. 20, 1969.



For Indicating Membership in Applicant.
First use in the fall of 1899.

SN 341,124. Alpha Sigma Tau Sorority, St. Louis, Mo. Filed Oct. 20, 1969.

AΣT

For Indicating Membership in Applicant.
First use in the fall of 1899.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 892,253. DESIGN OF JAPANESE LETTERS. Kabushiki Kaisha Kinuta-Dobutsuen. MULTIPLE CLASS (Classes 1 and 46). SN 262,796. Pub. 3-24-70. Filed 1-18-67.
- 892,254. FROSTI. Allied Chemical Corporation. MULTIPLE CLASS (Classes 1 and 43). SN 303,654. Pub. 3-24-70. Filed 7-26-68.
- 892,255. CUPROPHAN. J. P. Bemberg Aktiengesellschaft. SN 316,516. Pub. 3-24-70. Filed 1-14-69.
- 892,256. GULF AND ORANGE DISC (DESIGN). Gulf Oil Corporation. SN 320,261. Pub. 3-24-70. Filed 2-27-69.
- 892,257. UCARDEL. Union Carbide Corporation. SN 321,844. Pub. 3-24-70. Filed 3-14-69.
- 892,258. SOD-PAK. Hinton & Co., Inc. SN 322,985. Pub. 3-24-70. Filed 3-27-69.
- 892,259. PEARL FROST. Golden State Sheep Tanning Co. SN 326,645. Pub. 3-24-70. Filed 5-7-69.
- 892,260. KANDLE-KOB. George M. Morris. SN 326,673. Pub. 3-24-70. Filed 5-7-69.
- 892,261. HITANOL. Hitachi Chemical Company Ltd. SN 327,493. Pub. 3-24-70. Filed 5-16-69.
- 892,262. FLO-PAK. Free-Flow Packaging Corporation. SN 327,756. Pub. 3-24-70. Filed 5-20-69.
- 892,263. CHREASTER. Beamort Plants Inc. SN 334,544. Pub. 3-24-70. Filed 8-6-69.
- 892,264. TEFZEL. E. I. du Pont de Nemours and Company. SN 340,476. Pub. 3-24-70. Filed 10-13-69.

Class 2—Receptacles

- 892,265. ACTION. Action Bag & Envelope Co., Inc. SN 251,987. Pub. 11-21-67. Filed 8-9-66.
- 892,266. CHASELINE. Chase Bag Company. MULTIPLE CLASS (Classes 2, 21, 22, 29, 31, 39, 42, and 50). SN 314,841. Pub. 3-24-70. Filed 12-19-68.
- 892,267. GENI. David Douglas Co., Inc. SN 317,731. Pub. 3-24-70. Filed 1-28-69.
- 892,268. THE SHOE-SPIN. Protex Products Corp. SN 321,535. Pub. 3-24-70. Filed 3-12-69.
- 892,269. SLICKSTOW. Neirad Industries, Inc. SN 330,179. Pub. 3-24-70. Filed 6-16-69.
- 892,270. UNCLE SAM. Cyclops Corporation. SN 330,362. Pub. 3-24-70. Filed 8-18-69.
- 892,271. DELDRUM. Container Corporation of America. SN 332,086. Pub. 3-24-70. Filed 7-9-69.
- 892,272. DELBOY. Container Corporation of America. SN 332,087. Pub. 3-24-70. Filed 7-9-69.
- 892,273. TOWER-WELD. Tower Products, Inc., by change of name from Tower Packaging Company. SN 333,006. Pub. 3-24-70. Filed 7-18-69.
- 892,274. EGGMASTER. Supreme Foods, Inc. SN 333,769. Pub. 3-24-70. Filed 7-28-69.
- 892,275. BUFFHIDE. Bethlehem Steel Corporation. SN 333,975. Pub. 3-24-70. Filed 7-30-69.
- 892,276. ARCH-CORE AND DESIGN. Arch-Bilt Container Corporation. SN 334,451. Pub. 3-24-70. Filed 8-5-69.
- 892,277. FREE 'N FANCY. Lincoln Metal Products Corporation. SN 334,774. Pub. 3-24-70. Filed 8-8-69.
- 892,278. BOUTIQUE. Kimberly-Clark Corporation. SN 340,480. Pub. 3-24-70. Filed 10-13-69.
- 892,279. GULF AND ORANGE DISC (DESIGN). Gulf Oil Corporation. SN 341,488. Pub. 3-24-70. Filed 10-23-69.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

892,280. TRACELARM. Darworth Incorporated. SN 332,093. Pub. 3-24-70. Filed 7-9-69.

Class 4—Abrasives and Polishing Materials

- 892,281. PELLETRONICS. Pelletronics, Inc. SN 325,775. Pub. 3-24-70. Filed 4-28-69.
- 892,282. LIQUICK LUSTRE AND STAR DESIGN. The Motiold Company, Incorporated. SN 335,460. Pub. 3-24-70. Filed 8-15-69.

Class 5—Adhesives

- 892,283. THE STRIPPER. The W. W. Henry Company. SN 333,563. Pub. 3-24-70. Filed 7-25-69.
- 892,284. WOLCO. General Gummed Products, Inc. SN 335,971. Pub. 3-24-70. Filed 8-22-69.
- 892,285. FLEXSEAL. Electro-Seal Corporation. SN 340,660. Pub. 3-24-70. Filed 10-14-69.
- 892,286. FLEXGLU. Armour Industrial Products Company. SN 341,074. Pub. 3-24-70. Filed 10-16-69.
- 892,287. ADHESIVE NO. 711. Kentile Floors Inc. SN 341,247. Pub. 3-24-70. Filed 10-21-69.

Class 6—Chemicals and Chemical Compositions

- 892,288. MISCELLANEOUS DESIGN. Asahi Glass Company, Limited. MULTIPLE CLASS (Classes 6 and 31). SN 288,421. Pub. 3-24-70. Filed 1-9-68.
- 892,289. THE SWEET SMELL OF SUCCESS. Chicago Candle Corporation. MULTIPLE CLASS (Classes 6 and 15). SN 295,275. Pub. 3-24-70. Filed 4-10-68.
- 892,290. WHISTLE. The Drackett Company. SN 300,178. Pub. 3-24-70. Filed 6-11-68.
- 892,291. CB CIRILLO BROS. AND DESIGN. Cirillo Bros. Petroleum Co., Inc. MULTIPLE CLASS (Classes 6 and 15). SN 300,310. Pub. 3-24-70. Filed S.R. 6-13-68; Am. P.R. 11-29-68.
- 892,292. BLACK ROSE KOSMETIK AND DESIGN. Firma Dr. Babor & Co. MULTIPLE CLASS (Classes 6, 18, 51, and 52). SN 306,555. Pub. 3-24-70. Filed 9-4-68.
- 892,293. GLOBO. Globus-Werke Fritz Schulz Jun. SN 307,796. Pub. 3-24-70. Filed 8-14-68.
- 892,294. INDUBIOSE. L'Industrie Biologique Francaise S.A. SN 308,384. Pub. 3-24-70. Filed 9-27-68.
- 892,295. SEVITHION. Union Carbide Corporation. SN 311,316. Pub. 3-24-70. Filed 11-4-68.
- 892,296. DECCOX. May & Baker Limited. MULTIPLE CLASS (Classes 6 and 18). SN 311,429. Pub. 3-24-70. Filed 11-6-68.
- 892,297. ACRALEN. Farbenfabriken Bayer Aktiengesellschaft. SN 313,568. Pub. 10-21-69. Filed 12-4-68.
- 892,298. SUDDEN SOFTNESS. American Home Products Corporation. SN 320,899. Pub. 3-24-70. Filed 3-6-69.

TM 99

- 892,299. STARFLOC. Paul F. Werler, d.b.a. Chemstar Products Company. SN 321,710. Pub. 3-24-70. Filed 3-13-69.
- 892,300. BOP. The British Petroleum Company Limited. SN 323,237. Pub. 3-24-70. Filed 4-1-69.
- 892,301. PANTEK. Whitmoyer Laboratories, Inc. SN 323,403. Pub. 3-24-70. Filed 4-1-69.
- 892,302. COTTESTRENE. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 327,735. Pub. 3-24-70. Filed 5-20-69.
- 892,303. DADE. American Hospital Supply Corporation. SN 328,146. Pub. 3-24-70. Filed 5-23-69.
- 892,304. DV-22. Dresser Industries, Inc. SN 328,165. Pub. 3-24-70. Filed 5-23-69.
- 892,305. SEXAUER PRODUCTS AND DESIGN. J. A. Sexauer Mfg. Co., Inc. SN 328,594. Pub. 3-24-70. Filed 5-28-69.

Class 7—Cordage

- 892,306. STOP-LIFTER. Thomas & Betts Corporation. SN 330,216. Pub. 3-24-70. Filed 6-16-69.
- 892,307. LADY CLAIR. St. Clair Mfg. Corp. SN 339,364. Pub. 3-24-70. Filed 9-30-69.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 892,308. FLAME KISSED. Jacoby & Company. MULTIPLE CLASS (Classes 8, 22, and 42). SN 285,838. Pub. 3-24-70. Filed 11-29-67.

Class 10—Fertilizers

- 892,309. DELMO-Z. Chevron Chemical Company. SN 298,424. Pub. 3-24-70. Filed 5-17-68.

Class 12—Construction Materials

- 892,310. LECTRO PATCH. Martin-Marietta Corporation. SN 244,911. Pub. 5-23-67. Filed 5-4-66.
- 892,311. CUCKLER AND DESIGN. Cuckler Steel Span Company. SN 296,742. Pub. 3-24-70. Filed 4-29-68.
- 892,312. I AND DESIGN. Crosby Wood Preserving Co. SN 309,547. Pub. 3-24-70. Filed 10-14-68.
- 892,313. VIBRAFLEX. W. R. Meadows, Inc. SN 310,904. Pub. 3-24-70. Filed 10-30-68.
- 892,314. HI-LUME AND DESIGN. Hi-Lume Corporation. SN 312,995. Pub. 3-24-70. Filed 11-25-68.
- 892,315. ALCRETE. Allied Construction Supplies Corp. SN 325,918. Pub. 3-24-70. Filed 4-30-69.
- 892,316. SEXAUER PRODUCTS AND DESIGN. J. A. Sexauer Mfg. Co., Inc. SN 328,595. Pub. 3-24-70. Filed 5-28-69.
- 892,317. EPICORE. Epic Metals Corporation. SN 332,612. Pub. 3-24-70. Filed 7-15-69.
- 892,318. BURLGLAS. Burlington Industries, Inc. SN 333,670. Pub. 3-24-70. Filed 7-28-69.
- 892,319. WOODGLO. Weyerhaeuser Company. SN 333,784. Pub. 3-24-70. Filed 7-28-69.
- 892,320. NAVYOEK. Allied Compositions Corporation. SN 333,889. Pub. 3-24-70. Filed 7-30-69.
- 892,321. PYRO PLUS. Johns-Manville Corporation. SN 334,476. Pub. 3-24-70. Filed 8-5-69.
- 892,322. SYLVAN SUBURBAN. Sylvan Pools, Inc. SN 340,620. Pub. 3-24-70. Filed 10-13-69.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 892,323. POWER-CLOSER. Leigh Products, Inc. SN 333,724. Pub. 3-24-70. Filed 7-28-69.
- 892,324. ROTA-CLOSER. Leigh Products, Inc. SN 333,725. Pub. 3-24-70. Filed 7-28-69.
- 892,325. SERIES 7700. Amerock Corporation. SN 334,033. Pub. 3-24-70. Filed 7-31-69.
- 892,326. FISHTAIL. Fisher Governor Company. SN 334,316. Pub. 3-24-70. Filed 8-4-69.
- 892,327. JOHNI-BOLT. Hercules Chemical Company, Inc., assignee of Mechanical Services and Supply Corporation. SN 334,354. Pub. 3-24-70. Filed 8-4-69.
- 892,328. TALON 42. Textron Inc. SN 334,495. Pub. 3-24-70. Filed 8-5-69.
- 892,329. HOSE-SAVER. Wolverine Brass Works. SN 337,605. Pub. 3-24-70. Filed 9-10-69.

Class 14—Metals and Metal Castings and Forgings

- 892,330. SOLLAC. Societe Lorraine de Laminage Continu (Sollac). SN 302,771. Pub. 3-24-70. Filed 7-15-68.
- 892,331. CONTOURMIL. Metals Engineering Company. SN 319,337. Pub. 3-24-70. Filed 2-17-69.

Class 15—Oils and Greases

- 892,289. (See Class 6 for this trademark.)
- 892,291. (See Class 6 for this trademark.)
- 892,332. DOW CORNING 44. Dow Corning Corporation. SN 316,707. Pub. 3-24-70. Filed 1-16-69.
- 892,333. DOW CORNING 710. Dow Corning Corporation. SN 316,711. Pub. 3-24-70. Filed 1-16-69.
- 892,334. FLORACANDLE. Colonial Candle Co. of Cape Cod, Inc. SN 335,745. Pub. 3-24-70. Filed 8-20-69.
- 892,335. RUST BOMB AND DESIGN. Conklin Company, Inc. SN 339,502. Pub. 3-24-70. Filed 10-2-69.

Class 16—Protective and Decorative Coatings

- 892,336. PHOSCOLOR. MacDermid Incorporated. SN 313,958. Pub. 3-24-70. Filed 12-9-68.
- 892,337. INMONT. Inmont Corporation. SN 328,142. Pub. 3-24-70. Filed 5-23-69.

Class 18—Medicines and Pharmaceutical Preparations

- 892,292. (See Class 6 for this trademark.)
- 892,296. (See Class 6 for this trademark.)
- 892,338. CHOLEBRINE. Dagra N.V. SN 318,531. Pub. 3-24-70. Filed 2-6-69.
- 892,339. BEEF CATTLE BOOST. Moorman Manufacturing Company. SN 321,965. Pub. 3-24-70. Filed 3-17-69.
- 892,340. AKADAMA. Ralph N. Takaki, d.b.a. Takaki Sanyo-Do. SN 323,384. Pub. 3-24-70. Filed 4-1-69.
- 892,341. IOPSAN. The Upjohn Company. SN 326,460. Pub. 3-24-70. Filed 5-5-69.

- 892,342. SPASOSPAN. USV Pharmaceutical Corporation. SN 327,076. Pub. 3-24-70. Filed 5-12-69.
- 892,343. SEECO. Seeco, Inc. SN 332,896. Pub. 3-24-70. Filed 7-18-69.
- 892,344. SUPEN. Reid-Provident Laboratories Inc. SN 339,961. Pub. 3-24-70. Filed 10-7-69.

Class 19—Vehicles

- 892,345. FH1100. Fairchild Hiller Corporation. SN 328,544. Pub. 3-24-70. Filed 5-28-69.
- 892,346. TRAIL HORSE AND HORSE DESIGN. General Appliance Manufacturing Co. SN 335,131. Pub. 3-24-70. Filed 8-12-69.
- 892,347. ROADHOUSE. Roadhouse Motor Homes, Inc. SN 336,862. Pub. 3-24-70. Filed 9-2-69.
- 892,348. VERTIGLAS. PPG Industries, Inc. SN 339,679. Pub. 3-24-70. Filed 10-3-69.
- 892,349. SPORT-SAILOR. Urethane Fabricators, Inc. SN 339,825. Pub. 3-24-70. Filed 10-6-69.
- 892,350. YA YOUNG AMERICAN AND DESIGN. Mid-America Housing, Inc. SN 341,173. Pub. 3-24-70. Filed 10-20-69.
- 892,351. SEAFARI. Sea Craft, Incorporated. SN 341,285. Pub. 3-24-70. Filed 10-21-69.
- 892,352. POLYCAST. Motor Wheel Corporation. SN 341,405. Pub. 3-24-70. Filed 10-22-69.
- 892,353. SHELL LAKE. Lund Metalcraft, Inc. SN 341,671. Pub. 3-24-70. Filed 10-24-69.

Class 20—Linoleum and Oiled Cloth

- 892,354. APRINA. Armstrong Cork Company. SN 334,961. Pub. 3-24-70. Filed 8-11-69.
- 892,355. ZIP-STIK. American Blitrite Rubber Co., Inc. SN 335,312. Pub. 3-24-70. Filed 8-14-69.

Class 21—Electrical Apparatus, Machines, and Supplies

- 892,266. (See Class 2 for this trademark.)
- 892,356. BIRD AND DESIGN. Bird Electronic Corporation. SN 237,294. Pub. 8-9-66. Filed 1-26-66.
- 892,357. KOEHLER. Koehler Manufacturing Company. SN 263,078. Pub. 3-24-70. Filed 1-23-67.
- 892,358. SUPERWRAP. Matsuo Electric Company Limited. SN 281,298. Pub. 3-24-70. Filed 9-27-67.
- 892,359. WELDWRAP. Matsuo Electric Company Limited. SN 281,299. Pub. 3-24-70. Filed 9-27-67.
- 892,360. NOVA. Nova-Tech, Inc. SN 285,937. Pub. 3-24-70. Filed 11-30-67.
- 892,361. NORMADIS. Compagnie Generale d'Electricite. SN 296,518. Pub. 3-24-70. Filed 4-25-68.
- 892,362. DURAMOLD. The Grote Manufacturing Company. SN 301,419. Pub. 4-7-70. Filed 6-26-68.
- 892,363. INVERTAVOLT. Austin W. La Marche. SN 314,069. Pub. 3-24-70. Filed 12-10-68.
- 892,364. LITETRONIC. Republic Controls Corp. SN 318,373. Pub. 3-24-70. Filed 2-5-69.
- 892,365. TRI-DATA. Tri-Data. SN 320,877. Pub. 3-24-70. Filed 3-5-69.
- 892,366. PHOENIX. A. C. Weber Co., Inc. SN 324,147. Pub. 3-24-70. Filed 4-10-69.
- 892,367. FLUOLITE. Fibron Wolfgang Mellert KG. SN 324,904. Pub. 3-24-70. Filed 4-18-69.

- 892,368. HERKON. Standard Elektrik Lorenz Aktiengesellschaft. SN 330,642. Pub. 3-24-70. Filed 6-20-69.
- 892,369. STATEX. Allis-Chalmers Manufacturing Company. SN 332,434. Pub. 3-24-70. Filed 7-14-69.
- 892,370. HI-TEK. Hi-Tek Corporation. SN 333,130. Pub. 3-24-70. Filed 7-22-69.
- 892,371. ALULOX. The Okonite Company. SN 334,487. Pub. 3-24-70. Filed 8-5-69.
- 892,372. POWER BREED. Gould Inc. SN 334,579. Pub. 3-24-70. Filed 8-6-69.
- 892,373. RUBROHM. Multi-Flex Seals, Inc. SN 334,859. Pub. 3-24-70. Filed 8-8-69.
- 892,374. SHARP. Hayakawa Electric Co., Ltd. SN 335,140. Pub. 3-24-70. Filed 8-12-69.
- 892,375. MINI-PROX. Electro Products Laboratories, Inc. SN 341,581. Pub. 3-24-70. Filed 10-24-69.

Class 22—Games, Toys, and Sporting Goods

- 892,266. (See Class 2 for this trademark.)
- 892,308. (See Class 8 for this trademark.)
- 892,376. CUSTOM CRAFT. Volkman Manufacturing Company. SN 312,709. Pub. 3-24-70. Filed 11-20-68.
- 892,377. ATLAS AND DESIGN. Atlas Athletic Equipment Company. SN 320,232. Pub. 3-24-70. Filed 2-27-69.
- 892,378. POK-O-GOLF. Midwest Technology Incorporated. SN 320,839. Pub. 3-24-70. Filed 3-5-69.
- 892,379. FIBRO-CLAY. Milton Bradley Company. SN 321,680. Pub. 3-24-70. Filed 3-13-69.
- 892,380. MONTEVERDE. Dunham Brothers Company. SN 323,686. Pub. 3-24-70. Filed 4-4-69.
- 892,381. LIMBO LEGS. Milton Bradley Company. SN 324,397. Pub. 3-24-70. Filed 4-14-69.
- 892,382. L.M. 500 TRACK. Topper Corporation. SN 328,516. Pub. 3-24-70. Filed 5-28-69.
- 892,383. DIAMOND EYE. James W. Strader. SN 330,784. Pub. 3-24-70. Filed 6-23-69.
- 892,384. TIGER. Curl-Master Brooms Inc. SN 330,909. Pub. 3-24-70. Filed 6-26-69.
- 892,385. RUTLEDGE. American Steel Box Corp. SN 331,140. Pub. 3-24-70. Filed 6-27-69.
- 892,386. SLIP DISC. Mattel, Inc. SN 334,942. Pub. 3-24-70. Filed 8-11-69.
- 892,387. BABY SO-HIGH. Mattel, Inc. SN 336,374. Pub. 3-24-70. Filed 8-27-69.
- 892,388. BABY VELVET. Mattel, Inc. SN 336,375. Pub. 3-24-70. Filed 8-27-69.
- 892,389. BOOMY BOOMER. Mattel, Inc. SN 336,376. Pub. 3-24-70. Filed 8-27-69.
- 892,390. BRAD. Mattel, Inc. SN 336,378. Pub. 3-24-70. Filed 8-27-69.
- 892,391. GLENDA. Mattel, Inc. SN 336,379. Pub. 3-24-70. Filed 8-27-69.
- 892,392. MOTHER WHAT NOW. Mattel, Inc. SN 336,521. Pub. 3-24-70. Filed 8-28-69.
- 892,393. I WISH I WERE. Mattel, Inc. SN 339,510. Pub. 3-24-70. Filed 10-2-69.
- 892,394. NITTY GRITTY KITTY. Mattel, Inc. SN 339,511. Pub. 3-24-70. Filed 10-2-69.
- 892,395. PUFF. Mattel, Inc. SN 339,507. Pub. 3-24-70. Filed 10-6-69.
- 892,396. ROLL-ETTE. Parker Brothers, Inc. SN 340,223. Pub. 3-24-70. Filed 10-9-69.
- 892,397. DOUBLE THREAT. Mattel, Inc. SN 340,316. Pub. 3-24-70. Filed 10-10-69.
- 892,398. BERTHA. Mattel, Inc. SN 340,317. Pub. 3-24-70. Filed 10-10-69.
- 892,399. STOP DOT. Mattel, Inc. SN 340,321. Pub. 3-24-70. Filed 10-10-69.

- 892,400. THE DEMON. Mattel, Inc. SN 340,721. Pub. 3-24-70. Filed 10-15-69.
 892,401. MYSTIQUE. Mattel, Inc. SN 340,885. Pub. 3-24-70. Filed 10-16-69.
 892,402. BIG I. George Innat, Jr., d.b.a. Big I Headgear. SN 341,982. Pub. 3-24-70. Filed 10-29-69.
 892,403. SUE 'N LOU. Mattel, Inc. SN 341,989. Pub. 3-24-70. Filed 10-29-69.
 892,404. GOLLY WOBBLE. Mattel, Inc. SN 341,990. Pub. 3-24-70. Filed 10-29-69.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

- 892,405. AIR-O-SENSOR. The Reece Corporation. SN 302,515. Pub. 3-24-70. Filed 7-11-68.
 892,406. AIR-O-SHEAR. The Reece Corporation. SN 302,517. Pub. 3-24-70. Filed 7-11-68.
 892,407. PNEUMABLO. Pneumafil Corporation. SN 311,921. Pub. 3-24-70. Filed 11-12-68.
 892,408. EAGLE DESIGN. U.N. Alloy Steel Corporation, d.b.a. U.S. Knife Company. SN 315,797. Pub. 3-24-70. Filed 1-3-69.
 892,409. TIPTON VIBRO-COMPACT. Kabushiki-Kaisha Shikishima Tipton, d.b.a. Shikishima Tipton Mfg. Co., Ltd. SN 316,212. Pub. 3-24-70. Filed 1-9-69.
 892,410. SPERISTAR (DESIGN). Sperry Rand Corporation. SN 319,375. Pub. 3-24-70. Filed 2-17-69.
 892,411. CO6. Kennametal, Inc. SN 319,754. Pub. 3-24-70. Filed 12-17-68.
 892,412. HYDRO-SPREADER. Central Engineering Co., Inc. SN 320,124. Pub. 3-24-70. Filed 2-26-69.
 892,413. MECA. Meca-Meccanotecnica Cassanese S.n.c. SN 320,961. Pub. 3-24-70. Filed 3-6-69.
 892,414. PACKTABLE. René de la Coussaye. SN 321,195. Pub. 3-24-70. Filed 3-10-69.
 892,415. POLY-MATIC. Poly-Matic Fountain, Inc. SN 326,424. Pub. 3-24-70. Filed 5-5-69.
 892,416. STUDENTWRITER. Louis Marx & Co., Inc. SN 328,317. Pub. 3-24-70. Filed 5-26-69.
 892,417. BLU-TOPPER. David O. Allen, d.b.a. Claymore Co. SN 334,957. Pub. 3-24-70. Filed 8-11-69.
 892,418. DRIVE-CHEK. Gemco Electric Company. SN 335,222. Pub. 3-24-70. Filed 8-13-69.
 892,419. HYCO. Hyco, Inc., assignee of Hyco Incorporated. SN 335,225. Pub. 3-24-70. Filed 8-13-69.
 892,420. FISHBURNER. Fishburne Equipment Company, Inc. SN 335,859. Pub. 3-24-70. Filed 8-21-69.
 892,421. HILMOR. Hilmer Limited. SN 341,747. Pub. 3-24-70. Filed 10-27-69.
 892,422. LODIGE. Littleford Bros., Inc. SN 341,750. Pub. 3-24-70. Filed 10-27-69.

Class 24 — Laundry Appliances and Machines

- 892,423. BISHOPAD. Bishop Freeman Company. SN 331,011. Pub. 3-24-70. Filed 6-26-69.
 892,424. WEBCOR. U.S. Industries, Inc. SN 333,954. Pub. 3-24-70. Filed 7-30-69.

Class 25 — Locks and Safes

- 892,425. WAKE. Norris Industries, Inc. SN 334,606. Pub. 3-24-70. Filed 8-6-69.

Class 26 — Measuring and Scientific Appliances

- 892,426. SAGE II. Dero Research and Development Corporation. SN 295,221. Pub. 3-24-70. Filed 4-9-68.
 892,427. SPECTROLITE. Spectrolite Optics, Inc. SN 295,775. Pub. 3-24-70. Filed 4-16-68.
 892,428. HAND DESIGN. General Nucleonics Inc. SN 308,287. Pub. 3-24-70. Filed 9-26-68.
 892,429. MICROPERE. Cadillac Optical Corp. SN 310,848. Pub. 3-24-70. Filed 10-30-68.
 892,430. BRIVISOR. Firma G. Reichert, Betelligungs- und Verwaltungsgesellschaft mit beschränkter Haftung. SN 313,408. Pub. 3-24-70. Filed 12-2-68.
 892,431. MULTIFOVAL LENS DESIGN. Univis Inc. SN 314,768. Pub. 3-24-70. Filed 12-18-68.
 892,432. BRM AND DESIGN. Brooks Research and Manufacturing, Inc. SN 315,468. Pub. 3-24-70. Filed 12-31-68.
 892,433. CONSTANT CARE. Prescott L. Spaulding, d.b.a. Bio-Medical Electronics. SN 316,029. Pub. 3-24-70. Filed 1-7-69.
 892,434. IKL AND DESIGN. IKL Incorporated. SN 317,569. Pub. 3-24-70. Filed 1-27-69.
 892,435. ZEROING MANIFOLD. Donald L. Adams, d.b.a. DA Mfg. Co. SN 318,938. Pub. 3-24-70. Filed 2-12-69.
 892,436. AEROSCAN. Leeds & Northrup Company. SN 319,920. Pub. 3-24-70. Filed 2-24-69.
 892,437. GAC. Gulf Aerospace Corporation. SN 323,292. Pub. 3-24-70. Filed 4-1-69.
 892,438. E AND DESIGN. Exact Electronics, Inc. SN 330,827. Pub. 3-24-70. Filed 6-24-69.
 892,439. TELESWITCHER. Computer Control Systems, Incorporated. SN 332,201. Pub. 3-24-70. Filed 7-10-69.
 892,440. SIMPLI-MATIC. Lava-Simplex Internationale, Inc. SN 332,621. Pub. 3-24-70. Filed 7-15-69.
 892,441. SPRAYLITE. Lumitron Corp. SN 333,582. Pub. 3-24-70. Filed 7-25-69.
 892,442. MULTICON. Robertson Photo-Mechanix, Inc. SN 333,605. Pub. 3-24-70. Filed 7-25-69.
 892,443. AGFAMATIC. Agfa-Gevaert Aktiengesellschaft. SN 334,531. Pub. 3-24-70. Filed 8-6-69.
 892,444. MEDSPECT. Scientific Research Instruments Corporation. SN 335,066. Pub. 3-24-70. Filed 8-11-69.
 892,445. OTS AND DESIGN. The Ohio Thermometer/Sign Company. SN 335,369. Pub. 3-24-70. Filed 8-14-69.
 892,446. STRAIGHT-DATE. Textron Inc. SN 344,308. Pub. 3-24-70. Filed 11-24-69.

Class 27 — Horological Instruments

- 892,447. ARCTIC KING. Bulova Watch Company, Inc. SN 336,673. Pub. 3-24-70. Filed 8-29-69.

Class 28 — Jewelry and Precious-Metal Ware

- 892,448. FAITH. Stein & Ellbogen Company. SN 249,454. CONCURRENT USE. Pub. 6-13-67. Filed 7-1-66.
 892,449. FAITH. Page-Walker Co. SN 295,599. CONCURRENT USE. Pub. 7-30-68. Filed 4-15-68.
 892,450. DECATHLON. Textron Inc. SN 331,445. Pub. 3-24-70. Filed 6-30-69.
 892,451. THING RING. TNT, Inc. SN 338,314. Pub. 3-24-70. Filed 7-23-69.

- 892,452. SHANON. Howies Watch Band Co. SN 333,525. Pub. 3-24-70. Filed 7-25-69.
 892,453. HI CODE. Rink's Department Stores, Inc. SN 335,261. Pub. 3-24-70. Filed 8-13-69.
 892,454. THE LIGHT OF PEACE. Zale Corporation. SN 342,920. Pub. 3-24-70. Filed 11-6-69.

Class 29 — Brooms, Brushes, and Dusters

- 892,266. (See Class 2 for this trademark.)

Class 30 — Crockery, Earthenware, and Porcelain

- 892,455. COALPORT. Coalport China Limited. MULTIPLE CLASS (Classes 30, 34, and 50). SN 293,858. Pub. 3-24-70. Filed 3-15-68.

Class 31 — Filters and Refrigerators

- 892,266. (See Class 2 for this trademark.)
 892,288. (See Class 6 for this trademark.)
 892,456. K MART AND DESIGN. S. S. Kresge Company. SN 334,595. Pub. 3-24-70. Filed 8-6-69.
 892,457. ROILGARD AND DESIGN. Duluth Filter Company. SN 335,558. Pub. 3-24-70. Filed 8-18-69.

Class 32 — Furniture and Upholstery

- 892,458. CAMELOT. Clapay Corporation. SN 323,792. Pub. 3-24-70. Filed 4-7-69.
 892,459. TO-NITE. Clapay Corporation. SN 323,793. Pub. 3-24-70. Filed 4-7-69.
 892,460. REGENCY HOUSE. Howard Parlor Furniture Co. SN 338,151. Pub. 3-24-70. Filed 9-17-69.
 892,461. PENTHOUSE. Penthouse Furniture, Ltd. SN 340,279. Pub. 3-24-70. Filed 10-9-69.
 892,462. MELON. Jasco Fiberglass Designs, Inc. SN 341,111. Pub. 3-24-70. Filed 10-20-69.

Class 33 — Glassware

- 892,463. DAVID DOUGLAS. David Douglas & Co., Inc. SN 312,759. Pub. 3-24-70. Filed 11-21-68.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 892,455. (See Class 30 for this trademark.)
 892,464. SPRAYMASTER. Aqua-Chem, Inc. SN 331,489. Pub. 3-24-70. Filed 7-1-69.
 892,465. HEARTH-A-FIRE. Hearth Craft, Inc. SN 335,017. Pub. 3-24-70. Filed 8-11-69.
 892,466. POW-WOW. Hearth Craft, Inc. SN 335,018. Pub. 3-24-70. Filed 8-11-69.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 892,467. HILLCREST. J. N. Cessan Company. SN 324,684. Pub. 3-24-70. Filed 4-16-69.
 892,468. STRATA-BELT. Doral Tire & Rubber Co., Inc. SN 337,791. Pub. 3-24-70. Filed 9-12-69.
 892,469. DUROTEC. W. S. Shamban & Co. SN 340,829. Pub. 3-24-70. Filed 10-15-69.
 892,470. GREY HOUND. McLeod Leather & Belting Company, Inc. SN 341,837. Pub. 3-24-70. Filed 10-27-69.
 892,471. ASTROSTUD. The Kelly-Springfield Tire Company. SN 341,929. Pub. 3-24-70. Filed 10-28-69.
 892,472. ROADMARK. The Kelly-Springfield Tire Company. SN 341,930. Pub. 3-24-70. Filed 10-28-69.
 892,473. PORTEC. Portec, Inc. SN 342,061. Pub. 3-24-70. Filed 10-29-69.
 892,474. SULTAN. Sultan Enterprises, Inc. SN 342,184. Pub. 3-24-70. Filed 10-30-69.

Class 36 — Musical Instruments and Supplies

- 892,475. GE AND DESIGN. General Electric Company. SN 338,388. Pub. 3-24-70. Filed 9-19-69.
 892,476. STRATOLINE. Motorola Automotive Products, Inc. SN 340,412. Pub. 3-24-70. Filed 10-10-69.

Class 37 — Paper and Stationery

- 892,477. PROMOTER. Tuckersharpe Pen Company, Inc. SN 317,776. Pub. 3-24-70. Filed 1-28-69.
 892,478. SKILCRAFT AND DESIGN. National Industries for the Blind. SN 321,137. Pub. 3-24-70. Filed 3-6-69.
 892,479. PIONEER MAGNETIC XPANO ALBUM AND DESIGN. Irving Rubin, d.b.a. Irv Rubin Enterprises. SN 321,685. Pub. 3-24-70. Filed 3-13-69.
 892,480. DIPPITY-DYE. The Crystal Tissue Company. SN 325,469. Pub. 3-24-70. Filed 4-24-69.
 892,481. DEBONAIR. Chemolene Industries, Inc. SN 326,199. Pub. 3-24-70. Filed 5-2-69.
 892,482. TEEN PAK AND DESIGN. Chemolene Industries, Inc. SN 326,200. Pub. 3-24-70. Filed 5-2-69.
 892,483. MEDI-DATE AND DESIGN. Robert K. Spiro, M.D. SN 329,185. Pub. 3-24-70. Filed 6-4-69.
 892,484. SERCOFOLD. S. E. Rykoff & Co. SN 334,284. Pub. 3-24-70. Filed 8-4-69.
 892,485. SERCO CUSTOM SER AND DESIGN. S. E. Rykoff & Co. SN 334,286. Pub. 3-24-70. Filed 8-4-69.

Class 38 — Prints and Publications

- 892,486. HIT EM HURT EM WIN GRIN AND DESIGN. Clinton A. Kemp. SN 282,806. Pub. 3-24-70. Filed 10-18-67.
 892,487. CAPTAIN MARVEL AND DESIGN. Magazine Management Co., Inc., d.b.a. Marvel Comics Group, assignee, by means assignment, of Magazine Management Company, d.b.a. Marvel Comics Group. SN 283,349. Pub. 3-24-70. Filed 10-25-67.
 892,488. THINK SPANISH. Visual Education Association, Inc. SN 310,154. Pub. 3-24-70. Filed 10-21-68.
 892,489. HEAD SHEET AND DESIGN. Abigail Brown. SN 329,306. Pub. 3-24-70. Filed 6-6-69.
 892,490. CORD. Cord Communications Corporation. SN 332,411. Pub. 3-24-70. Filed 7-14-69.
 892,491. STERNCO AND DESIGN. Sternco Industries, Inc. SN 332,565. Pub. 3-24-70. Filed 6-16-69.

- 892,492. CII AND DESIGN. Curriculum Innovations, Inc. SN 333,383. Pub. 3-24-70. Filed 7-24-69.
 892,493. DE PROFUNDIS ETC. AND DESIGN. American Numismatic Association, d.b.a. The American Numismatic Association. SN 334,291. Pub. 3-24-70. Filed 8-4-69.
 892,494. ROTOR & WING AND DESIGN. Peoria Journal Star, Inc. SN 341,846. Pub. 3-24-70. Filed 10-27-69.

Class 39—Clothing

- 892,266. (See Class 2 for this trademark.)
 892,495. KID DUDS. Lees Manufacturing Co. SN 287,022. Pub. 3-24-70. Filed 12-15-67.
 892,496. CONTUR CASUALS. Hayes Garment Company. SN 320,600. Pub. 3-24-70. Filed 3-3-69.
 892,497. TREASURE COVE. Treasure Cove Sportswear, Inc. SN 326,148. Pub. 3-24-70. Filed 5-1-69.
 892,498. YEARMEN. Worley Sewell Company. SN 329,023. Pub. 3-24-70. Filed 6-3-69.
 892,499. TEACHER'S PET AND DESIGN. Holiday Sportswear Manufacturing Company. SN 329,473. Pub. 3-24-70. Filed 6-9-69.
 892,500. TRIPLE CHECK. G. C. Murphy Company. MULTIPLE CLASS (Classes 39 and 43). SN 330,440. Pub. 3-24-70. Filed 6-18-69.
 892,501. MISS SUSAN. Harex-Lorna Industries, Inc. SN 330,599. Pub. 3-24-70. Filed 6-20-69.
 892,502. STRINGBEANS. Stringbean, Inc. SN 330,643. Pub. 3-24-70. Filed 6-20-69.
 892,503. HAND JOY GLOVES. Aris Gloves, Inc. SN 331,808. Pub. 3-24-70. Filed 7-7-69.
 892,504. BEACH GLASS. Manhattan Industries, Inc. SN 333,585. Pub. 3-24-70. Filed 7-25-69.
 892,505. "8-PLUS." Seminole Manufacturing Company. SN 333,756. Pub. 3-24-70. Filed 7-28-69.
 892,506. BACHELORS DOZEN. Ashear Bros., Inc. SN 333,897. Pub. 3-24-70. Filed 7-30-69.
 892,507. WEMLON SUPREME. Wembley, Inc. SN 334,657. Pub. 3-24-70. Filed 8-6-69.
 892,508. SKI BURBAN WHITE STAG AND DESIGN. White Stag Manufacturing Co. SN 338,502. Pub. 3-24-70. Filed 9-22-69.
 892,509. MISCELLANEOUS DESIGN. I. Shalom & Co., Inc. SN 339,963. Pub. 3-24-70. Filed 10-7-69.
 892,510. COMPUKNIT. Computerized Knitwear Incorporated. SN 341,103. Pub. 3-24-70. Filed 10-20-69.
 892,511. CKI. Computerized Knitwear Incorporated. SN 341,104. Pub. 3-24-70. Filed 10-20-69.
 892,512. EMLE PART II. Emle Mills, Inc. SN 341,976. Pub. 3-24-70. Filed 10-29-69.
 892,513. MOONSHINER'S. Munsingwear, Inc. SN 341,991. Pub. 3-24-70. Filed 10-29-69.
 892,514. BODY HUG. Pembroke Lingerie Co., Inc. SN 342,124. Pub. 3-24-70. Filed 10-30-69.

Class 40—Fancy Goods, Furnishings, and Notions

- 892,515. THE SECRET I AND EYE DESIGN. Hair Fair, Inc. SN 325,603. Pub. 3-24-70. Filed 4-25-69.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 892,266. (See Class 2 for this trademark.)
 892,308. (See Class 8 for this trademark.)

- 892,516. M AND DESIGN. Melco Textile Corporation. SN 325,060. Pub. 3-24-70. Filed 4-21-69.
 892,517. PORTFOLIO. Burlington Industries, Inc. SN 329,602. Pub. 3-24-70. Filed 6-10-69.
 892,518. MILLIWOOL. Deering Milliken, Inc. SN 338,710. Pub. 3-24-70. Filed 9-24-69.
 892,519. RUB-RAP. Deering Milliken, Inc. SN 340,475. Pub. 3-24-70. Filed 10-13-69.
 892,520. TELSAX. Deering Milliken, Inc. SN 340,082. Pub. 3-24-70. Filed 10-8-69.
 892,521. CHATTERTWIST. Klopman Mills, Inc. SN 341,318. Pub. 3-24-70. Filed 10-22-69.
 892,522. PAGODA. Klopman Mills, Inc. SN 341,319. Pub. 3-24-70. Filed 10-22-69.
 892,523. TWILLTOUR. Klopman Mills, Inc. SN 341,320. Pub. 3-24-70. Filed 10-22-69.
 892,524. CONSIGN. Klopman Mills, Inc. SN 341,321. Pub. 3-24-70. Filed 10-22-69.
 892,525. MIMOSA. Klopman Mills, Inc. SN 341,326. Pub. 3-24-70. Filed 10-22-69.
 892,526. SINCERITY. Klopman Mills, Inc. SN 341,328. Pub. 3-24-70. Filed 10-22-69.
 892,527. CRO-SHEL. Norwood Knitting Mills, Inc. SN 341,687. Pub. 3-24-70. Filed 10-24-69.
 892,528. MIRAGE. Klopman Mills, Inc. SN 342,208. Pub. 3-24-70. Filed 10-31-69.

Class 43—Thread and Yarn

- 892,254. (See Class 1 for this trademark.)
 892,500. (See Class 39 for this trademark.)
 892,529. SEQUAN. S. E. Polymers, Inc. SN 330,011. Pub. 3-24-70. Filed 6-13-69.
 892,530. SE AND DESIGN. S.E. Polymers, Inc. SN 330,012. Pub. 3-24-70. Filed 6-13-69.

Class 44—Dental, Medical, and Surgical Appliances

- 892,531. DENPRO ETC. AND DESIGN. Kenyon L. Baugher, d.b.a. Denpro Company. SN 318,395. Pub. 3-24-70. Filed 12-2-68.
 892,532. BABY CHICK DESIGN. Gilbert Hyde Chick Company. SN 315,919. Pub. 3-24-70. Filed 1-6-69.
 892,533. CHICK AND DESIGN. Gilbert Hyde Chick Company. SN 315,920. Pub. 3-24-70. Filed 1-6-69.
 892,534. CHICK. Gilbert Hyde Chick Company. SN 315,921. Pub. 3-24-70. Filed 1-6-69.

Class 45—Soft Drinks and Carbonated Waters

- 892,535. DESERT SPICE DRINK. Meryl L. Stoddard. SN 292,430. Pub. 3-24-70. Filed 3-4-68.
 892,536. PARTY KING. Kings Beverage Co. Inc. SN 318,270. Pub. 3-24-70. Filed 2-4-69.

Class 46—Foods and Ingredients of Foods

- 892,253. (See Class 1 for this trademark.)
 892,537. FUJIYA. Fujiya Confectionery Co., Ltd. SN 278,587. Pub. 3-24-70. Filed 8-18-67.

- 892,538. PIZZAGETTI. American Home Products Corporation. SN 286,988. Pub. 3-24-70. Filed 12-15-67.
 892,539. EL SOL THE HAPPY TORTILLA AND DESIGN. Tony Reyes, d.b.a. El Sol Spanish Food Products. SN 293,948. Pub. 3-24-70. Filed 3-22-68.
 892,540. MARIE ELIZABETH. Strohmeier & Arpe Company, d.b.a. United Pure Food Company. SN 317,473. Pub. 3-24-70. Filed S.R. 1-24-69; Am. P.R. 3-26-69.
 892,541. FANCIFUL CHICKEN DESIGN. Smith's Pride Foods, Inc. SN 317,634. Pub. 3-24-70. Filed 1-27-69.
 892,542. WEAVER. Victor F. Weaver, Inc. SN 317,783. Pub. 3-24-70. Filed 1-28-69.
 892,543. SLOPPY ALFIE. Libby, McNeill & Libby. SN 321,667. Pub. 4-7-70. Filed 3-13-69.
 892,544. KALT. Pennwalt Corporation, by merger and change of name from Wallace & Tiernan Inc. SN 323,497. Pub. 3-24-70. Filed 4-2-69.
 892,545. FLAVORMATES. Topps Chewing Gum, Incorporated. SN 325,905. Pub. 3-24-70. Filed 4-29-69.
 892,546. CHEF BOY-AR-DEE AND DESIGN. American Home Products Corporation. SN 326,472. Pub. 3-24-70. Filed 5-6-69.
 892,547. TOWN FAIR. National Frosted Food Company, Inc. SN 326,724. Pub. 3-24-70. Filed 5-8-69.
 892,548. CONGRESS. Dansk Andelsost Vela Export a.m.b.a. SN 327,129. Pub. 3-24-70. Filed 5-13-69.
 892,549. SNOOPY. Interstate Bakeries Corporation. SN 328,304. Pub. 3-24-70. Filed 5-26-69.
 892,550. MILLIONAIRE. Peavey Company. SN 329,751. Pub. 3-24-70. Filed 6-11-69.
 892,551. SNACK-UPS. General Foods Corporation. SN 330,129. Pub. 3-24-70. Filed 6-16-69.
 892,552. MORNING COFFEE. Midwest Biscuit Company. SN 330,398. Pub. 3-24-70. Filed 6-18-69.
 892,553. PURE-FLO. National Starch and Chemical Corporation. SN 330,618. Pub. 3-24-70. Filed 6-20-69.
 892,554. TOM MIX. The Quaker Oats Company. SN 330,807. Pub. 3-24-70. Filed 6-24-69.
 892,555. RESPOND. Agway, Inc. SN 331,004. Pub. 3-24-70. Filed 6-26-69.
 892,556. PASTUREPELS. Agway, Inc. SN 331,301. Pub. 3-24-70. Filed 6-30-69.
 892,557. PEPPY CHASE. Haynes Milling Co., Inc. SN 331,748. Pub. 3-24-70. Filed 7-3-69.
 892,558. KENTUCKY BELLE. Price & Lucas Co., Inc. SN 332,138. Pub. 3-24-70. Filed 7-9-69.
 892,559. FRONTIER. John Morrell & Co. SN 335,925. Pub. 3-24-70. Filed 8-22-69.
 892,560. FANTASY. Fantasy Flavors, Inc. SN 339,277. Pub. 3-24-70. Filed 9-30-69.

Class 47—Wines

- 892,561. B AND DESIGN. John Bardenheier Wine & Liquor Company, d.b.a. Bardenheier's Wine Cellars. SN 303,393. Pub. 3-24-70. Filed 7-23-68.
 892,562. MONT AMBELOS AND DESIGN. D. Nicolaou Sons Co. SN 309,286. Pub. 3-24-70. Filed 10-9-68.
 892,563. (RIO VIEJO). Pedro Domecq, S.A. SN 329,507. Pub. 3-24-70. Filed 6-9-69.

Class 48—Malt Beverages and Liquors

- 892,564. STERN-BRAU. Stern-Brauerel Carl Funke A.G. SN 255,477. Pub. 3-12-68. Filed 9-29-66.
 892,565. FOSTER'S LAGER AND DESIGN. Carlton and United Breweries Limited. SN 311,571. Pub. 3-24-70. Filed 11-7-68.

Class 50—Merchandise Not Otherwise Classified

- 892,266. (See Class 2 for this trademark.)
 892,455. (See Class 30 for this trademark.)
 892,566. BUSSARD VICON-10 AND DESIGN. R. D. Bussard & Son, Inc. SN 315,202. Pub. 3-24-70. Filed 12-26-68.
 892,567. GOURMET GALERIE. Jane A. Ellis. SN 319,149. Pub. 3-24-70. Filed 2-14-69.
 892,568. WONDERS OF AMERICA. The Franklin Mint, Inc. SN 320,485. Pub. 3-24-70. Filed 3-3-69.
 892,569. AMERICAN LANDMARKS. The Franklin Mint, Inc. SN 320,488. Pub. 3-24-70. Filed 3-3-69.
 892,570. HISTORY OF FLIGHT. The Franklin Mint, Inc. SN 320,497. Pub. 3-24-70. Filed 3-3-69.
 892,571. ROAD TO THE FUTURE. The Franklin Mint, Inc. SN 320,503. Pub. 3-24-70. Filed 3-3-69.
 892,572. CHAMPIONS OF LIBERTY. The Franklin Mint, Inc. SN 320,541. Pub. 3-24-70. Filed 3-3-69.
 892,573. SPORTSARAMA. The Franklin Mint, Inc. SN 320,550. Pub. 3-24-70. Filed 3-3-69.
 892,574. MAN OF THE YEAR. The Franklin Mint, Inc. SN 320,553. Pub. 3-24-70. Filed 3-3-69.
 892,575. HEROES OF THE WEST. The Franklin Mint, Inc. SN 320,556. Pub. 3-24-70. Filed 3-3-69.
 892,576. GREAT STARS. The Franklin Mint, Inc. SN 320,559. Pub. 3-24-70. Filed 3-3-69.
 892,577. HISTORY MAKERS. The Franklin Mint, Inc. SN 320,562. Pub. 3-24-70. Filed 3-3-69.
 892,578. LAND OF LIBERTY. The Franklin Mint, Inc. SN 320,570. Pub. 3-24-70. Filed 3-3-69.
 892,579. SONS OF LIBERTY. The Franklin Mint, Inc. SN 320,572. Pub. 3-24-70. Filed 3-3-69.
 892,580. REVOLUTIONARY HEROES. The Franklin Mint, Inc. SN 320,575. Pub. 3-24-70. Filed 3-3-69.
 892,581. MAGNA-KOTE. Hydrometals, Inc. SN 327,497. Pub. 3-24-70. Filed 5-16-69.
 892,582. HALL MARK MONUMENTS. The Lewis Monument Co., Inc. SN 327,641. Pub. 3-24-70. Filed 5-19-69.
 892,583. TUITTI FRUITTI. Harry M. Brown, Jr. SN 335,320. Pub. 3-24-70. Filed 8-14-69.
 892,584. DRINKY MOUSE. Curiel Products Corporation. SN 340,984. Pub. 3-24-70. Filed 10-17-69.

Class 51—Cosmetics and Toilet Preparations

- 892,292. (See Class 6 for this trademark.)
 892,585. AUBUSSON. Caravan de France, S.A.R.L. SN 301,913. Pub. 3-24-70. Filed S.R. 7-3-68; Am. P.R. 9-10-69.
 892,586. MISCELLANEOUS DESIGN. Laboratoire Lachartre S.A. SN 304,608. Pub. 3-24-70. Filed 8-7-68.
 892,587. CARMEN. Bristol-Myers Company, assignee of Clairol Incorporated. MULTIPLE CLASS (Classes 51 and 52). SN 321,363. Pub. 3-24-70. Filed 3-11-69.
 892,588. LADY KOSCOT. Koscot Interplanetary, Inc. SN 330,602. Pub. 3-24-70. Filed 6-20-69.
 892,589. SAM. The Mennen Company. SN 334,242. Pub. 3-24-70. Filed 3-1-69.
 892,590. SAM'S. The Mennen Company. SN 334,244. Pub. 3-24-70. Filed 3-1-69.

Class 52—Detergents and Soaps

- 892,292. (See Class 6 for this trademark.)
 892,587. (See Class 51 for this trademark.)

- 892,591. MISCELLANEOUS DESIGN. Early California Industries Inc., assignee of Arizona Agrochemical Corporation. SN 282,530. Pub. 3-24-70. Filed 10-16-67.
- 892,592. DIAL CREME WHIP. Armour-Dial, Inc. SN 311,458. Pub. 3-24-70. Filed 11-6-68.
- 892,593. STRATFORD. Stratford, Inc. SN 324,328. Pub. 3-24-70. Filed 4-14-69.
- 892,594. BEAUTIFUL ONE. John H. Breck, Inc. SN 332,796. Pub. 3-24-70. Filed 7-17-69.
- 892,595. ONE & ONLY. John H. Breck, Inc. SN 332,797. Pub. 3-24-70. Filed 7-17-69.
- 892,596. INTERLUDE. Frances Denney, Inc. SN 334,059. Pub. 3-24-70. Filed 7-31-69.
- 892,597. SAM. The Mennen Company. SN 334,243. Pub. 3-24-70. Filed 8-1-69.
- 892,598. SAM'S. The Mennen Company. SN 334,245. Pub. 3-24-70. Filed 8-1-69.
- 892,599. DEMO. Lever Brothers Company. SN 336,519. Pub. 3-24-70. Filed 8-28-69.
- 892,600. HEROINE. Lever Brothers Company. SN 337,856. Pub. 3-24-70. Filed 9-15-69.
- 892,601. BLACO-CLENE. Baron Blakeslee, Inc. SN 341,891. Pub. 3-24-70. Filed 10-28-69.
- 892,602. DACROCLEAN. Diamond Shamrock Corporation. SN 342,733. Pub. 3-24-70. Filed 11-5-69.
- 892,603. VIE W. Gem, Incorporated. SN 343,200. Pub. 3-24-70. Filed 11-10-69.

Service Marks

Class 100—Miscellaneous

- 892,604. MISCELLANEOUS DESIGN. American Society for Industrial Security. SN 305,193. Pub. 3-24-70. Filed 8-15-68.
- 892,605. OFFICER FRIENDLY. The Sears-Roebuck Foundation. SN 311,180. Pub. 3-24-70. Filed 11-1-68.
- 892,606. OOGLEBLOOK. Morrison Incorporated. SN 317,755. Pub. 3-24-70. Filed 1-28-69.

Class 101—Advertising and Business

- 892,607. MCO. AND DESIGN. Merrill & Company. SN 268,884. Pub. 3-24-70. Filed 4-11-67.
- 892,608. WHAT'S HAPPENING. Courtney Business Assistance, Inc. SN 301,515. Pub. 3-24-70. Filed 6-27-68.

- 892,609. LOTTS. Jerrico, Inc. SN 303,996. Pub. 3-24-70. Filed 7-31-68.
- 892,610. DYNA BANK DB AND DESIGN. The First National Bank of Atlanta. SN 315,750. Pub. 3-24-70. Filed 1-3-69.
- 892,611. S-H-S INTERNATIONAL. Schneider, Hill and Spangler, Inc. SN 317,876. Pub. 3-24-70. Filed 1-29-69.
- 892,612. CREST AND DESIGN. Crest Personnel, Inc. SN 322,974. Pub. 3-24-70. Filed 3-27-69.

Class 105—Transportation and Storage

- 892,613. TYME. Wright Airlines, Inc., assignee of Tyme Airlines, Inc. SN 292,435. Pub. 3-24-70. Filed 3-4-68.
- 892,614. THRIFT TRIPS. Ozark Air Lines, Inc. SN 337,410. Pub. 3-24-70. Filed 9-9-69.

Class 107—Education and Entertainment

- 892,615. MISCELLANEOUS DESIGN. Thomas R. White-leather, d.b.a. Whiteleather Aviation. SN 309,708. Pub. 3-24-70. Filed 10-15-68.
- 892,616. JENNY LIND. The Barnum Festival Society, Incorporated. SN 314,693. Pub. 3-24-70. Filed 12-17-68.
- 892,617. MEDCOM LEARNING SYSTEMS. Medical Communications, Inc. SN 328,773. Pub. 3-24-70. Filed 6-2-69.
- 892,618. AMERICAN HOLIDAY ASSOCIATION AND SHIELD DESIGN. Lee Rogers, d.b.a. American Holiday Association. SN 328,779. Pub. 3-24-70. Filed 6-2-69.
- 892,619. HOCKEY AND O DESIGN. San Francisco-Oakland Hockey Club, Inc. SN 338,328. Pub. 3-24-70. Filed 9-19-69.
- 892,620. OPTIREAD. Westchester Children's Remedial Center, Inc. SN 341,499. Pub. 3-24-70. Filed 10-23-69.

Collective Membership Marks

Class 200

- 892,621. NORTH AMERICAN FAMILY CAMPERS ASSN. AND DESIGN. North American Family Campers Association, Inc. SN 306,068. Pub. 3-24-70. Filed 8-27-68.
- 892,622. LEGION LEX. Legion Lex. SN 318,791. Pub. 3-24-70. Filed 2-10-69.
- 892,623. QSD CENTURION. QSD Centurion. SN 318,920. Pub. 3-24-70. Filed 2-11-69.

TRADEMARK REGISTRATIONS RENEWED

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| 76,544. REPRESENTATION OF EAGLE. Cl. 37 (Int. Cl. 16). 1-25-10. | 269,662. BIG 7. Cl. 46 (Int. Cl. 31). 4-15-30. |
| 77,115. RELIANCE. Cl. 37 (Int. Cl. 16). 3-8-10. | 269,673. SHANTA. Cl. 42 (Int. Cl. 24). 4-15-30. |
| 78,180. ASBESTINE. Cl. 1 (Int. Cl. 1). 5-31-10. | 269,674. ONDEEN. Cl. 42 (Int. Cl. 24). 4-15-30. |
| 79,320. JABON DE REUTER ETC. AND DESIGN. Cl. 52 (Int. Cl. 3). 8-30-10. | 269,832. GOLDEN NUGGET AND DESIGN. Cl. 46 (Int. Cl. 30). 4-22-30. |
| 265,317. CORYSE. Cl. 51 (Int. Cl. 3). 12-24-29. | 269,980. MAYCREST. Cl. 22 (Int. Cl. 16). 4-22-30. |
| 266,823. INSULAVA. Cl. 12 (Int. Cl. 17). 2-4-30. | 270,339. TRADE WIND. Cl. 42 (Int. Cl. 24). 5-6-30. |
| 266,968. UNITY FOR SERVICE XC AND DESIGN. Cl. 38 (Int. Cl. 16). 2-11-30. | 270,555. MOORA. Cl. 42 (Int. Cl. 24). 5-6-30. |
| 267,900. SUNDOWN. Cl. 46 (Int. Cl. 31). 3-4-30. | 270,557. DUNA. Cl. 42 (Int. Cl. 24). 5-6-30. |
| 267,943. CARBORUNDUM. Cl. 34 (Int. Cl. 11). 3-4-30. | 270,593. MAYCREST. Cl. 37 (Int. Cl. 16). 5-6-30. |
| 268,613. SUNNYLAND. Cl. 46 (Int. Cl. 30). 3-18-30. | 270,939. DAREX. Cl. 5 (Int. Cl. 1). 5-20-30. |
| 268,764. MAYBROOKE. Cl. 39 (Int. Cl. 25). 3-18-30. | 271,006. WHITE CAP. Cl. 46 (Int. Cl. 30). 5-20-30. |
| 269,141. GLAD HAND. Cl. 52 (Int. Cl. 3). 3-25-30. | 271,188. WM. PENN. AND DESIGN. Cl. 15 (Int. Cl. 4). 5-27-30. |
| 269,168. SENATOR. Cl. 46 (Int. Cl. 29). 3-25-30. | 271,902. CASH-O-RAN AND DESIGN. Cl. 42 (Int. Cl. 24). 6-17-30. |
| 269,185. CERTIFIED. Cl. 39 (Int. Cl. 25). 3-25-30. | 272,775. KARMELEKORN. Cl. 46 (Int. Cl. 30). 7-15-30. |
| 269,436. PILGRIM. Cl. 28 (Int. Cl. 14). 4-8-30. | 273,660. OASIS. Cl. 45 (Int. Cl. 32). 8-5-30. |
| 269,648. TRIPOLA. Cl. 42 (Int. Cl. 24). 4-15-30. | 274,272. STREAMLINE. Cl. 13 (Int. Cl. 6). 8-26-30. |
| 269,649. REXA. Cl. 42 (Int. Cl. 24). 4-15-30. | |

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| 274,526. ALMANAQUE PINTORESCO DE BRISTOL AND DESIGN. Cl. 33 (Int. Cl. 16). 9-2-30. | 514,664. FUL-O-PEP. Cl. 46 (Int. Cl. 31). 5-2-50. |
| 275,137. ASH GROVE. Cl. 12 (Int. Cl. 19). 9-16-30. | 524,924. FYR-FYTER. Cl. 23 (Int. Cl. 9). 5-2-50. |
| 443,842. SIGNAL FLAGS (DESIGN). Cl. 16 (Int. Cl. 2). 3-21-50. | 525,021. SPALDING AND DESIGN. Cl. 22 (Int. Cl. 28). 5-9-50. |
| 443,924. FLYING TIGERS AND DESIGN. Cl. 39 (Int. Cl. 25). 4-18-50. | 525,067. PRISCILLA. Cl. 44 (Int. Cl. 8). 5-9-50. |
| 443,925. FLYING TIGERS. Cl. 39 (Int. Cl. 25). 4-18-50. | 525,248. DEKOR. Cl. 32 (Int. Cl. 20). 5-16-50. |
| 443,974. P AND SHIELD DESIGN. Cl. 35 (Int. Cl. 17). 5-9-50. | 525,279. FATHER TIME. Cl. 27 (Int. Cl. 14). 5-16-50. |
| 443,981. CADORICIN. Cl. 51 (Int. Cl. 3). 5-16-50. | 525,394. MARSHMALLOW RICH. Cl. 46 (Int. Cl. 30). 5-23-50. |
| 444,021. KATHARINE BEECHER. Cl. 46 (Int. Cl. 30). 6-6-50. | 525,494. LAVA. Cl. 34 (Int. Cl. 7). 5-23-50. |
| 519,358. LA-CE-EDGE. Cl. 40 (Int. Cl. 26). 12-27-49. | 525,596. BLOX. Cl. 46 (Int. Cl. 31). 5-30-50. |
| 521,851. NUTWOOD. Cl. 49 (Int. Cl. 33). 8-7-50. | 525,869. ST. REGIS. Cl. 23 (Int. Cl. 7). 6-6-50. |
| 522,067. SOUTHERN SEAS. Cl. 46 (Int. Cl. 29). 3-7-50. | 526,220. SKYLAND STUDIO RECORDING AND DESIGN. Cl. 36 (Int. Cl. 9). 6-18-50. |
| 522,090. NUTRI-WHIP. Cl. 46 (Int. Cl. 1). 3-14-50. | 526,411. TUBOSCOPE. Cl. 103 (Int. Cl. 37). 6-18-50. |
| 522,207. METAL AND DESIGN. Cl. 14 (Int. Cl. 6). 3-14-50. | 526,459. CLEANEGG. Cl. 4 (Int. Cl. 3). 6-18-50. |
| 522,209. PICTORIAL REPRESENTATION OF OLD DUTCH COUPLE. Cl. 48 (Int. Cl. 32). 3-14-50. | 526,897. BIKE. Cl. 44 (Int. Cl. 25). 6-27-50. |
| 522,518. CHALLENGE. Cl. 15 (Int. Cl. 4). 8-21-50. | 527,151. COWDEN 7-11. Cl. 39 (Int. Cl. 25). 7-4-50. |
| 522,560. LURON. Cl. 52 (Int. Cl. 8). 3-21-50. | 527,493. HOFFMANN. Cl. 23 (Int. Cl. 7). 7-11-50. |
| 522,627. DILL. Cl. 26 (Int. Cl. 9). 8-21-50. | 527,522. MONTEZUMA. Cl. 46 (Int. Cl. 30). 7-11-50. |
| 522,672. LEAP YEAR. Cl. 51 (Int. Cl. 3). 3-21-50. | 527,575. PERFECT POISE. Cl. 39 (Int. Cl. 25). 7-11-50. |
| 522,870. NAVARRO. Cl. 46 (Int. Cl. 30). 3-21-50. | 527,753. EMILY PAIGE. Cl. 51 (Int. Cl. 3). 7-18-50. |
| 522,874. SOUTHERN SEAS. Cl. 46 (Int. Cl. 29). 3-21-50. | 528,021. MERROW. Cl. 23 (Int. Cl. 7). 7-25-50. |
| 522,934. STA-TITE. Cl. 23 (Int. Cl. 8). 3-28-50. | 528,166. LIMPID LUBE. Cl. 15 (Int. Cl. 4). 7-25-50. |
| 523,003. ALUMITE. Cl. 34 (Int. Cl. 34). 3-28-50. | 528,277. MARATHON. Cl. 21 (Int. Cls. 7 and 11). 8-1-50. |
| 523,026. PARADUCT. Cl. 21 (Int. Cl. 9). 3-28-50. | 528,468. PURSETTES. Cl. 44 (Int. Cl. 5). 8-1-50. |
| 523,105. MIKRO-SAMPLMILL. Cl. 23 (Int. Cl. 7). 3-28-50. | 528,555. NATIONAL RIFLE ASSOCIATION OFFICIAL AND DESIGN. Cl. 22 (Int. Cl. 28). 8-8-50. |
| 523,137. SWEDEN SLEEP AND DESIGN. Cl. 31 (Int. Cl. 11). 3-28-50. | 528,618. PERMATAX AND DESIGN. Cl. 15 (Int. Cl. 4). 8-8-50. |
| 523,264. SQUARE HEAT TYPE R BOILER. Cl. 34 (Int. Cl. 11). 3-28-50. | 528,660. T. W. SAMUELS. Cl. 49 (Int. Cl. 33). 8-8-50. |
| 523,312. CAMP. Cl. 44 (Int. Cl. 10). 4-4-50. | 528,736. MISSION. Cl. 45 (Int. Cl. 32). 8-8-50. |
| 523,365. LAVA. Cl. 12 (Int. Cl. 19). 4-4-50. | 528,955. FOLDER-WAX. Cl. 12 (Int. Cl. 19). 8-15-50. |
| 523,587. BOWTIE AND DESIGN. Cl. 19 (Int. Cl. 12). 4-4-50. | 529,010. NEOFOLD. Cl. 87 (Int. Cl. 16). 8-15-50. |
| 523,620. THE STRATEGIC MIDDLE ROUTE. Cl. 105 (Int. Cl. 39). 4-4-50. | 529,402. BOYL-A-NIT. Cl. 39 (Int. Cl. 25). 8-22-50. |
| 523,683. SPENCER. Cl. 39 (Int. Cl. 25). 4-11-50. | 529,426. KATHARINE BEECHER THE ORIGINAL BUTTER MINTS AND DESIGN. Cl. 46 (Int. Cl. 30). 8-22-50. |
| 523,701. LINDICLIP. Cl. 13 (Int. Cl. 8). 4-11-50. | 529,461. KUDER. Cl. 46 (Int. Cl. 31). 8-22-50. |
| 523,809. SPRING KNIGHT. Cl. 42 (Int. Cl. 24). 4-11-50. | 529,601. MAGNOLIA AND DESIGN. Cl. 27 (Int. Cl. 14). 8-22-50. |
| 524,126. PARANITE. Cl. 21 (Int. Cl. 9). 4-18-50. | 529,727. DUROWEVE. Cl. 2 (Int. Cl. 20). 8-29-50. |
| 524,127. SNAP-BAR. Cl. 28 (Int. Cl. 14). 4-18-50. | 529,891. PROMINENT. Cl. 46 (Int. Cl. 31). 8-29-50. |
| 524,152. SPEED GRIP. Cl. 13 (Int. Cl. 6). 4-18-50. | 529,892. BONANZA. Cl. 19 (Int. Cl. 12). 8-29-50. |
| 524,155. SPRING GARDEN. Cl. 46 (Int. Cl. 29). 4-18-50. | 529,926. PARASYN. Cl. 21 (Int. Cl. 9). 8-29-50. |
| 524,219. DIXIANA 6. Cl. 6 (Int. Cl. 31). 4-18-50. | 530,132. ELI-WEATHERBY'S. Cl. 16 (Int. Cls. 2, 3, and 4). 9-5-50. |
| 524,222. DRAWCOTE. Cl. 15 (Int. Cl. 4). 4-18-50. | 530,160. MONSANTO. Cl. 6 (Int. Cl. 1). 9-5-50. |
| 524,353. WELFORD. Cl. 39 (Int. Cl. 25). 4-25-50. | 530,211. MMI. Cl. 14 (Int. Cl. 6). 9-5-50. |
| 524,419. SPALDING. Cl. 22 (Int. Cl. 28). 4-25-50. | 530,331. RA-PID-GRO AND DESIGN. Cl. 10 (Int. Cl. 1). 9-5-50. |
| 524,639. LYONS ROOT BEER AND DESIGN. Cl. 45 (Int. Cl. 32). 5-2-50. | 530,436. HY REACTION. Cl. 13 (Int. Cl. 6). 9-5-50. |
| 524,662. FUL-O-PEP. Cl. 46 (Int. Cl. 31). 5-2-50. | 530,491. OLD DEERFIELD. Cl. 37 (Int. Cl. 16). 9-12-50. |
| | 530,989. PARAUSE. Cl. 21 (Int. Cl. 9). 9-19-50. |

TRADEMARK REGISTRATIONS CANCELED

Section 8

- 746,744. ALUMA LITE. Cl. 50. 8-12-68.
- 747,400. HISPANIA. Cl. 46. 8-26-68.
- 747,867. TIPSTIK. Cl. 51. 8-26-68.
- 749,837. STERIL-FAB. Cl. 42. 5-21-63.
- 752,690. CANDY CANE AND DESIGN. Cl. 46. 7-9-63.
- 753,619. SAVADERM. Cl. 18. 7-30-63.
- 755,920. SLAYMAKER'S STREAMERETTE. Cl. 22. 9-8-63.

The following registrations issued Apr. 21, 1964

- 768,821. REGAL FOREST. Cl. 1.
- 768,828. RHODOPERLE. Cl. 1.
- 768,828. FLEXI-DRUM. Cl. 2.
- 768,841. SPIRIFAX. Cls. 11 and 87.
- 768,847. PATRIOT. Cl. 14.
- 768,848. UDS. Cl. 15.
- 768,853. ANULL. Cl. 18.
- 768,854. ESCALATOR. Cl. 18.
- 768,859. CHAS. H. PHILLIPS. Cl. 18.
- 768,863. NU-CUD. Cl. 18.
- 768,864. SOL-VI-OTIC. Cl. 18.

- 768,869. SPIRACINE. Cl. 18.
- 768,870. VI-FLAVS. Cl. 18.
- 768,871. SILENIT. Cl. 18.
- 768,872. CAMPAIN. Cl. 18.
- 768,873. DYNALAX. Cl. 18.
- 768,877. EMBASSY. Cl. 18.
- 768,878. NATAFLUR. Cl. 18.
- 768,881. PERMIPRES. Cl. 18.
- 768,887. VICTORY. Cl. 19.
- 768,888. SEAFURY. Cl. 19.
- 768,889. FORMCAR. Cl. 19.
- 768,891. PAA ETC. AND DESIGN. Cl. 22.
- 768,892. THONK. Cl. 22.
- 768,894. CHATTY PATTY. Cl. 22.
- 768,900. PIPO. Cl. 22.
- 768,901. SKOOZ-IT. Cl. 22.
- 768,902. SOME MATH—SOME GAME. Cl. 22.
- 768,905. DARVYL. Cl. 22.
- 768,907. FORMULA-1. Cl. 22.
- 768,908. DR. JOHN. Cl. 22.
- 768,909. LIBBY. Cl. 22.
- 768,912. MAGIC PUFF. Cl. 22.
- 768,914. METRONAUT. Cl. 22.

- 768,415. DURA-FLEX. Cl. 23.
 768,420. SERVO/TITER. Cl. 28.
 768,435. TAPE FUN. Cl. 38.
 768,439. MR. DAVID. Cl. 39.
 768,442. IONIVYL. Cl. 39.
 768,449. TREAT TRAY. Cl. 46.
 768,450. REP. Cl. 46.
 768,467. JR-87. Cl. 46.
 768,469. LONGLIFE COLOR BRITE. Cl. 46.
 768,478. REPRESENTATION OF A GIRL'S HEAD. Cl. 46.
 768,482. UNI-FILL-ETTS. Cl. 46.
 768,487. JEROME NAPOLEON. Cl. 49.
 768,491. FLORDECOR. Cl. 50.
 768,494. IVY LEAGUE. Cl. 51.
 768,495. DESIGN OF CANNON AND CANNON BALLS. Cl. 51.
 768,502. EMBASSY. Cl. 51.
 768,506. EMBASSY. Cl. 52.
 768,507. REPRESENTATION OF A MOTHER HOLDING A BABY. Cl. 100.
 768,509. MISS GRAIN SORGHUM OF THE NATION. Cl. 101.
 768,517. KAN-KADDY. Cl. 2.
 768,518. WIRE CADDY. Cl. 2.
 768,521. PAV-IN-COLOR AND DESIGN. Cl. 12.
 768,522. COLORROADS AND DESIGN. Cl. 12.
 768,523. BLACK GLAZE. Cl. 12.
 768,525. MULTISPAR. Cl. 12.
 768,526. SUPERSEAL. Cl. 12.
 768,528. LINKING CHEMISTRY TO MEDICINE. Cl. 18.
 768,529. QUADPA PLANAR. Cl. 21.
 768,531. TWIST 'N TWIRL. Cl. 22.
 768,533. WOODDELL. Cl. 27.
 768,537. KANDI-KUP. Cl. 46.
 768,538. KANDI-STIX. Cl. 46.
 768,539. KANDI-KONE. Cl. 46.
 768,540. JAR (DESIGN). Cl. 46.
 768,542. MOIST BAKE. Cl. 46.
 768,546. ADJUST-A-LOTION. Cl. 51.
 768,548. BOTTLE (DESIGN). Cl. 52.
 768,549. SCR NEW FRONTIERS WITH STRUCTURAL CERAMICS AND DESIGN. Cl. 100.
 768,550. DEPENDENT UPON YOU ETC. AND DESIGN. Cl. 102.

Section 18

- 760,756. BY ERNEST AND DESIGN. Cl. 39. 11-26-63.
 761,248. MONTEGO. Cl. 20. 12-10-63.
 769,241. GALORE. Cl. 46. 5-5-64.
 777,148. AT ONCE. Cl. 52. 9-15-64.
 815,116. GOLD KEY. Cl. 49. 9-13-66.
 815,154. DRIAK. Cl. 52. 9-13-66.
 825,461. PIZZA CHEF. Cl. 100. 3-7-67.
 865,393. FIGURE PERSUADER. Cl. 39. 2-25-69.

INDEX OF REGISTRANTS

JUNE 9, 1970

(Registered; Renewed; Canceled; Amended; Disclaimed; Corrected, etc.; New Certificates; 12c Publications.)

- AMF Tuboscope Inc.: See—
 Tubular Service & Engineering Co.
 Action Bag & Envelope Co., Inc., Brooklyn, N.Y. 892,265, pub. 11-21-67. Cl. 2.
 Adams, Donald L., d.b.a. Da Mfg. Co., Tulsa, Tex. 892,435, pub. 3-24-70. Cl. 26.
 Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany. 892,443, pub. 3-24-70. Cl. 26.
 Agway, Inc., Dewitt, N.Y. 892,555-6, pub. 3-24-70. Cl. 46.
 Albemarle Paper Mfg. Co., The, to James River Paper Co., Richmond, Va. 77,115, reg. 6-9-70. Cl. 37.
 Allen, David O., d.b.a. Claymore Co., San Diego, Calif. 892,417, pub. 3-24-70. Cl. 23.
 Allied Chemical Corp., New York, N.Y. 892,254, pub. 3-24-70. Multiple Class (Classes 1 and 43).
 Allied Compositions Corp., Maspeth, N.Y. 892,320, pub. 3-24-70. Cl. 12.
 Allied Construction Supplies Corp., Dallas, Tex. 892,315, pub. 3-24-70. Cl. 12.
 Allied Mills, Inc.: See—
 Quaker Oats Co., The.
 Allied Mills, Inc., Chicago, Ill. 525,596, ren. 6-9-70. Cl. 46.
 Allis-Chalmers Mfg. Co., Milwaukee, Wis. 892,369, pub. 3-24-69. Cl. 21.
 American Bitrite Rubber Co., Inc., Trenton, N.J. 892,355, pub. 3-24-70. Cl. 20.
 American Fire Clay & Products Co., Canfield, Ohio. 768,523, can. Cl. 12.
 American Home Products Corp., New York, N.Y. 768,373, can. Cl. 18.
 American Home Products Corp., New York, N.Y. 892,298, pub. 3-24-70. Cl. 6.
 American Home Products Corp., New York, N.Y. 892,538, pub. 3-24-70. Cl. 46.
 American Home Products Corp., New York, N.Y. 892,546, pub. 3-24-70. Cl. 46.
 American Hospital Supply Corp., Evanston, Ill. 892,303, pub. 3-24-70. Cl. 6.
 American Numismatic Association, d.b.a. The American Numismatic Association, Colorado Springs, Colo. 892,493, pub. 3-24-70. Cl. 38.
 American Society for Industrial Security, Washington, D.C. 892,604, pub. 3-24-70. Cl. 100.
 American Standard Inc.: See—
 Kewanee Boiler Corp.
 American Steel Box Corp., Chicago, Ill. 892,385, pub. 3-24-70. Cl. 22.
 Amerock Corp., Rockford, Ill. 892,325, pub. 3-24-70. Cl. 13.
 Aqua-Chem, Inc., Milwaukee, Wis. 892,484, pub. 3-24-70. Cl. 34.
 Arch-Bilt Container Corp., Maspeth, N.Y. 892,276, pub. 3-24-70. Cl. 2.
 Archer Daniels Midland Co., Decatur, Ill. 522,090, ren. 6-9-70. Cl. 46.
 Aris Gloves, Inc., New York, N.Y. 892,503, pub. 3-24-70. Cl. 39.
 Armour Industrial Products Co., Chicago, Ill. 892,286, pub. 3-24-70. Cl. 5.
 Armour-Dial, Inc.: See—
 Skat Co., The.
 Armour-Dial, Inc., Chicago, Ill. 892,592, pub. 3-24-70. Cl. 52.
 Armstrong Cork Co., Lancaster, Pa. 892,354, pub. 3-24-70. Cl. 20.
 Asahi Glass Co., Ltd., Tokyo, Japan. 892,288, pub. 3-24-70. Multiple Class (Classes 6 and 31).
 Ash Grove Cement Co.: See—
 Ash Grove Lime & Portland Cement Co.
 Ash Grove Cement Co., Kansas City, Mo. 275,137, ren. 6-9-70. Cl. 12.
 Ashhear Bros., Inc., New York, N.Y. 892,506, pub. 3-24-70. Cl. 39.
 Astoria Fibre Corp., Astoria, to Pearl-Wick Corp., Long Island, City, N.Y. 529,727, ren. 6-9-70. Cl. 2.
 Atlas Athletic Equipment Co., St. Louis, Mo. 892,377, pub. 3-24-70. Cl. 22.
 Baby's Formula Service, Inc., Miami, Fla. 768,507, can. Cl. 100.
 Badische Anilin & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 892,302, pub. 3-24-70. Cl. 6.
 Barclay & Barclay, New York, N.Y. to Lanman & Kemp-Barclay & Co., Inc., Palisades Park, N.J. 79,320, ren. 6-9-70. Cl. 52.
 Bardenheier Wine & Liquor Co., d.b.a. Bardenheier's Wine Cellars, St. Louis, Mo. 892,561, pub. 3-24-70. Cl. 47.
 Barnum Festival Society, Inc., The, Bridgeport, Conn. 892,616, pub. 3-24-70. Cl. 107.
 Baron Blakelee, Inc., Chicago, Ill. 892,601, pub. 3-24-70. Cl. 52.
 Baugher, Kenyon L., d.b.a. Denpro Co., Denver, Colo. 892,531, pub. 3-24-70. Cl. 44.
 Beamort Plants Inc., Lawrence, N.Y. 892,263, pub. 3-24-70. Cl. 1.
 Beech Aircraft Corp., Wichita, Kans. 529,892, ren. 6-9-70. Cl. 19.
 Beecher, Katharine, to Katharine Beecher, Inc., Manchester, Pa. 444,021, ren. 6-9-70. Cl. 46.
 Beecher, Katharine, to Katharine Beecher, Inc., Manchester, Pa. 529,426, ren. 6-9-70. Cl. 46.
 Beecher, Katharine, Inc.: See—
 Beecher, Katharine.
 Bels, Sam Upholstered Products Co., Memphis, Tenn. 525,248, ren. 6-9-70. Cl. 32.
 Bemberg, J. P., Aktiengesellschaft, Wuppertal-Barmen, Germany. 892,255, pub. 3-24-70. Cl. 1.
 Berger Brothers Co., The, New Haven, Conn. 523,683, ren. 6-9-70. Cl. 39.
 Berol Corp.: See—
 Bagley Pencil Co.
 Bethlehem Steel Corp., Bethlehem, Pa. 892,375, pub. 3-24-70. Cl. 2.
 Big Fruit Distributors, Inc., New York, N.Y., to Lamb-Weston, Inc., Portland, Ore. 269,662, ren. 6-9-70. Cl. 46.
 Bike Web Co., The, Chicago, Ill., to The Kendall Co., Walpole, Mass. 526,897, ren. 6-9-70. Cl. 44.
 Bird Electronics Corp., Solon, Ohio. 892,356, pub. 3-24-66. Cl. 21.
 Bishop Freeman Co., Evanston, Ill. 892,423, pub. 3-24-70. Cl. 24.
 Blanchet, Maurice, Suresnes, France. 265,317, ren. 6-9-70. Cl. 51.
 Bouillier & de Lauriere, d.b.a. Jerome & Cie, Cognac, France. 768,487, can. Cl. 49.
 Bowles Watch Band Co., Denver, Colo. 892,452, pub. 3-24-70. Cl. 28.
 Bradley, Milton Co., Springfield, Mass. 892,879, pub. 3-24-70. Cl. 22.
 Bradley, Milton Co., Springfield, Mass. 892,881, pub. 3-24-70. Cl. 22.
 Breck, John H., Inc., Wayne, N.J. 892,594-5, pub. 3-24-70. Cl. 52.
 Bristol-Myers Co., from Chairol Inc., New York, N.Y. 892,587, pub. 3-24-70. Multiple Class (Classes 51 and 52).
 British Petroleum Co. Ltd., The, London, England. 892,300, pub. 3-24-70. Cl. 6.
 Brooks Research & Mfg., Inc., Kansas City, Mo. 892,432, pub. 3-24-70. Cl. 26.
 Brown, Abigail, New York, N.Y. 892,489, pub. 3-24-70. Cl. 38.
 Brown, Harry M., Jr., Vancouver, Wash. 892,583, pub. 3-24-70. Cl. 50.
 Bryn Mawr-Coachella Valley Groves: See—
 Coachella Valley Grapefruit Association.
 Bulova Watch Co., Inc., Flushing, N.Y. 892,447, pub. 3-24-70. Cl. 27.
 Burlington Industries, Inc., New York, N.Y. 892,318, pub. 3-24-70. Cl. 12.
 Burlington Industries, Inc., New York, N.Y. 892,517, pub. 3-24-70. Cl. 42.
 Bussard, R. D., & Son, Inc., Albany, Oreg. 892,566, pub. 3-24-70. Cl. 50.
 Buyer's Mart, Inc., Eau Gallie, Fla. 768,388, can. Cl. 19.
 Cadillac Optical Corp., New York, N.Y. 892,429, pub. 3-24-70. Cl. 26.
 Cadorecin Societe Anonyme, Paris, France. 448,981, ren. 6-9-70. Cl. 51.
 California Crushed Fruit Corp., Los Angeles, Calif., to Mission of California, Inc., New Haven, Conn. 273,000, ren. 6-9-70. Cl. 45.
 Camp, S. H., & Co., Jackson, Mich. 523,312, ren. 6-9-70. Cl. 44.
 Canfield Oil Co., The, to Fleet-Wing Corp., Cleveland, Ohio. 271,188, ren. 6-9-70. Cl. 15.
 Capitol Aluminum Corp., Seattle, Wash. 746,744, can. Cl. 50.
 Caravan de France, S.A.R.L., Paris, France. 892,585, pub. 3-24-70. Cl. 51.
 Carborundum Co., The, to The Carborundum Co., Niagara Falls, N.Y. 267,948, ren. 6-9-70. Cl. 84.
 Carlton & United Breweries Ltd., Carlton, Victoria, Australia. 892,565, pub. 3-24-70. Cl. 48.
 Carter Products, Inc., New York, N.Y. 768,353, can. Cl. 18.
 Cato Oil & Grease Co., Oklahoma City, Okla. 528,166, ren. 6-9-70. Cl. 15.
 Ceazan, J. N., Co., Los Angeles, Calif. 892,467, pub. 3-24-70. Cl. 35.
 Central Engineering Co., Inc., Milwaukee, Wis. 892,412, pub. 3-24-70. Cl. 23.
 Chase Bag Co., New York, N.Y. 892,200, pub. 3-24-70. Multiple Class (Classes 2, 21, 22, 29, 31, 39, 42, and 50).
 Chemolene Industries, Inc., Bordentown, N.J. 892,481-2, pub. 3-24-70. Cl. 37.
 Chevron Chemical Co., San Francisco, Calif. 892,309, pub. 3-24-70. Cl. 10.
 Chicago Candle Corp., Chicago, Ill. 892,269, pub. 3-24-70. Multiple Class (Classes 6 and 15).
 Ciba Ltd., Basel, Switzerland. 768,371, can. Cl. 18.
 Cirillo Bros. Petroleum Co., Inc., Bronx, N.Y. 892,291, pub. 3-24-70. Multiple Class (Classes 6 and 15).
 Clorox Corp., Cincinnati, Ohio. 892,458-9, pub. 3-24-70. Cl. 32.
 Coachella Valley Grapefruit Association, Thermal, to J. W. Wiley, d.b.a. Bryn Mawr-Coachella Valley Groves, Bryn Mawr, Calif. 267,900, ren. 6-9-70. Cl. 46.

Coalport China Ltd., Stoke-on-Trent, England. 892,455, pub. 3-24-70. Multiple Class (Classes 30, 34, and 50).

Colonial Candle Co. of Cape Cod, Inc., Barnstable, Mass. 892,334, pub. 3-24-70. Cl. 15.

Colonial Insurance Agency, Inc., Stamford, Conn. 768,550, can. Cl. 102.

Columbia Asphalt Corp., Flushing, N.Y. 708,521-2, can. Cl. 12.

Compagnie Generale d'Electricite, Paris, France. 892,361, pub. 3-24-70. Cl. 21.

Computer Control Systems, Inc., Dallas, Tex. 892,439, pub. 3-24-70. Cl. 26.

Computerized Knitwear Inc., Brooklyn, N.Y. 892,510-11, pub. 3-24-70. Cl. 39.

Conklin Co., Inc., Minneapolis, Minn. 892,335, pub. 3-24-70. Cl. 15.

Consolidated Foods Corp.: See—
Lyons-Magnus, Inc.

Container Corp. of America, Chicago, Ill. 892,271-2, pub. 3-24-70. Cl. 2.

Cord Communications Corp., New York, N.Y. 892,490, pub. 3-24-70. Cl. 38.

Courtney Business Assistance, Inc., Kansas City, Mo. 892,608, pub. 3-24-70. Cl. 101.

Cowden Mfg. Co., Kansas City, Mo., to Cowden Mfg. Co., Lexington, Ky. 527,151, ren. 6-9-70. Cl. 89.

Crest Personnel, Inc., Memphis, Tenn. 892,612, pub. 3-24-70. Cl. 101.

Crown Zellerbach Corp., San Francisco, Calif. 529,010, ren. 6-9-70. Cl. 37.

Crystal Tissue Co., The, Middletown, Ohio. 892,480, pub. 3-24-70. Cl. 37.

Cuckler Steel Span Co., Monticello, Iowa. 892,311, pub. 3-24-70. Cl. 12.

Curtel Products Corp., Scottsdale, Ariz. 892,584, pub. 3-24-70. Cl. 55.

Curion, Gene, Silver Spring, Md. 815,110, can. Cl. 49.

Curles Clothing Co., St. Louis, Mo. 269,185, ren. 6-9-70. Cl. 39.

Cur-Master Brooms Inc., Champlain, N.Y. 892,384, pub. 3-24-70. Cl. 22.

Curriculum Innovations, Inc., Chicago, Ill. 892,492, pub. 3-24-70. Cl. 38.

Curtis, Helene Industries, Inc., Chicago, Ill. 768,494, can. Cl. 51.

Cyclops Corp., Pittsburgh, Pa. 892,270, pub. 3-24-70. Cl. 2.

Dagra N.V., Diemen, Netherlands. 892,338, pub. 3-24-70. Cl. 18.

Danbury Rubber Co., Inc., The, Danbury, Conn. 761,246, can. Cl. 20.

Dansk Andelsost Vela Export a.m.b.a., Svendborgvej Hjallesø, Denmark. 892,548, pub. 3-24-70. Cl. 46.

Darworth Inc., Simsbury, Conn. 892,230, pub. 3-24-70. Cl. 3.

Davis Paint Co., Kansas City, Mo. 530,132, ren. 6-9-70. Cl. 16.

Deering Milliken, Inc.: See—
Madison Woolen Co.

Deering Milliken, Inc., New York, N.Y. 892,518-20, pub. 3-24-70. Cl. 42.

De La Coussaye Rene, Paris, France. 892,414, pub. 3-24-70. Cl. 23.

Denney, Frances Inc., Philadelphia, Pa. 892,596, pub. 3-24-70. Cl. 52.

Dero Research & Development Corp., Huntington, N.Y. 892,426, pub. 3-24-70. Cl. 26.

Dewey & Almy Chemical Co., North Cambridge, to W. R. Grace & Co., Cambridge, Mass. 270,939, ren. 6-9-70. Cl. 5.

Diamond Shamrock Corp., Cleveland, Ohio. 892,602, pub. 3-24-70. Cl. 52.

Dill Mfg. Co., The, to Eaton Yale & Towne Inc., Cleveland, Ohio. 522,627, ren. 6-9-70. Cl. 26.

Dr. Le Gars, Inc., St. Louis, Mo. 768,363-4, can. Cl. 18.

Domecq Pedro, S.A., Cadiz, Spain. 892,563, pub. 3-24-70. Cl. 47.

Doral Tire & Rubber Co., Inc., Stowe, Ohio. 892,468, pub. 3-24-70. Cl. 35.

Douglas, David Co., Inc., Manitowoc, Wis. 892,267, pub. 3-24-70. Cl. 2.

Douglas, David & Co., Inc., Manitowoc, Wis. 892,463, pub. 3-24-70. Cl. 33.

Dow Corning Corp., Midland, Mich. 892,332-3, pub. 3-24-70. Cl. 15.

Drackett Co., The, Cincinnati, Ohio. 892,290, pub. 3-24-70. Cl. 6.

Dresser Industries, Inc., Dallas, Tex. 892,304, pub. 3-24-70. Cl. 6.

Du Pont, De Nemours, E. I., & Co., Wilmington, Del. 768,405, can. Cl. 22.

Du Pont, De Nemours, E. I., & Co., Wilmington, Del. 892,264, pub. 3-24-70. Cl. 1.

Duluth Filter Co., Duluth, Minn. 892,457, pub. 3-24-70. Cl. 31.

Dunham Brothers Co., Brattleboro, Vt. 892,380, pub. 3-24-70. Cl. 22.

Eagle Pencil Co., New York, N.Y., to Berol Corp., Danbury, Conn. 76,544, ren. 6-9-70. Cl. 37.

Early California Industries Inc., Los Angeles, Calif., from Arizona Agrochemical Corp., Phoenix, Ariz. 892,591, pub. 3-24-70. Cl. 52.

Eaton Mfg. Co., to Eaton Yale & Towne Inc., Cleveland, Ohio. 530,436, ren. 6-9-70. Cl. 13.

Eaton Yale & Towne Inc.: See—
Dill Mfg. Co., The.

Eaton Mfg. Co.

Eisenstadt Mfg. Co., St. Louis, Mo. 525,067, ren. 6-9-70. Cl. 44.

Electro Products Laboratories, Inc., Chicago, Ill. 892,375, pub. 3-24-70. Cl. 21.

Electronic Research Associates, Inc., Cedar Grove, N.J. 768,529, can. Cl. 21.

Electro-Seal Corp., Maywood, N.J. 892,285, pub. 3-24-70. Cl. 5.

Elgin National Industries, Inc.: See—
Elgin National Watch Co.

Elgin National Watch Co., Elgin, Ill., to Elgin National Industries, Inc., New York, N.Y. 525,279, ren. 6-9-70. Cl. 27.

Ellis, Jane A., Los Angeles, Calif. 892,567, pub. 3-24-70. Cl. 50.

Emile Mills, Inc., New York, N.Y. 892,512, pub. 3-24-70. Cl. 39.

Epic Metals Corp., Pittsburgh, Pa. 892,317, pub. 3-24-70. Cl. 12.

Eskimo Pie Corp., Richmond, Va. 522,870, ren. 6-9-70. Cl. 46.

Eskimo Pie Corp., Richmond, Va. 527,522, ren. 6-9-70. Cl. 46.

Essex International, Inc.: See—
Essex Wire Corp.

Essex Wire Corp., to Essex International, Inc., Detroit, Mich. 523,026, ren. 6-9-70. Cl. 21.

Essex Wire Corp., to Essex International, Inc., Detroit, Mich. 524,126, ren. 6-9-70. Cl. 21.

Essex Wire Corp., to Essex International, Inc., Detroit, Mich. 529,926, ren. 6-9-70. Cl. 21.

Essex Wire Corp., to Essex International, Inc., Detroit, Mich. 530,889, ren. 6-9-70. Cl. 21.

Exact Electronics, Inc., Hillsboro, Oreg. 892,438, pub. 3-24-70. Cl. 26.

Fairchild Hiller Corp., Germantown, Md. 892,345, pub. 3-24-70. Cl. 19.

Fantasy Flavors, Inc., Wheaton, Ill. 892,560, pub. 3-24-70. Cl. 46.

Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 892,297, pub. 10-21-69. Cl. 6.

Fels & Co., Philadelphia, Pa. 768,548, can. Cl. 52.

Fenels-Tobkin Co., Chula Vista, Calif. 768,402, can. Cl. 22.

Fibron Wolfgang Mellert Kg., Bretten, Germany. 892,367, pub. 3-24-70. Cl. 21.

Firma Dr. Babor & Co., Bad Aachen, Germany. 892,292, pub. 3-24-70. Multiple Class (Classes 6, 18, 51, and 52).

Firma G. Reicherter, Esslingen Am Neckar, Germany. 892,430, pub. 3-24-70. Cl. 26.

First National Bank of America, The, Atlanta, Ga. 892,610, pub. 3-24-70. Cl. 101.

Fishburne Equipment Co., Inc., Arden, N.C. 892,420, pub. 3-24-70. Cl. 23.

Fisher Governor Co., Marshalltown, Iowa. 892,326, pub. 3-24-70. Cl. 13.

Fleet-Wing Corp.: See—
Canfield Oil Co., The.

Flying Tigers (American Volunteer Group—Chinese Air Force) Inc., The, Los Angeles, Calif. 443,924-5, ren. 6-9-70. Cl. 39.

Foremost Dairies, Inc., San Francisco, Calif. 752,090, can. Cl. 46.

Formac Constructors, Inc., Orlando, Fla. 768,389, can. Cl. 19.

Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 269,048-9, ren. 6-9-70. Cl. 42.

Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., New York, N.Y. 269,673-4, ren. 6-9-70. Cl. 42.

Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 270,556, ren. 6-9-70. Cl. 42.

Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 270,557, ren. 6-9-70. Cl. 42.

Foster & Co., New York, N.Y., to T. W. Samuels Distillery, Inc., Deatsville, Ky. 528,060, ren. 6-9-70. Cl. 49.

Franklin Mint, Inc., The, Yeadon, Pa. 892,568-80, pub. 3-24-70. Cl. 50.

Free-Flow Packaging Corp., Redwood City, Calif. 892,262, pub. 3-24-70. Cl. 1.

Friedman, Frank, to Magnolia Diamonds, Inc., Birmingham, Ala. 529,601, ren. 6-9-70. Cl. 27.

Friedman Silver Co., Inc., Brooklyn, N.Y., to Textron Inc., Providence, R.I. 269,436, ren. 6-9-70. Cl. 28.

Fujiya Confectionery Co., Ltd., Tokyo, Japan. 892,537, pub. 3-24-70. Cl. 46.

Fyr-Fyter Co., The, Dayton, Ohio, to Norris Industries, Inc., Los Angeles, Calif. 524,924, ren. 6-9-70. Cl. 23.

Galore Food Co., Jamestown, N.Y. 769,241, can. Cl. 46.

Gem, Inc., Byhalia, Miss. 892,603, pub. 3-24-70. Cl. 52.

Gemco Electric Co., Clawson, Mich. 892,418, pub. 3-24-70. Cl. 23.

General Appliance Mfg. Co., Omaha, Nebr. 892,346, pub. 3-24-70. Cl. 19.

General Electric Co., Schenectady, N.Y. 892,475, pub. 3-24-70. Cl. 36.

General Foods Corp., White Plains, N.Y. 892,551, pub. 3-24-70. Cl. 46.

General Gummed Products, Inc., Linden, N.J. 892,284, pub. 3-24-70. Cl. 5.

General Nucleonics Inc., Columbus, Ohio. 892,428, pub. 3-24-70. Cl. 26.

Gilron Products Co., Cleveland, Ohio, to Pennwalt Corp., Philadelphia, Pa. 524,222, ren. 6-9-70. Cl. 15.

Gladden Enterprises, Inc., Bay City, Mich. 768,531, can. Cl. 22.

Globus-Werke Fritz Schulz Jun., Neuburg, Danube, Germany. 892,293, pub. 3-24-70. Cl. 6.

Golden Nugget Sweets, San Francisco, Calif., to Reed Candy Co., Chicago, Ill. 269,832, ren. 6-9-70. Cl. 46.

Golden State Sheep Tanning Co., Brooklyn, N.Y. 892,259, pub. 3-24-70. Cl. 1.

Golf, Inc., Miami, Fla. 760,750, can. Cl. 39.

Good Humor Corp., Brooklyn, N.Y. 768,537-9, can. Cl. 46.

Gorton's of Gloucester, Inc., Gloucester, Mass. 768,482, can. Cl. 46.

Gould Inc., St. Paul, Minn. 892,372, pub. 3-24-70. Cl. 21.

Grace, W. R., & Co.: See—
Dewey & Almy Chemical Co.

Grecht, William Co., Baltimore, Md. 524,155, ren. 6-9-70. Cl. 46.

Green, A. P., Refractories Co.: See—
Massillon Refractories Co., The.

Grote Mfg. Co., The, Madison, Ind. 892,362, pub. 4-7-70. Cl. 21.

Gulf Aerospace Corp., Houston, Tex. 892,437, pub. 3-24-70. Cl. 26.

Gulf Oil Corp., Pittsburgh, Pa. 892,256, pub. 3-24-70. Cl. 1.

Gulf Oil Corp., Pittsburgh, Pa. 892,278, pub. 3-24-70. Cl. 2.

Gunite Foundries Corp., Rockford, Ill., to Kelsey-Hayes Co., Romeus, Mich. 523,537, ren. 6-9-70. Cl. 19.

HPL Inc., Fort Wayne, Ind. 777,148, can. Cl. 52.

Hair Fair, Inc., Miami Beach, Fla. 892,515, pub. 3-24-70. Cl. 40.

Harer-Lorna Industries, Inc., East Providence, R.I. 892,501, pub. 3-24-70. Cl. 39.

Hasselfield Bros., Inc., Central Falls, R.I. 768,412, can. Cl. 22.

Hastings, H. G., Co., Atlanta, Ga. 524,219, ren. 6-9-70. Cl. 0.

Hayakawa Electric Co., Ltd., Osaka, Japan. 892,374, pub. 3-24-70. Cl. 21.

Hayes Garment Co., Nashville, Tenn. 892,496, pub. 3-24-70. Cl. 39.

Haynes Milling Co., Inc., Portland, Ind. 892,557, pub. 3-24-70. Cl. 46.

Hearth Craft, Inc., Portland, Oreg. 892,465-6, pub. 3-24-70. Cl. 34.

Hecht Co., The, Washington, D.C., to The May Department Stores Co., St. Louis, Mo. 524,353, ren. 6-9-70. Cl. 39.

Henry, W. W. Co., The, Huntington Park, Calif. 892,283, pub. 3-24-70. Cl. 5.

Henschen Industrial Corp., Jackson Center, Ohio. 768,415, can. Cl. 23.

Henson-Kickernick, Inc., Greenville, Tex. 885,893, can. Cl. 39.

Hercules Chemical Co., Inc., New York, N.Y., from Mechanical Services & Supply Corp., Washington, D.C. 892,327, pub. 3-24-70. Cl. 13.

High Plains Broadcasting Co., Dimmitt, Tex. 768,509, can. Cl. 101.

Highway Trailer Industries, Inc., New York, N.Y. 768,328, can. Cl. 2.

Hilmar Ltd., Stevenage, England. 892,421, pub. 3-24-70. Cl. 23.

Hi-Lume Corp., Huntington, N.Y. 892,314, pub. 3-24-70. Cl. 12.

Hinton & Co., Inc., Brooklyn, N.Y. 892,258, pub. 3-24-70. Cl. 1.

Hitachi Chemical Co. Ltd., Tokyo, Japan. 892,261, pub. 3-24-70. Cl. 1.

Hi-Tek Corp., Santa Ana, Calif. 892,870, pub. 3-24-70. Cl. 21.

Hoffmann Mfg. Co. Ltd., The: See—
Norma-Hoffmann Bearings Corp.

Holiday Sportswear Mfg. Co., Toronto, Ontario, Canada. 892,499, pub. 3-24-70. Cl. 39.

Howard Hardware Products, Inc., Newark, N.J. 768,526, can. Cl. 12.

Howard Parlor Furniture Co., Chicago, Ill. 892,460, pub. 3-24-70. Cl. 32.

Hubinger Co., The, Keokuk, Iowa. 768,542, can. Cl. 46.

Hupp, Inc.: See—
Richards-Wilcox Mfg. Co.

Hycro, Inc., from Hycro Inc., Ashland, Ohio. 892,419, pub. 3-24-70. Cl. 23.

Hyde, Gilbert Chick Co., Oakland, Calif. 892,532-4, pub. 3-24-70. Cl. 44.

Hydrometals, Inc., Dallas, Tex. 892,581, pub. 3-24-70. Cl. 50.

IKL Inc., Newport Beach, Calif. 892,434, pub. 3-24-70. Cl. 26.

Ideal Toy Corp., Hollis, N.Y. 768,401, can. Cl. 22.

Innat, George Jr., d.b.a. Big I Headgear, Worth, Ill. 892,402, pub. 3-24-70. Cl. 22.

Industries Nuestra Señora Del Carmen, S.A., Puente Genil, Spain. 747,400, can. Cl. 46.

Inmont Corp., New York, N.Y. 892,837, pub. 3-24-70. Cl. 16.

International Latex Corp., Dover, Del. 768,354, can. Cl. 18.

International Pulp Co., to International Talc Co., Inc., New York, N.Y. 73,180, ren. 6-9-70. Cl. 1.

International Talc Co., Inc.: See—
International Pulp Co.

Interstate Bakersies Corp., Kansas City, Mo. 892,549, pub. 3-24-70. Cl. 46.

Iroquois Industries, Inc.: See—
Krantz Brewing Corp.

Jacoby & Co., Detroit, Mich. 892,308, pub. 3-24-70. Multiple Class (Classes 8, 22, and 42).

James River Paper Co.: See—
Albemarle Paper Mfg. Co., The.

Jasco Fiberglass Designs, Inc., Liverpool, N.Y. 892,462, pub. 3-24-70. Cl. 32.

Jerrico, Inc., Lexington, Ky. 892,609, pub. 3-24-70. Cl. 101.

John-Manville Corp., New York, N.Y. 892,321, pub. 3-24-70. Cl. 12.

Kabushiki Kaisha Kinuta-Dobutsuen, Tokyo, Japan. 892,253, pub. 3-24-70. Multiple Class (Classes 1 and 46).

Kabushiki Kaisha Shikishima Tipton d.b.a. Shikishima Tipton Mfg. Co., Ltd., Minamiku, Nagoya, Japan. 892,406, pub. 3-24-70. Cl. 23.

Karmalkorn Shoppes, Inc.: See—
O'Sullivan, William C.

Kelly-Springfield Tire Co., The, Cumberland, Md. 892,471-2, pub. 3-24-70. Cl. 35.

Kelsey-Hayes Co.: See—
Gunite Foundries Corp.

Kemp, Clinton A., New York, N.Y. 892,486, pub. 3-24-70. Cl. 38.

Kendall Co., The: See—
Bike Web Co., The.

Kennametal, Inc., Latrobe, Pa. 892,411, pub. 3-24-70. Cl. 23.

Kentile Floors Inc., Brooklyn, N.Y. 892,287, pub. 3-24-70. Cl. 5.

Kewanee Boiler Corp., Kewanee, Ill., to American Standard Inc., New York, N.Y. 523,264, ren. 6-9-70. Cl. 34.

Kimberly-Clark Corp., Neenah, Wis. 892,275, pub. 3-24-70. Cl. 2.

Kings Beverage Co. Inc., Brooklyn, N.Y. 892,536, pub. 3-24-70. Cl. 45.

Klopman Mills, Inc., Rockleigh, N.J. 892,521-3, pub. 3-24-70. Cl. 42.

Klopman Mills, Inc., Rockleigh, N.J. 892,523, pub. 3-24-70. Cl. 42.

Koehler Mfg. Co., Marlboro, Mass. 892,357, pub. 3-24-70. Cl. 21.

Koscot Interplanetary, Inc., Orlando, Fla. 892,588, pub. 3-24-70. Cl. 51.

Krantz Brewing Corp., Findlay, Ohio, to Iroquois Industries, Inc., Buffalo, N.Y. 522,209, ren. 6-9-70. Cl. 48.

Kremetz & Co., Newark, N.J. 524,127, ren. 6-9-70. Cl. 28.

Krege, S. S. Co., Detroit, Mich. 892,456, pub. 3-24-70. Cl. 31.

Koder Citrus Pulp Co., Lake Alfred, Fla. 529,461, ren. 6-9-70. Cl. 46.

Laboratoire Lachartre S.A., Paris, France. 892,586, pub. 3-24-70. Cl. 51.

La Marche, Austin W., Des Plaines, Ill. 892,363, pub. 3-24-70. Cl. 21.

Lamb-Weston, Inc.: See—
Big 7 Fruit Distributors, Inc.

Lander Co., Inc., The, to Lander Co., Inc., New York, N.Y. 527,753, ren. 6-9-70. Cl. 51.

Lanman & Kemp, Inc., New York, to Lanman & Kemp-Barclay & Co. Inc., Palisades Park, N.Y. 274,526, ren. 6-9-70. Cl. 38.

Lanman & Kemp-Barclay & Co. Inc.: See—
Barclay & Barclay.

Lanman & Kemp-Barclay & Co. Inc.: See—
Lanman & Kemp, Inc.

Lava Crucible Co. of Pittsburgh, to Lava Crucible-Refractories Co., Pittsburgh, Pa. 266,823, ren. 6-9-70. Cl. 12.

Lava Crucible Co. of Pittsburgh, to Lava Crucible-Refractories Co., Pittsburgh, Pa. 525,494, ren. 6-9-70. Cl. 34.

Lava Crucible Co. of Pittsburgh, to Lava Crucible-Refractories Co., Pittsburgh, Pa. 523,365, ren. 6-9-70. Cl. 12.

Lava Crucible-Refractories Co.: See—
Lava Crucible Co. of Pittsburgh.

Lava-Simplex Internationale, Inc., Chicago, Ill. 892,440, pub. 3-24-70. Cl. 26.

Lea Mfg. Co., The, Waterbury, Conn. 526,459, ren. 6-9-70. Cl. 4.

Leeds & Northrup Co., North Wales, Pa. 892,436, pub. 3-24-70. Cl. 26.

Lees Mfg. Co., Cannon Falls, Minn. 892,495, pub. 3-24-70. Cl. 39.

Legion Lex, Los Angeles, Calif. 892,622, pub. 3-24-70. Cl. 200.

Leigh Products, Inc., Coopersville, Mich. 892,823-4, pub. 3-24-70. Cl. 13.

Lever Bros. Co., New York, N.Y. 892,599-600, pub. 3-24-70. Cl. 52.

Lewis Monument Co., Inc., The, Brooklyn, N.Y. 892,582, pub. 3-24-70. Cl. 50.

Libby, McNeill & Libby, Chicago, Ill. 892,543, pub. 4-7-70. Cl. 46.

Lincoln Metal Products Corp., Brooklyn, N.Y. 892,277, pub. 3-24-70. Cl. 2.

Lindsay, Henry, Ltd., Shipley, England. 523,701, ren. 6-9-70. Cl. 13.

L'Industrie Biologique Francaise S.A., Gennevilliers, Hauts de Seine, France. 892,294, pub. 3-24-70. Cl. 6.

Littleford Bros., Inc., Cincinnati, Ohio. 892,422, pub. 3-24-70. Cl. 23.

Lumitron Corp., Los Angeles, Calif. 892,441, pub. 3-24-70. Cl. 26.

Lund Metalcraft, Inc., New York Mills, Minn. 892,553, pub. 3-24-70. Cl. 19.

Lyons-Magnus, Inc., San Francisco, Calif., to Consolidated Foods Corp., Chicago, Ill. 524,639, ren. 6-9-70. Cl. 45.

MacDermid Inc., Waterbury, Conn. 892,356, pub. 3-24-70. Cl. 18.

Madison Woolen Co., Madison, Maine, to Deering Milliken, Inc., New York, N.Y. 271,902, ren. 6-9-70. Cl. 42.

Magazine Management Co., Inc., from Magazine Management Co., d.b.a. Marvel Comics Group, New York, N.Y. 892,487, pub. 3-24-70. Cl. 38.

Magnolia Diamonds, Inc.: See—
Friedman, Frank.

Mallinckrodt Chemical Works, St. Louis, Mo. 768,528, can. Cl. 13.

Manhattan Industries, Inc., New York, N.Y. 892,504, pub. 3-24-70. Cl. 39.

Marathon Electric Mfg. Corp., Wausau, Wis. 528,277, ren. 6-9-70. Cl. 21.

Martin-Marietta Corp., New York, N.Y. 892,310, pub. 5-22-67. Cl. 12.

Marx, Louis & Co., Inc., New York, N.Y. 892,416, pub. 3-24-70. Cl. 23.

Mastercrafters Clock & Radio Co., Chicago, Ill. 768,533, can. Cl. 27.

Matsuo Electric Co. Ltd., Toyonaka, Japan. 892,358-9, pub. 3-24-70. Cl. 21.

Mattel, Inc., Los Angeles, Calif. 768,894, can. Cl. 22.

- Mattel, Inc., Hawthorne, Calif. 892,886-95, pub. 3-24-70. Cl. 22.
 Mattel, Inc., Hawthorne, Calif. 892,897-401, pub. 3-24-70. Cl. 22.
 Mattel, Inc., Hawthorne, Calif. 892,408-4, pub. 3-24-70. Cl. 22.
 Massillon Refractories Co., The, Tuscawawas, Ohio, to A. P. Green Refractories Co., Mexico, Mo. 523,003, ren. 6-9-70. Cl. 34.
 May & Baker Ltd., Dagenham, Essex, England. 892,296, pub. 3-24-70. Multiple Class (Classes 6 and 18).
 May Department Stores Co., The, St. Louis, Mo. 268,764, ren. 6-9-70. Cl. 39.
 May Department Stores Co., The, St. Louis, Mo. 269,980, ren. 6-9-70. Cl. 22.
 May Department Stores Co., The, St. Louis, Mo. 270,593, ren. 6-9-70. Cl. 37.
 May Department Stores Co., The: See—
 Hecht Co., The.
 McLeod Leather & Belting Co., Inc., Greensboro, N.C. 892,470, pub. 3-24-70. Cl. 35.
 Meadows, W. R., Inc., Elgin, Ill. 892,313, pub. 3-24-70. Cl. 12.
 Meca-Meccanotecnica Cassanese S.n.c., Cassano Magnago (Varese), Italy. 892,413, pub. 3-24-70. Cl. 23.
 Mechanical Services & Supply Corp.: See—
 Hercules Chemical Co., Inc.
 Medical Communications, Inc., New York, N.Y. 892,617, pub. 3-24-70. Cl. 107.
 Meehanite Metal Corp., Chattanooga, Tenn. to Meehanite Metal Corp., White Plains, N.Y. 522,207, ren. 6-9-70. Cl. 14.
 Melco Textile Corp., Carlstadt, N.J. 892,516, pub. 3-24-70. Cl. 42.
 Mennen Co., The, Morristown, N.J. 892,589-90, pub. 3-24-70. Cl. 51.
 Mennen Co., The, Morristown, N.J. 892,597-8, pub. 3-24-70. Cl. 52.
 Merrill & Co., Battle Creek, Mich. 892,607, pub. 3-24-70. Cl. 101.
 Merrow Machine Co., The, Hartford, Conn. 528,021, ren. 6-9-70. Cl. 23.
 Metalmasters, Inc., Chicago, Ill. 530,211, ren. 6-9-70. Cl. 14.
 Metals Engineering Co., Leesport, Pa. 892,331, pub. 3-24-70. Cl. 14.
 Mid-America Housing, Inc., Birmingham, Ala. 892,350, pub. 3-24-70. Cl. 19.
 Midas, Inc., Chicago, Ill. 768,414, can. Cl. 23.
 Midwest Biscuit Co., Burlington, Iowa. 892,552, pub. 3-24-70. Cl. 46.
 Midwest Technology Inc., St. Louis, Mo. 892,378, pub. 3-24-70. Cl. 22.
 Millers Falls Paper Co., Millers Falls, Mass. 530,491, ren. 6-9-70. Cl. 37.
 Minot, Hooper & Co., to Springs Mills, Inc., New York, N.Y. 270,339, ren. 6-9-70. Cl. 42.
 Mission Dry Corp., Los Angeles, Calif. to Mission of California, Inc., New Haven, Conn. 528,736, ren. 6-9-70. Cl. 45.
 Mission of California, Inc.: See—
 California Crushed Fruit Corp.
 Mission Dry Corp.
 Mize Co., The, Paducah, Ky. 768,517, can. Cl. 2.
 Monsanto Chemical Co., to Monsanto Co., St. Louis, Mo. 530,160, ren. 6-9-70. Cl. 6.
 Monsanto Co.: See—
 Monsanto Chemical Co.
 Moorman Mfg. Co., Quincy, Ill. 892,339, pub. 3-24-70. Cl. 18.
 Morrell, John & Co., Chicago, Ill. 892,559, pub. 3-24-70. Cl. 46.
 Morris, George M., Dallas, Tex. 892,260, pub. 3-24-70. Cl. 1.
 Morrison Inc., Mobile, Ala. 892,606, pub. 3-24-70. Cl. 100.
 Motiford Co., Inc., The, Chicago, Ill. 892,282, pub. 3-24-70. Cl. 4.
 Motor Wheel Corp., Lansing, Mich. 892,352, pub. 3-24-70. Cl. 19.
 Motorola Automotive Products, Inc., Franklin Park, Ill. 892,478, pub. 3-24-70. Cl. 36.
 Mueller Brass Co., to Mueller Brass Co., Port Huron, Mich. 274,272, ren. 6-9-70. Cl. 13.
 Multi-Flex Seals, Inc., New York, N.Y. 892,373, pub. 3-24-70. Cl. 21.
 Munsingwear, Inc., Minneapolis, Minn. 892,513, pub. 3-24-70. Cl. 39.
 Murphy, G. C. Co., McKeesport, Pa. 892,500, pub. 3-24-70. Multiple Class (Classes 39 and 43).
 Myers, Dolly Inc., Seattle, Wash. 768,439, can. Cl. 39.
 Narrow Fabric Co., The, West Reading, to Wyomissing Corp., Reading, Pa. 519,358, ren. 6-9-70. Cl. 40.
 National Exchange Club, The, Toledo, Ohio. 266,968, ren. 6-9-70. Cl. 38.
 National Frosted Food Co., Inc., Oneida, N.Y. 892,547, pub. 3-24-70. Cl. 46.
 National Industries for the Blind, New York, N.Y. 892,478, pub. 3-24-70. Cl. 37.
 National Packing Corp., Boston, Mass. 768,449, can. Cl. 46.
 National Rifle Association of America, Washington, D.C. 528,555, ren. 6-9-70. Cl. 22.
 National Starch & Chemical Corp., New York, N.Y. 892,553, pub. 3-24-70. Cl. 46.
 Neirad Industries, Inc., Saugatuck, Conn. 892,269, pub. 3-24-70. Cl. 2.
 Nicolaou, D. Sons Co., Athens, Greece. 892,562, pub. 3-24-70. Cl. 47.
 Norma-Hoffmann Bearings Corp., Stamford, Conn. to The Hoffmann Mfg. Co. Ltd., Chelmsford, England. 527,493, ren. 6-9-70. Cl. 23.
 Norris Industries, Inc.: See—
 Fry-Fyter Co., The.

- Norris Industries, Inc., Los Angeles, Calif. 892,425, pub. 3-24-70. Cl. 26.
 North American Family Campers Association, Inc., Newburyport, Mass. 892,621, pub. 3-24-70. Cl. 200.
 Norwood Knitting Mills Inc., Norwood, N.J. 892,527, pub. 3-24-70. Cl. 42.
 Nova-Tech, Inc., Redondo Beach, Calif. 892,360, pub. 3-24-70. Cl. 21.
 Ohio Thermometer/Sign Co., The, Springfield, Ohio. 892,445, pub. 3-24-70. Cl. 26.
 Okonite Co., The, Passaic, N.J. 892,371, pub. 3-24-70. Cl. 21.
 O'Sullivan, William C., d.b.a. O'Sullivan's Casper, Wyoming, to Karmelkorn Shoppes, Inc., Norfolk, Nebr. 272,775, ren. 6-9-70. Cl. 46.
 Ozark Air Lines, Inc., St. Louis, Mo. 892,614, pub. 3-24-70. Cl. 105.
 PPG Industries, Inc., Pittsburgh, Pa. 892,348, pub. 3-24-70. Cl. 19.
 Pacific Coats Borax Co., to United States Borax & Chemical Corp., Los Angeles, Calif. 522,560, ren. 6-9-70. Cl. 52.
 Page-Walker Co., Providence, R.I. 892,449, pub. 7-30-68. Cl. 28.
 Parker Brothers, Inc., Salem, Mass. 768,407, can. Cl. 22.
 Parker Brothers, Inc., Salem, Mass. 892,396, pub. 3-24-70. Cl. 22.
 Pate Oil Co., Milwaukee, Wis., to Standard Oil Co., New York, N.Y. 522,518, ren. 6-9-70. Cl. 15.
 Pearl-Wick Corp.: See—
 Astoria Fibre Corp.
 Peavey Co., Minneapolis, Minn. 892,550, pub. 3-24-70. Cl. 46.
 Pelletronics, Inc., Trenton, N.J. 892,281, pub. 3-24-70. Cl. 4.
 Pembroke Lingerie Co., Inc., New York, N.Y. 892,514, pub. 3-24-70. Cl. 39.
 Penawalt Corp.: See—
 Gilron Products Co.
 Penwalt Corp., Philadelphia, Pa., from Wallace & Tiernan Inc., East Orange, N.J. 892,544, pub. 3-24-70. Cl. 46.
 Penthouse Furniture, Ltd., Springfield, Mo. 892,461, pub. 3-24-70. Cl. 32.
 Peoria Journal Star, Inc., Peoria, Ill. 892,494, pub. 3-24-70. Cl. 38.
 Permatex Co., Inc., West Palm Beach, Fla. 528,613, ren. 6-9-70. Cl. 15.
 Pet Inc.: See—
 Whitman, Stephen F. & Son, Inc.
 Pirelli Societa Per Azioni, Milan, Italy. 443,974, ren. 6-9-70. Cl. 35.
 Pizza Chef of America, Inc., Norfolk, Va. 825,461, can. Cl. 100.
 Pneumafil Corp., Charlotte, N.C. 892,407, pub. 3-24-70. Cl. 23.
 Poly-Matic Fountain, Inc., Siler City, N.C. 892,415, pub. 3-24-70. Cl. 23.
 Polymers, S. E. Inc., Clare, Mich. 892,529-30, pub. 3-24-70. Cl. 43.
 Portec, Inc., Oak Brook, Ill. 892,472, pub. 3-24-70. Cl. 35.
 Prairie States Corp., Danville, Ill. 768,348, can. Cl. 15.
 Price & Lucas Co., Inc., Louisville, Ky. 892,558, pub. 3-24-70. Cl. 46.
 Procter & Gamble Co., The, Cincinnati, Ohio. 768,467, can. Cl. 46.
 Professional Archers Association, Hickory Corner, Mich. 768,351, can. Cl. 22.
 Proter Products Corp., Cincinnati, Ohio. 892,268, pub. 3-24-70. Cl. 2.
 Pulverizing Machinery Co., Summit, N.J., to Slick Industrial Co., New York, N.Y. 523,105, ren. 6-9-70. Cl. 23.
 Purux Corp., Ltd.: See—
 Sanitary Products Corp.
 QSAID Centurion, Los Angeles, Calif. 892,623, pub. 3-24-70. Cl. 200.
 Quaker Oats Co., The, to Allied Mills, Inc., Chicago, Ill. 524,662, ren. 6-9-70. Cl. 46.
 Quaker Oats Co., The, to Allied Mills, Inc., Chicago, Ill. 524,664, ren. 6-9-70. Cl. 46.
 Quaker Oats Co., The, Chicago, Ill. 768,478, can. Cl. 46.
 Quaker Oats Co., The, Chicago, Ill. 892,554, pub. 3-24-70. Cl. 46.
 Radiant Electronic Products Corp., New York, N.Y. 768,450, can. Cl. 46.
 Ra-Pid-Gro Corp., Dansville, N.Y. 530,331, ren. 6-9-70. Cl. 10.
 Reece Corp., The, Waltham, Mass. 892,405-6, pub. 3-24-70. Cl. 23.
 Reed Candy Co.: See—
 Golden Nugget Sweets.
 Reeder, Oliver, & Son, Inc., Baltimore, Md. 443,842, ren. 6-9-70. Cl. 16.
 Reid-Provident Laboratories Inc., Atlanta, Ga. 892,344, pub. 3-24-70. Cl. 18.
 Remco Industries, Inc., Harrison, N.J. 768,408-9, can. Cl. 22.
 Republic Controls Corp., Syracuse, N.Y. 892,364, pub. 3-24-70. Cl. 21.
 Revere Copper & Brass Inc., New York, N.Y. 768,347, can. Cl. 14.
 Reyes, Tony, d.b.a. El Sol Spanish Food Products, Los Angeles, Calif. 892,539, pub. 3-24-70. Cl. 46.
 Richardson Corp., Rochester, N.Y. 525,394, ren. 6-9-70. Cl. 46.
 Richards-Wilcox Mfg. Co., Aurora, Ill. to Hupp, Inc., Cleveland, Ohio. 528,955, ren. 6-9-70. Cl. 12.
 Richman, Ronald R., Indianapolis, Ind. 768,400, can. Cl. 22.
 Rink's Department Stores, Inc., Cleveland, Ohio. 892,453, pub. 3-24-70. Cl. 28.
 Roadhouse Motor Homes, Inc., Redding, Calif. 892,347, pub. 3-24-70. Cl. 19.
 Robertson Photo-Mechanix, Inc., Des Plaines, Ill. 892,442, pub. 3-24-70. Cl. 26.
 Roddenberry Bros., to W. B. Roddenberry Co., Inc., Cairo, Ga. 268,613, ren. 6-9-70. Cl. 46.

- Roddenberry, W. B. Co., Inc.: See—
 Roddenberry Bros.
 Rogers, Lee, d.b.a. American Holiday Association, Los Angeles, Calif. 892,618, pub. 3-24-70. Cl. 107.
 Royal Forest Charcoal Co., Columbia, Mo. 768,321, can. Cl. 1.
 Rubin, Irving, d.b.a. Irv Rubin Enterprises, Van Nuys, Calif. 892,479, pub. 3-24-70. Cl. 37.
 Rykoff, S. E., & Co., Los Angeles, Calif. 892,484-5, pub. 3-24-70. Cl. 37.
 SCM Corp., New York, N.Y. 768,341, can. Multiple Class (Classes 11 and 37).
 St. Clair Mfg. Corp., Bellwood, Ill. 892,307, pub. 3-24-70. Cl. 7.
 St. Regis Paper Co., New York, N.Y. 525,969, ren. 6-9-70. Cl. 23.
 Samuels, T. W. Distillery, Inc.: See—
 Foster & Co.
 San Francisco-Oakland Hockey Club, Inc., Oakland, Calif. 892,619, pub. 3-24-70. Cl. 107.
 Sanitary Products Corp., Taneytown, Md., to Purex Corp., Ltd., Lakewood, Calif. 528,468, ren. 6-9-70. Cl. 44.
 Savage Laboratories, Inc., Houston, Tex. 768,619, can. Cl. 18.
 Schenley Distillers Corp., to Schenley Industries, Inc., New York, N.Y. 521,851, ren. 6-9-70. Cl. 49.
 Schenley Industries, Inc.: See—
 Schenley Distillers Corp.
 Schneider, Hill & Spangler, Inc., Philadelphia, Pa. 892,611, pub. 3-24-70. Cl. 101.
 Scientific Research Instruments Corp., Baltimore, Md. 892,444, pub. 3-24-70. Cl. 26.
 Scott-Lee Laboratories, Inc., New Orleans, La. 768,378, can. Cl. 18.
 Sea Craft Inc., Miami, Fla. 892,851, pub. 3-24-70. Cl. 19.
 Sears-Roebuck Foundation, The, Skokie, Ill. 892,605, pub. 3-24-70. Cl. 100.
 Seeco, Inc., Willmar, Minn. 892,343, pub. 3-24-70. Cl. 18.
 Seminole Mfg. Co., Columbus, Miss. 892,505, pub. 3-24-70. Cl. 39.
 Sexauer, J. A., Co., Inc., White Plains, N.Y. 892,305, pub. 3-24-70. Cl. 6.
 Sexauer, J. A., Mfg. Co., Inc., White Plains, N.Y. 892,316, pub. 3-24-70. Cl. 12.
 Shalom, I., & Co., Inc., New York, N.Y. 892,509, pub. 3-24-70. Cl. 39.
 Shamban, W. S., & Co., Los Angeles, Calif. 892,469, pub. 3-24-70. Cl. 36.
 Sioux Honey Association, Cooperative, Sioux City, Iowa. 768,540, can. Cl. 46.
 Skat Co., The, Hartford, Conn., to Armour-Dial, Inc., Chicago, Ill. 269,141, ren. 6-9-70. Cl. 52.
 Slaymaker, Samuel R., II, Gap, Pa. 755,920, can. Cl. 22.
 Slick Industrial Co.: See—
 Pulverizing Machinery Co.
 Smith's Pride Foods, Inc., Birmingham, Ala. 892,541, pub. 3-24-70. Cl. 46.
 Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 768,323, can. Cl. 1.
 Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 768,369, can. Cl. 18.
 Societe Lorraine de Laminage Continu (Sollac), Paris, France. 892,580, pub. 3-24-70. Cl. 14.
 Societe Rhovyl, Paris, France. 768,442, can. Cl. 39.
 South River Metal Products Co., Inc., South River, N.J. 768,518, can. Cl. 2.
 Spalding, A. G., & Bros. Inc., Chicopee, Mass. 524,419, ren. 6-9-70. Cl. 22.
 Spalding, A. G., & Bros. Inc., Chicopee, Mass. 525,021, ren. 6-9-70. Cl. 22.
 Spaulding, Prescott L., d.b.a. Bio-Medical Electronics, San Diego, Calif. 892,483, pub. 3-24-70. Cl. 26.
 Spectrolite Optics, Inc., New York, N.Y. 892,427, pub. 3-24-70. Cl. 26.
 Spencer Shoe Corp., Boston, Mass. 527,675, ren. 6-9-70. Cl. 39.
 Sperry Rand Corp., New York, N.Y. 892,410, pub. 3-24-70. Cl. 23.
 Spiro, Robert K., M.D., Bloomfield, N.J. 892,483, pub. 3-24-70. Cl. 37.
 Springs Cotton Mills, The, Lancaster, S.C. to Springs Mills, Inc., New York, N.Y. 523,609, ren. 6-9-70. Cl. 42.
 Springs Mills, Inc.: See—
 Minot, Hooper & Co.
 Springs Mills, Inc.: See—
 Springs Cotton Mills, The.
 Standard Elektrik Lorenz, Stuttgart-Zuffenhausen, Germany. 892,368, pub. 3-24-70. Cl. 21.
 Standard Oil Co.: See—
 Late Oil Co.
 Sta-Tite Snath Co., Shelbyville, Ind. 523,934, ren. 6-9-70. Cl. 23.
 Stein & Ellbogen Co., Chicago, Ill. 892,448, pub. 6-13-67. Cl. 28.
 Sterling Drug Inc., New York, N.Y. 768,359, can. Cl. 18.
 Sterling Drug Inc., New York, N.Y. 768,372, can. Cl. 18.
 Stern-Brainerd Carl Funke A.G., Essen, Germany. 892,564, pub. 3-12-68. Cl. 43.
 Sterno Industries, Inc., Alledale, N.J. 768,469, can. Cl. 46.
 Sterno Industries, Inc., New York, N.Y. 892,491, pub. 3-24-70. Cl. 33.
 Stevens, J. F., & Co., Inc.: See—
 Fortmann & Huffman Co.
 Stoddard, Meryl L., Scottsdale, Ariz. 892,585, pub. 3-24-70. Cl. 45.
 Strader, James W., Fort Lauderdale, Fla. 892,383, pub. 3-24-70. Cl. 22.
 Stratford, Inc., Minneapolis, Minn. 892,593, pub. 3-24-70. Cl. 52.

- Strickland, J. & Co., to J. Strickland & Co., Memphis, Tenn. 522,072, ren. 6-9-70. Cl. 51.
 Stringbean, Inc., New York, N.Y. 892,502, pub. 3-24-70. Cl. 39.
 Strohmeyer & Arpe Co., d.b.a. United Pure Food Co., New York, N.Y. 892,540, pub. 3-24-70. Cl. 46.
 Structural Clay Products Research Foundation, Geneva, Ill. 768,549, can. Cl. 100.
 Stuart, C. W. & Co., Newark, N.Y. 768,401, can. Cl. 50.
 Stusin, Bernard d.b.a. Tape Fan Co., Cleveland Heights, Ohio. 768,435, can. Cl. 38.
 Sultana Enterprises, Inc., Asheville, N.C. 892,474, pub. 3-24-70. Cl. 35.
 Supreme Foods, Inc., Los Angeles, Calif. 892,374, pub. 3-24-70. Cl. 2.
 Swan, Lawrence, Niles, Ill. 768,392, can. Cl. 22.
 Sweden Freaser Mfg. Co., Seattle, Wash. 523,157, ren. 6-9-70. Cl. 31.
 Sylvan Pools, Inc., Doylestown, Pa. 892,322, pub. 3-24-70. Cl. 12.
 TNT, Inc., Acton, Mass. 892,451, pub. 3-24-70. Cl. 28.
 Takaki, Ralph N., d.b.a. Takaki Sanyo-Do, Honolulu, Hawaii. 892,340, pub. 3-24-70. Cl. 18.
 Texas Instruments Inc., Dallas, Tex. 768,420, can. Cl. 26.
 Textron Inc.: See—
 Friedman Silver Co., Inc.
 Textron Inc., Providence, R.I. 892,328, pub. 3-24-70. Cl. 12.
 Textron Inc., Providence, R.I. 892,446, pub. 3-24-70. Cl. 36.
 Textron Inc., Providence, R.I. 892,450, pub. 3-24-70. Cl. 38.
 Thomas & Betts Corp., Elizabeth, N.J. 892,306, pub. 3-24-70. Cl. 7.
 Tinnerman Products, Inc., to Tinnerman Products, Inc., Brookpark, Ohio. 524,152, ren. 6-9-70. Cl. 18.
 Tipetik Mfg. Co., Altadena, Calif. 747,367, can. Cl. 51.
 Topper Corp., Elizabeth, N.J. 892,382, pub. 3-24-70. Cl. 22.
 Topps Chewing Gum, Inc., Brooklyn, N.Y. 892,545, pub. 3-24-70. Cl. 46.
 Tower Packaging Co.: See—
 Tower Products, Inc.
 Tower Products, Inc., from Tower Packaging Co., Wheeling, Ill. 892,273, pub. 3-24-70. Cl. 2.
 Treasure Cove Sportswear, Inc., New York, N.Y. 892,497, pub. 3-24-70. Cl. 39.
 Triangle Mfg. Co., Inc., Baltimore, Md. 749,837, can. Cl. 42.
 Tri-Data, Mountain View, Calif. 892,365, pub. 3-24-70. Cl. 21.
 Tubular Service & Engineering Co., to AMF Tuboscope Inc., Houston, Tex. 526,411, ren. 6-9-70. Cl. 103.
 Tuckersharpe Pen Co., Inc., Richmond, Va. 892,477, pub. 3-24-70. Cl. 37.
 Turner Hall Corp., New York, N.Y. 768,546, can. Cl. 51.
 Tyme Airlines, Inc.: See—
 Wright Airlines, Inc.
 U.N. Alloy Steel Corp., d.b.a. U.S. Knife Co., Boston, Mass. 892,408, pub. 3-24-70. Cl. 23.
 USV Pharmaceutical Corp., New York, N.Y. 892,342, pub. 3-24-70. Cl. 18.
 Union Carbide Corp., New York, N.Y. 892,257, pub. 3-24-70. Cl. 1.
 Union Carbide Corp., New York, N.Y. 892,295, pub. 3-24-70. Cl. 6.
 Union Pacific Railroad Co., Omaha, Nebr. 523,620, ren. 6-9-70. Cl. 105.
 Unistrut Corp., Wayne, Mich. 768,525, can. Cl. 12.
 U.S. Borax & Chemical Corp.: See—
 Pacific Coast Borax Co.
 U.S. Industries, Inc., New York, N.Y. 892,424, pub. 3-24-70. Cl. 24.
 U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 768,370, can. Cl. 18.
 Univis Inc., Fort Lauderdale, Fla. 892,431, pub. 3-24-70. Cl. 26.
 Upjohn Co., The, Kalamazoo, Mich. 892,241, pub. 3-24-70. Cl. 18.
 Urethane Fabricators, Inc., Camden, N.J. 892,249, pub. 3-24-70. Cl. 19.
 Visalia Citrus Association, Visalia, Calif. 529,891, ren. 6-9-70. Cl. 46.
 Visual Education Association, Inc., Dayton, Ohio. 892,488, pub. 3-24-70. Cl. 33.
 Viskman Mfg. Co., Chicago, Ill. 892,376, pub. 3-24-70. Cl. 22.
 W-B Enterprises, Houston, Tex. 768,387, can. Cl. 19.
 Wallace & Tiernan Inc.: See—
 Penawalt Corp.
 Watson, Angus & Co. (America) Ltd., San Francisco, Calif., to John West Foods Ltd., Liverpool, England. 269,168, ren. 6-9-70. Cl. 46.
 Weaver, Victor F., Inc., New Holland, Pa. 892,542, pub. 3-24-70. Cl. 46.
 Weber, A. C., Co., Inc., Chicago, Ill. 892,566, pub. 3-24-70. Cl. 21.
 Wembley, Inc., New Orleans, La. 892,507, pub. 3-24-70. Cl. 39.
 Werler, Paul F., d.b.a. Chemstar Products Co., Minneapolis, Minn. 892,299, pub. 3-24-70. Cl. 6.
 West, John, Foods Ltd.: See—
 Watson, Angus & Co. (America) Ltd.
 Westchester Children's Remedial Center, Inc., Yonkers, N.Y. 892,620, pub. 3-24-70. Cl. 107.
 Weyerhaeuser Co., Tacoma, Wash. 892,319, pub. 3-24-70. Cl. 12.
 White Laboratories, Inc., Kenilworth, N.J. 768,381, can. Cl. 18.
 White Stag Mfg. Co., Portland, Oreg. 892,508, pub. 3-24-70. Cl. 39.
 Whiteleather, Thomas R., d.b.a. Whiteleather Aviation, Hollywood, Fla. 892,616, pub. 3-24-70. Cl. 107.

INDEX OF REGISTRANTS

Whitman, Stephen F., & Son, Inc., Philadelphia, Pa., to Pet Inc., St. Louis, Mo. 271,006, ren. 6-9-70. Cl. 46.
 Whitmeyer Laboratories, Inc., Myerstown, Pa. 892,301, pub. 3-24-70. Cl. 6.
 Wilbur-Ellis Co., San Francisco, Calif. 522,067, ren. 6-9-70. Cl. 46.
 Wilbur-Ellis Co., San Francisco, Calif. 522,874, ren. 6-9-70. Cl. 46.
 Wilder, Mary E., Alexander, N.C. 526,220, ren. 6-9-70. Cl. 36.
 Wingfield, James R., d.b.a. Wingfield Laboratories, Appomattox, Va. 768,495, can. Cl. 51.
 Wolverine Brass Works, Grand Rapids, Mich. 892,329, pub. 3-24-70. Cl. 13.
 Wonderknot Corp., New York, N.Y. 529,402, ren. 6-9-70. Cl. 39.
 Wood, Crosby Preserving Co., Picayune, Miss. 892,312, pub. 3-24-70. Cl. 12.
 Woolworth, F. W., Co., New York, N.Y. 768,377, can. Cl. 18.
 Woolworth, F. W., Co., New York, N.Y. 768,502, can. Cl. 51.
 Woolworth, F. W., Co., New York, N.Y. 768,506, can. Cl. 52.
 Sewell, Worley, Co., Bremen, Ga. 892,498, pub. 3-24-70. Cl. 39.
 Wright Airlines, Inc., Cleveland, from Tyme Airlines, Inc., Luckey, Ohio. 892,613, pub. 3-24-70. Cl. 105.
 Wyandotte Chemicals Corp., Wyandotte, Mich. 815,154, can. Cl. 52.
 Wyomissing Corp.: See—
 Narrow Fabric Co., The.
 Zale Corp., Dallas, Tex. 892,454, pub. 3-24-70. Cl. 28.

U.S. GOVERNMENT PRINTING OFFICE: O-1970



U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 16, 1970

Volume 875

Number 3

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of May 1970

Examiner affirmed	115	3,403,722	3,466,101	3,480,637	3,486,800
Examiner affirmed in part	17	3,415,901	3,467,603	3,480,677	3,486,901
Examiner reversed	37	3,427,820	3,468,195	3,481,097	3,487,028
Total	169	3,429,343	3,468,899	3,481,099	3,487,194

Disclaimer

3,389,774.—William C. Rainer, Barrington, R.I. PLASTIC SEALING LINER HAVING A TRANSPARENT CENTRAL PORTION. Patent dated Sept. 5, 1967. Disclaimer filed Apr. 16, 1970, by the assignee, W. H. Hutchinson & Son, Inc.	3,435,798	3,478,069	3,482,401	3,487,789
Hereby enters this disclaimer to claims 3, 4 and 5 of said patent.	3,439,427	3,478,506	3,482,763	3,487,764
	3,439,678	3,478,745	3,482,850	3,488,046
	3,442,629	3,478,716	3,482,193	3,488,204
	3,443,184	3,474,017	3,482,323	3,488,240
	3,443,348	3,474,620	3,482,327	3,488,205
	3,443,723	3,474,809	3,482,346	3,488,288
	3,444,724	3,475,212	3,482,413	3,488,245

Service by Publication

Andre Marter

In accordance with Rule 47 of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on July 14, 1964, of an application for patent entitled "Insulating Compositions and Materials," on behalf of Andre Marter, whose last known address is 4 rue Guy De Maupassant, Notre-Dame-de-Gravenchon, Seine-Maritime, France. The application was made in compliance with Rule 47(a) and 35 U.S.C. 116 by Robert de Dryver without execution by the said Andre Marter. Notice of the filing directed to the above noted address has been returned undelivered.	3,447,157	3,476,204	3,484,142	3,489,495
Any action to be taken by the said Andre Marter in connection with the said application must be taken within sixty days of the publication of this notice.	3,447,883	3,476,325	3,484,327	3,489,514
	3,453,175	3,476,355	3,484,353	3,489,595
	3,453,339	3,477,298	3,484,398	3,489,617
	3,453,491	3,478,029	3,484,522	3,489,695
	3,456,213	3,478,089	3,484,630	3,489,727
	3,456,438	3,478,146	3,484,677	3,490,137
	3,457,069	3,479,126	3,484,692	3,490,705
	3,458,448	3,479,238	3,484,786	3,490,768
	3,458,472	3,479,357	3,484,817	3,490,949
	3,459,079	3,479,374	3,485,152	3,491,305
	3,460,155	3,479,713	3,485,593	3,491,436
	3,461,941	3,479,992	3,486,319	3,501,612

RICHARD A. WAHL,
Assistant Commissioner of Patents.

New Applications Received During April 1970

Patents	9009
Designs	599
Plant Patents	6
Reissues	49
Total	9663

Issue—June 16, 1970

Designs	45—No. 217,800 to No. 217,844, incl.
Def. Pub.	5—No. T875,014 to No. T875,018, incl.
Total	50

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner
F. H. BRONAUGH, Deputy Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JUNE 2, 1970

PATENT EXAMINING GROUPS	Actual Filing Date of Oldest New Case Awaiting Action
CHEMICAL EXAMINING GROUPS	
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director..... Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	5-24-68
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Director..... Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	1-12-68
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director..... Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	8-08-68
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 180—A. P. KENT, Director..... Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	5-02-68
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director..... Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	3-04-68
ELECTRICAL EXAMINING GROUPS	
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—N. ANSHER, Director..... Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	3-07-69
SECURITY, GROUP 220—S. BOYD, Director..... Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	7-22-68
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—J. F. COUCH, Director..... Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	6-03-68
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director..... Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	9-26-68
PHYSICS, GROUP 260—R. L. EVANS, Director..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	6-04-68
DESIGNS, GROUP 290—S. BOYD, Director..... Industrial Arts; Household, Personal and Fine Arts.	8-28-69
MECHANICAL EXAMINING GROUPS	
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director..... Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Sorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Apparatuses; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	12-24-68
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—D. J. STOCKING, Director..... Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	8-06-68
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director..... Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletory; Printing; Typewriters; Stationery; Information Dissemination.	10-21-68
HEAT, POWER AND FLUID ENGINEERING, GROUP 340—C. F. GAREAU, Director..... Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission; Fluid Handling; Lubrication; Joint Packing.	5-21-69
CONSTRUCTIONS, SUPPORTS, TEXTILES, CLEANING, GROUP 350—T. J. HIOKEY, Director..... Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures; Centrifugal Separations; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes; Sewing Machines; Winding and Reeling.	2-03-69
Total number of pending applications (excluding Designs).....	184,066
Total number of Design applications pending.....	3,282

Expiration of patents: The patents within the range of numbers indicated below expire during June 1970, except those which may have expired earlier due to shortened terms under the provisions of Public Law 800, 70th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 85th Congress, approved August 28, 1944 (58 Stat. 764), or which may have had their terms curtailed by disclaimer under the provisions of 35 U.S.C. 253. Other patents, issued after the dates of the range of numbers indicated below, may have expired before the full term of 17 years for the same reasons, or have lapsed under the provisions of 35 U.S.C. 151.

Patents..... Numbers 2,640,195 to 2,644,158, inclusive
Plant Patents..... Numbers 1,191 to 1,200, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE JOSEPH A. BRINK, JR.

No. 8239. Decided January 15, 1970

[57 CCPA —; 419 F.2d 914; 184 USPQ 247]

1. PATENTABILITY—ANTICIPATION—INHERENCY—35 U.S.C. 102.

"Just as the ambiguous reference failed as an anticipation under 35 U.S.C. 102 in *In re Hughes*, supra, we do not see how a disclosure or combination of disclosures leaving one to rely on fortune in choosing the referred to material can function as an anticipation. Absent a showing of some reasonable certainty of inherency, the rejection of claims 1, 2 and 4 under 35 U.S.C. 102 must fail."

2. SAME—PARTICULAR SUBJECT MATTER—"LIQUID MIST COLLECTION."

The refusal of certain claims in an application entitled "Liquid Mist Collection," as unpatentable over the prior art, is reversed.

APPEAL from Patent Office. Serial No. 280,847.

REVERSED.

Richard W. Sternberg, Roger R. Jones, for appellant.

Joseph Schimmel (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN, LANE, Associate Judges; and RAO, Chief Judge, sitting by designation.

ALMOND, J., delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Board of Appeals, adhered to on reconsideration, affirming the rejection of claims 1, 2, 4, 5 and 6, all the claims remaining in appellant's application entitled "Liquid Mist Collection."¹

The invention relates to a method for separating a liquid mist from a mist-laden gas by passing the gas through a bed of glass fibers under such conditions that the liquid mist in the gas is collected on the glass fibers and is drained therefrom by gravity flow as a continuous liquid phase in substantially undiluted form. Particular use is found in the removal and recovery of acid mists from process gas streams. Appellant tells us that the success of the invention rests upon the discovery that it is not necessary to "sieve" the mist particles from the gas and that a bed formed of coarse fibers can be employed to remove even the smallest mist droplets if the fibers in the bed are compacted to a relatively high density.

Claim 1 is representative:

1. A process for separating and collecting a finely divided mist from a gas in which said mist is dispersed, which process comprises passing said gas through a bed of unbonded glass fibers having fiber diameters between about 5 and about 30 microns, said fiber bed being compressed to a bulk density of between about 5 and about 20 pounds per cubic foot, and concurrently draining liquid resulting from the collection of said mist from said bed by gravity flow in substantially undiluted form and as a continuous liquid phase to thereby effect steady state operation.

Claim 2 depends from claim 1 and limits the direction of gas flow. Claims 4-6 each depend from claim 2 and further restrict the range of fiber diameter and bed density.

¹ Serial No. 280,847, filed May 16, 1963, alleged to be a continuation of Serial No. 779,535, filed December 11, 1958.

The Examiner rejected claims 1, 2 and 4 as being fully anticipated under 35 U.S.C. 102 and claims 5 and 6 as being unpatentable under 35 U.S.C. 103. The references he relied upon are:

Hennig, 2,771,153, Nov. 20, 1956.

Lange's Handbook of Chemistry, 9th ed., McGraw-Hill Book Co., New York, 1956, pp. 878-879.

Hennig discloses removing sulfuric acid mist from a gas stream laden therewith. He specifically illustrates an apparatus including a circular casing inside of which are disposed a plurality of vertical annular filters. One such filter is composed of two blankets of glass wool retained between inner and outer screens, the upper ends of the blankets being compressed and clamped against the exterior of an annular sleeve telescoped within the end of the screens. For the inner of the two blankets is used "a 14 micron average fiber diameter glass mat (commercially available as Owens-Corning TWF) of about 4 to 6 inches thick * * *."

Lange discloses properties of materials of construction and describes, inter alia, material No. 75 "Fiberglas TW-F, general purpose" of commercial construction "Batt, roll, bulk, shredded" and material No. 77 "Fiberglas, TW-F (see above)," commercial construction "Pipe covering blankets." For No. 75 a density of 2-10 lbs. per cu. ft. is given, while No. 77 is listed as having a density of 7 lbs. per cu. ft.

The Board's affirmance reveals the Patent Office position:

Claims 1, 2 and 4 were rejected as being fully anticipated by Hennig, and claims 5 and 6 were rejected as being unpatentable over Hennig under 35 U.S.C. 103. The rejection of claims 1, 2 and 4 is put on the basis of 35 U.S.C. 102 because the Lange's Handbook, like a dictionary, is relied on to explain what is meant in the Hennig patent by the expression "14 micron average fiber diameter glass mat (commercially available as Owens-Corning TWF) of about 4 to 6 inches thick" * * *. Appellant has not suggested that 35 U.S.C. 103 would be a better basis for rejection by the rule-of-thumb that recourse to two references indicates a rejection under subordinate section 103 instead of section 102.

Since the authoritative Lange's Handbook gives a density of 7 lbs. per cu. ft. for "Fiberglas TWF" blanket which Hennig recommended for his filter in a 14 micron average diameter form, it would seem that appellant's contentions or representations to the contrary should be explicit and to the point. * * * Appellant has instead resorted to a series of affidavit representations which in the aggregate give us little confidence in appellant's position.

Only Exhibit C refers to "TWF" insulation and this is of a specialized type for appliance purposes and of an undisclosed fiber diameter. The "nominal" density for this fiber (2.6 lbs. per cu. ft.) is not explained, but obviously this is not the delivered, or use density since the material is packed under compression.

Appellant requested reconsideration and submitted a letter signed by "a vice-president of Owens-Corning Fiberglas Corporation" discussing the density of the product sold under the mark "TWF." The writer states:

I do not believe we ever had available or sold an insulating material under the mark "TWF" which had a bulk density much over 3 pounds per cubic foot and certainly not as high as 5 pounds per cubic foot in the normal uncompressed condition.

In adhering to its decision, the Board stated that it was moved by the letter to consult available handbooks to determine whether the

Lange data were unreasonable. The Board then referred to an article by two Corning Glass Co. experts indicating that fibrous glass wool products have minimum densities between 4 and 6 lbs. per cu. ft. as well as a handbook indicating a density of 4 and 10 lbs. per cu. ft. for a Pyrex glass wool, curled. The Board acknowledged that these sources provided no direct evidence as to the appeal issues, but felt that they suggested that Lange was not out of line with ordinary experience.

Appellant acknowledges that except for the bulk density limitation Hennig satisfies every limitation of claim 1. He contends, however, that the rejection under 35 U.S.C. 102 is a technical rejection based on alleged inherency. The process of the appealed claims, it is argued, is not inherent in the Hennig disclosure because nowhere therein is the importance of bed density recognized. Moreover, appellant urges, even if Lange may be properly referred to it is merely speculative that anything therein described is the same material used in the reference patent. As to "inherency" as a basis for rejection, appellant requests that we follow the language of this court in *In re Hughes*, 52 CCPA 1855, 345 F.2d 184, 145 USPQ 467 (1965), stating in effect that if a reference is ambiguous and can be interpreted so that it may or may not constitute an anticipation of an appellant's claims, an anticipation rejection under 35 U.S.C. 102 based upon the ambiguous reference is improper. Here, it is contended, there is uncertainty or doubt as to the inherency.

The Solicitor counters by arguing that *In re Hughes* is inapposite because there is nothing ambiguous about Hennig's disclosure. Rather, it is urged, there is merely an example of incorporation by reference in a patent disclosure, a frequent occurrence. In such a case, an outside source must be consulted in order to fully comprehend the invention in question.

The essence of the Solicitor's argument appears in his brief as follows:

Hennig specifies that blanket or mat 41 is commercially available as "Owens Corning TWF." This naturally leads one who wishes to practice Hennig's invention, to the literature on the subject. Aside from Lange, the only other evidence of record which refers to "TWF" insulation, is presented by Exhibit C * * * which accompanies the affidavit of November 12, 1965 * * *. While the TWF insulation of that exhibit has a light coating of lubricant * * * and is available in the form of a blanket, the Board noted that it was of a specialized type and of an undisclosed fiber diameter * * *. Regarding its unexplained "nominal" density of 2.6 lbs. per cu. ft., the Board stated: "obviously this is not the delivered, or use density since the material is packed under compression" * * *.

The Board might further have noted that the density value of 2.6 in Exhibit C * * * is predicated upon a specific type of blanket no more than 3 1/2" in thickness, whereas Hennig's blanket 41 must be 4-6" thick. In view of the difference in thickness and different purposes for which TWF blankets are used: (a) filtering (Hennig), (b) appliance insulation (Exhibit C) and (c) pipe covering (Lange's item 77, * * *), it is more likely that one would naturally select the Hennig blanket, item 77, since the upper limit of 3 1/2" for the blanket of Exhibit C would suggest its unavailability in the greater thicknesses specified by Hennig.

It is immaterial that Hennig does not mention pipe covering or refer to "general purpose TWF" (as contended * * *). This appeal must be decided on the totality of evidence before the court plus whatever common knowledge the court is aware of, of which it will take judicial notice.

The Solicitor then states that "[s]ince Hennig does refer to 'Owens Corning TWF' * * *, the important question to decide is which form

of TWF constituting part of the evidence of record, one skilled in the art would select for blanket 41 in putting into practice the Hennig invention."

Accepting the Solicitor's statement of the question above, without necessarily totally agreeing therewith, we conclude from a careful consideration of the evidence of record that one is unable to say with reasonable certainty that one form of TWF would be used in preference to another. Hennig discloses only TWF, in addition to setting forth a blanket thickness. Yet Lange lists two types of TWF with no mention of thickness. One type has a density of 2-10 lbs. per cu. ft. and is available in batt, roll, bulk or shredded form, while the other of 7 lbs. per cu. ft. density is available as pipe-covering blankets. Neither would appear to be preferred over the other for the filtering use of Hennig. [1] Just as the ambiguous reference failed as an anticipation under 35 U.S.C. 102 in *In re Hughes*, supra, we do not see how a disclosure or combination of disclosures leaving one to rely on fortune in choosing the referred to material can function as an anticipation. Absent a showing of some reasonable certainty of inherency, the rejection of claims 1, 2 and 4 under 35 U.S.C. 102 must fail. With respect to claims 5 and 6, we agree with the Solicitor that since the rejection of those claims is predicated on the assumption that Hennig's blanket has a bulk density of 7 lbs. per cu. ft., reversal of that rejection is in order once having reversed the rejection of claims 1, 2 and 4, predicated on the same assumption.

[2] The decision of the Board is, therefore, reversed.
REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE LOUISE H. BROWN AND RONALD SWIELLER

APPEAL No. 8075. JULY 24, 1969

On Petition for Rehearing

PER CURIAM.

By order of the court, appellants' petition for rehearing is granted only to the extent of changing the language of the original opinion dated February 20, 1969, 56 CCPA —, 406 F.2d 780, 160 USPQ 669, as follows:

In line 2 of page 3 of the opinion, change "olefin" to "olefinic acid."

Delete the first 11 lines of the text on page 5 of the opinion, and insert therefor:

"Examiner and the Board deprives us of the benefit of their views on that particular issue and we do not consider it. *In re Fong*, 54 CCPA 1482, 378 F.2d 977, 154 USPQ 25; *In re Moureau*, 52 CCPA 1363, 345 F.2d 595, 145 USPQ 452. In any event, appellants' disclosure speaks of times 'from as long as several days to as short as * * * a few seconds.'

"The difference between Schirm and Perkins with regard to the presence of water, does not, we feel, have the significance which appellants attempt to attribute to it. Viewing the teachings of Schirm and Perkins as a whole, it seems to us that, when alkylating a phenol with an olefin or substituted olefin containing at"

ALMOND, J., joins in this order but adheres to his original concurrence.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,476,900, G. W. Dougherty, SPRAYING AND DUSTING MACHINE; 2,694,357, same, SPRAYING MACHINE; 2,629,239, J. M. Halt, INSECTICIDE SPREADING MACHINE; 2,784,521, Britten and Bowie, METHOD AND APPARATUS FOR DISTRIBUTING PESTICIDE, filed Dec. 19, 1962, D.C., E.D. Mich. (Grand Rapids), Doc. 4451, *FMC Corporation v. Kelzer Equipment Co.* Stipulation, consent dismissal with prejudice, complaint and counterclaim herein, Mar. 4, 1970.

2,692,195, Welch and Welch, BATTERY TERMINAL CONNECTION, filed Mar. 19, 1970, Ct. of App., 4th Cir., Richmond, Va., Doc. 14,468, *Charles H. Welch and James M. Welch v. General Motors Corporation.*

2,694,357. (See 2,476,900.)

2,619,429, T. H. Jukes, ANIMAL AND POULTRY FEED CONTAINING AUREOMYCIN MASH, filed Mar. 11, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-521-JWC, *American Cyanamid Company v. Rachele Laboratories, Inc.*

2,629,239. (See 2,476,900.)

2,694,992, Amos, McCurdy and McIntyre, METHOD OF MAKING LINEAR INTERPOLYMERS OF MONOVINYL AROMATIC COMPOUNDS AND A NATURAL OR SYNTHETIC RUBBER, filed Dec. 30, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c2485, *The Dow Chemical Company v. Standard Oil Co. (Ind.) et al.* Cause hereby dismissed with leave to re-instate by May 5, 1969, Feb. 28, 1969.

2,753,663, D. F. Jones, PRODUCTION OF HYBRID SEED CORN, filed Dec. 3, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c2336, *Research Corp. v. Funk Bros. Seed Co. and Robert D. Weist.* Stipulated order of dismissal with prejudice as to Counts I, III, IV and V of the amended complaint herein and without prejudice as to Count II thereof, Nov. 24, 1969.

2,784,521. (See 2,476,900.)

2,836,244, H. F. Gatward, CARRIER BAGS, filed Mar. 27, 1970, D.C., S.D.N.Y., Doc. 70-C-1247, *Imperial Packaging Corp. v. Bahamas Paper Co., Ltd.*

2,877,501, R. Bradt, GLASS-REINFORCED THERMOPLASTIC INJECTION MOLDING COMPOUND AND INJECTION-MOLDING PROCESS EMPLOYING IT, filed Jan. 14, 1970, D.C., E.D. Mich. (Detroit), Doc. 34249, *Dart Industries, Inc. v. Thermofl, Inc.*

3,093,529, R. L. Reich, LABEL APPLYING MEANS, filed Oct. 9, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c2098, *Compac Corporation v. Avery Adhesive Products, Inc.* Order cause removed from the active calendar of this court with leave to re-instate within 60 days, Mar. 27, 1970.

3,115,558, Sabel, Sabel and Sabel, ORNAMENTAL COLUMN STRUCTURE, filed Mar. 12, 1970, D.C.S.C. (Charleston), Doc. C/A 70-212, *Herman Sabel, Arnold Sabel and Leon W. Sabel v. Lowe's of Charleston, Inc.* Same, filed, Mar. 12, 1970, D.C.S.C. (Charleston), Doc. C/A 70-213, *Herman Sabel, Arnold Sabel and Leon W. Sabel v. Sears, Roebuck & Co.*

3,139,213, B. Edwards, NESTABLE CUP, filed Mar. 6, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c483, *Illinois Tool Works Inc. v. American Can Company.* Dismissed without prejudice, Apr. 2, 1970.

3,157,906, G. D. Behlen, GRINDING MACHINE WITH MEANS FOR COMPENSATING FOR GRINDING WHEEL WEAR, filed Mar. 23, 1970, D.C., E.D. Ky. (Covington), Doc. 1498, *Seico Industries Inc. v. The United States Electrical Tool Company.*

3,157,157, Clay and Letson, METHOD AND APPARATUS FOR DISPENSING FEED TO LIVESTOCK, filed Mar. 23, 1970, D.C., N.D. Ill. (Chicago), Doc. 70c687, *Clay Equipment Corporation v. The DeLaval Separator Company.*

3,199,912, R. E. Robinson, PROCESS FOR PREPARING ESTERS, filed Mar. 24, 1970 D.C., S.D. Tex. (Houston), Doc. 70-H-261, *National Distillers and Chemical Corp. v. Celanese Corporation.*

3,229,857, Hollis and Borders, PROCESS FOR PREPARING DEHYDRATED POTATOES, filed Nov. 23, 1969, D.C. Del. (Wilmington), Doc. 3813, *American Potato Company v. General Foods Corporation.*

3,221,731, B. G. Forsstrom, SAMPLE COLLECTOR, filed Mar. 24, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-628-WPG, *LKB Instruments, Inc. v. Marvin R. Solomon, etc., et al.*

3,266,391, E. J. Sovatkin, TONOMETER, filed June 2, 1967, D.C., S.D.N.Y., Doc. 67-C-2144, *J. Sklar Mfg. Co., Inc. v. Metaleque Surgical Instruments Co., Inc. et al.* Consent judgment, all defendants permanently enjoined, Mar. 18, 1970.

3,279,138, I. F. Dittmar, SURFACE FINISHING PANEL, filed Aug. 21, 1967, D.C., N.D. Pa. (Scranton), Doc. 10,148, *Wilson Oak Flooring Co., Inc. v. Oromar Company.* Consent judgment, action is dismissed with prejudice. Defendant Oromar has good title to the Patent; plaintiff Wilson has infringed, Mar. 23, 1970.

3,324,941, W. W. Burhop, PLASTIC SPOOL OF COMPLEMENTARY HALVES, filed Mar. 10, 1970, D.C., W.D.N.C. (Asheville), Doc. 3221, *Wayne Plastics Corporation v. Orellin Plastics Corporation.*

3,341,962, R. Torresen, BOWLING BALL POLISHING MACHINE, filed Mar. 3, 1970, D.C., N.D. Ill. (Chicago), Doc. 70c498, *Brunswick Corporation v. Thumtectors, Inc.*

3,369,097, H. Selden, TRIMMER CAPACITOR WITH DIRECT TRAVEL MECHANISM, filed Jan. 5, 1968, D.C.N.J. (Newark), Doc. 16-68, *Stratford Retreat House v. Volttronics Corporation.* Stipulation and order for withdrawal of complaint and counterclaims, Feb. 19, 1970.

3,367,128. (See 3,474,723.)

3,368,239, Friedman and Richman, DENTAL TOOL, filed June 10, 1969, D.C., S.D. Fla. (Miami), Doc. 69-698-C-WM, *C & B Corporation v. Sonoptics Corporation and American Hospital Supply Corp. v. Charles M. Friedman and Bruce Richman (Third Party Defendants).* Patent valid, defendants have infringed and are hereby enjoined, Mar. 24, 1970.

3,375,900, Cole and Buller, SEISMIC CABLE DEPTH CONTROL APPARATUS, filed Feb. 6, 1970, D.C., S.D. Tex. (Houston), Doc. 70-H-102, *Continental Oil Co. v. Double D. Mfg. Co. Inc. et al.*

3,395,617, J. H. Gehring, CUP-SHAPED CAP MEANS IN A JOINT, filed Mar. 26, 1970, D.C., N.D. Ohio (Cleveland), Doc. C70-302, *James H. Gehring v. United Carr Incorporated.*

3,391,749, J. F. Arnold, METHOD AND APPARATUS FOR DRILLING STRAIGHT WELLS, filed Mar. 24, 1970, D.C., S.D. Tex. (Houston), Doc. 70-H-264, *Land and Marine Rental Company v. Butler Drilling Co.*

3,453,216, M. Radoff, PROCESS FOR FORMING YARNS FROM CERTAIN WOVEN OR KNIT TEXTILES, filed Mar. 23, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-601-AAH, *Franklyn Radoff v. Columbia-Minerva Corporation.*

3,473,251, R. D. Kahn, INSECT ELECTROCUTING DEVICE, filed Mar. 18, 1970, D.C., S.D.N.Y., Doc. 70-C-1108, *Fedtro, Inc. v. Lear Seigler, Inc.*

3,474,723, Reimus and Saporito, BEVERAGE APPARATUS; 3,367,128, J. D. Howell, FLOATING AGITATOR; 3,465,522, J. G. Muller, BEVERAGE APPARATUS, filed Feb. 17, 1970, D.C. Del. (Wilmington), Doc. 3850, *Struthers Scientific & International Corporation v. General Foods Corporation.*

3,484,735, J. G. Fanelli, ELECTRIC TERMINAL ADAPTER, filed Apr. 2, 1970, D.C., N.D. Ind. (South Bend), Doc. 70H886, *Coleman Cable & Wire Company v. M.H.R.V. Distributors, Inc. and Lyall Electric, Inc.*

3,495,522. (See 3,472,723.)

D. 206,285, Fleisher, Katz, Stern and Weiss, PORTABLE ILLUMINABLE MIRROR, filed Sept. 13, 1967, D.C., S.D.N.Y., Doc. 67-C-3521, *Bercy Industries, Inc. v. Rialto Products, Inc.* Stipulation and order of dismissal, Mar. 35, 1970.

D. 209,919, Appel and Schnur, PAPER TOWEL HOLDER, filed Dec. 22, 1967, D.C., S.D.N.Y., Doc. 67-C-5019, *Elpo Industries, Inc. v. Chadwick-Miller, Inc.* Consent judgment, defendant permanently enjoined, Mar. 31, 1970.

D. 209,874, Kadmon and Kadmon, ILLUMINABLE CHRISTMAS ORNAMENT, filed Apr. 14, 1969, D.C., S.D.N.Y., Doc. 69-1529, *Otto Kadmon Inc. v. New York Merchandise Co. Inc.* Final Judgment, permanent injunction, Feb. 18, 1970.

D. 212,361, Bolle, Bolle and Salvage, PAIR OF SUN GLASSES, filed Dec. 10, 1968, D.C., S.D.N.Y., Doc. 68-C-4910, *Richard Salvage v. Magee Trading Corp.* Order, actions is discontinued, Mar. 20, 1970.

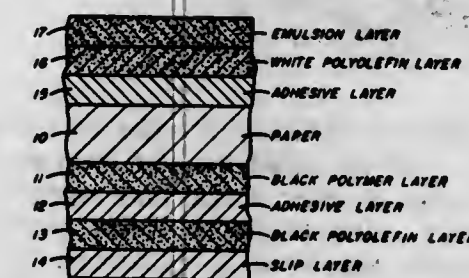
DEFENSIVE PUBLICATIONS

PUBLISHED JUNE 16, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 809 O.G. 687. The abstracts of Defensive Publication applications are identified by distinctly numbered series and are arranged chronologically. The heading of each abstract indicates the number of pages of specification, including claims and sheets of drawings contained in the application as originally filed. The files of these applications are available to the public for inspection and reproduction may be purchased for 80 cents a sheet.

Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

T875,014
OPAQUE PHOTOGRAPHIC ELEMENT
 Robert B. Campbell, Pittsford, Lauri W. Kikka, Victor, and George R. Secrist, Webster, N.Y. (all of 1669 Lake Ave., Rochester, N.Y. 14650)
 Filed Aug. 4, 1969, Ser. No. 847,258
 Int. Cl. G03c 1/86
 U.S. Cl. 96-85
 1 Sheet Drawing, 14 Pages Specification



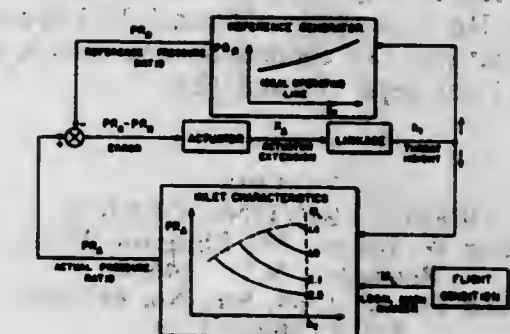
An opaque light-sensitive photographic element is prepared by coating a paper support on one surface with a polymer layer containing sufficient carbon to render the element substantially opaque and to provide a high degree of static protection. An extruded polyolefin layer containing additional carbon is adhered to the polymer layer by means of a polyalkyleneimine and a casein layer containing a slip agent is coated over the polyolefin layer which preferably has been corona activated.

An extruded polyolefin layer containing a light colored pigment such as titanium dioxide is adhered to the other side of the paper by means of a polyalkyleneimine and a gelatin-silver halide emulsion layer is coated on the resulting light colored polyolefin layer preferably following corona activation of the polyolefin layer. The original paper support is preferably tub sized with a light colored pigment composition before applying the mentioned polymer layers. The opaque element is especially useful in a photographic diffusion transfer process of the type in which the element is exposed to a subject and, while in a camera, is rolled into contact with an opaque receiving element with a layer of processing solution interposed. The opaque element allows withdrawal of the resulting sandwich from the camera and processing to take place in the light.

T875,015
INLET CONTROL SYSTEM FOR SUPERSONIC AIRCRAFT
 Robert C. Loschke, Glendale, Calif., assignor, by mesne assignments, to the United States of America as represented by the Administrator of the Federal Aviation Administration
 Continuation of application Ser. No. 619,320, Feb. 28, 1967. This application Aug. 20, 1969, Ser. No. 853,601
 Int. Cl. F02k 11/00
 U.S. Cl. 137-1
 5 Sheets Drawings, 19 Pages Specification

A method and apparatus for controlling the inlet area of a variable geometry engine inlet. The method for controlling the inlet area includes (a) measuring the actual

pressure ratio of the engine inlet; (b) varying the inlet area in response to a change in the actual pressure ratio; (c) generating a reference pressure ratio which is a function of the inlet area; and (d) balancing the actual pres-



sure ratio with the reference pressure ratio. This balancing of the actual and reference pressure ratios is carried out through a feedback mechanism from the engine plant to the reference generating means.

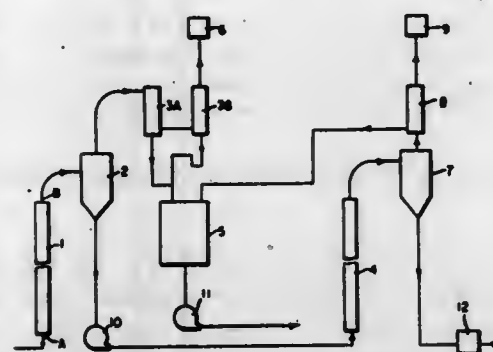
T875,016
PHOTOTHERMOGRAPHIC SYSTEM
 Frederick A. Stahly, Kodak Park, Rochester, N.Y. 14650
 Filed Oct. 27, 1969, Ser. No. 869,886
 Int. Cl. G03c 5/18, 5/34, 11/12
 U.S. Cl. 96-49
 No Drawing, 12 Pages Specification

A photothermographic system for the production of images is provided by a supported photosensitive layer comprising a light-sensitive organic salt, in particular, a diazonium salt of an inorganic acid, such as p-diazo-N-diethylaniline zinc chloride, and a polymeric binder, such as a polyvinyl acetate or a cyclohexane dimethanoldipate-azelaate copolyester, wherein the salt is capable of plasticizing or reducing the tackifying temperature of the exposed portions of the layer upon imagewise exposure to light. The exposed, plasticized image then may be toned or differentially transferred to a receiving surface. Optical density can be given to the transferred image by incorporating a colorant or color-forming component in the photosensitive layer.

T875,017
RECOVERY OF TOLYLENE DIISOCYANATE IN RISING FILM EVAPORATORS
 Francis V. Bailor, Jr., 43 Henderson Road, Apt. 8D, Newark, Del. 19711, and John L. Littlefield, 103 Westworth Drive, Claymont, Del. 19703
 Filed Oct. 30, 1969, Ser. No. 872,587
 Int. Cl. B01d 3/04
 U.S. Cl. 203-73
 1 Sheet Drawing, 12 Pages Specification

A process for the recovery of tolylene diisocyanate (TDI) from the crude reaction mass produced by the phosgenation of tolylene diamine which consists essen-

tially of (1) distilling said crude reaction mass to produce TDI vapor and a viscous tarry distillation heel containing 50-80% TDI and 20-50% non-volatile residue, (2) passing said distillation heel through a heated tube



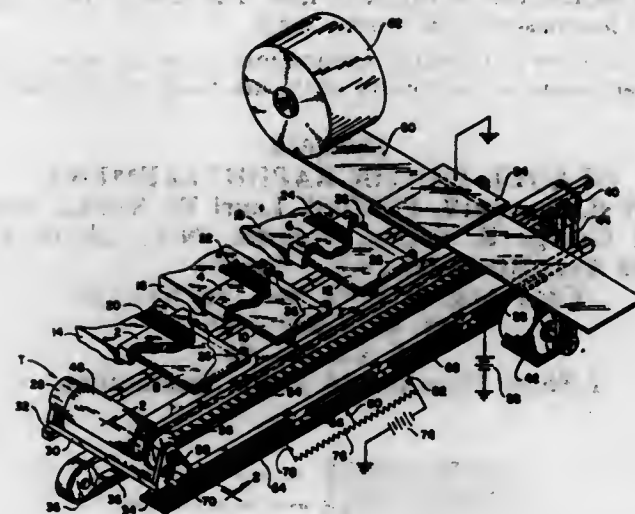
about 4-20 feet in length and having an exit pressure of 0.5-15 mm. Hg to produce additional TDI vapor and a liquid effluent and (3) condensing and recovering said TDI vapor from steps (1) and (2).

T875,018
OFFSET PRINTING DEVICE
Oliver W. Gnage, 901 Elmgrove Road,
Rochester, N.Y. 14650
Filed Dec. 5, 1969, Ser. No. 882,642
Int. Cl. B41f 3/34
U.S. Cl. 101-252

1 Sheet Drawing, 7 Pages Specification

A device for offset electrostatic printing is provided wherein an offset transfer member in the form of a roller or a roller segment is moved along a path past a plurality of transfer stations, each station having an electro-

static liquid toned image, for example, one of three color separation images, which is transferred to the offset transfer member. These images are transferred sequentially and in registry and subsequently are transferred all together to a receiver. A potential may be applied to the offset member which is opposite the charge on the electrostatic toner to facilitate each transfer. A potential may be applied to the receiver which is opposite that on the offset

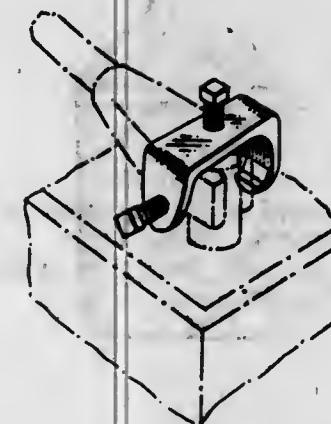


transfer member to facilitate transfer of the registered toner images from the offset transfer member to the receiver. The offset transfer device may comprise an aluminum transfer roller having a Teflon coating, which roller is rotatably supported in a carriage. The carriage is driven along a path past a plurality of transfer stations. A rack extends along the path which engages and turns a pinion which in turn rotates the transfer roller as it is moved along the path.

DESIGNS

JUNE 16, 1970

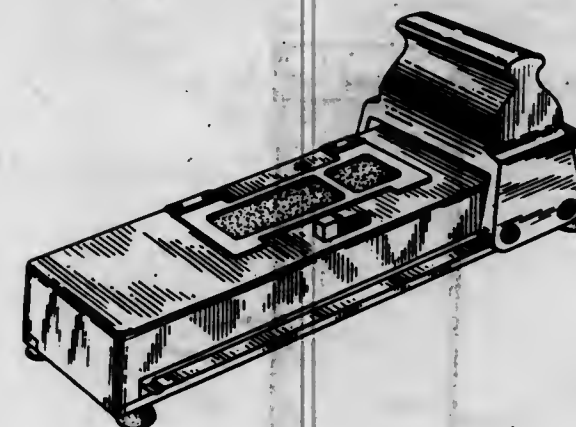
217,800
BATTERY CABLE TIGHTENER AND REMOVER
Boykin H. Hines, 4212 S. 87th St.,
Philadelphia, Pa. 19142
Filed Feb. 6, 1969, Ser. No. 15,682
Term of patent 14 years
Int. Cl. D8-02
U.S. Cl. D8-51



217,802
JUG OR SIMILAR ARTICLE
Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed May 23, 1969, Ser. No. 17,314
Term of patent 14 years
Int. Cl. D9-01
U.S. Cl. D9-41



217,801
TAPE CUTTER
Ralph L. Johnson, Wheaton, Robert I. Henkel, Kenilworth, and David M. Beveridge, Wheaton, Ill., assignors to Johnson & Quin, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1969, Ser. No. 16,905
Term of patent 14 years
Int. Cl. D8-02
U.S. Cl. D8-98



217,803
BOTTLE OR SIMILAR ARTICLE
Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Continuation-in-part of design application Ser. No. 14,712, Nov. 29, 1968. This application May 26, 1969, Ser. No. 17,335
Term of patent 14 years
Int. Cl. D9-01
U.S. Cl. D9-113



217,804

BOTTLE OR SIMILAR ARTICLE

Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed June 27, 1969, Ser. No. 17,935
Term of patent 14 years

Int. Cl. D9—01

U.S. Cl. D9—115



217,806

DECANTER

Ronald A. Kassin, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware

Original design application Aug. 18, 1967, Ser. No. 8,317, now Patent No. 214,427, dated June 17, 1969. Divided and this application Apr. 25, 1968, Ser. No. 14,223

Term of patent 14 years

Int. Cl. D9—01

U.S. Cl. D9—119



217,805

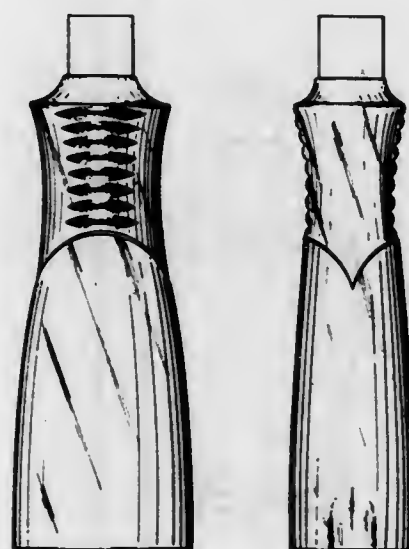
COMBINED BOTTLE AND CAP THEREFOR

Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed May 23, 1969, Ser. No. 17,291
Term of patent 14 years

Int. Cl. D9—01

U.S. Cl. D9—117



217,807

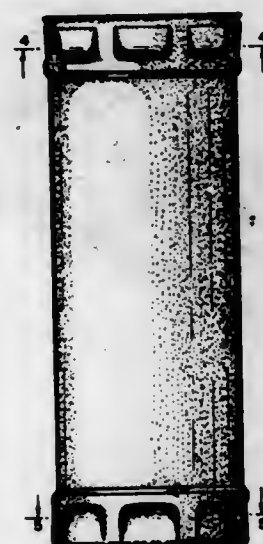
DISPENSING CONTAINER OR SIMILAR ARTICLE

Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed May 23, 1969, Ser. No. 17,311
Term of patent 14 years

Int. Cl. D9—07

U.S. Cl. D9—208

217,808
CLOSURE

Kenneth C. Lawrence, Richmond, Ind., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 23, 1968, Ser. No. 11,582

Term of patent 14 years

Int. Cl. D9—02

U.S. Cl. D9—267

217,809
BUILDING

George L. Altamura, 2756 Jacqueline Court, Napa, Calif. 94558

Filed June 2, 1969, Ser. No. 17,472

Term of patent 14 years

Int. Cl. D25—04

U.S. Cl. D13—1



217,810

PASSENGER CARRYING VEHICLE

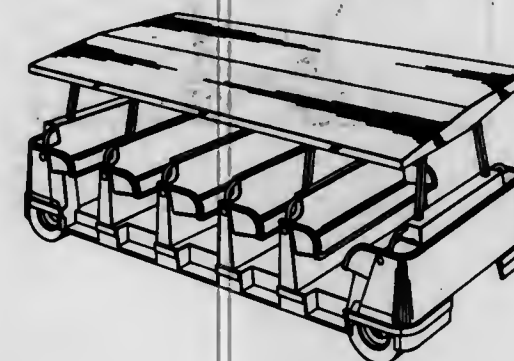
George F. McGinnis, Los Angeles, Calif., assignor to Wed Enterprises, Inc., Glendale, Calif., a corporation of California

Filed Apr. 7, 1969, Ser. No. 16,587

Term of patent 14 years

Int. Cl. D12—08

U.S. Cl. D14—3



217,811

AUTOMOTIVE MIRROR

Thomas E. Lohr, Warren, Mich., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 12, 1969, Ser. No. 16,198

Term of patent 14 years

Int. Cl. D12—14

U.S. Cl. D14—6



217,812

AUTOMOTIVE MIRROR

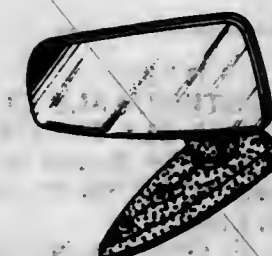
Thomas E. Lohr, Warren, Mich., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 12, 1969, Ser. No. 16,199

Term of patent 14 years

Int. Cl. D12—14

U.S. Cl. D14—6



217,813

AUTOMOTIVE MIRROR

Thomas E. Lohr, Warren, Mich., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 12, 1969, Ser. No. 16,212

Term of patent 14 years

Int. Cl. D12—14

U.S. Cl. D14—6



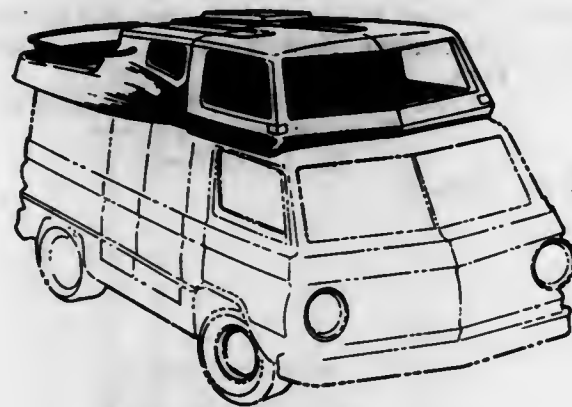
217,814
AUTOMOTIVE ACCESSORY CONSOLE
OR SIMILAR ARTICLE
 Archie L. Simmons, 9677 Brockbank, Apt. 136,
 Dallas, Tex. 75228
 Filed May 19, 1969, Ser. No. 17,220
 Term of patent 14 years
 Int. Cl. D12-14; D14-01; D9-04
 U.S. Cl. D14-6



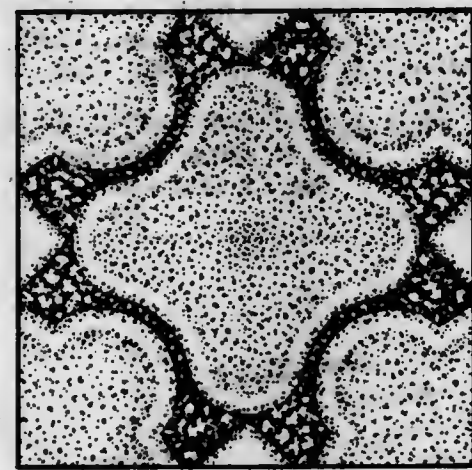
217,816
CHAIR
 Wayland B. Parker, South Boston, Va., assignor to
 Schlumberger Limited (Schlumberger N.V.), New
 York, N.Y., a corporation of the Netherlands
 Antilles
 Filed Apr. 9, 1969, Ser. No. 16,650
 Term of patent 14 years
 Int. Cl. D6-01
 U.S. Cl. D15-1



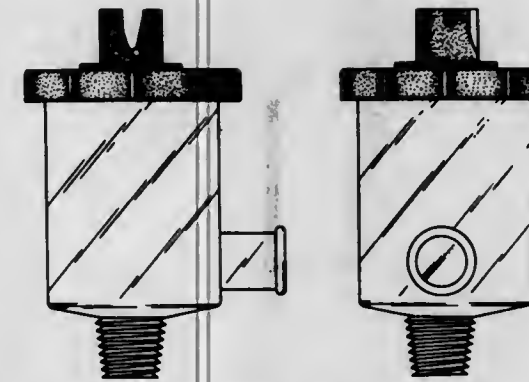
217,815
TOP DECK AND EXTENDABLE CLOSURE UNIT
FOR A STANDUP BUS-TYPE VEHICLE
 Patrick D. Patterson, 2099 Barrett St. 95124, and
 Alwyne Z. Sanders, 63 N. 5th St., Apt. 6 95112,
 both of San Jose, Calif.
 Filed Feb. 5, 1969, Ser. No. 15,650
 Term of patent 7 years
 Int. Cl. D12-14
 U.S. Cl. D14-27



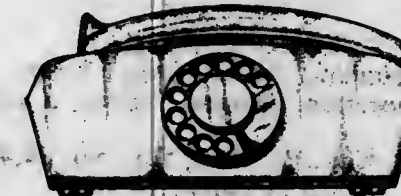
217,817
FLOOR TILE OR SIMILAR ARTICLE
 John Stanley Madsen, Montgomery Township, Belle Mead,
 Somerset County, N.J., assignor to GAF Corporation,
 New York, N.Y., a corporation of Delaware
 Filed Apr. 3, 1969, Ser. No. 16,570
 Term of patent 7 years
 Int. Cl. D25-01
 U.S. Cl. D18-2



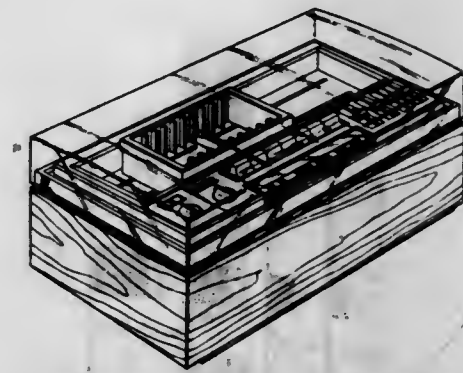
217,818
COMBINATION VALVE AND STRAINER
 Marilyn R. Truesdell, Sioux City, Iowa, assignor to Cen-
 tury Engineering Corporation, Cedar Rapids, Iowa, a
 corporation of Iowa
 Filed Nov. 8, 1968, Ser. No. 14,367
 Term of patent 14 years
 Int. Cl. D23-01
 U.S. Cl. D23-20



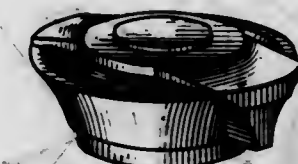
217,819
TELEPHONE
 Minoru Denshi and Haruyuki Amano, Tokyo, Japan, as-
 signors to Tamura Electric Works Limited, Tokyo,
 Japan, a corporation of Japan
 Filed July 22, 1969, Ser. No. 18,300
 Claims priority, application Japan Jan. 25, 1969
 Term of patent 14 years
 Int. Cl. D14-03
 U.S. Cl. D26-14



217,820
CASSETTE TRANSPORT
 Orville W. Larson, Elmhurst, Ill., assignor to Ampex
 Corporation, Redwood City, Calif., a corporation of
 California
 Filed Aug. 18, 1969, Ser. No. 18,725
 Term of patent 14 years
 Int. Cl. D14-01
 U.S. Cl. D26-14



217,821
COMBINED TROPHY AND TROPHY SUPPORT
 Dorothy K. Allen, Libertyville, Ill., assignor to F. H.
 Noble & Company, Chicago, Ill., a corporation of
 Illinois
 Original design application Nov. 15, 1967, Ser. No. 9,427.
 Divided and this application May 27, 1969, Ser. No.
 18,540
 Term of patent 14 years
 Int. Cl. D11-02
 U.S. Cl. D29-28



217,822

BOOKCASE

Georges Frydman, Le Rambouillet, Avenue Edith Cavel,
Nice, Alpes-Maritimes, France
Filed Nov. 24, 1967, Ser. No. 9,528
Claims priority, application France July 13, 1967
Term of patent 14 years
Int. Cl. D6—03

U.S. Cl. D33—2



217,824

TENNIS RACKET FRAME

William Charles Carlton, Ardleigh, Essex, England, as-
signor to Carlton Sports Company Limited, London,
England
Continuation of design applications Ser. No. 10,517, Feb.
9, 1968, and Ser. No. 10,836, Mar. 4, 1968. This appli-
cation Dec. 10, 1968, Ser. No. 14,866
Claims priority, application Great Britain Dec. 7, 1967
Term of patent 14 years
Int. Cl. D21—03

U.S. Cl. D34—5

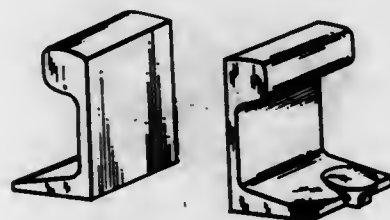


217,823

BOOK END

Robert R. Anderson, 3901 X St. 68503, and Hal V.
Stines, 2201 S. 50th St. 68506, both of Lincoln,
Nebr.
Filed Oct. 11, 1968, Ser. No. 13,945
Term of patent 14 years
Int. Cl. D6—01

U.S. Cl. D33—3

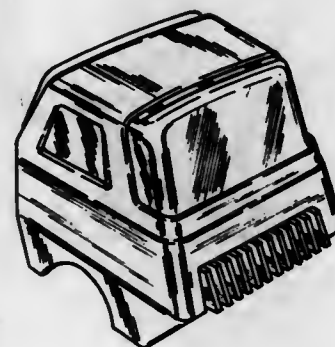


217,825

TOY TRUCK CAB

Vernon A. Peterson, Minneapolis, Minn., assignor to
Tonka Corporation, Mound, Minn., a corporation of
Minnesota
Filed Nov. 12, 1968, Ser. No. 14,408
Term of patent 14 years
Int. Cl. D21—02

U.S. Cl. D34—15



217,826

TUMBLER OR SIMILAR ARTICLE

Frank J. Benes, Lancaster, Ohio, assignor to Anchor
Hocking Corporation, Lancaster, Ohio, a corporation
of Delaware
Filed July 18, 1969, Ser. No. 18,275
Term of patent 14 years
Int. Cl. D7—01

U.S. Cl. D36—8

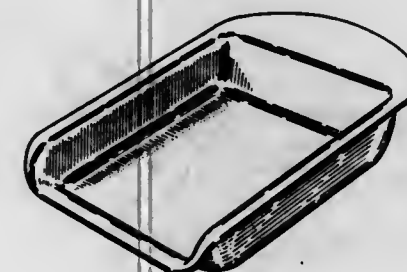


217,827

SALAD DISH

John B. Parker, Sr., Rte. 1, Box 253,
Eden, N.C. 27288
Filed Aug. 12, 1969, Ser. No. 18,655
Term of patent 14 years
Int. Cl. D7—01

U.S. Cl. D44—10



217,828

HOLDER FOR A BEVERAGE CAN OR THE LIKE

Lester E. Hillard, 1709 45th St.,
Des Moines, Iowa 50311
Filed June 10, 1968, Ser. No. 12,282
Term of patent 14 years
Int. Cl. D7—99

U.S. Cl. D44—29



217,829

WATCH BRACELET OR SIMILAR ARTICLE

Ananta Uengrakul, Bangkok, Thailand, assignor to Stelux
Manufacturing Company, Ltd., San Po Kong, Kowloon,
Hong Kong, a corporation of Hong Kong
Filed July 3, 1968, Ser. No. 12,616
Term of patent 14 years
Int. Cl. D11—01

U.S. Cl. D45—4



217,830

COMBINED HIGH INTENSITY LIGHT AND PAD

Stephen Heller, Spring Valley, N.Y., assignor, by me-
assignment, to Tensor Corporation, Brooklyn, N.Y.,
a corporation of New York
Filed Apr. 1, 1968, Ser. No. 11,246
The portion of the term of the patent subsequent to
June 27, 1981, has been disclaimed
Term of patent 14 years
Int. Cl. D26—02

U.S. Cl. D48—20



217,831
GAS-FUELED CIGARETTE LIGHTER
 Alfred Racek, Zwerngasse 59,
 Vienna, Austria
 Filed Sept. 25, 1968, Ser. No. 13,699
 Claims priority, application Austria Mar. 28, 1968
 Term of patent 14 years
 Int. Cl. D27—05

U.S. Cl. D48—27



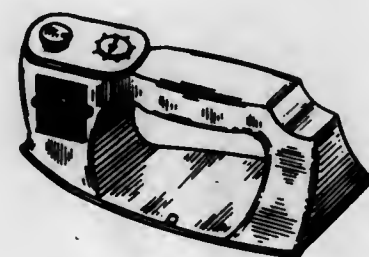
217,832
COMBINED LIGHTING FIXTURE AND SUPPORT POST THEREFOR
 Howard Daum, Gettysburg, Pa., assignor to Hadco Products, Inc., Littlestown, Pa., a corporation of Pennsylvania
 Original design application Jan. 30, 1968, Ser. No. 10,372. Divided and this application Dec. 20, 1968, Ser. No. 15,827
 Term of patent 14 years
 Int. Cl. D26—03

U.S. Cl. D48—31



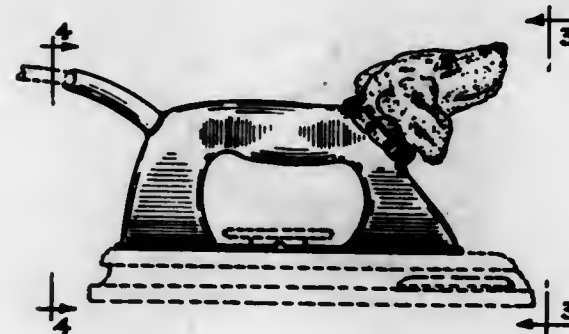
217,833
FLATIRON HANDLE
 James L. Terrell, 1020 Broadway St., North Chicago, Ill. 60064
 Filed Mar. 5, 1969, Ser. No. 16,172
 Term of patent 14 years
 Int. Cl. D7—06

U.S. Cl. D49—6



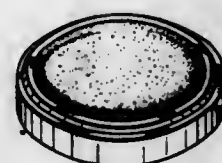
217,834
FLATIRON HANDLE
 James L. Terrell, 1020 Broadway St., North Chicago, Ill. 60064
 Filed Mar. 5, 1969, Ser. No. 16,317
 Term of patent 14 years
 Int. Cl. D7—06

U.S. Cl. D49—6



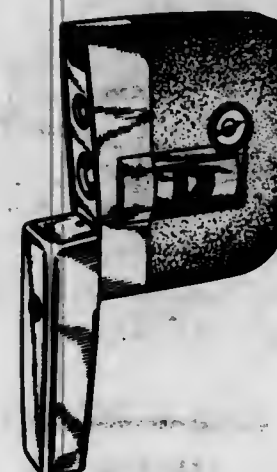
217,835
TAPE MEASURE
 Walter Henkels, 264 Mangenberger-Str., 565 Solingen-Merscheid, Germany
 Filed Oct. 1, 1968, Ser. No. 13,807
 Term of patent 14 years
 Int. Cl. D10—08

U.S. Cl. D52—1



217,836
MOVIE CAMERA
 Kazuo Masuyama, Hyogo-ken, Japan, assignor to Fuji Shashin Film Kabushiki Kaisha, Ashigarakami-gun, Kanagawa-ken, Japan, a corporation of Japan
 Filed Jan. 23, 1969, Ser. No. 15,461
 Claims priority, application Japan Aug. 1, 1968
 Term of patent 14 years
 Int. Cl. D16—02

U.S. Cl. D61—1



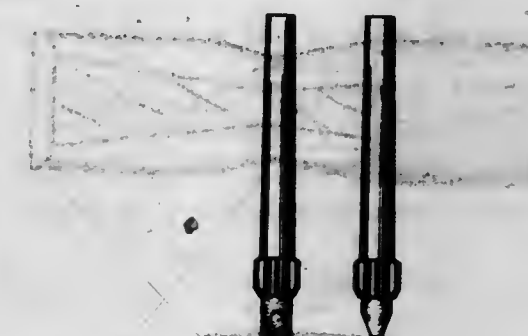
217,837
MOVIE CAMERA
 Kazuo Masuyama, Nishinomiyashi, Japan, assignor to Fuji Shashin Film Kabushiki Kaisha, Ashigarakami-gun, Kanagawa-ken, Japan, a corporation of Japan
 Filed July 25, 1969, Ser. No. 18,409
 Claims priority, application Japan Feb. 8, 1969
 Term of patent 14 years
 Int. Cl. D16—02

U.S. Cl. D61—1



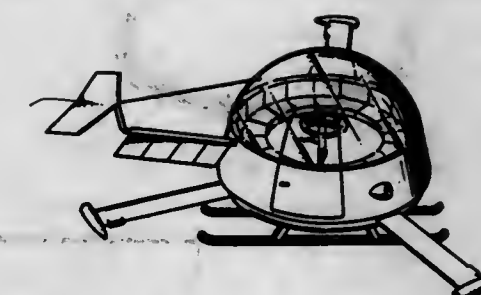
217,838
MARKING PEN
 James H. Lee and James R. Paul, Walnut Creek, Calif., assignors to Dymo-Industries, Inc., Emeryville, Calif., a corporation of California
 Filed May 7, 1968, Ser. No. 11,816
 Term of patent 14 years
 Int. Cl. D19—06

U.S. Cl. D74—17



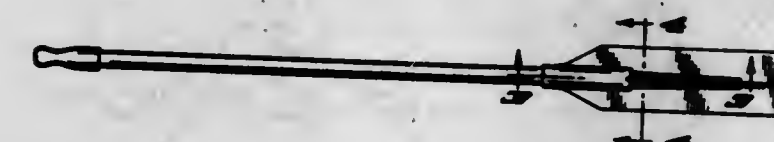
217,839
ROTARY WING AIRCRAFT OR SIMILAR ARTICLE
 Eugene M. Gluhareff, 18518 S. Broadway, Gardena, Calif. 90247
 Filed Nov. 25, 1968, Ser. No. 14,614
 Term of patent 14 years
 Int. Cl. D12—07

U.S. Cl. D71—1



217,840
BOAT OAR
 Robert A. Nichols, 613 3rd St. SW., Fairbank, Minn. 55021
 Filed Dec. 3, 1968, Ser. No. 14,775
 Term of patent 14 years
 Int. Cl. D12—14

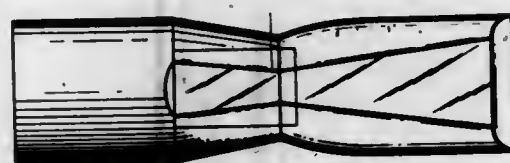
U.S. Cl. D71—1



217,841 CIGAR TIP

Robert F. Bulger, Levittown, and John Weller, Sr., Philadelphia, Pa., assignors to Bayak Cigars Incorporated, Philadelphia, Pa., a corporation of Maryland
Filed May 22, 1967, Ser. No. 7,212
Term of patent 14 years
Int. Cl. D27—02

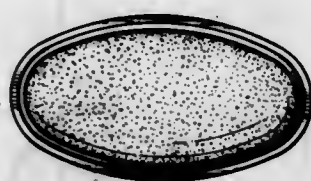
U.S. Cl. D85—8



217,842 BRUSH FOR CLOTHES

Fukuza Nakanishi, 43 Yata Sunji-cho, 3-chome, Sumiyoshi-ku, Osaka-shi, Osaka, Japan
Filed Aug. 14, 1969, Ser. No. 18,689
Term of patent 14 years
Int. Cl. D28—03

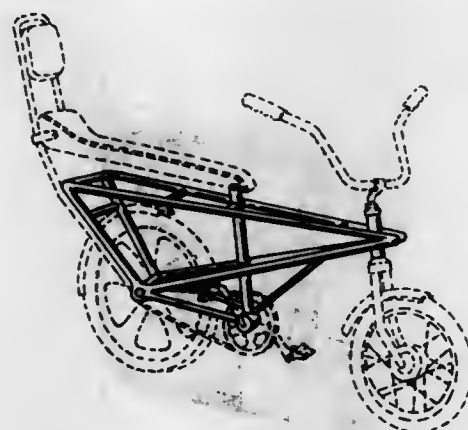
U.S. Cl. D86—13



217,843 FRAME FOR BICYCLES

George Barris, Encino, Calif., assignor to Stelber Industries, Inc., Elmhurst, N.Y., a corporation of New York
Filed Mar. 27, 1969, Ser. No. 16,472
Term of patent 14 years
Int. Cl. D12—11

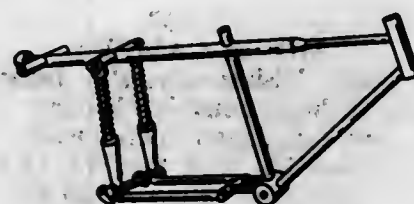
U.S. Cl. D90—3



217,844 BICYCLE FRAME

George Barris, Encino, Calif., assignor to Stelber Industries, Inc., Elmhurst, N.Y., a corporation of New York
Filed May 23, 1969, Ser. No. 17,296
Term of patent 14 years
Int. Cl. D12—11

U.S. Cl. D90—3



LIST OF DEFENSIVE PUBLICATIONS

APPLICANTS TO WHOM

DEFENSIVE PUBLICATIONS WERE ISSUED ON THE 16TH DAY OF JUNE, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O. G. 687.

- Bailor, Francis V., Jr., and J. L. Littlefield. Recovery of tolylene diisocyanate in rising film evaporators. 875,017, 6-16-70, Cl. 203—73.
Campbell, Robert B., L. W. Klika, and G. R. Secrist. Opaque photographic element. 875,014, 6-16-70, Cl. 96—85.
Gnage, Oliver W. Offset printing device. 875,018, 6-16-70, Cl. 101—252.
Klika, Lauri W.: See—
Campbell, Robert B., Secrist, and Klika. 875,014.
Littlefield, John L.: See—
Bailor, Francis V., Jr., and Littlefield. 875,017.
Loschke, Robert C., to United States of America, Federal Aviation Administration. Inlet control system for supersonic aircraft. 875,015, 6-16-70, Cl. 187—1.
Secrist, George R.: See—
Campbell, Robert B., Secrist, and Klika. 875,014.
Stahly, Frederick. Photothermographic system. 875,016, 6-16-70, Cl. 96—49.
United States of America
Federal Aviation Administration: See—
Loschke, Robert C. 875,015.

LIST OF DESIGN PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- GAF Corp.: See—
Madsen, John S. 217,817.
Allen, Dorothy K. Combined trophy and trophy support. 217,821, 6-16-70, Cl. D29—28.
Allied Chemical Corp.: See—
Lohr, Thomas E. 217,811.
Lohr, Thomas E. 217,812.
Lohr, Thomas E. 217,813.
Altamura, George L. Building. 217,809, 6-16-70, Cl. D13—1.
Aluminum Co. of America: See—
Lawrence, Kenneth C. 217,808.
Amano, Haruyuki: See—
Deushi, Minoru, and Amano. 217,819.
Amper Corp.: See—
Larson, Orville W. 217,820.
Anchor Hocking Corp.: See—
Benes, Frank J. 217,826.
Anderson, Robert R., and H. V. Stines. Book end. 217,823, 6-16-70, Cl. D33—3.
Benes, Frank J., to Anchor Hocking Corp. Tumbler or similar article. 217,826, 6-16-70, Cl. D36—8.
Beveridge, David M.: See—
Johnson, Ralph L., Henkel, and Beveridge. 217,801.
Carlton Sports Co.: See—
Carlton, William C. 217,824.
Carlton, William C., to Carlton Sports Co. Tennis racket frames. 217,824, 6-16-70, Cl. D34—5.
Century Engineering Corp.: See—
Truesdell, Merlyn R. 217,818.
Colgate-Palmolive Co.: See—
Douglas, Livingston C. 217,802.
Douglas, Livingston C. 217,803.
Douglas, Livingston C. 217,804.
Douglas, Livingston C. 217,805.
Douglas, Livingston C. 217,807.
Deushi, Minoru, and H. Amano, to Tamura Electric Works Ltd. Telephone. 217,819, 6-16-70, Cl. D26—14.
Douglas, Livingston C., to Colgate-Palmolive Co. Jug or similar article. 217,802, 6-16-70, Cl. D9—41.
Douglas, Livingston C., to Colgate-Palmolive Co. Bottle or similar article. 217,803, 6-16-70, Cl. D9—113.
Douglas, Livingston C., to Colgate-Palmolive Co. Bottle or similar article. 217,804, 6-16-70, Cl. D9—115.
Douglas, Livingston C., to Colgate-Palmolive Co. Combined bottle and cap therefor. 217,805, 6-16-70, Cl. D9—117.
Douglas, Livingston C., to Colgate-Palmolive Co. Dispensing container or similar article. 217,807, 6-16-70, Cl. D9—208.
Frydman, Georges. Bookcase. 217,822, 6-16-70, Cl. D33—2.
Heller, Stephen, to Tensor Corp. Combined high intensity light and pad. 217,830, 6-16-70, Cl. D48—20.
Henkel, Robert I.: See—
Johnson, Ralph L., Henkel, and Beveridge. 217,801.
Hilliard, Lester E. Holder for a beverage can or the like. 217,828, 6-16-70, Cl. D44—29.
Johnson & Quin, Inc.: See—
Johnson, Ralph L., Henkel, and Beveridge. 217,801.
Johnson, Ralph L., R. I. Henkel, and D. M. Beveridge, to Johnson & Quin, Inc. Tape cutter. 217,801, 6-16-70, Cl. D8—98.
Kirkland, Boykin. Battery cable tightener and remover. 217,800, 6-16-70, Cl. D8—51.
Lohr, Thomas E., to Allied Chemical Corp. Automotive mirror. 217,811, 6-16-70, Cl. D16—6.
Lohr, Thomas E., to Allied Chemical Corp. Automotive mirror. 217,812, 6-16-70, Cl. D14—6.
Lohr, Thomas E., to Allied Chemical Corp. Automotive mirror. 217,813, 6-16-70, Cl. D14—6.
Kassin, Ronald A., to Schenley Industries, Inc. Decanter. 217,806, 6-16-70, Cl. D8—119.
Larson, Orville W., to Ampex Corp. Cassette transport. 217,820, 6-16-70, Cl. D28—14.
Lawrence, Kenneth C., to Aluminum Co. of America. Closure. 217,808, 6-16-70, Cl. D9—287.
Madsen, John S., to GAF Corp. Floor tile or similar article. 217,817, 6-16-70, Cl. D18—2.
McGinnis, George F., to Wed Enterprises, Inc. Passenger carrying vehicle. 217,810, 6-16-70, Cl. D14—3.
Parker, John B., Sr. Salad dish. 217,827, 6-16-70, Cl. D44—10.
Parker, Wayland B., to Schlumberger Ltd. (Schlumberger N.V.). Chair. 217,816, 6-16-70, Cl. D15—1.
Patterson, Patrick D., and A. Z. Sanders. Top deck and extendable closure unit for a stand up bus type vehicle. 217,815, 6-16-70, Cl. D14—27.
Peterson, Vernon A., to Tonka Corp. Toy truck cab. 217,825, 6-16-70, Cl. D34—15.
Sanders, Alwyn Z.: See—
Patterson, Patrick D., and Sanders. 217,815.
Schenley Industries, Inc.: See—
Kassin, Ronald A. 217,806.
Schlumberger Ltd. (Schlumberger N.V.): See—
Parker Wayland B. 217,816.
Simmons, Archie L. Automotive accessory console or similar article. 217,814, 6-16-70, Cl. D14—6.
Stelux Mfg. Co. Ltd.: See—
Uengsakul, Ananta. 217,829.
Stines, Hal V.: See—
Anderson, Robert R., and Stines. 217,823.
Tamura Electric Works Ltd.: See—
Deushi, Minoru, and Amano. 217,819.
Tensor Corp.: See—
Heller, Stephen. 217,830.
Tonka Corp.: See—
Peterson, Vernon A. 217,825.
Truesdell, Merlyn R., to Century Engineering Corp. Combination valve and strainer. 217,818, 6-16-70, Cl. D23—20.
Uengsakul, Ananta, to Stelux Mfg. Co., Ltd. Watch bracelet or similar article. 217,829, 6-16-70, Cl. D45—4.
Volk, Albert J.: See—
Spaven, George D., Volk, and Assenza. 217,795.
Wed Enterprises, Inc.: See—
McGinnis, George F. 217,810.

CLASSIFICATION OF PATENTS

ISSUED JUNE 16, 1970

NOTE.—First number, class; second number, subclass; third number, patent number

CLASSIFICATION OF DESIGNS

D 8- 51 : 217,800	D 9-267 : 217,808	D15- 1 : 217,816	D34- 5 : 217,824	D48- 27 : 217,831	D71- 1 : 217,839
98 : 217,801	D13- 1 : 217,809	D18- 2 : 217,817	15 : 217,825	31 : 217,832	31 : 217,840
D 9- 41 : 217,802	D14- 3 : 217,810	D23- 20 : 217,818	D36- 8 : 217,826	D49- 6 : 217,833	D74- 17 : 217,838
113 : 217,803	6 : 217,811	D26- 14 : 217,819	D44- 10 : 217,827	29 : 217,828	D85- 8 : 217,841
115 : 217,804	217,812	D29- 28 : 217,821	D45- 4 : 217,829	D62- 1 : 217,835	D86- 13 : 217,842
117 : 217,805	217,813	D33- 2 : 217,822	D48- 20 : 217,830	D61- 1 : 217,836	D90- 8 : 217,843
119 : 217,806	217,814	3 : 217,823		217,837	217,844
208 : 217,807	27 : 217,815				

DEFENSIVE PUBLICATIONS APPLICATIONS

(Notice of Dec. 16, 1969, 869 O.G. 687)

96- 49 : T875,016	96- 85 : T875,014	101-252 : T875,018	137- 1 : T875,015	203- 73 : T875,017
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PI 3

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

Alabama.....	1	Kentucky.....	21	Oregon.....	41
Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
American Samoa.....	3	Maine.....	23	Puerto Rico.....	43
Arizona.....	4	Maryland.....	24	Rhode Island.....	44
Arkansas.....	5	Massachusetts.....	25	South Carolina.....	45
California.....	6	Michigan.....	26	South Dakota.....	46
Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
Florida.....	12	Nevada.....	32	Virgin Islands.....	52
Georgia.....	13	New Hampshire.....	33	Washington.....	53
Guam.....	14	New Jersey.....	34	West Virginia.....	54
Hawaii.....	15	New Mexico.....	35	Wisconsin.....	55
Idaho.....	16	New York.....	36	Wyoming.....	56
Illinois.....	17	North Carolina.....	37	U.S. Air Force.....	57
Indiana.....	18	North Dakota.....	38	U.S. Army.....	58
Iowa.....	19	Ohio.....	39	U.S. Navy.....	59
Kansas.....	20	Oklahoma.....	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

Design Patents

6 : 217,809	6 : 217,844	18 : 217,806	27 : 217,825	34 : 217,805	39 : 217,826
217,810	217,801	19 : 217,818	217,840	217,807	42 : 217,800
217,815	217,820	20 : 217,828	31 : 217,823	217,817	217,832
217,838	217,821	26 : 217,811	34 : 217,802	36 : 217,806	217,841
217,839	217,833	217,812	217,803	217,830	48 : 217,814
217,843	217,834	217,813	217,804	37 : 217,827	54 : 217,816

DEFENSIVE PUBLICATIONS APPLICATIONS

(Notice of Dec. 16, 1969, 869 O.G. 687)

6 : T875,015	10 : T875,017	36 : T875,014	36 : T875,016	36 : T875,018
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PI 4

A UNITED STATES
DEPARTMENT OF
COMMERCE
PUBLICATION



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Number 3

TRADEMARKS NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA), The Coca Cola Company, Tonic syrup or beverage; Reg. No. 47,189, same, Non-alcoholic maltless beverages and the syrups for making such beverages; Reg. No. 238,145, same, Beverages and syrups for the manufacture of such beverages; Reg. No. 238,146, same; Reg. No. 415,755 (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, filed Jan. 18, 1970, D.C., E.D. Wash. (Takima), Doc. 2592, *The Coca-Cola Company v. Yakima Pizza Corporation, doing business as Shakey's Pizza Parlor and Shakey's Lounge*. Final judgment, injunction against further infringement on trademarks, Mar. 28, 1970. Same, filed Mar. 28, 1970, D.C., District of Columbia (Washington), Doc. 912-70, *The Coca-Cola Company v. Emanuel P. Sardella, doing business as 1100 Coffee Shop et al.* Same, filed Mar. 24, 1970, D.C., District of Columbia (Washington), Doc. 862-70, *The Coca-Cola Company v. Black Sheep Corporation, doing business as Black Sheep Lounge and Restaurant*.

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

Reg. No. 345,466. (See Reg. No. 793,829.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 549,014. (See Reg. No. 793,829.)

Reg. No. 554,811 (DACRON), E. I. du Pont de Nemours and Company, Synthetic polyester fibers for generalized use in the industrial arts; Reg. No. 555,005, same, Yarns of synthetic fibers, filed Sept. 22, 1969, D.C., S.D.N.Y., Doc. 69-4142, *E. I. du Pont de Nemours & Co. v. Dynasty of Hong Kong Ltd.* Final Judgment, defendants permanently enjoined, Sept. 28, 1969.

Reg. No. 555,005. (See Reg. No. 554,811.)

Reg. No. 555,913. (See Reg. No. 793,829.)

Reg. No. 560,787. (See Reg. No. 793,829.)

Reg. No. 571,196. (See Reg. No. 793,829.)

Reg. No. 575,006. (See Reg. No. 793,829.)

Reg. No. 601,290. (See Reg. No. 793,829.)

Reg. No. 617,181 (VOLKSWAGEN), Volkswagenwerk, GmbH, Vehicles—namely, automobiles and trucks, aircraft, boats, and parts of and accessories for automobiles—namely, radiators, direction indicators, windshield defrosters, anti-dazzle appliances, windshield wipers, shock absorbers, brakes, and baggage racks; Reg. No. 621,649 (VW IN CIRCLE), same; Reg. No. 653,005 (VW), same; Reg. No. 790,621 (VOLKSWAGEN), same, Automobiles and trucks, aircraft, and boats; and parts of and accessories for automobiles—namely, radiators, direction indicators, windshield defrosters, anti-dazzle appliances, windshield wipers, Shock absorbers, brakes, and baggage racks; Reg. No. 790,600 (VW AND DESIGN), same; Reg. No. 791,311 (VW), same; Reg. No. 804,800 (VW AND DESIGN), same, Repair and reconditioning of motor vehicles,

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1970

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]..... 24,172
Date of oldest new application..... June 2, 1969
Date of oldest amended application (filing date)..... October 20, 1966

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....		9-17-69	10-2-67
(II) F. H. WETHERBEE, Classes 1, 6, 15, 16, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....		7-9-69	10-20-66
(III) C. R. FOWLER, Classes 19, 21, 22, 23, 31, 34, 35, 36.....		9-4-69	11-2-66
(IV) M. E. ABRAMSON, Classes 6, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....		6-2-69	10-27-67
Renewals (All Classes).....		3-17-70	
Sec. 12(c) Publications (All Classes).....		3-17-70	

Applications filed during the month of April 1970—3,154

Registrations Issued 456—No. 892,624 to No. 893,079

Renewals Issued 140

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, \$20.50 per annum, foreign mailing \$5.75 additional; single copies, 40 cents each.

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TM 875 O.G.—C

TM 109

aircraft and boats; Reg. No. 808,881 (VOLKSWAGEN), same, Vehicles—namely, automobiles and trucks, aircraft, and boats; and parts and accessories for automobiles and trucks, aircraft and boats—namely, radiators, direction indicators, windshield wipers, shock absorbers, brakes, and baggage racks; Reg. No. 815,883 (VW), same, Repair, reconditioning and replacement of motors and accessories and parts thereof, and repair and reconditioning of motor vehicles, aircraft, and boats; Reg. No. 819,297 (VOLKSWAGEN), same, filed Mar. 25, 1970, D.C., N.D. Calif. (San Francisco), Doc. C-70-634-GSL, Volkswagenwerk Aktiengesellschaft v. Fred Fenster, doing business as City Foreign Car Center. Same, filed July 22, 1969, D.C., Puerto Rico (San Juan), Doc. C-499-69, Volkswagenwerk Aktiengesellschaft v. Europa Motor Parts, Inc. et al. Consent judgment enjoining defendant from infringement of trademarks, etc., Mar. 10, 1970.

Reg. No. 821,849. (See Reg. No. 617,131.)

Reg. No. 833,885. (See Reg. No. 617,131.)

Reg. No. 798,479. (See Reg. No. 770,899.)

Reg. No. 754,276. (See Reg. No. 770,899.)

Reg. No. 770,899 (LEANING FIGURE DESIGN), Klopman Mills, Inc., Greige and finished fabrics in the piece of all types for use in men's, women's and children's apparel, in home furnishings, and in the industrial field; Reg. No. 754,276 (LEAN ON KLOPMAN), same, Greige and finished fabrics in the piece of all types for use in men's women's and children's apparel; Reg. No. 819,166 (A FABRIC YOU CAN LEAN ON BY KLOPMAN), same, Greige and finished fabrics in the piece of all types for use in men's, women's and children's apparel, in home furnishings, and in the industrial field; Reg. No. 736,479 (A MAN YOU CAN LEAN ON THAT'S KLOPMAN), same; Reg. No. 823,446 (LOOK BEFORE YOU LEAN—MAKE SURE IT'S A FABRIC YOU CAN LEAN ON BY KLOPMAN), same, filed July 11, 1968, D.C., S.D.N.Y., Doc.

68-C-2861, Klopman Mills, Inc. v. Wilson Shirt Co., Inc. Judgment for plaintiff enjoining defendants, Dec. 10, 1969.

Reg. No. 799,821. (See Reg. No. 617,131.)

Reg. No. 799,939. (See Reg. No. 617,131.)

Reg. No. 791,811. (See Reg. No. 617,131.)

Reg. No. 793,879 (ROLLER DERBY), Roller Derby Associates, Entertainment exhibition involving contest between teams of roller skaters; Reg. No. 555,913, same, Pennants, lapel buttons; Reg. No. 800,787, same, Sports clothing; Reg. No. 571,198 (ROLLER DERBY SKATE), Roller Derby Skate Co., Roller skates, wheels and repair parts therefor; Reg. No. 801,299 (ROLLER DERBY "STREET KING"), same, Roller Skates, wheels and repair parts therefor, and shoes attached to roller skates and accessories therefor; Reg. No. 845,408 (ROLLER DERBY), same, Roller skates, wheels, and repair parts therefor; Reg. No. 575,006, same, Roller Derby Associates. All types of dolls and toy figures; Reg. No. 549,014, same, wallets, purses, pocket books, portfolios, and key cases, filed Dec. 29, 1969, D.C., S.D. Tex. (Houston), Doc. 69-H-1261, Roller Derby Associates et al. v. Texas Skating Derbys, Inc. et al.

Reg. No. 804,309. (See Reg. No. 617,131.)

Reg. No. 800,881. (See Reg. No. 617,131.)

Reg. No. 815,832. (See Reg. No. 617,131.)

Reg. No. 819,166. (See Reg. No. 770,899.)

Reg. No. 819,297. (See Reg. No. 617,131.)

Reg. No. 823,446. (See Reg. No. 770,899.)

Reg. No. 885,995 (AFRO-SHEEN), Johnson Products Co., Inc., Hair conditioner, hair spray and hair dressing, filed Feb. 17, 1970, D.C.N.J. (Newark), Doc. C-199-70, Johnson Products Co., Inc. v. All-American Brush Mfg. Corp.

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 3, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.104. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 279,131. Gebrüder Giulini G.m.b.H., Ludwigshafen (Rhine), Germany. Filed Aug. 28, 1967.



Owner of German Reg. No. 807,785, dated Mar. 30, 1965.

Class 4—Abrasives and Polishing Materials

For Polishing Alumina for the Manufacture of Cleaning Agents for Kitchen Ranges, Metal and Lacquered Surfaces, for the Preparation of Polishing Compounds for Non-Ferrous, Rare and Light Metals, for the Surface Treatment of the Balls of Ball-Bearings as Well as for the Surface Treatment of Plastics Such as Polyester Lacquers, Glass, Marble, Gems and Other Ornamental Stones; and Whetting Agents (Int. Cl. 3).

First use at least as early as 1966; in commerce at least as early as August 1966.

Class 6—Chemicals and Chemical Compositions

For Chemicals and Chemical Compositions for Commercial and Industrial Applications—Namely, Phosphoric Acid, Alkali Phosphates, Organic Phosphates, Alumina, Alumina Gels, Alumina Compounds, Silicic Acid and Silicon Dioxide; Sterilizing and Sanitizing Agents; Smelting Salts for Use in the Manufacture of Cheese; Water Softening Preparations; Mordants; Flocculating Agents and Water Hardness Testing Preparations; Chemicals for Photographic Purposes; Fire Extinguishing Agents; Hardening Agents; Leather Dressings and Preservatives, Sizing and Tanning Agents; Emulsifiers; Laundry Starches and Dyes; Rust and Corrosion Inhibitors (Int. Cls. 1 and 2).

First use at least as early as 1966; in commerce at least as early as August 1966.

Class 10—Fertilizers

For Phosphates and Phosphate Compounds Used as Fertilizers; and Plant Foods (Int. Cl. 1).

Class 18—Medicines and Pharmaceutical Preparations

For Medicines and Pharmaceuticals; Base Materials and Adjuvants for Use in the Manufacture of Medicines and Pharmaceuticals—Namely, Convallaria Extracts, Rauwolfia Extracts and Concentrates, Reserpine, Rescinamine, Monosodium-phosphate, Disodiumphosphate, Aluminum Hydroxide Gel and Aluminum Oxide (Int. Cls. 1 and 5).

First use March 1962; in commerce March 1962.

Class 46—Foods and Ingredients of Foods

For Phosphates and Polyphosphates for Use as Food Preservatives and as Feed Additives; Food Preservatives and Conservatives, Particularly for Meat, Sausages and Fish (Int. Cl. 1).

Class 52—Detergents and Soaps

For Leather Cleaning Agents; Spot Removers; and Rust Removers (Int. Cl. 3).

SN 801,612. Domino's, Inc., Ypsilanti, Mich., by change of name from Domino's Pizza, Inc., Ypsilanti, Mich. Filed June 28, 1968.



Class 100—Miscellaneous

For Restaurant and Catering Services (Int. Cl. 42). First use Jan. 1, 1965.

Class 101—Advertising and Business

For Rendering and Operating Restaurant and Catering Services (Int. Cl. 35). First use Mar. 31, 1967.

SN 805,241. Pellon Corporation, New York, N.Y. Filed Aug. 15, 1968.



Class 21—Electrical Apparatus, Machines, and Supplies

For Battery Separators and Electrical Insulation Tape (Int. Cls. 9 and 17).

Class 29—Brooms, Brushes, and Dusters

For Polishing Cloth and Disks, and Offset and Gravure Printing Wipers (Int. Cl. 21).

Class 31—Filters and Refrigerators

For Air and Liquid Filter Fabrics (Int. Cl. 11).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Non-Woven Material for Use as a Substitute for Woven Fabric, and as Interfacing Fabric; Non-Woven Fabric for Use Instead of Canvas; Chafar Fabrics and Non-Woven Fibers Which Are Bonded Together, To Form Sheets; Used as Overlays for Lamination, Fusing Webs and Backings for Vinyl (Int. Cl. 24).

First use Jan. 5, 1968.

SN 818,219. Chemetron Corporation, Chicago, Ill. Filed Nov. 29, 1968. SN 818,485. Fleetwood Enterprises, Inc., Riverside, Calif. Filed Feb. 6, 1969.

H.P.E. CO.

Class 34—Heating, Lighting, and Ventilating Apparatus
For Valves and Regulators for Use With Welding and Cutting Gases (Int. Cl. 11).

Class 44—Dental, Medical, and Surgical Appliances
For Valves and Regulators for Use With Medical Gases (Int. Cl. 10).

First use on or about June 1, 1955.

SN 814,380. Bandy Laboratories, Inc., Temple, Tex. Filed Dec. 13, 1968.



Applicant disclaims the words "Pet Products" apart from the mark as shown.

Class 6—Chemicals and Chemical Compositions

For Kitten-Puppy Tick and Flea Spray; Dog and Cat Repellent Spray To Prevent Pets From Chewing Furniture Inside and for Use Outside on Blossoms and Plants; Dog and Cat Repellent Dust To Keep Pets Away From Patios, Trees, Flowers, Steps, Walks and Furniture; Tick and Flea Powder for Dogs and Cats; Tick and Flea Spray for Dogs and Cats; Insect Repellent for Mosquitoes, Flies, Chiggers, Ticks, Fleas, Roaches, Ants, Moths, Spiders and Scorpions; and Dog Spray for Killing Ticks, Fleas, and Lice (Int. Cl. 5).

Class 15—Oils and Greases

For Clipper Lubricant and Cleaner (Int. Cl. 4).

Class 18—Medicines and Pharmaceutical Preparations

For Anti-Mating Spray for Dogs; Itch Rid for Dogs, Cats and Horses; and Ear Powder for Dogs and Cats (Int. Cl. 5).

Class 51—Cosmetics and Toilet Preparations

For Hair Setting Spray for Dogs and Cats and Grooming Powder; and Cologne and Deodorant for Pets (Int. Cl. 3).

First use on or about Oct. 1, 1968.

SN 814,481. Memorex Corporation, Santa Clara, Calif. Filed Dec. 16, 1968.

MEMOREX

Owner of Reg. No. 734,922.

Class 21—Electrical Apparatus, Machines, and Supplies

For Magnetic Tape for Television Recorders (Int. Cl. 9).
First use Nov. 1, 1963.

Class 26—Measuring and Scientific Appliances

For Disc Drives, Magnetic Recording Discs and Magnetic Recording Tape for Data Processing Equipment and Measuring and Testing Instruments (Int. Cl. 9).
First use July 12, 1961.

BARRINGTON**Class 12—Construction Materials**

For Modules for the Construction of Prefabricated Dwelling Houses and Other Buildings (Int. Cl. 19).

Class 19—Vehicles

For Mobile Homes, Travel Trailers, House Trailers, and Camping Trailers (Int. Cl. 12).

First use Nov. 25, 1968.

SN 823,176. Elphiac, Société Anonyme, Saint-Gilles, Brussels, Belgium. Filed Apr. 1, 1969.



Priority claimed under Sec. 44(d) on Belgian Reg. No. 9,099, dated Oct. 24, 1968.

Class 21—Electrical Apparatus, Machines, and Supplies

For Rotary or Static Electric Generators and Parts Thereof—Namely, Starters, Rectifiers, Exciter Sets, Transformers, Condensers, Induction Coils, Electric Inductors, Auto-Transformers, Switches and Relays (Int. Cl. 7 and 9).

Class 26—Measuring and Scientific Appliances

For Operating and Control Apparatus, Detached Parts and Fittings Thereof—Namely, Voltmeters, Ammeters, Power Factor Meters, and High Frequency Meters (Int. Cl. 9).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Induction Heating Equipment—Namely, Induction Furnaces, Heaters for Bars and Tubes, Billet Heaters, Pin Heaters, Automatic Machines for Surface Hardening, Annealing or Welding; Di-Electric Heating Equipment; Resistance Furnaces and Melting Furnaces; Electric Welding Sets; Electric Equipment for Heating by Electric Discharge or by Radiation; and Parts Thereof (Int. Cl. 7 and 11).

SN 823,620. Porzellanfabriken Lorenz Hutschenreuther Aktiengesellschaft, Selb, Bavaria, Germany. Filed Apr. 4, 1969.

LORENZ
HUTSCHENREUTHER



Owner of U.S. Reg. Nos. 598,185 and 605,929.

Class 30—Crockery, Earthenware, and Porcelain

For Porcelain House and Kitchen Ware—Namely, Dinner Sets, Coffee and Tea Service, After Dinner Coffee Service, Chocolate and Liquor Service, Egg Service; and Art Objects of Porcelain—Namely, Vases, Boxes, Dishes, and Decorated Plates (Int. Cl. 21).

Class 50—Merchandise Not Otherwise Classified

For Figurines (Int. Cl. 21).

First use February 1967; in commerce March 1967.

SN 823,905. Music Sales Corporation, New York, N.Y. Filed Apr. 8, 1969.

**Class 11—Inks and Inking Materials**

For Music Writing Inks (Int. Cl. 16).

Class 36—Musical Instruments and Supplies

For Music Supplies—Namely, Durable Cardboard or Plastic Cases, Folders, Wrappers and Envelopes Designed for Carrying, Storing and Filing Sheet Music, Folio Music, Scores and Orchestral Parts (Int. Cl. 15).

Class 37—Paper and Stationery

For Music Manuscript Papers, Books, Pads and Looseleaf Fillers and Binders; Score Papers, Stave-Ruled Correction Tapes for Score and Music Papers (Int. Cl. 16).

First use Oct. 15, 1968.

SN 328,238. SFM Corporation, Union, N.J. Filed May 26, 1969.

SFM

Owner of Reg. No. 771,121.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Lathes, Including Automatic, Semiautomatic and Chucking Lathes, Automatic and N/C tracer Lathes; Centering, Milling, Drilling and Boring Machines; Machines for Commuting and for Compacting, Treating and Processing Waste Materials and Garbage; Control Panels for All of the foregoing; Tool Grinding and Form Relieving Fixtures and Machines, and Components and Parts of All of the foregoing (Int. Cl. 7).
First use at least as early as March 1962.

Class 26—Measuring and Scientific Appliances

For Photoelectric Sensor Systems for Controlling the Movement of Machine Tools and Other Equipment; Electronic and Automation Devices and Equipment—Namely, Tracer and Tape Control Systems for Machines; Lubricator Pressure Failure Responsive Controls for Machine Tools and Other Equipment, and Parts Thereof (Int. Cl. 9).
First use at least as early as July 1964.

SN 829,980. Henry Manufacturing Co., Inc., Bowling Green, Ohio. Filed June 13, 1969.

HENRY**Class 23—Cutlery, Machinery, and Tools, and Parts Thereof**

For Conveyors and Continuous Separators for Sludge Removal by Means of Scrapers for Both Settled and Floating Solids, and Parts Thereof (Int. Cl. 7).

Class 31—Filters and Refrigerators

For Filters for Liquids Basically for Industrial and Commercial Use, and Parts Thereof (Int. Cl. 11).

First use January 1954.

SN 332,774. Elphiac, Société Anonyme, Saint-Gilles, Brussels, Belgium. Filed July 17, 1969.



Owner of Belgian Reg. No. 9,098, dated Oct. 24, 1968.

Class 21—Electrical Apparatus, Machines, and Supplies

For Rotary or Static Electric Generators and Parts Thereof—Namely, Starters, Rectifiers, Exciter Sets, Transformers, Condensers, Induction Coils, Electric Inductors, Auto-Transformers, Switches and Relays (Int. Cls. 7 and 9).

Class 26—Measuring and Scientific Appliances

For Operating and Control Apparatus, Detached Parts and Fittings Thereof—Namely, Voltmeters, Ammeters, Power Factor Meters, and High Frequency Meters (Int. Cl. 9).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Induction Heating Equipment—Namely, Induction Furnaces, Heaters for Bars and Tubes, Billet Heaters, Pin Heaters, Automatic Machines for Surface Hardening, Annealing or Welding; Di-Electric Heating Equipment; Resistance Furnaces and Melting Furnaces; Electric Welding Sets; Electric Equipment for Heating by Electric Discharge or by Radiation; and Parts Thereof (Int. Cls. 7 and 11).

SN 333,514. The American Montessori Society, Inc., New York, N.Y. Filed July 25, 1969.



Class 22—Games, Toys, and Sporting Goods

For Educational Toys for Instruction in Personal Care and Familiarization With Prismatic and Geometric Shapes, Colors, Musical Tones, Weights, Smells, Touch, Temperature and Stereoscopic Vision—Namely, Framed Fabric Panels With Lacing, Hooks and Eyes, Safety Pins, Snap Fasteners and Zippers, Prismatic Solids, Cylinders, Blocks and Towers; Tuned Musical Bells, Tone Bars, Staff Notation Boards and Accessories; Demonstration Samples of Geometrical Prism Solids, Weights, Various Surface-Textured Touch Boards; Display Boards, Insets, Cut-Outs and Jigsaw Puzzles for Use in the Instruction of Language, Arithmetic, Geometry and Geography, Namely, Blocks, Beads, Rods, Sticks and Prisms for Counting and Use in Performing Mathematical Computations, Syllable, Letter, Number, Word and Grammar Templates and Display Boards, Prismatic Solid Take-Apart Puzzles Illustrating Squares, Cubes, Square Roots and Cube Roots, Jigsaw Puzzle Maps, and Miniature Model Toy Form Displays (Int. Cl. 28).

Class 37—Paper and Stationery

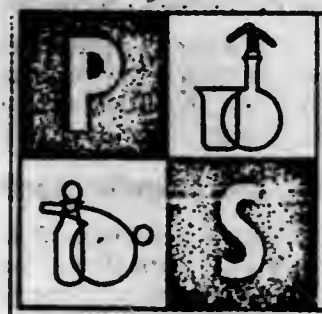
For Diplomas, Certificates, Letterheads and Invoice Forms Sold to Member Schools; Writing Instruments—Namely, Crayons, Pens, Pencils and Tracing Guides of Wood, Metal, and the Like (Int. Cl. 16).

Class 38—Prints and Publications

For Professional Bulletins, Teachers' Journals, Newsletters, Reading Instruction Books, Pamphlets Listing Applicant's Publications, Explanatory Folders, Pamphlets and Brochures Describing Applicant and "the Montessori Method" of Education for Distribution to Parents of Prospective Students and to the Public (Int. Cl. 16).

First use in or about 1958.

SN 334,463. Delect Merchandising Corp., New York, N.Y. Filed Aug. 5, 1969.

**Class 6—Chemicals and Chemical Compositions**

For Fountain Solutions for Offset Presses, Aerosol Sprays for Static Elimination and for Preventing Skinning of Ink and Silicone Sprays (Int. Cl. 1).

Class 52—Detergents and Soaps

For Cleaning Solvents for the Graphic Arts (Int. Cl. 3).

First use January 1945.

SN 343,030. Studio Girl-Hollywood, Inc., Chicago, Ill. Filed Nov. 10, 1969.

STUDIO GIRL**Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks**

For Women's Hand Bags (Int. Cl. 18).

Class 39—Clothing

For Brassieres (Int. Cl. 25).

First use on or about Nov. 3, 1969.

SN 344,275. Creative Merchandising, Inc., Denver, Colo. Filed Nov. 24, 1969.

CREATIVE MANOR**Class 23—Cutlery, Machinery, and Tools, and Parts Thereof**

For Stainless Steel Flatware (Int. Cl. 8).

First use Apr. 15, 1969.

Class 30—Crockery, Earthenware, and Porcelain

For China Dinnerware (Int. Cl. 21).

First use Oct. 15, 1968.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 289,898. Greene, Tweed & Co., Inc., d.b.a. Greene, Tweed & Co., North Wales, Pa. Filed Jan. 23, 1968.

FLUOROMER

For Synthetic Rubber for Use as a Molding Composition for Making Packings and Seals (Int. Cl. 17).
First use Dec. 15, 1967.

SN 310,953. Witco Chemical Corporation, New York, N.Y. Filed Oct. 30, 1968.

WITONITE

For Clays Treated With Organic Surface Active Agents for General Use in the Industrial Arts (Int. Cl. 19).
First use Sept. 25, 1968.

SN 314,807 The Pittston Company, New York, N.Y. Filed Dec. 16, 1968.



Applicant disclaims the representation of a piece of coal and the term "Sewell" apart from the mark as shown. Owner of Reg. Nos. 107,633, 659,939, and others.

For Coal (Int. Cl. 4).

First use Nov. 11, 1968.

SN 325,998. Sani Pine Products Co., Inc., Great Neck, N.Y. Filed Apr. 30, 1969.

SANI LITTER

No claim is made to the word "Litter" apart from the mark as shown.

For Sanitary Absorbent for Use in Cat and Pet Boxes, in Barbecue Grills, in Garbage Cans, on Floors and Other Surfaces, as a Mulch for Plants, and as an Anti-Skid Material on Ice and Snow (Int. Cl. 1).

First use on or about Mar. 15, 1958.

SN 329,475. Husky Briquetting, Inc., Cody, Wyo. Filed June 9, 1969.



The mark consists of a fanciful representation of the letters "hb."

For Barbecue Briquets (Int. Cl. 4).

First use on or about Nov. 1, 1966.

SN 335,582. International Pulp Sales Company, New York, N.Y. Filed Aug. 18, 1969.

NICELL KB

For Wood Pulp (Int. Cl. 1).

First use Apr. 22, 1968.

SN 342,222. Benilite Corporation of America, New York, N.Y. Filed Oct. 31, 1969.

BENILITE

For Beneficiated Ilmenite (Titanic Iron Ore (FeTiO₃) which is Upgraded into a Product Possessing a Higher Titanium Dioxide (TiO₂) Content Than Ilmenite in its Natural State (Int. Cl. 6).

First use June 18, 1969.

SN 342,224. Benilite Corporation of America, New York, N.Y. Filed Oct. 31, 1969.

WHITOX

For Titanium Dioxide (TiO₂), Product Used as a Pigment for Paints, Paper, Plastics, etc. (Int. Cl. 2).

First use July 11, 1969.

SN 342,268. J. M. Huber Corporation, Borger, Tex. Filed Oct. 31, 1969.

HYDRAPRINT

For Clay (Int. Cl. 19).

First use June 30, 1969.

SN 342,860. Golden State Sheep Tanning Co., Brooklyn, N.Y. Filed Nov. 6, 1969.

PRIMA

For Sheared Process Lamb Skins (Int. Cl. 18).
First use Oct. 20, 1969.

SN 343,091. Davies Nitrates Co., Inc., Morristown, N.J. Filed Nov. 10, 1969.

DAVON

For Plastics, Especially Fluorocarbon Resin Compositions (Int. Cl. 1).
First use Oct. 2, 1961.

SN 343,328. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Nov. 12, 1969.

PHENODUR

Owner of German Reg. No. 498,516, dated July 31, 1937.
For Synthetic Resins (Int. Cl. 1).

Class 2—Receptacles

SN 331,633. Masterwares Corp., Columbus, Ind. Filed July 2, 1969.

TRI-SPENSER

For Dispenser for Rolled Products Such as Paper, Foli, Plastic, and the like (Int. Cl. 6).
First use Feb. 18, 1969.

SN 335,598. W. A. Miller Co., Inc., Oquossoc, Maine. Filed Aug. 18, 1969.



For Receptacles—Namely, Cartons and Boxes (Int. Cl. 16).
First use May 1, 1961.

SN 335,602. Nyman Mfg. Co., Providence, R.I. Filed Aug. 18, 1969.

COURTESY CUP

Applicant disclaims the word "Cup" apart from the mark as shown, but reserves any common law right in the word "Cup" as used with the mark when the mark is applied to the goods.

For Plastic Drinking Cups (Int. Cl. 21).

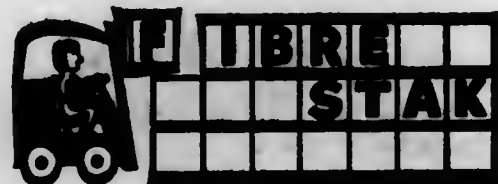
First use on or about May 12, 1969.

SN 337,523. Consolidated Aluminum Corporation, Jackson, Tenn. Filed Sept. 10, 1969.



Owner of Reg. No. 776,054.
For Aluminum Foil Pans and Dishes (Int. Cl. 21).
First use July 17, 1969.

SN 338,564. General Nailing Machine Corporation, Sanger, Calif. Filed Sept. 22, 1969.



The representation of the cartons is disclaimed apart from the mark as shown.
For Corrugated Cartons (Int. Cl. 16).
First use July 5, 1969.

SN 340,028. Menasha Corporation, Neenah, Wis. Filed Oct. 7, 1969.



The lining shown in the drawing is part of the mark and is not intended to indicate color.
For Corrugated Paper Containers Treated With Wax or Wax-Resin Compositions (Int. Cl. 16).
First use Aug. 27, 1969.

SN 340,029. Menasha Corporation, Neenah, Wis. Filed Oct. 7, 1969.



The lining shown in the drawing is part of the mark and is not intended to indicate color.
For Corrugated Paper Containers Treated With Wax or Wax-Resin Compositions (Int. Cl. 16).
First use Aug. 21, 1969.

SN 351,538. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 16, 1970.

MANY MOODS

For Hostess Trays and Snack Trays (Int. Cl. 21).
First use on or about Oct. 23, 1969.

SN 352,126. Fortune Plastics, Inc., Old Saybrook, Conn. Filed Feb. 24, 1970.

Fortune

For Plastic Bags (Int. Cl. 20).
First use May 26, 1955.

SN 353,367. Filfast Corporation, d.b.a. FDC Packaging, Holliston, Mass. Filed Mar. 9, 1970.

FDC

For Insulated Shipping Containers (Int. Cl. 20).
First use at least as early as Jan. 30, 1969.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 342,213. Tender Loving Care, Inc., New York, N.Y. Filed Oct. 31, 1969.

POOCHIE

For Dog Coats (Int. Cl. 18).
First use June 3, 1968.

Class 4 — Abrasives and Polishing Materials

SN 343,508. Buehler Ltd., Evanston, Ill. Filed Nov. 14, 1969.

MIROMET

For Polishing Compound for Metals (Int. Cl. 3).
First use Nov. 26, 1968.

SN 343,770. Turtle Wax, Inc., Chicago, Ill. Filed Nov. 17, 1969.

CONCOURS

For Automobile Polish (Int. Cl. 3).
First use Nov. 3, 1969.

SN 351,898. Buehler Ltd., Evanston, Ill. Filed Feb. 20, 1970.

MAGOMET

For Abrasive Compound for Use in Polishing Metallurgical Samples (Int. Cl. 3).
First use January 1966.

Class 6 — Chemicals and Chemical Compositions

SN 320,738. Process Materials Corporation, Carlstadt, N.J. Filed Mar. 4, 1969.



SN 311,227. J. T. Baker Chemical Company, Phillipsburg, N.J. Filed Nov. 4, 1968.

DUAL-TINT

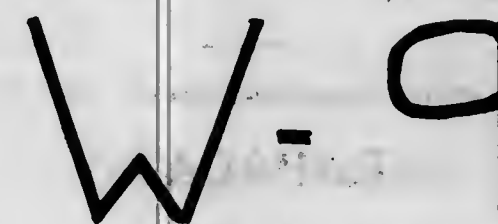
For pH Test Papers for Laboratory Use (Int. Cl. 1).
First use Dec. 21, 1967.

SN 314,267. Rhodes Pharmacal Co., Inc., Chicago, Ill. Filed Dec. 11, 1968.

ONE-DROP

For Air Deodorant (Int. Cl. 5).
First use on or about May 10, 1968.

SN 315,408. Gidley Laboratories, Inc., Fairhaven, Mass. Filed Dec. 30, 1968.



For Peptizers (Specialty Chemicals for Use in Rubber Products Manufacturing) (Int. Cl. 1).
First use July 1951.

SN 315,504. Sigma Chemical Company, St. Louis, Mo. Filed Dec. 31, 1968.

SIGMA 7-9

Owner of Reg. Nos. 436,282, 743,989, and others.
For Biochemical Buffering Agent for Laboratory Use (Int. Cl. 1).
First use April 1952.

SN 315,505. Sigma Chemical Company, St. Louis, Mo. Filed Dec. 31, 1968.

SIGMA 104

Owner of Reg. Nos. 436,282, 743,989, and others.
For Phosphatase Substrate for Use as a Diagnostic Biochemical Reagent in the Laboratory (Int. Cl. 1).
First use September 1952.

SN 316,314. Isolab Supply Company, Akron, Ohio. Filed Jan. 10, 1969.

ISOLAB

For Laboratory Agents for Assaying, Handling and Removing Radioactive Materials (Int. Cl. 1).
First use on or about Nov. 1, 1966.

SN 319,673. Morton International, Inc., Chicago, Ill. Filed Feb. 20, 1969.

NORTH STAR

Owner of Reg. Nos. 534,869 and 849,916.
For Rock Salt Intended for Industrial Uses and Not Intended for Feed Purposes (Int. Cl. 1).
First use on or about Oct. 12, 1964.

For Chemical Products for the Treatment and Preservation of Paper, in Particular, Vapor Emitting Products for the Prevention of Acidic Deterioration of Paper and Chemicals Used in Bookbinding and Book Restoration (Int. Cl. 1).
First use Mar. 25, 1968.

SN 321,655. Johnson & Johnson, New Brunswick, N.J. Filed Mar. 18, 1969.

NEAT 'N' SWEET

For Fabric Fresheners (Int. Cl. 3).
First use Jan. 9, 1967.

SN 325,468. The Crystal Tissue Company, Middletown, Ohio. Filed Apr. 24, 1969.



For Dyes for Applying Decorative Patterns to Paper (Int. Cl. 2).
First use Dec. 16, 1968.

SN 334,632. Stauffer Chemical Company, New York, N.Y. Filed Aug. 6, 1969.

NEUSOL

For Concentrated Dry Laundry Sour (Int. Cl. 1).
First use at least as early as Mar. 31, 1960.

SN 340,633. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Oct. 13, 1969.

VANGARD BT

Owner of Reg. Nos. 667,576 and 865,176.
For Corrosion Inhibitor (Int. Cl. 2).
First use June 24, 1969.

SN 341,029. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Oct. 17, 1969.

FLOMEX

For Chemical Ingredient Used in the Manufacture of Acaricides (Int. Cl. 1).
First use Sept. 17, 1969.

SN 341,277. Great Lakes Chemical Corporation, West Lafayette, Ind. Filed Oct. 21, 1969.

TERR-O-CIDE

For Soil Fumigant (Int. Cl. 5).
First use Aug. 15, 1969.

SN 341,446. The Dow Chemical Company, Midland, Mich. Filed Oct. 20, 1969.

ZONETROL

Owner of Reg. No. 856,742.
For Polymeric Chemical Compositions for Use in the Recovery of Petroleum From Wells and Subterranean Formations (Int. Cl. 1).
First use June 5, 1967.

SN 342,041. W. R. Grace & Co., Cambridge, Mass. Filed Oct. 29, 1969.

HYDROPHOBE

For Air-Entraining and Waterproofing Agent for Masonry Mortar Cement (Int. Cl. 1).
First use Aug. 15, 1969.

SN 342,619. Ciba Limited, Basel, Switzerland. Filed Nov. 4, 1969.

PRINTAFLO

Owner of Swiss Reg. No. 218,814, dated June 22, 1966.
For Dyestuffs, Coloring Matters; Chemical Compositions, Preparations or Compounds for Use as Auxiliary Agents in the Textile, Leather, Paper and Plastics Industries (Int. Cls. 1 and 2).

SN 343,293. Johns-Manville Corporation, New York, N.Y. Filed Nov. 12, 1969.

CERA PREG

For Liquid Impregnant Primarily for the Impregnation of Refractory Fiber Liners Such as in Combustion Chambers (Int. Cl. 1).
First use at least as early as June 1965.

SN 344,528. Agway, Inc., DeWitt, N.Y. Filed Nov. 25, 1969.

SCALE-RID

For Insecticide (Int. Cl. 5).
First use Apr. 30, 1966.

SN 345,570. Reichhold Chemicals, Inc., White Plains, N.Y. Filed Dec. 8, 1969.

FOUNDREZ

Owner of Reg. Nos. 566,126, 568,070, and 833,187.
For Catalysts, Accelerators, Activators and Desiccants (Int. Cl. 1).
First use Nov. 8, 1967.

SN 346,124. The Sherwin-Williams Company, Cleveland, Ohio. Filed Dec. 12, 1969.

POLASOL

For Catalyst for Enamel Products (Int. Cl. 1).
First use Oct. 10, 1969.

SN 353,961. Philadelphia Quartz Company, Philadelphia, Pa. Filed Mar. 18, 1970.

SAYFBRITE

For Laundry Bleach (Int. Cl. 3).
First use on or about Aug. 4, 1969.

SN 355,189. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Mar. 27, 1970.

ALK-PHOSTEL

For Diagnostic Reagent for Laboratory Use for Phosphate Testing (Int. Cl. 1).
First use Mar. 3, 1970.

SN 355,325. Summit Chemical Co., Baltimore, Md. Filed Mar. 30, 1970.

MISTOCIDE

For Synergized Pyrethrum Insecticide (Int. Cl. 5).
First use Dec. 9, 1958.

SN 355,590. Syntex Corporation, Boulder, Colo. Filed Apr. 1, 1970.

CATOCENE

For Combustion Catalyst (Int. Cl. 1).
First use Jan. 23, 1970.

SN 356,177. Syntex Corporation, Boulder, Colo. Filed Apr. 7, 1970.

ARAPACAT

For Combustion Catalysts (Int. Cl. 1).
First use Feb. 17, 1970.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 351,539. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 16, 1970.

MANY MOODS

For Ash Trays (Int. Cl. 34).
First use on or about Nov. 18, 1969.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 327,840. American Circle Corp., Bellmore, N.Y. Filed May 21, 1969.

ON GUARD

For Aerosol Can Filled With Chemical-Like Tear Gas for Self-Protection (Int. Cl. 13).
First use Sept. 27, 1964.

Class 10—Fertilizers

SN 354,373. United States Steel Corporation, Pittsburgh, Pa. Filed Mar. 18, 1970.

GOLD BOND

For Fertilizers (Int. Cl. 1).
First use 1912.

Class 11—Inks and Inking Materials

SN 336,150. Office Devices, Inc., St. Louis, Mo. Filed Aug. 25, 1969.

TENDER TOUCH

For Stamp Pads (Int. Cl. 16).
First use Aug. 1, 1969.

SN 338,668. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed Sept. 23, 1969.



Owner of Reg. Nos. 798,706 and 811,046.
For Inks for Drawing Pens, Fountain Pens, Ball Point Pens; Printing Inks, Writing Inks, Stamp Pad Inks, and Carbon Papers and Ribbons (Int. Cl. 16).
First use 1880.

Class 12—Construction Materials

SN 319,660. Yanton International, Inc., New York, N.Y. Filed Feb. 19, 1969.

RIGICOMB

For Honeycombed Paper Cores for Panels Used as Reinforcement Materials in the Industrial Arts (Int. Cl. 19).
First use Oct. 30, 1968.

SN 338,562. Hardwood Corporation of America, Asheville, N.C. Filed July 25, 1969.

HARCOFLOR

Owner of Reg. Nos. 815,283 and 815,284.
For Laminated Wood Flooring (Int. Cl. 19).
First use Feb. 20, 1967.

SN 335,930. American Olean Tile Company, Inc., Lansdale, Pa. Filed Aug. 22, 1969.

POMONA

Owner of Reg. No. 880,743.
For Ceramic Tile (Int. Cl. 19).
First use Jan. 3, 1969.

SN 337,136. Movilla, Inc., Minneapolis, Minn. Filed Sept. 5, 1969.

MOVILLA

For Prefabricated Housing Units (Int. Cl. 19).
First use Apr. 29, 1969.

SN 338,335. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Sept. 19, 1969.

SPARTAN

For Plywood, Wood, and Wood Fiber Products in the Construction, Building, Industrial, and Furniture Field, i.e., Panels for Walls, Partitions, and Furniture (Int. Cl. 19).
First use on or about August 1968.

SN 341,583. Hardcast, Inc., Dallas, Tex. Filed Oct. 24, 1969.

HARDCAST

For Gypsum Base Adhesive Tape for Industrial Conduit Sealing (Int. Cl. 17).
First use at least as early as June 1967.

SN 343,142. Major Pool Equipment Corp., Clifton, N.J. Filed Nov. 10, 1969.

DANNO

For Swimming Pool Covers Made of Polypropylene (Int. Cl. 22).
First use Oct. 23, 1969.

SN 343,155. Eugene Olson, Milwaukee, Wis. Filed Nov. 10, 1969.

LAMINAR

For Clear Concrete Sealer (Int. Cl. 19).
First use May 28, 1969.

SN 354,369. United States Steel Corporation, Pittsburgh, Pa. Filed Mar. 18, 1970.

BEN-WELD

For Concrete Reinforcing Bars (Int. Cl. 6).
First use Jan. 16, 1970.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 322,454. Albert Lins, Kunsnacht, Zurich, Switzerland. Filed Mar. 21, 1969.



The drawing is lined for red and blue. Priority claimed under Sec. 44(d) on Swiss Reg. No. 285,531, dated Sept. 23, 1968.

For Temperature-controlled Safety Valves for Pressurized Vessels, Especially Boilers, and Temperature-Controlled Radiator Valves—Namely, Automatic Regulators for the Radiators of Central Heating Systems (Int. Cl. 9).

SN 324,516. Signode Corporation, Chicago, Ill. Filed Apr. 14, 1969.

PASTWIST

For Gun Driven Nails (Int. Cl. 6).
First use Feb. 14, 1969.

SN 846,856. Arc-Co. Incorporated, Bridgeport, Conn. Filed Dec. 16, 1969.



Owner of Reg. Nos. 871,608 and 871,662.
For Pipe Clamps and Hangers (Int. Cl. 6).
First use Oct. 1, 1967, on pipe clamps.

SN 846,868. Conoflow Corporation, Blackwood, N.J. Filed Dec. 23, 1969.

CONOFLOW

Owner of Reg. Nos. 624,768 and 844,567.
For Fire Protection Devices—Namely, Sprinklers (Int. Cl. 9).
First use Dec. 18, 1969.

Class 15—Oils and Greases

SN 801,778. The L. S. Starrett Company, Athol, Mass. Filed July 1, 1968.

MICRO-OIL

For Corrosion Resisting and Rustproofing Oil for Industrial uses (Int. Cl. 4).
First use January 1951.

SN 802,920. Crane Engineering Co., Inc., Hallandale, Fla. Filed July 17, 1968.



No claim is made to the words "Super Lube" or the representation of the goods, apart from the mark as shown.
For Internal Combustion Engine Lubricating Oil Additive (Int. Cl. 1).
First use at least as early as Mar. 5, 1968.

SN 807,807. Castrol Limited, London NW. 1, England. Filed Sept. 18, 1968.

CASTROL GTX

Priority claimed under Sec. 44(d) on British Reg. No. 922,423, dated Mar. 14, 1968. No claim is made to the exclusive use of the letters "GTX" apart from the mark as a whole.
Owner of U.S. Reg. Nos. 89,589 and 648,795.
For Oils for Heating, Lighting and Lubricating and for Greases for Industrial Purposes (Int. Cl. 4).

SN 812,890. Macmillan Ring-Free Oil Co., Inc., New York, N.Y. Filed Nov. 18, 1968.



No exclusive rights are claimed in the word "Oil" which is the name of the goods.
Owner of Reg. Nos. 802,949, 885,868, and others.
For Motor Oils (Int. Cl. 4).
First use Apr. 18, 1968.

SN 828,495. Walker Enterprises, Inc., Beaumont, Tex. Filed Apr. 2, 1969.



For Penetrating Oil With Rust Removing and Inhibiting Properties (Int. Cl. 4).
First use at least as early as Oct. 18, 1967.

SN 828,496. Walker Enterprises, Inc., Beaumont, Tex. Filed Apr. 2, 1969.

RUST RUNNER

For Penetrating Oil With Rust Removing and Inhibiting Properties (Int. Cl. 4).
First use at least as early as Oct. 18, 1967.

SN 840,929. Occidental Petroleum Corporation, Los Angeles, Calif. Filed Oct. 16, 1969.



Owner of Reg. Nos. 858,714, 859,168, and others.
For Lubricating Oil (Int. Cl. 4).
First use on or about Oct. 1, 1959.

SN 840,930. Occidental Petroleum Corporation, Los Angeles, Calif. Filed Oct. 16, 1969.



Owner of Reg. Nos. 858,752, 859,147, and others.
For Lubricating Oils (Int. Cl. 4).
First use in or about April 1968.

SN 840,931. Occidental Petroleum Corporation, d.b.a. Occidental Chemical Company, Los Angeles, Calif. Filed Oct. 16, 1969.

OXYCHEM

Owner of Reg. Nos. 858,714, 859,147, and others.
For Lubricating Oil (Int. Cl. 4).
First use on or about Sept. 29, 1969.

SN 846,205. Atlas Supply Company, Springfield, N.J. Filed Dec. 15, 1969.



Owner of Reg. Nos. 112,331, 810,943, and others.
For Gasoline Additive and Automatic Transmission Sealer and Additive (Int. Cl. 1).
First use Jan. 2, 1969.

SN 848,370. United Refining Company, Warren, Pa. Filed Jan. 12, 1970.

POWERFUEL

Owner of Reg. No. 600,149.
For Gasoline (Int. Cl. 4).
First use Sept. 1, 1958.

SN 851,870. Diamond Shamrock Corporation, Cleveland, Ohio. Filed Feb. 16, 1970.

TRANS POWER

For Automatic Transmission Fluid (Int. Cl. 4).
First use Feb. 5, 1970.

SN 855,429. Pennwalt Corporation, Philadelphia, Pa. Filed Apr. 1, 1970.

KSL

For Greases and Oils for Industrial Use (Int. Cl. 4).
First use Feb. 17, 1970.

Class 16—Protective and Decorative Coatings

SN 820,988. Armstrong Products Co., Inc., Warsaw, Ind. Filed Mar. 6, 1969.

EPOXIPLATE

For Plastic Coating Powder Containing Epoxy Resin to Protect Metal Against Corrosion (Int. Cl. 2).
First use Mar. 4, 1968.

SN 838,427. Paint Producers Co., St. Louis, Mo. Filed Sept. 19, 1969.

TOP FLO

For Latex Wall Paint (Int. Cl. 2).
First use Aug. 15, 1969.

Class 17—Tobacco Products

SN 827,742. John Chapman Limited, Johannesburg, Transvaal, Republic of South Africa. Filed May 20, 1969.

JOHN CHAPMAN

For Smoking Tobacco (Int. Cl. 34).
First use Mar. 10, 1969; in commerce Apr. 9, 1964.

SN 853,457. Douwe Egberts Koninklijke Tabakfabriek-Koffiebranderijen-Theehandel N.V., Joure, Netherlands. Filed Mar. 9, 1970.

BARONET

For Pipe Tobacco (Int. Cl. 34).
First use May 13, 1969; in commerce May 13, 1969.

SN 853,459. Douwe Egberts Koninklijke Tabakfabriek-Koffiebranderijen-Theehandel N.V., Joure, Netherlands. Filed Mar. 9, 1970.

OBELISK

For Pipe Tobacco (Int. Cl. 34).
First use May 13, 1969; in commerce May 13, 1969.

SN 854,529. Stephano Brothers, Philadelphia, Pa. Filed Mar. 18, 1970.

ACTION

For Little Cigars (Aromatic) and for Little Cigars (Cherry Menthol (Int. Cl. 34).
First use Mar. 2, 1970.

SN 855,290. American Brands, Inc., New York, N.Y. Filed Mar. 26, 1970.

SIGNALINE

For Cigarettes (Int. Cl. 34).
First use Mar. 10, 1970.

Class 18—Medicines and Pharmaceutical Preparations

SN 809,851. Allergan Pharmaceuticals, Santa Ana, Calif. Filed Oct. 10, 1968.

KERAGEL

For Dermatological Preparation (Int. Cl. 5).
First use Sept. 26, 1968.

SN 811,638. Sandoz-Wander, Inc., Hanover N.J., by merger and change of name from Sandoz, Inc., Hanover, N.J. Filed Nov. 8, 1968.

WARDPAK

For Packages and Containers, Sold Only With Medicinal Preparations (Int. Cl. 5).
First use Oct. 25, 1968.

TM 122

OFFICIAL GAZETTE

JUNE 16, 1970

SN 318,461. A. H. Robins Company, Incorporated, Richmond, Va. Filed Feb. 5, 1969.

PONDIMIN

For Anorexic Medicinal Preparation (Int. Cl. 5).
First use Jan. 20, 1969.

SN 318,858. New England Serum Company, Topsfield, Mass. Filed Feb. 5, 1969.

New England
Serum Company

For Packaged Veterinary Drugs (Int. Cl. 5).
First use Jan. 2, 1969.

SN 333,116. Federal Pharmacal Corporation, Fort Lauderdale, Fla. Filed July 22, 1969.

G.G.I.

For Expectorant, Sold Upon Prescription of a Physician (Int. Cl. 5).
First use Mar. 1, 1964.

SN 333,122. Hoffman-La Roche Inc., Nutley, N.J. Filed July 22, 1969.

MATULANE

For Anti-Tumor Preparation (Int. Cl. 5).
First use July 17, 1969.

SN 333,788. Wilson Enterprises Incorporated, Colonial Heights, Va. Filed July 22, 1969.

HI-PER

For Vitamin Mineral Supplement for Horses (Int. Cl. 5).

JUNE 16, 1970

U. S. PATENT OFFICE

TM 123

SN 334,887. The Upjohn Company, Kalamazoo, Mich. Filed Aug. 8, 1969.

HERCULIN

Owner of Reg. No. 061,812.
For Antibiotic (Int. Cl. 5).
First use Feb. 7, 1969.

SN 334,974. Bristol-Myers Company, New York, N.Y. Filed Aug. 11, 1969.

RENAPEN

For Antibiotic Preparations (Int. Cl. 5).
First use Jan. 30, 1969.

SN 335,059. Richardson-Merrell Inc., New York, N.Y. Filed Aug. 11, 1969.

CRYOVAX

For Smallpox Vaccine (Int. Cl. 5).
First use Mar. 17, 1969.

SN 316,637. General Engineering and Manufacturing Corporation, Andrews, Ind. Filed Jan. 15, 1969.

SPORTSMOBILE

For Motorized Homes Used for Camping Purposes (Int. Cl. 12).
First use in or about February 1968.

SN 325,044. Jayco, Inc., Goshen, Ind. Filed Apr. 21, 1969.

JAYCO

For Recreational Vehicles—Namely, Collapsible Camping Trailers Equipped With Living Accommodations, Including Tables, Beds, Stove, Sink and Cabinets (Int. Cl. 12).
First use Apr. 16, 1968.

SN 333,922. S. S. Korago Company, Detroit, Mich. Filed July 22, 1969.

SN 818,461. A. H. Robins Company, Incorporated, Richmond, Va. Filed Feb. 5, 1969.

PONDIMIN

For Anorexic Medicinal Preparation (Int. Cl. 5).
First use Jan. 20, 1969.

SN 818,858. New England Serum Company, Topsfield, Mass. Filed Feb. 5, 1969.

New England
Serum Company

For Packaged Veterinary Drugs (Int. Cl. 5).
First use Jan. 2, 1968.

SN 820,972. Salsbury Laboratories, Charles City, Iowa. Filed Mar. 6, 1969.

Bactofac

For Feed Additive for Stimulating Growth in Poultry and Livestock (Int. Cl. 5).
First use Dec. 31, 1968.

SN 820,973. Salsbury Laboratories, Charles City, Iowa. Filed Mar. 6, 1969.

PABAC

For Fowl Cholera Bacterin (Int. Cl. 5).
First use Feb. 5, 1969.

SN 821,257. Emanuel Nathanson, d.b.a. K.I.K. Co., Bethlehem, Pa. Filed Mar. 10, 1969.

CHERAMIST #30

For Mouthwash With Anesthetic Properties (Int. Cl. 5).
First use on or about Jan. 1, 1969.

SN 824,680. Bioforma, Societe Anonyme, Neuilly-sur-Seine (Seine), France. Filed Apr. 16, 1969.

TRIVASTAL

Owner of French Reg. No. 496,828, dated June 8, 1961 (Paris); Natl. Inst. No. 165,951.
For Peripheral Vasodilator Preparation (Int. Cl. 5).

SN 825,447. Allen & Hanburys Limited, London, England. Filed Apr. 24, 1969.

HALIBORANGE

Owner of British Reg. No. 540,917, dated Apr. 22, 1938.
For Tonics Containing Vitamins (Int. Cl. 5).

SN 333,116. Federal Pharmacal Corporation, Fort Lauderdale, Fla. Filed July 22, 1969.

G.G.I.

For Expectorant, Sold Upon Prescription of a Physician (Int. Cl. 5).
First use Mar. 1, 1964.

SN 333,182. Hoffman-La Roche Inc., Nutley, N.J. Filed July 22, 1969.

MATULANE

For Anti-Tumor Preparation (Int. Cl. 5).
First use July 17, 1969.

SN 333,786. Wilson Enterprises Incorporated, Colonial Heights, Va. Filed July 28, 1969.

HI-PER

For Vitamin-Mineral Supplement for Horses (Int. Cl. 5).
First use March 1968.

SN 334,502. The Upjohn Company, Kalamazoo, Mich. Filed Aug. 5, 1969.

DEPO-PROVERA CONTRAJECT

Owner of Reg. Nos. 515,760, 738,935, and others.
For Medicinal Progestational Preparation (Int. Cl. 5).
First use Feb. 18, 1969.

SN 334,576. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 6, 1969.

MAXIRETS

Owner of Reg. No. 691,548.
For Gradual Release Medication (Int. Cl. 5).
First use July 25, 1969.

SN 334,578. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 6, 1969.

TONOPLUS

For Analeptic Tonic Preparations (Int. Cl. 5).
First use July 25, 1969.

SN 334,755. Vineland Poultry Laboratories, Vineland, N.J. Filed Aug. 7, 1969.

S-4 FEEDMIX

The word "Feedmix" is disclaimed apart from the mark as shown.
For Medicinal Mixtures Containing Sulfa Compounds for Poultry, Rabbit, and Livestock Use (Int. Cl. 5).
First use December 1962.

SN 334,757. Vineland Poultry Laboratories, Vineland, N.J. Filed Aug. 7, 1969.

S-4 PLUS A

The word "Plus A" is disclaimed apart from the mark as shown.
For Medicinal Mixtures Containing Sulfa and Vitamin Compounds for Poultry and Livestock Use (Int. Cl. 5).
First use February 1965.

SN 334,887. The Upjohn Company, Kalamazoo, Mich. Filed Aug. 8, 1969.

HERCULIN

Owner of Reg. No. 661,812.
For Antibiotic (Int. Cl. 5).
First use Feb. 7, 1969.

SN 334,974. Bristol-Myers Company, New York, N.Y. Filed Aug. 11, 1969.

RENAPEN

For Antibiotic Preparations (Int. Cl. 5).
First use Jan. 30, 1969.

SN 335,059. Richardson-Merrell Inc., New York, N.Y. Filed Aug. 11, 1969.

CRYOVAX

For Smallpox Vaccine (Int. Cl. 5).
First use Mar. 17, 1969.

SN 335,469. Phillips Roxane, Inc., New York, N.Y. Filed Aug. 15, 1969.

LEPTO-CANIC

For Veterinary Product—Namely, a Vaccine for Prevention of Leptospira Canicolaeterohemorrhagiae Infections in Dogs, Cattle and Swine (Int. Cl. 5).
First use Sept. 27, 1968.

SN 335,777. The Purdue Frederick Company, Yonkers, N.Y. Filed Aug. 20, 1969.

INTERDINE

For Antiseptic Microbicide (Int. Cl. 5).
First use Aug. 11, 1969.

SN 336,244. Calbiochem, Los Angeles, Calif. Filed Aug. 18, 1969.

LYTANE

For Oral Chemotherapeutic Agent (Int. Cl. 5).
First use Apr. 14, 1969.

Class 19—Vehicles

SN 805,450. Impala Industries Limited, Richmond, British Columbia, Canada. Filed Aug. 19, 1968.



For Camping Trailers and Parts Thereof (Int. Cl. 12).
First use February 1968; in commerce July 15, 1968.

SN 316,687. General Engineering and Manufacturing Corporation, Andrews, Ind. Filed Jan. 15, 1969.

SPORTSMOBILE

For Motorized Homes Used for Camping Purposes (Int. Cl. 12).
First use in or about February 1965.

SN 325,044. Jayco, Inc., Goshen, Ind. Filed Apr. 21, 1969.

JAYCO

For Recreational Vehicles—Namely, Collapsible Camping Trailers Equipped With Living Accommodations, Including Tables, Beds, Stove, Sink and Cabinets (Int. Cl. 12).
First use Apr. 16, 1968.

SN 333,928. S. S. Kerage Company, Detroit, Mich. Filed July 30, 1969.



For Vehicle Floor Mats (Int. Cl. 27).
First use on or before Mar. 10, 1969.

SN 339,392. R. D. Hall Mfg., Inc., Sun Valley, Calif. Filed Oct. 1, 1969.



The wording "The Camper it Raises it Lowers" is disclaimed apart from the association shown without waiver of applicant's common law rights in the disclaiming wording.
Owner of Reg. Nos. 725,570 and 729,666.

For Telescoping Campers for Trucks and Similar Vehicles (Int. Cl. 12).
First use on or about Jan. 10, 1969; Jan. 27, 1961, in another form.

SN 342,728. Bridge Painting, Inc., Richmond, Va. Filed Nov. 5, 1969.

SCRAMP

For Land Vehicle for Transporting and Providing a Mobile Platform for Bridge Painting Equipment (Int. Cl. 12).
First use on or before Mar. 1, 1969.

SN 343,746. Pacemaker Corporation, Egg Harbor City, N.J. Filed Nov. 17, 1969.

EGG HARBOR

For Yachts and Cruisers (Int. Cl. 12).
First use 1946.

SN 848,578. Price-Meyers Corporation, Elkhart, Ind. Filed Jan. 14, 1970.



Applicant disclaims the word "Homes" apart from the mark as shown.
For Mobile Homes (Int. Cl. 12).
First use Nov. 11, 1969.

SN 848,578. B & M Industries, Inc., Van Nuys, Calif. Filed Jan. 19, 1970.

SPORTSCOACH

For Recreation Vehicles—Namely, Motor Homes (Int. Cl. 12).
First use Dec. 16, 1969.

SN 851,510. Charles W. McCarter, Imperial, Mo. Filed Feb. 16, 1970.

CON-STEP

For Portable Step Structure for House Trailers (Int. Cl. 12).
First use Jan. 22, 1970.

Class 20—Linoleum and Oiled Cloth

SN 881,917. Les Papeteries de Genval, Genval, Belgium. Filed July 7, 1969.

TEXTIMUR

Owner of Belgian Reg. No. 1,381, dated July 30, 1968.
For Textile Wall Lining Constituting a Matting Plate on Paper (Int. Cl. 27).

Class 21—Electrical Apparatus, Machines, and Supplies

SN 296,536. Hitachi, Ltd. Manufacturers, Chiyoda-ku, Tokyo, Japan. Filed Apr. 25, 1968.

COOL-5

For Electric Motors in General Use (Int. Cl. 9).
First use Mar. 20, 1968; in commerce Mar. 20, 1968.

SN 300,255. Clevite Corporation, Cleveland, Ohio. Filed June 12, 1968.

LAZER LITE

The word "Lite" is disclaimed apart from the mark as a whole.
For Electric Flashlights (Int. Cl. 11).
First use Mar. 27, 1968.

SN 305,831. International Scanatron Systems Corp., Wyandanch, N.Y. Filed Aug. 23, 1968.

PACFAX

For Graphic Communication Equipment and Supplies—Namely, Facsimile Transmitter and Receiver Modems (Int. Cl. 9).
First use Dec. 29, 1968.

SN 313,952. Fansteel Inc., North Chicago, Ill., assignee of Mech-Tronics Corporation, Melrose Park, Ill. Filed Dec. 9, 1968.

The Future...is our business

For Mechanical Components of Electronic Equipment Comprising Electronic Hardware, Equipment Housings and Mountings; Electronic Assemblies for Power Supply in Communication Units in Aerospace Vehicles, for Connecting Computers to Recorders, and for Controlling Paper Cutters for Printers; Electrical Instrument Components for Aircraft, Antennas and Components and Antenna Systems, Modules and Racks for Automatic Pilots and Electrical Navigation Units, Mechanical Frames and Subassemblies of Electronic Equipment for Space Vehicles; Welded Circuit Boards, Electronic Power Supply Modules, and Electronic Amplifiers and Preamplifiers (Int. Cl. 9).
First use May 6, 1968.

SN 313,953. Fansteel Inc., North Chicago, Ill. assignee of Mech-Tronics Corporation, Melrose Park, Ill. Filed Dec. 9, 1968.



Owner of Reg. No. 690,476.
For Mechanical Components of Electronic Equipment Comprising Electronic Hardware, Equipment Housings and Mountings; Electronic Assemblies for Power Supply in Communication Units in Aerospace Vehicles, for Connecting Computers to Recorders, and for Controlling Paper Cutters for Printers; Electrical Instrument Components for Aircraft, Antennas and Components and Antenna Systems, Modules and Racks for Automatic Pilots and Electrical Navigation Units, Mechanical Frames and Subassemblies of Electronic Equipment for Space Vehicles; Welded Circuit Boards, Electronic Power Supply Modules, and Electronic Amplifiers and Preamplifiers (Int. Cl. 9).
First use May 20, 1961.

SN 317,555. Graphic Sciences, Inc., Danbury, Conn. Filed Jan. 27, 1969.

dex I

Applicant disclaims the letter "I" apart from the mark.
For Facsimile Machine Which Can Be Acoustically Coupled to a Telephone and Which Is Capable of Transmitting and Receiving Information, Documents, Photographs or Other Material to or From Other Similar Machines Via Conventional Use of the Telephone (Int. Cl. 9).
First use Nov. 11, 1968.

SN 320,225. AMP Incorporated, Harrisburg, Pa. Filed Feb. 27, 1969.



Owner of Reg. Nos. 405,714, 812,073, and others.
For Electrical High Voltage Instruments—Namely, Dividers and Ripple Detectors (Int. Cl. 9).
First use Dec. 17, 1968.

SN 320,935. Aquadyne, Inc., Teaticket, Mass. Filed Mar. 6, 1969.

AQUADYNE

For Transducers, Including Hydrophones, and Teletype Converters (Also Known as Teletype Terminal Units) Which Are Radio or Telephone Receiving Signal Converters Used With Teletype Machines (Int. Cl. 9).
First use on or about Mar. 20, 1967 on teletype converters.

SN 322,931. Hugo H. Wiedekamp, Powell, Wyo. Filed Mar. 26, 1969.

TRANSISTAERIAL

For Aerial for Transistor Radios (Int. Cl. 9).
First use Dec. 18, 1968.

SN 325,671. Tandy Corporation, d.b.a. Radio Shack, Boston, Mass. Filed Apr. 28, 1969.

WEATHERADIO

For Radio Receivers (Int. Cl. 9).
First use at least as early as Oct. 1, 1968.

SN 328,245. Pemco Corporation, Bluefield, W. Va. Filed May 26, 1969.



Owner of Reg. No. 748,349.
For Electrical Transformers, Power Rectifiers, Switch Gear, and Parts Therefor (Int. Cl. 9).
First use at least as early as Sept. 10, 1960.

SN 330,632. Richards Manufacturing Company, Philadelphia, Pa. Filed June 20, 1969.

RICHARDS GOLD STREAK

For Spark Plug Wire Sets, Spark Plug Protectors, Spark Plug Wire Repair Kits, Coil Wire Repair Kits, Battery Terminals, Miscellaneous Terminals, Connectors, Distributor and Coil Nipples, Battery Cables and Ground Straps, Battery Booster Cables, Static Eliminators, Fuse Connectors, Battery Shims, and T.V. Lead-In Wires (Int. Cl. 9).
First use Feb. 12, 1969.

SN 331,936. Phillips Audio, Inc., Long Island City, N.Y. Filed July 7, 1969.

MIRADON

For Radios and Combination Radio-Phonograph Units (Int. Cl. 9).
First use Apr. 10, 1969.

SN 338,645. Tamar Electronics, Inc., Los Angeles, Calif. Filed Sept. 22, 1969.

ECONO-LOGIC

For Printed Circuit Cards Which Are Designed To Perform Individual Logical Functions (Int. Cl. 9).
First use Mar. 28, 1969.

SN 341,453. Fenwal Electronics Inc., Framingham, Mass. Filed Oct. 20, 1969.

UNI-CURVE

For Thermistors (Int. Cl. 9).
First use Apr. 26, 1969.

SN 343,559. Hiraoka New York, Inc., New York, N.Y. Filed Nov. 14, 1969.

WESTMINSTER

For Radios and Walkie-Talkies (Int. Cl. 9).
First use Dec. 2, 1968.

SN 343,710. Icore Electro-Plastics, Inc., Sunnyvale, Calif. Filed Nov. 17, 1969.

ICORE

For Flexible Electric Conduit and Fittings (Int. Cl. 9).
First use March 1966.

SN 346,650. Radair, Inc., Seattle, Wash. Filed Dec. 18, 1969.

BACKUP X

For Radio Transmitter and Receiver (Int. Cl. 9).
First use Nov. 15, 1969.

SN 347,616. Multra-Guard, Inc., Rockville, Md. Filed Jan. 2, 1970.

MULTRA-FONE

For Microphone Pick-Up Assembly for Electronic Security Protective System (Int. Cl. 9).
First use Oct. 15, 1969.

SN 347,729. Dyn Electronics, Inc., Hialeah, Fla. Filed Jan. 5, 1970.

DYN

For Batteries (Int. Cl. 9).
First use Nov. 10, 1969.

SN 347,883. Chicago Wheel & Manufacturing Co., Chicago, Ill. Filed Jan. 7, 1970. SN 334,340. S. S. Kresge Company, Detroit, Mich. Filed Aug. 4, 1969.

PACE-MASTER

For Motor Speed Controller (Int. Cl. 9).
First use Oct. 20, 1969.

SN 347,900. Dynair Electronics, Inc., San Diego, Calif. Filed Jan. 7, 1970.

MINI-FADE

For Television Equipment—Namely, a 2-Input Video Fader (Int. Cl. 9).
First use Dec. 21, 1967.

SN 347,901. Dynair Electronics, Inc., San Diego, Calif. Filed Jan. 7, 1970.

MINI-6

For Television Equipment—Namely, a 6-Input Video Switcher (Int. Cl. 9).
First use Aug. 27, 1966.

SN 347,902. Dynair Electronics, Inc. San Diego, Calif. Filed Jan. 7, 1970.

MINI-AUD

For Television Equipment—Namely, an Audio Power Amplifier (Int. Cl. 9).
First use May 2, 1968.

SN 347,903. Dynair Electronics, Inc. San Diego, Calif. Filed Jan. 7, 1970.

MINI-SPK

For Television Equipment—Namely, a Speaker (Int. Cl. 9).
First use Mar. 7, 1968.

SN 351,540. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 16, 1970.

MANY MOODS

For Lamps (Int. Cl. 11).
First use on about Oct. 31, 1969.

Class 22—Games, Toys, and Sporting Goods

SN 327,264. The Franklin Mint, Inc., Yeadon, Pa. Filed May 14, 1969.

ZODIAC

For Equipment or Apparatus for Playing a Game (Int. Cl. 28).
First use May 1, 1969.



For Sleeping Bags for Outdoor or Campers' or Similar Recreational Use (Int. Cl. 20).
First use on or before Jan. 17, 1969.

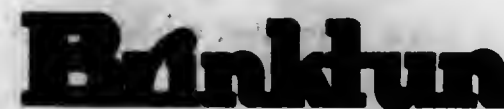
SN 334,666. Basso Chemicals, Inc., d.b.a. Wingsetter Decoy Co., Jacksonville, Fla. Filed Aug. 7, 1969.



For the purposes of registration, no claim is made to exclusive right to use the word "Decoys" apart from the mark as shown.

For Game Bird Decoys (Int. Cl. 28).
First use Sept. 27, 1968.
Subj. to Intf. with SN 328,457.

SN 337,488. Larson Industries, Inc., Minneapolis, Minn. Filed Sept. 10, 1969.



For Pool Tables, Billiard Tables, and Parts and Accessories For Dolls, Doll Clothing and Doll Accessories (Int. Cl. 28).
Accessories Therefor (Int. Cl. 28).
First use in or about December 1946 on table tennis tables.

SN 338,316. Mattel, Inc., Hawthorne, Calif. Filed Sept. 19, 1969.

CARDS OF FATE

No claim of exclusive right is made to "Cards" for the good recited.
For Fortune Telling Kit (Int. Cl. 28).
First use Aug. 8, 1969.

SN 338,318. Mattel, Inc., Hawthorne, Calif. Filed Sept. 19, 1969.

DOTTIE DRAW-A-PICTURE

Applicant makes no claim to exclusive rights in the words "Draw-A-Picture" apart from the mark.
for the Foregoing; and Table Tennis Tables, and Parts and
First use Aug. 14, 1969.

SN 339,395. Mattel, Inc., Hawthorne, Calif. Filed Oct. 1, 1969. SN 346,584. Toy Town, Inc., Jacksonville, Fla. Filed Dec. 18, 1969.

Y.O.U. YOUR OWN UNIVERSE

Applicant makes no claim to the exclusive right to the words "Your Own Universe" apart from the mark.
For Astrology Kit (Int. Cl. 28).
First use Aug. 8, 1969.

SN 339,395. Mattel, Inc., Hawthorne, Calif. Filed Oct. 6, 1969.



Owner of Reg. Nos. 635,129, 753,681, and 867,473.
For Toys (Int. Cl. 28).
First use July 8, 1969.

SN 340,315. Mattel, Inc., Hawthorne, Calif. Filed Oct. 10, 1969.

FRIZZLE SIZZLE

Owner of Reg. No. 323,622.
For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Aug. 28, 1969.

SN 340,325. Mattel, Inc., Hawthorne, Calif. Filed Oct. 10, 1969.

RICK RILEY

Owner of Reg. No. 805,916.
For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Aug. 28, 1969.

SN 340,722. Mattel, Inc., Hawthorne, Calif. Filed Oct. 15, 1969.

BABY YO-YO

No claim of exclusive right is made to "Baby" for the goods recited.
For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Sept. 5, 1969.

SN 344,930. David W. Darr, Winston-Salem, N.C. Filed Dec. 1, 1969.

PITFALL

For Apparatus Sold as a Unit for Playing an Amusement Game (Int. Cl. 28).
First use October 1969.

TOYTOWN

Owner of Reg. No. 858,095.
For Stuffed Animals, Toy Drums, and Tamborines, Footballs, Chess and Checker Boards (Int. Cl. 28).
First use on or about Sept. 21, 1949 on stuffed animals and footballs.

SN 353,626. Mattel, Inc., Hawthorne, Calif. Filed Mar. 10, 1970.

THE WEDGE

For Toy Top (Int. Cl. 28).
First use Nov. 24, 1969.

SN 353,627. Mattel, Inc., Hawthorne, Calif. Filed Mar. 10, 1970.

THE ROUNDER

For Toy Top (Int. Cl. 28).
First use Nov. 24, 1969.

SN 354,083. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

RING AROUND THE NOSEY

For Equipment Sold as a Unit for Playing a Three Dimensional Game (Int. Cl. 28).
First use Nov. 24, 1969.

SN 354,084. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

CATCH'EM

For Equipment Sold as a Unit for Playing a Three Dimensional Game (Int. Cl. 28).
First use Nov. 24, 1969.

SN 354,091. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

SCREAMIN'

For Toy Automobile (Int. Cl. 28).
First use Jan. 28, 1970.

SN 354,356. Mattel, Inc., Hawthorne, Calif. Filed Mar. 18, 1970.

TRANTULA

For Toy Automobile (Int. Cl. 28).
First use Nov. 18, 1969.

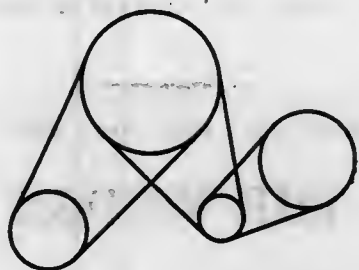
SN 354,358. Mattel, Inc., Hawthorne, Calif. Filed Mar. 18, 1970.

RITA RIDER

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Jan. 30, 1970.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 303,691. Maurey Manufacturing Corporation, Chicago, Ill. Filed July 26, 1968.



Owner of Reg. No. 861,031.
For Flexible Couplings for Metallic Shafts in Machinery (Int. Cl. 7).
First use Jan. 3, 1967.

SN 309,469. North American Rockwell Corporation, Pittsburgh, Pa. Filed Oct. 11, 1968.

LUBER-FINER

Owner of Reg. Nos. 332,804 and 336,765.
For Liquid Refiners, Particularly Adapted for Use in Refining Lubricating Oil (Int. Cl. 7).
First use in or about November 1934.

SN 311,280. Curtis L. Lorenz, d.b.a. Lorenz Enterprises, Modesto, Calif. Filed Nov. 4, 1968.

FLOCK MATER

The word "Flock" is disclaimed apart from the mark as shown.
For Machine for Inserting Fluent Material in Tubes (Int. Cl. 7).
First use Jan. 1, 1968.

SN 311,910. North American Rockwell Corporation, Pittsburgh, Pa. Filed Nov. 12, 1968.

AUTOFORGE

The word "Forge" is disclaimed apart from the mark as shown.
For Metal Casting and Forging Machines (Int. Cl. 7).
First use Oct. 2, 1968.

SN 317,638. Societe E. Demolin, Ivry-sur-Seine, France. Filed Jan. 27, 1969.



For Priority claimed under Sec. 44(d) on French Reg. No. 748,231, dated July 31, 1968.
For Parts for Internal Combustion Engines—Namely, Pistons, Gudgeon Pins, Cylinder Linings, and Bearings (Int. Cl. 12).

SN 325,861. Gandy Company, Owatonna, Minn. Filed Apr. 29, 1969.

TURF TENDER

For Lawn Applicators for Granulated Fertilizer, Granulated Weed-Killer, Seeds, Top-Dressing, and the Like (Int. Cl. 7).
First use Apr. 21, 1969.

SN 331,611. Green Nursery & Landscaping Co., Inc., Memphis, Tenn. Filed July 2, 1969.



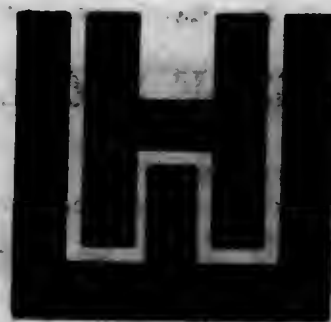
For Reciprocating Power-Operated Cutting Tool for Horticultural Use (Int. Cl. 8).
First use June 24, 1969.

SN 334,650. United Silver and Cutlery Company, Los Angeles, Calif. Filed Aug. 6, 1969.

MONTEREY

For Stainless Steel Flatware—Namely, Knives, Forks, Spoons, Serving Pieces, and Hostess Sets (Int. Cl. 8).
First use Jan. 9, 1969.

SN 334,660. Howard Worthington, Inc., Elk Grove, Ill. Filed Aug. 6, 1969.



For Construction Equipment—Namely, Backhoes, Trenchers, Loaders, Fork Lifts, Tractors, and Tampers (Int. Cl. 7).
First use Apr. 1, 1969.

SN 336,842. Onelda Ltd., Onelda, N.Y. Filed Sept. 2, 1969.

DAYDREAM

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use July 21, 1969.

SN 336,845. Onelda Ltd., Onelda, N.Y. Filed Sept. 2, 1969.

SAN MARINO

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use July 21, 1969.

SN 336,846. Onelda Ltd., Onelda, N.Y. Filed Sept. 2, 1969.

BRANDYWINE

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use July 21, 1969.

SN 337,295. The Gleason Works, Rochester, N.Y. Filed Sept. 8, 1969.

WEDG-AC

For Gear Cutters and Gear-Cutter Blades (Int. Cl. 7).
First use Feb. 22, 1969.

SN 337,479. Automation Devices, Inc., Fairview, Pa. Filed Sept. 10, 1969.

SWAN-MATIC

For Capping Machines for Capping Bottles and Jars, Inserts Therefor, and Can Top Crimping Tools (Int. Cl. 7).
First use Aug. 7, 1964.

SN 339,956. Ralston Purina Company, St. Louis, Mo. Filed Oct. 7, 1969.



The words "Health Products" are disclaimed apart from the mark as shown. The drawing is lined for the colors red and blue, but no claim is made to color. Owner of Reg. No. 862,372.

For Insecticide Sprayer (Int. Cl. 7).
First use March 1968.

SN 343,561. Horstman Mfg. Co., Inc., Monrovia, Calif. Filed Nov. 14, 1969.

REV-GRIP

For Centrifugal Clutches for Go-Cart and Mini-Bike Engines (Int. Cl. 12).
First use Sept. 15, 1967.

SN 343,598. Stibbe Machinery Limited, Leicester, England. Filed Nov. 14, 1969.

MINI-JAC

For Knitting Machines and Parts Therefor (Int. Cl. 7).
First use Nov. 13, 1968; in commerce Nov. 22, 1968.

SN 344,588. Shop-Matic Industries, Inc., Milwaukee, Wis. Filed Nov. 25, 1969.

SHOP-MATIC

For Hydraulic Press (Int. Cl. 7).
First use Aug. 5, 1968.

SN 344,337. The Durst Corporation, Beloit, Wis. Filed Nov. 28, 1969.



For Gear Boxes and Ratcheting Jacks (Int. Cl. 7).
First use Apr. 15, 1968.

SN 344,840. The Nutwistle Company, Providence, R.I. Filed Nov. 28, 1969.



Owner of Reg. No. 772,789.
For Machines for Applying Insulation Material to Wire and Cable (Int. Cl. 7).
First use in or about May 1969; on or about May 13, 1968, in a different form.

SN 344,880. Onelda Ltd., Onelda, N.Y. Filed Nov. 28, 1969.

BRIDAL WREATH

Owner of Reg. No. 577,848.
For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use Oct. 10, 1969.

SN 344,881. Onelda Ltd., Onelda, N.Y. Filed Nov. 28, 1969.

ROSALIE

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use Oct. 10, 1969.

SN 345,015. Rotek Incorporated, Ravenna, Ohio. Filed Dec. 1, 1969.



For Slewing Rings and Multi-Load Bearings (Int. Cl. 7).
First use May 3, 1966.

SN 347,438. Spiroll Corporation Ltd., Winnipeg, Manitoba, Canada. Filed Dec. 30, 1969.



Owner of Canadian Reg. No. 141,125, dated July 9, 1965. For Concrete Slab Forming Machinery (Int. Cl. 7).

SN 348,178. Pratt Manufacturing Corp., Milwaukee, Wis. Filed Jan. 9, 1970.

HOLWRAP

For Continuous Packaging Machines for Wrapping Items in Flexible Material (Int. Cl. 7).
First use Oct. 21, 1969.

SN 351,372. General Mills, Inc., Minneapolis, Minn. Filed Feb. 16, 1970.

FLIGHT

Owner of Reg. No. 274,966.
For Stainless Flatware (Int. Cl. 8).
First use Dec. 1, 1969.

Class 26—Measuring and Scientific Appliances

SN 293,661. Ametek, Inc., New York, N.Y. Filed Mar. 20, 1968.

ADD-A-HEAD

For Dispensers for Measuring Liquids (Int. Cl. 9).
First use Oct. 29, 1965.

SN 309,668. Dr. J. U. H. Krautkramer, Gesellschaft für Elektro-Physik, Cologne-Klettenberg, Germany. Filed Oct. 15, 1968.

KRAUTKRÄMER

The German word "Krautkramer" may be translated as "vegetable merchant."
For Ultrasonic Flaw Detectors, Corrosion Meters, Ultrasonic Thickness Gauges, Probe Testers, and Parts and Fittings Thereof (Int. Cl. 9).
First use in or about February 1965; in commerce in or about February 1965.

SN 313,684. Datel Corporation, Falls Church, Va. Filed Dec. 5, 1968.

DATEL

For Data Processing Equipment Comprising Automatic Typewriters and Conversational Terminals (Int. Cl. 9).
First use Feb. 5, 1968.

SN 317,866. The Perkin-Elmer Corporation, Norwalk, Conn. Filed Jan. 23, 1969.

DATAFACE

For Analog Instrument Amplifiers for Use With Spectrophotometers (Int. Cl. 9).
First use February 1968.

SN 319,789. Advanced Research Corporation, Washington, D.C. Filed Feb. 24, 1969.



For Radiation Monitors To Measure Ray Emission From TV Sets (Int. Cl. 9).
First use Jan. 24, 1969.

SN 321,337. Systemation Inc., Schenectady, N.Y. Filed Feb. 19, 1969.



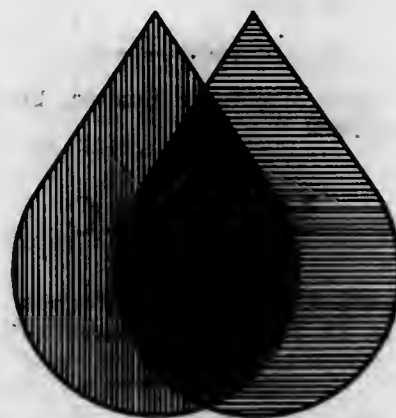
For Numerically Controlled, Multi-Axis Automatic Positioning and Control System, Used To Perform Manufacturing Operations Automatically (Int. Cl. 9).
First use Nov. 1, 1968.

SN 321,466. Buckingham Graphics, Incorporated, Evanston, Ill. Filed Mar. 12, 1969.

DRYEDGE

For Dryer for Photographic Printing Materials (Int. Cl. 9).
First use on or about Nov. 12, 1966.

SN 322,455. Albert Lins, Kusnacht, Zurich, Switzerland. Filed Mar. 21, 1969.



The drawing is lined for red and blue. Priority claimed under Sec. 44(d) on Swiss Reg. No. 235,530, dated Sept. 23, 1968.

For Central Heating Equipment and Heating Control Apparatus—Namely, Automatic Controllers for Controlling Temperature, Pressure, Liquid Level, Rate of Flow, and Like Variables (Int. Cl. 9).

SN 333,650. Alpha Tech, Inc., Greenlawn, N.Y. Filed July 28, 1969.



For Electronic Educational Training Aid—Namely, Logic Circuit Plug-In Panels and Overlay Sheets for Performing Digital Logic Experiments Used With the Logic Circuit Plug-In Panels (Int. Cl. 9).
First use in or about June 1966.

SN 335,092. VWR United Corporation, Seattle, Wash. Filed Aug. 11, 1969.

USE-PACK

For Scientific Labware Items in Kit or Package Form—Namely, Pipets, Clamps, Plastic Tubing, Filter Paper, and Round Bottom Centrifuge Tubes (Int. Cl. 9).
First use September 1968.

SN 335,233. Kalvar Corporation, New Orleans, La. Filed Aug. 13, 1969.

KAL-STAT-D

For Dry Toning Electrostatic Papers (Int. Cl. 1).
First use at least as early as Oct. 24, 1966.

SN 337,416. Alexander Drafting Equipment Co., Pasadena, Calif. Filed Sept. 8, 1969.



For Pocket Adding and Subtracting Machine (Int. Cl. 9).
First use Aug. 1, 1969.

SN 340,749. Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany. Filed Oct. 15, 1969.

GRANDAMO

Owner of German Reg. No. 420,948, dated Jan. 29, 1980.
For Light-Sensitive Photographic Papers (Int. Cl. 1).

SN 344,128. Monsanto Company, St. Louis, Mo. Filed Nov. 20, 1969.

TEL-TAK

For Mechanical Tack Tester Used to Determine Elastomer Tack and Adhesive Properties (Int. Cl. 9).
First use July 28, 1969.

SN 346,774. Pioneer Engineering and Manufacturing Company, Warren, Mich. Filed Dec. 19, 1969.



For Coordinate Measuring Machines (Int. Cl. 9).
First use Sept. 19, 1967.

SN 350,193. Wm. Ainsworth, Inc., Denver, Colo. Filed Feb. 2, 1970.

CADET

For Pocket Transits (Int. Cl. 9).
First use Jan. 2, 1969.

SN 351,387. Programming Sciences Corporation, New York, N.Y. Filed Feb. 16, 1970.

EDUPUTER

For Computer Console, Simulator (Int. Cl. 9).
First use at least as early as Jan. 9, 1970.

SN 351,645. American Optical Corporation, Southbridge, Mass. Filed Feb. 18, 1970.

HAZELITE

For Ophthalmic Lenses (Int. Cl. 9).
First use December 1962.

SN 355,320. RCA Corporation, New York, N.Y. Filed Mar. 30, 1970.

RCA

Owner of Reg. Nos. 167,591, 378,899, and others.
For Test Equipment—Namely, Transistor/Diode Checkers, Resistance Capacitance Circuit Boxes, Isotopes, Tube Testers, and Probes (Int. Cl. 9).
First use at least as early as the Spring, 1930 on tube testers.

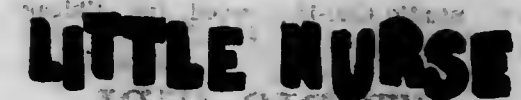
SN 355,821. RCA Corporation, New York, N.Y. Filed Mar. 30, 1970.



Owner of Reg. Nos. 167,591, 378,899, and others.
For Test Equipment—Namely, Transistor/Diode Checkers, Resistance Capacitance Circuit Boxes, Isotopes, Tube Testers, and Probes (Int. Cl. 9).
First use at least as early as November 1968 on tube testers; at least as early as the Spring, 1930 in a different form.

Class 27—Horological Instruments

SN 316,358. World Wide Watch Co., Inc., New York, N.Y. Filed Jan. 10, 1969.



Applicant disclaims the word "Nurse" apart from the mark as shown.
For Watches (Int. Cl. 14).
First use Sept. 3, 1968.

SN 343,548. Gruen Industries, Inc., New York, N.Y. Filed Nov. 14, 1969.

ACHIEVEMENT

Owner of Reg. No. 536,629.
For Watches, Watch Cases, and Watch Movements (Int. Cl. 14).
First use Dec. 29, 1947.

SN 848,558. Gruen Industries, Inc., New York, N.Y. Filed Nov. 14, 1969.

PENTATHIN

Owner of Reg. Nos. 816,295 and 840,845.
For Watches, Watch Cases, and Watch Movements (Int. Cl. 14).
First use Apr. 2, 1928.

SN 848,781. Waltham Watch Company, Chicago, Ill. Filed Nov. 17, 1969.

WALTHAMATIC

Owner of Reg. Nos. 82,124, 99,182, and others.
For Watches (Int. Cl. 14).
First use Oct. 8, 1969.

Class 28—Jewelry and Precious-Metal Ware

SN 885,775. Pompadour Products, Limited, London NW. 11, England. Filed Aug. 20, 1969.

POMPADOUR

Owner of British Reg. No. 664,266, dated Nov. 20, 1947.
For Artificial Pearls, Artificial Pearl Necklaces, and Articles of Jewelry Made Wholly or Principally of Artificial Pearls (Int. Cl. 14).
First use 1941; in commerce 1958.

SN 840,588. Oneida, Ltd., Oneida, N.Y. Filed Oct. 18, 1969.

GOLDEN HOUSTON

Applicant Disclaims the word "Golden" apart from the mark as shown.
For Flatware Made in Whole or in Part of Gold (Int. Cl. 8).
First use Oct. 3, 1969.

SN 844,848. David Dattner, Inc., Buffalo, N.Y. Filed Nov. 24, 1969.

UNITY

For Jewelry (Int. Cl. 14).
First use May 31, 1968.

SN 849,091. Studio Girl-Hollywood, Inc., Chicago, Ill. Filed Jan. 20, 1970.

STUDIO GIRL

For Jewelry of Non-Precious Metals—Namely, Earrings, Locketts, and Bracelets (Int. Cl. 14).
First use on or about Oct. 29, 1969.

SN 852,557. Marvin Bankoff, d.b.a. M. Landis Company, Hoboken, N.J. Filed Feb. 27, 1970.

DIAMONIQUE

For Simulated Diamonds, Which Are Both Colored and White, for Jewelry (Int. Cl. 14).
First use Feb. 9, 1970.

SN 354,375. Zale Corporation, Dallas, Tex. Filed Mar. 18, 1970.

Heavenly

For Finger Rings (Int. Cl. 14).
First use Nov. 5, 1969.

Class 29—Brooms, Brushes, and Dusters

SN 842,181. Rock River Manufacturing Corporation, Janesville, Wis. Filed Oct. 30, 1969.

ECON-O-WIPES

For Wiping Towels or Cloths of Nonwoven Viscose Rayon Fabric (Int. Cl. 21).
First use Jan. 27, 1969.

Class 31—Filters and Refrigerators

SN 228,330. Silver Line Brake Lining Corporation, Los Angeles, Calif., assignee of Chainveyor Corp., Los Angeles, Calif. Filed Sept. 22, 1965.

STARBRIGHT

For Swimming Pool Equipment—Namely, Water Filtration Systems (Int. Cl. 11).
First use during 1958.

SN 835,448. Gelman Instrument Company, Ann Arbor, Mich. Filed Aug. 15, 1969.

ACROFLOW

For Liquid Filtration Units and Cartridges Therefor (Int. Cl. 11).
First use Apr. 10, 1969.

Class 32—Furniture and Upholstery

SN 293,410. Sperry Rand Corporation, New York, N.Y. Filed Mar. 15, 1968.

KOMPAKT

For Filing Cabinets and Parts Thereof (Int. Cl. 20).
First use Nov. 18, 1953.

SN 322,976. Electrohome Limited, Kitchener, Ontario, Canada. Filed Mar. 27, 1969.

DURADEIL

Owner of Canadian Reg. No. 124,840, dated Jan. 5, 1962.
For Finished Radio and Television Cabinets; and Finish Sold as a Component Part of Radio and Television Cabinets (Int. Cl. 20).

SN 824,891. Art Metal-Knoll Corporation, Jamestown, N.Y. Filed Apr. 14, 1969.

ART METAL

Applicant disclaims the word "Metal" apart from the mark as shown. Applicant does not waive any commonlaw right or any other right in the mark as shown or in any other part thereof. Owner of Reg. No. 247,247.

For Articles of Furniture—Namely, Desks, Tables, Cabinets, Stands, Chairs, Files, Book Cases, Shelving, Partitions, Counters, and Conches (Int. Cl. 20).
First use Nov. 1, 1914.

SN 824,409. Clopay Corporation, Cincinnati, Ohio. Filed Apr. 14, 1969.

CROWN

For Window Shades (Int. Cl. 20).
First use March 1950.

SN 824,757. Interroyal Corporation, New York, N.Y., by change of name from Royalmetal Corporation, New York, N.Y. Filed Apr. 16, 1969.

ROYALRIDE

Owner of Reg. Nos. 592,199, 784,490, and others.
For Shelf Filing Cabinets (Int. Cl. 20).
First use Jan. 17, 1969.

SN 340,857. Viscount Products, Incorporated, New York, N.Y. Filed Oct. 15, 1969.

VISCOUNT

For Musical Hand/Stand Mirrors and Cosmetic Tray Mirrors (Int. Cl. 20).
First use Jan. 10, 1969.

SN 342,766. Gene S. Tepper, d.b.a. Elbo Products, San Francisco, Calif. Filed Nov. 5, 1969.

ELBO

For Mirrors and Bookends (Int. Cl. 20).
First use Aug. 15, 1969.

Class 33—Glassware

SN 822,598. Klöckner-Schott Glasfaser GmbH, Dortmund-Mengede, Germany. Filed Mar. 24, 1969.

TURAN

Owner of German Reg. No. 320,786, dated Sept. 11, 1924.
For Glass Plates and Glass Rods (Int. Cl. 21).

SN 828,801. Indiana Glass Company, Dunkirk, Ind. Filed May 26, 1969.

TurboGlass

The term "Glass" is disclaimed apart from the mark as shown.
For Glass Tableware (Int. Cl. 21).
First use Dec. 26, 1968.

WATCHGUARD

For Laminated Safety Glass (Int. Cl. 19).
First use at least as early as Jan. 26, 1970.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 299,748. Allweld Equipment Corporation, Huntington Park, Calif. Filed June 5, 1968.

ALLWELD

For Welding Equipment, Materials and Supplies—Namely, Welding Wires, Welding Rods, Welding Solders, Welding Electrodes, Braising Alloys (Bare and Flux Coated), Welding Alloys (Bare and Flux Coated), Braising Rods (Coated), Fluxes, Welding Machines, and Cutting Machines (Int. Cls. 1, 6, 7, and 9).
First use in or about October 1959.

SN 299,744. Allweld Equipment Corporation, Huntington Park, Calif. Filed June 5, 1968.

NOXIDE

For Welding Equipment, Materials and Supplies—Namely, Welding and Soldering Fluxes (Int. Cl. 1).
First use Dec. 2, 1964.

SN 824,122. Bergen County Service Co., Glen Rock, N.J. Filed Apr. 10, 1969.



Applicant disclaims the word "Humid" and the design portion of the mark separate and apart from the mark as shown, while not waiving any of its common law rights therein.

For Humidifiers (Int. Cl. 11).
First use Feb. 5, 1969.

SN 832,949. Hagie, Inc., Winter Park, Fla. Filed July 18, 1969.



For Residential and Commercial Air Conditioning Units, and Parts Thereof (Int. Cl. 11).
First use on or about Apr. 29, 1969.

Class 36 — Musical Instruments and Supplies

SN 334,254. William David Rogers, d.b.a. Old Stage Records, Nashville, Tenn. Filed Aug. 1, 1969.



Applicant disclaims the word "Records" apart from the mark as shown.
For Phonograph Records (Int. Cl. 9).
First use Mar. 6, 1969.

SN 349,777. MCA Inc., Universal City, Calif. Filed Jan. 27, 1970.



For Recorded Tapes and Records (Int. Cl. 9).
First use latter part of July 1969.

SN 352,535. Superscope, Inc., Sun Valley, Calif. Filed Feb. 26, 1970.

ESP

For Tape Recorders and Components Thereof (Int. Cl. 9).
First use September 1965.

Class 37 — Paper and Stationery

SN 303,489. American Maise-Products Company, New York, N.Y. Filed July 24, 1968.

EDIFLEX

For Starch Film Used as a Packaging Material for Goods and Food Additives (Int. Cl. 16).
First use on or about Apr. 1, 1968.

SN 304,852. All-States Business Products Corp. of New Jersey, Dover, N.J. Filed Aug. 12, 1968.

ERASE-SURE

For Onion Skin Typewriter Paper, Used Individually and in Manifold With Interleaved Carbon Paper (Int. Cl. 16).
First use Jan. 1, 1959.

SN 306,587. William G. Pendill, Hinsdale, Ill. Filed Sept. 4, 1968.

QUIK-PIC

For Partially Printed Shopping Lists (Int. Cl. 16).
First use Aug. 16, 1968.

SN 308,706. The Lynn Pacific Corporation, Union City, Calif. Filed Oct. 2, 1968.

DRAGON

For Paper Tablets and Books Containing Blank Paper (Int. Cl. 16).
First use Mar. 1, 1968.

SN 335,422. Boorum & Pease Company, Brooklyn, N.Y. Filed Aug. 15, 1969.

REST-BAK

For Loose Leaf Binder (Int. Cl. 16).
First use Apr. 1, 1969.

SN 337,838. Statler Tissue Corp., Medford, Mass. Filed Sept. 12, 1969.

WHISPER

For Toilet Tissue and Towels (Int. Cl. 16).
First use Mar. 18, 1969.

SN 339,742. Olinkraft, Inc., West Monroe, La. Filed Oct. 3, 1969.

KRAFKOTE

For Paper and Paperboard Designed for Packaging and Containers (Int. Cl. 16).
First use September 1967.

SN 340,621. Tape, Inc., Green Bay, Wis. Filed Oct. 18, 1969.
For Colored Construction Paper in Rolls for Art Projects (Int. Cl. 16).



First use on or about Sept. 22, 1969.

SN 341,329. Mattel, Inc., Hawthorne, Calif. Filed Oct. 22, 1969.

HOT WHEELS

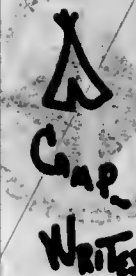
For Wallpaper (Int. Cl. 27).
First use Feb. 15, 1969.

SN 341,373. The Dow Chemical Company, Midland, Mich. Filed Oct. 22, 1969.

ZIP-WRAP

Owner of Reg. No. 373,777 and others.
For Plastic Film for Use in Wrapping and Packaging (Int. Cl. 16).
First use on or about July 21, 1959.

SN 341,969. Wm. Goff Whitworth and Bernice Z. Whitworth, d.b.a. Bee Zee Originals, Chesterfield, Mo. Filed Oct. 28, 1969.



For Postal Kits Containing Blank Post Cards for Correspondence Purposes (Int. Cl. 16).
First use Mar. 18, 1962.

SN 342,820. Beekley Corporation, West Hartford, Conn. Filed Nov. 6, 1969.

Data-Mount

Owner of Reg. No. 842,459.
For Mounting Sheets for Reports (Int. Cl. 16).
First use on or about Oct. 31, 1969.

SN 345,023. Scott Paper Company, Philadelphia, Pa. Filed Dec. 1, 1969.

SOFT-COTE

For Disposable Paper Wipers (Int. Cl. 16).
First use Aug. 26, 1969.

SN 345,403. Writer's Craft Systems, Narberth, Pa. Filed Dec. 4, 1969.

COPY COUNT

For Manuscript Paper, With and Without Interleaved Carbon Paper (Int. Cl. 16).
First use August 1968.

SN 345,405. Writer's Craft Systems, Narberth, Pa. Filed Dec. 4, 1969.

CRAFTSET

For Manuscript Paper, With and Without Interleaved Carbon Paper (Int. Cl. 16).
First use Mar. 1, 1968.

SN 345,600. Columbia Ribbon and Carbon, Glen Cove, N.Y. Filed Dec. 8, 1969.

TRANSOFAX

Owner of Reg. No. 767,566.
For Master Sheets, Stencils and Transfer Sheets, and Combined Master and Transfer Sheet Units for Use in Thermographically Imaging Duplicating Spirit and Offset Masters and Stencils; Also Combined Copy Sheet and Transfer Sheet Units for Thermographically Imaging Single Copies and for Imaging Projection Transparencies (Int. Cl. 16).
First use Oct. 10, 1961.

SN 346,647. Nathan Polsky, d.b.a. Scratch-Art Co., Olympia Fields, Ill. Filed Dec. 18, 1969.

"SCRATCH-ETCH"

Owner of Reg. No. 763,658.
For Paper and Board With an Opaque Top Layer for Drawing With a Pointed Non-Writing Instrument (Int. Cl. 16).
First use Nov. 2, 1969.

SN 347,592. Diebold, Incorporated, Canton, Ohio. Filed Jan. 2, 1970.

TRAKLYFE

For Edge Punched Forms With Reinforced Guide Holes (Int. Cl. 16).
First use Oct. 21, 1969.

SN 348,146. The Gillette Company, d.b.a. The Paper Mate Company, Chicago, Ill. Filed Jan. 9, 1970.

EL MARKO

Owner of Reg. No. 763,004.
For Writing Instruments—Namely, Pens (Int. Cl. 16).
First use Dec. 10, 1969.

SN 350,271. K.C. Pen Co., Inc., Brooklyn, N.Y. Filed Feb. 2, 1970.

ATTACHE

For Ballpoint Pens and Refills Thereof (Int. Cl. 16).
First use Jan. 5, 1970.

SN 352,030. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 24, 1970.

KLEENEX LITTLE TRAVELERS

Owner of Reg. Nos. 191,941, 573,822, and others.
For Facial Tissue (Int. Cl. 16).
First use Feb. 16, 1970.

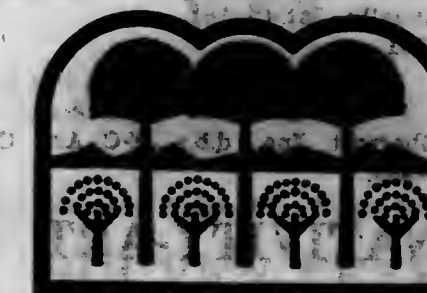
Class 38 — Prints and Publications

SN 278,887. Farm Business Council, Inc., d.b.a. The Picture Publications, Urbana, Ill. Filed Aug. 23, 1967.

PLAIN TALK

For Printed Advertisements Designed for Use by Others To Promote Bank Services Among Members of the Agricultural Community (Int. Cl. 16).
First use in about October 1965.

SN 304,362. Litchfield Park Properties, Litchfield Park, Ariz. Filed Aug. 5, 1968.



For Newsletters and House Organs (Int. Cl. 16).
First use in 1966.

SN 307,243. Standard Chemical Manufacturing Company, Omaha, Nebr. Filed Sept. 12, 1968.



Applicant disclaims the words "Feed," "Quality," and "Premixes" apart from the mark as shown. Owner of Reg. No. 372,102.

For Instruction Manuals for the Care of and Feeding of Livestock Including Sheep, Cattle, Cows, Hogs, and Poultry (Int. Cl. 16).

First use at least as early as Apr. 1, 1967.

SN 330,344. American Stock Exchange, New York, N.Y. Filed June 18, 1969.

**Management
& Operations**

For Magazine Published at Irregular Intervals, Dealing With Matters of Interest Relating to the Securities Business (Int. Cl. 16).

First use May 29, 1969.

SN 331,653. Technic, Inc., Cranston, R.I. Filed July 2, 1969.

MOMENT OF TRUTH

For Technical Bulletins Issued From Time to Time (Int. Cl. 16).

First use November 1962.

SN 340,146. Hill Publishing Company, Inc., Boston, Mass. Filed Oct. 8, 1969.

AUDIENCE

For Hardcover Magazines (Int. Cl. 16).

First use July 1, 1968.

SN 340,583. National Market Reports, Inc., Chicago, Ill. Filed Oct. 13, 1969.

**RED BOOK LICENSE AND
TITLE LAWS**

Applicant disclaims the terminology "License" and "Title Laws" apart from the mark as shown. Owner of Reg. No. 764,463.

For Periodical Booklets Dealing With License and Title Laws, Issued Annually (Int. Cl. 16).

First use in 1961.

SN 342,588. Elmcraft, Inc., d.b.a. E-C Art, Chicago, Ill. Filed Nov. 4, 1969.

NATIVITY-ART

Owner of Reg. Nos. 655,945 and 756,576. For Greeting Cards Contained in Albums Intended for Commercial Display Thereof (Int. Cl. 16).

First use on or about Jan. 2, 1966.

SN 342,602. United Technical Publications, Inc., Garden City, N.Y. Filed Nov. 4, 1969.



No claim is made to the exclusive right to the words "Technical Publications" apart from the mark as shown.

For Industry News Reports, Published Periodically (Int. Cl. 16).

First use at least as early as Jan. 31, 1966; Jan. 2, 1968 in a modified form.

SN 345,588. Availability, Inc., Rockford, Ill. Filed Dec. 8, 1969.

AVAIL A NEWS

Owner of Reg. Nos. 765,289 and 871,940. For Newsletter Relating to Employment and Personnel Agency Services (Int. Cl. 16).

First use in September 1968.

SN 345,953. Herbert A. Ireland, d.b.a. Prospector Research Services, Waltham, Mass. Filed Dec. 11, 1969.



For Monthly Periodical Business Newsletter (Int. Cl. 16).

First use September 1969.

SN 346,130. U.S. Air Tool Co., Inc., Garden City Park, N.Y. Filed Dec. 12, 1969.



For Catalogs of Aircraft Maintenance and Repair Equipment (Int. Cl. 16).

First use Mar. 3, 1969.

SN 349,875. Solomon M. Malkin, Newark, N.J. Filed Jan. 28, 1970.



For Magazine and a Yearbook for the Book Trade (Int. Cl. 16).

First use Jan. 17, 1968.

SN 350,308. Ferdinand Roten, Incorporated, Baltimore, Md. Filed Feb. 2, 1970.

AQUARIUS PRESS

For Books and Works of Graphic Art (Int. Cl. 16).

First use July 2, 1969.

SN 350,402. Poster Originals Ltd., New York, N.Y. Filed Feb. 8, 1970.



For Posters (Int. Cl. 16).

First use Aug. 1, 1965.

SN 351,548. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 16, 1970.

MANY MOODS

For Pictures (Int. Cl. 16).

First use on or about Nov. 3, 1969.

Class 39—Clothing

SN 275,086. College Hall Fashions, Inc., Philadelphia, Pa. Filed June 29, 1967.

COLLEGE HALL

For Men's and Boys' Suits, Slacks, Sport Jackets, Topcoats, and Overcoats (Int. Cl. 25).

First use 1926.

SN 313,644. American Self Service Stores, Inc., d.b.a. Hill Bros., St. Louis, Mo. Filed Dec. 5, 1968.

Hill Topps

Owner of Reg. Nos. 672,649 and 757,803.

For Children's and Women's Shoes (Int. Cl. 25).

First use June 10, 1967.

SN 318,977. Medline Industries, Inc., Evanston, Ill. Filed Jan. 31, 1969.

MEDLINE

For Hospital Garments for Hospital Personnel and Patients—Namely, Lab Coats; Diapers; Pants; Slippers; Caps for Nurses; Leggings; Protective Vests; and Scrub Shirts (Int. Cl. 25).

First use on or about Oct. 4, 1968, on lab coats.

SN 323,420. Mother Wouldn't Like It, London, England. Filed Apr. 2, 1969.

MOTHER WOULDN'T LIKE IT

For Shirts for Men and Women (Int. Cl. 25).

First use August 1967.

SN 331,009. Bernstein & Sons Shirt Corporation, New York, N.Y. Filed June 28, 1969.

DE CALQUER

For Men's, Boys', Women's, and Girls' Wearing Apparel—Namely, Shirts and Blouses (Int. Cl. 25).

First use June 19, 1969.

SN 332,117. Marx-Haas Clothing Co., Inc., St. Louis, Mo. Filed July 9, 1969.

Contura

For Men's Suits and Sport Coats (Int. Cl. 25).

First use 1964.

SN 337,111. Welco Enterprises, Inc., Waynesville, N.C. Filed Sept. 4, 1969.

MOON BASE

For Footwear Such as Shoes, Boots, Slippers, and Sandals (Int. Cl. 25).

First use as early as 1961.

SN 338,538. Chadbourn Inc., Charlotte, N.C. Filed Sept. 22, 1969.



For Men's and Boys' Slacks (Int. Cl. 25).

First use Jan. 9, 1967.

SN 340,730. Beatrice Foods Co., Niles, Ill. Filed Oct. 15, 1969.

SOUVEN-YEAR

Owner of Reg. No. 719,350.

For Caps, Gowns, and Hoods (Int. Cl. 25).

First use Aug. 6, 1969.

SN 341,686. New Process Company, Warren, Pa. Filed Oct. 24, 1969.

FASHION GAL

For Women's Dresses (Int. Cl. 25).
First use Oct. 8, 1969.

SN 342,238. Donmoor, Inc., New York, N.Y. Filed Oct. 31, 1969.

LEM

For Boys' Shirts and Trousers (Int. Cl. 25).
First use Aug. 28, 1969.

SN 343,161. Pyramid Trading Corporation, Dallas, Tex. Filed Nov. 10, 1969.

MUSKI

The mark is fictitious and is not the name of a particular individual.
For Clothing, More Specifically, Dresses (Int. Cl. 25).
First use Oct. 1, 1969.

SN 343,360. Daber, Inc., Richmond, Va. Filed Nov. 13, 1969.

JACK MC CONNELL

The term "Jack McConnell" is a fanciful and fictitious name, and is not intended as the name of any particular living individual.

For Ladies' Blouses and Men's Shirts (Int. Cl. 25).
First use at least as early as Sept. 29, 1969.

SN 344,042. V.F. Corporation, Reading, Pa. Filed Nov. 19, 1969.

VANILURE

For Textile Fabrics Made Up Into Finished Apparel—Namely, Loungewear and Lingerie (Int. Cl. 25).
First use Oct. 1, 1969.

SN 344,270. Vapor-Ella Shower or Raincap Inc., Miami, Fla. Filed Nov. 21, 1969.

VAPOR-ELLA

For Shower or Rain Caps (Int. Cl. 25).
First use Oct. 9, 1969.

SN 344,473. Uniroyal, Inc., New York, N.Y. Filed Nov. 24, 1969.

SIREN

Owner of Reg. No. 224,504.
For Shoes (Int. Cl. 25).
First use September 1969.

SN 345,696. Wembley Industries, Inc., New Orleans, La. Filed Dec. 8, 1969.

Wemana

For Men's Neckwear (Int. Cl. 25).
First use Sept. 19, 1969.

SN 346,348. Maidenform, Inc., New York, N.Y. Filed Dec. 16, 1969.

TRIC-O-PLUS

Owner of Reg. Nos. 599,108 and 783,274.
For Foundation Garments, Lingerie, Sleepwear, and Lounge-wear (Int. Cl. 25).
First use Nov. 21, 1969.

SN 347,127. Thomson Company, Thomson, Ga. Filed Dec. 24, 1969.

SALVATION

Owner of Reg. No. 837,184.
For Men's Clothing—Namely, Slacks (Int. Cl. 25).
First use Dec. 9, 1969.

SN 347,658. Ultra Smart Hosiery Co., Inc., New York, N.Y. Filed Jan. 2, 1970.

GAYLARK

For Ladies' Hosiery (Int. Cl. 25).
First use Jan. 15, 1969.

SN 348,274. East-West Industries, Inc., Cornwells Heights, Pa. Filed Jan. 12, 1970.



For Sweaters, Knit Shirts, Swim Suits, Slacks, Jackets, Shirts and Shorts (Int. Cl. 25).
First use Mar. 1, 1969.

SN 352,424. Harlemark International, Inc., Framingham, Mass. Filed Feb. 26, 1970.

Skin Dry

For Garments Worn Next to the Body—Namely, Tights (Int. Cl. 25).
First use Apr. 17, 1969.

SN 353,247. E. I. Anderson, Long Beach, Calif. Filed Mar. 6, 1970.

Scatter Gunner

For Wearing Apparel for Sportsmen and Shooters—Namely, Jackets, Coats, Shirts, Sweaters, Vests, Caps and Belts (Int. Cl. 25).
First use at least as early as February 1969.

SN 353,701. Nat Jolton Company, Los Angeles, Calif. Filed Mar. 11, 1970.

LOVE 'N' STUFF

For Jeans and Shirts for Men and Women (Int. Cl. 25).
First use Mar. 3, 1970.

SN 353,817. Judy Bond, Inc., New York, N.Y. Filed Mar. 19, 1970.

Provincetown

Owner of Reg. No. 770,130.
For Ladies', Misses' and Juniors' Dresses, Blouses and Sweaters (Int. Cl. 25).
First use Dec. 5, 1969.

SN 353,818. Consolidated Foods Corporation, Chicago, Ill. Filed Mar. 12, 1970.

HANDSOME HANDS

For Men's Gloves (Int. Cl. 25).
First use Oct. 15, 1969.

SN 353,956. Maidenform, Inc., New York, N.Y. Filed Mar. 18, 1970.

PANTEENS

Owner of Reg. No. 697,501.
For Lingerie (Int. Cl. 25).
First use May 16, 1969.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 324,454. Victor B. Handal & Bro. Inc., New York, N.Y. Filed Apr. 14, 1969.

Touche

For Bath Mats and Wall to Wall Carpet in Bathrooms (Int. Cl. 27).
First use Mar. 1, 1969.

KLEEN-WRAP

For Knitted Paper Fabrics (Int. Cl. 24).
First use Mar. 8, 1969.

SN 332,502. Mercer Industries, Inc., New York, N.Y. Filed July 14, 1969.



For Textile Fabrics Containing Natural and/or Synthetic Fibers and/or Combinations or Blends Thereof (Int. Cl. 24).
First use Jan. 6, 1969.

SN 341,322. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 22, 1969.

SILDUKA

For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Apr. 17, 1966.

SN 341,323. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 22, 1969.

SPATTER

Owner of Reg. No. 507,956.
For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as May 13, 1967.

SN 341,324. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 22, 1969.

UTOPIA

Owner of Reg. No. 507,957.
For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Mar. 7, 1966.

SN 341,325. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 22, 1969.

COBWEB SHEER

Applicant disclaims the word "Sheer" apart from the mark as shown.

Owner of Reg. No. 507,958.
For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Jan. 1, 1968.

SN 347,684. Deering Milliken, Inc., New York, N.Y. Filed Jan. 5, 1970.

MILLICORD

Owner of Reg. Nos. 783,732, 824,126, and 839,644.
For Textile Fabrics Made of Wool, Cotton and Synthetic Fibers and Combinations Thereof (Int. Cl. 24).
First use Dec. 13, 1969.

SN 847,038. Dearing Milliken, Inc., New York, N.Y. Filed SN 849,127. E. T. Barwick Industries, Inc., Chamblee, Ga. Jan. 5, 1970. Filed Jan. 21, 1970.

TURPSICORD

For Textile Fabrics Made of Wool, Cotton and Synthetic Fibers and Combinations Thereof (Int. Cl. 24).
First use Dec. 10, 1969.

SN 849,110. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

LUXPOINT

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,118. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

NIGUEL

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,114. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

POLYQUEST

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,115. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

POLYSTONE

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,128. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

SPANISH TRACE

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,125. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

TEXTRA

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,126. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

TRIPLE TEX

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

UNISPHERE

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 849,129. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

VELLMAR

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 851,542. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 18, 1970.

MANY MOODS

For Bedspreads, Draperies, and Table Covers (Int. Cl. 24).
First use on or about Nov. 14, 1969.

SN 852,711. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Mar. 2, 1970.

LIVING THEMES

For Carpets (Int. Cl. 27).
First use Feb. 24, 1970.

SN 852,712. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Mar. 2, 1970.

ECONOMO

For Carpets (Int. Cl. 27).
First use June 1968.

SN 852,714. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Mar. 2, 1970.

SPIKETUFT II

For Carpets (Int. Cl. 27).
First use Feb. 20, 1970.

Class 43—Thread and Yarn

SN 296,758. Standard Oil Company, Flemington, N.J. Filed Apr. 29, 1968.

EXXON

For Synthetic Fibrous Material—Namely, Yarn (Int. Cl. 23).
First use Oct. 4, 1967.

Class 44—Dental, Medical, and Surgical Appliances

SN 317,857. Medline Industries, Inc., Evanston, Ill. Filed Jan. 29, 1969.

STERICLOTH

For Surgeons' Gowns (Int. Cl. 10).
First use on or about Jan. 14, 1969.

SN 328,910. Sybron Corporation, Rochester, N.Y. Filed June 2, 1969. SN 305,626. H. C. Brill Company, Inc., Cedar Grove, N.J. Filed Aug. 21, 1968.

ULTRALUM

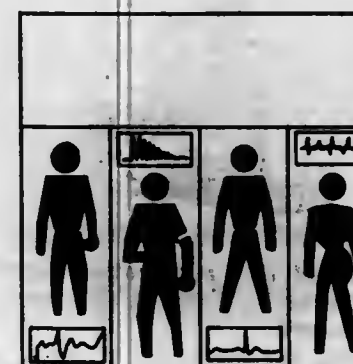
For Stationary Medical X-Ray Grids (Int. Cl. 10).
First use on or before Mar. 21, 1968.

SN 381,909. Kimberly-Clark Corporation, Neenah, Wis. Filed July 7, 1969.

POISE

Owner of Reg. Nos. 416,435 and 723,814.
For Sanitary Tampons (Int. Cl. 5).
First use May 21, 1969.

SN 387,804. Harco Electronics Ltd., Winnipeg, Manitoba, Canada. Filed Sept. 8, 1969.



For Medical Electronic Monitoring Equipment—Namely, Pulse Meter, Foetal Heart Monitor, Blood Pressure Monitor, Pulse-Blood Pressure Monitor, E.C.G. Activated Cardiac Monitor, Fetal E.C.G. Preamplifier, E.C.G. Activated Cardiac Monitor Alarm, 5-Inch Scope and Alarm (With Self-Contained Direct Writer), 5-Inch Scope and Alarm (Without Rate Meter and Alarm), Central Station Monitoring Console, I.V. Drop Counter and Rate Meter With Rate Alarm, E.C.G. Portable Recorder, Defibrillator With Synchronizer, Defibrillator Without Synchronizer, Patient Cable Sets, Electrodes, and Adhesives for Electrodes (Int. Cl. 10).
First use July 11, 1968; in commerce July 11, 1968.

SN 338,027. American Optical Corporation, Southbridge, Mass. Filed Sept. 16, 1969.

BELT-AIRE

For Respirators (Int. Cl. 9).
First use December 1964.

Class 46—Foods and Ingredients of Foods

SN 303,547. Sunline, Inc., St. Louis, Mo. Filed July 24, 1968.

SUN BURST

For Edible Sunflower Seeds (Int. Cl. 29).
First use June 16, 1968.



The word "Sweet" is disclaimed apart from the mark as shown. Owner of Reg. No. 852,000.
For Dough Base for Making Bakery Products, Sold Only to Commercial Bakers (Int. Cl. 30).
First use on or before Feb. 28, 1966.

SN 305,627. H. C. Brill Company, Inc., Cedar Grove, N.J. Filed Aug. 21, 1968.



Owner of Reg. Nos. 544,740 and 852,000.
For Dough Base for Making Bakery Products, Sold Only to Commercial Bakers (Int. Cl. 30).
First use on or before Feb. 28, 1966.

SN 305,628. H. C. Brill Company, Inc., Cedar Grove, N.J. Filed Aug. 21, 1968.



Owner of Reg. No. 852,000.
For Dough Base for Making Bakery Products, Sold Only to Commercial Bakers (Int. Cl. 30).
First use on or before Feb. 28, 1966.

SN 309,267. Lberitler Argentina, Cociudad Anonima Industrial y Comercial, Santa Fe, Argentina. Filed Oct. 9, 1968.

PITO PITO

Owner of Argentine Reg. No. 466,584, dated Dec. 5, 1961.
For Candy (Int. Cl. 30).
First use Apr. 1, 1964.

SN 309,904. Salt's Enterprises, San Rafael, Calif. Filed Oct. 17, 1968.



The words "Authentic English Fish & Chips" are disclaimed apart from the mark. "H. Salt" is the name of a living individual whose consent is of record.
For Cooked Fish and Chips, Vinegar, Wheat Flour Batter Mix, and Frozen Fish (Int. Cls. 29 and 30).
First use about Jan. 2, 1967.

SN 815,222. Foremost-McKesson, Inc., San Francisco, Calif. Filed Dec. 26, 1968.

BLUE MOON

Owner of Reg. Nos. 441,900, 508,148, and 670,678.
For Cheese (Int. Cl. 29).
First use Jan. 15, 1931.

SN 318,454. Oxford Pickle Co., Inc., Cambridge, Mass. Filed Feb. 5, 1969.

Sugar Loaf

For Pickles (Int. Cl. 29).
First use about 1930.

SN 321,888. Choice Quality Mills, Inc., Newberry, S.C. Filed Mar. 11, 1969.



No claim is made to the words "Choice Feeds."
For Feeds for Livestock and Poultry (Int. Cl. 31).
First use Aug. 1, 1968.

SN 322,928. Tree Top, Inc., Selah, Wash. Filed Mar. 26, 1969.

TREE TOP

Owner of Reg. Nos. 521,818, 798,861, and others.
For Apple Juice, Frozen Apple Flakes and Dehydrated Apple Flakes (Int. Cls. 29 and 32).
First use February 1947.

SN 324,012. General Mills, Inc., Minneapolis, Minn. Filed Apr. 9, 1969.

GOBBLEDECRUNCH

Owner of Reg. No. 822,498.
For Ready-to-Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Nov. 4, 1968.

SN 327,628. Herrud & Company, Grand Rapids, Mich. Filed May 19, 1969.

ASTRO-HOT DOGS

Applicant hereby disclaims any right to the exclusive use of the words "Hot Dogs" apart from their use in the combined mark as shown.
For All Meat Frankfurters (Int. Cl. 29).
First use on or about Apr. 28, 1969.

SN 331,607. Fenn Bros., Inc., Sioux Falls, S. Dak. Filed July 2, 1969.

ICED BRAZILS

Without waiving its common law rights, applicant disclaims exclusive right to use of the word "Brazilis" apart from the mark shown.

Owner of Reg. No. 563,608.
For Candy Bars (Int. Cl. 30).
First use Apr. 1, 1969.

SN 336,020. Schreiber Mills, Inc., St. Joseph, Mo. Filed Aug. 22, 1969.

LASSIE

Owner of Reg. Nos. 285,240, 582,452, and others.
For Cat Food and Dog Food (Int. Cl. 31).
First use Aug. 7, 1969.

SN 336,975. The Cheese Joint, Inc., Sodas, N.Y. Filed Sept. 4, 1969.

"One taste is worth a thousand words"



For the purposes of this registration, applicant disclaims the phrase "One Taste Is Worth A Thousand Words" apart from the mark as shown.

Owner of Reg. No. 741,369.
For Horseradish, Seafood Cocktail Sauce (Tomato Based), Mustard Sauce, Ham Salad, Sour Cream French Onion Dip, and Sour Cream Bleu (Blue) Cheese Dip (Int. Cls. 29 and 30).
First use Mar. 16, 1968, on horseradish.

SN 337,180. The Coca-Cola Company, Atlanta, Ga. Filed Sept. 5, 1969.

MINUTE MAID

Owner of Reg. Nos. 634,655, 743,068, and others.
For Fresh Lemons (Int. Cl. 31).
First use Aug. 13, 1969.

SN 337,183. Malpeque Shrimps, Limited, Montreal, Quebec, Canada. Filed Sept. 5, 1969.

malpeque

The translation of the term "Malpeque" is "bad nose."
For Frozen Cooked Ready-to-Eat Shrimp (Int. Cl. 29).
First use Nov. 11, 1968; in commerce Nov. 11, 1968.

SN 339,998. Cap'n Syd's Inc., Corpus Christi, Tex. Filed Oct. 7, 1969.

CAP'N SYD'S

For Fresh Frozen Shrimp (Int. Cl. 29).
First use Aug. 15, 1969.

SN 340,357. The Douras Company, Memphis, Tenn. Filed Oct. 9, 1969.

LOVE LINKS

For Chewing Gum (Int. Cl. 30).
First use Sept. 6, 1968.

SN 341,344. Ajinomoto Kabushiki Kaisha, d.b.a. Ajinomoto Co., Inc., Chuo-ku, Tokyo, Japan. Filed Oct. 22, 1969.

味の素

The mark consists of the Japanese characters for the word "Aji-No-Moto." "Aji-No-Moto" means "element of taste" in the English language.

Owner of U.S. Reg. Nos. 590,656 and 859,023.
For Food Flavoring Agent of a Chemical Nature (Int. Cl. 30).
First use September 1969; in commerce August 1968.

SN 342,211. Pet Incorporated, St. Louis, Mo. Filed Oct. 31, 1969.

COOKING MACHINE

For Milk Base Cooking Sauce (Int. Cl. 30).
First use Oct. 10, 1969.

SN 342,360. General Mills, Inc., Minneapolis, Minn. Filed Nov. 8, 1969.

FEMME

For Pet Foods for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,361. General Mills, Inc., Minneapolis, Minn. Filed Nov. 8, 1969.

GOLDEN VALLEY

For Pet Food for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,362. General Mills, Inc., Minneapolis, Minn. Filed Nov. 8, 1969.

GOOD DOG

For Pet Foods for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,364. General Mills, Inc., Minneapolis, Minn. Filed Nov. 8, 1969.

PROSPER

For Pet Food for Dogs and Cats (Int. Cl. 31).
First use on or about Oct. 7, 1969.

SN 342,391. Pierce Pre-Cooked Foods, Inc., Moorefield, W. Va. Filed Nov. 6, 1969.

TATER-CHIK

Owner of Reg. Nos. 791,494 and 846,068.
For Frozen Pre-Cooked Chicken Parts (Int. Cl. 29).
First use Oct. 31, 1969.

SN 343,853. Coburg Dairy, Inc., Charleston, S.C. Filed Nov. 13, 1969.

Lean & Keen

The word "Lean" is disclaimed when used apart from the mark as shown.

For Low Fat Milk (Int. Cl. 29).
First use Oct. 20, 1969.

SN 346,802. General Mills, Inc., Minneapolis, Minn. Filed Dec. 22, 1969.

ENCORE

For Pet Foods for Dogs and Cats (Int. Cl. 31).
First use on or about Nov. 5, 1969.

SN 346,803. General Mills, Inc., Minneapolis, Minn. Filed Dec. 22, 1969.



For Dry Smoked Sausage, Beef Jerky, Vinegar Pickled Sausage, Pickled Pigs Knuckles and Pigs Feet, and Vinegar Pickled Eggs (Int. Cl. 29).
First use in or about December 1968 on dry smoked sausages and beef jerky.

SN 346,804. General Mills, Inc., Minneapolis, Minn. Filed Dec. 22, 1969.

DOG'S CHOICE

For Pet Food for Dogs and Cats (Int. Cl. 31).
First use on or about Nov. 5, 1969.

SN 346,805. General Mills, Inc., Minneapolis, Minn. Filed Dec. 22, 1969.

SLIM JIM

Owner of Reg. No. 746,384.
For Dry Smoked Sausage, Beef Jerky, Vinegar Pickled Sausage, Pickled Pigs Knuckles and Pigs Feet, and Vinegar Pickled Eggs (Int. Cl. 29).
First use in or about January 1968 on dry smoked sausages.

SN 347,526. North Sea Packing Co. A/S, Stavanger, Norway. Filed Dec. 31, 1969.



For Sardines and Other Fish Cans, Especially Brining and Sild-Sardines and Kipperd Herrings (Int. Cl. 29).
First use Feb. 12, 1937; in commerce February 1937.

SN 347,606. Gus Glaser Meats, Inc., Fort Dodge, Iowa. Filed Jan. 2, 1970.

BEEF
TENDERETTE

For the purposes of this registration and without waiving any of applicant's common-law rights therein, the word "Beef" is disclaimed apart from the mark as shown.

For Prepared Meat Products (Int. Cl. 29).
First use Oct. 6, 1969.

SN 348,000. Dolly Madison Industries, Inc., Philadelphia, Pa. Filed Jan. 8, 1970.

DOLLY
MADISON
kitchen brand

The word "Brand" is disclaimed apart from the mark as shown.

Owner of Reg. Nos. 281,725, 791,939, and others.
For Ice Cream (Int. Cl. 30).
First use Dec. 8, 1969.

SN 349,545. Daily Diet Pet Food Co., Huntington Park, Calif. Filed Jan. 26, 1970.



For Dog Food (Int. Cl. 31).
First use Jan. 22, 1958.

SN 350,190. Ralston Purina Company, St. Louis, Mo. Filed Feb. 2, 1970.

GILT-BILT

For Hog Feed (Int. Cl. 31).
First use Jan. 12, 1970.

SN 350,656. Fotomat Corporation, La Jolla, Calif. Filed Feb. 6, 1970.

PEARL OF THE COVE

For Quality Canned Fish (Int. Cl. 29).
First use Nov. 18, 1969.

SN 352,417. General Mills, Inc., Minneapolis, Minn. Filed Feb. 26, 1970.

TIMBERJAX

For Ready to Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Jan. 29, 1970.

SN 352,418. General Mills, Inc., Minneapolis, Minn. Filed Feb. 26, 1970.

SHAKAROOS

For Ready To Eat Breakfast Cereal (Int. Cl. 30).
First use on or about Jan. 29, 1970.

SN 353,951. Cavenham Confectionery Limited, Hopkinsville, Ky. Filed Mar. 13, 1970.



The representation of candy is disclaimed apart from the mark as shown with reservation of all common law rights therein.

For Candy (Int. Cl. 30).
First use Nov. 6, 1969.

SN 354,260. Frito-Lay, Inc., Dallas, Tex. Filed Mar. 17, 1970.



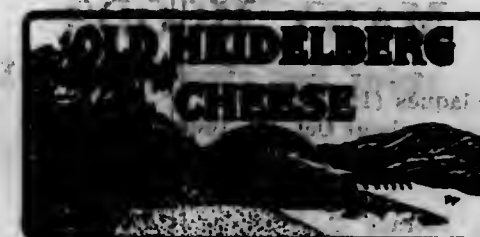
For Snack Foods—Namely, Corn Chips, Potato Chips, and Puffed Corn Snacks (Int. Cl. 29).
First use Oct. 8, 1969.

SN 354,267. The Quaker Oats Company, Chicago, Ill. Filed Mar. 17, 1970.

BIGGIES

For Line of Snack Crackers and Cookies (Int. Cl. 30).
First use Jan. 26, 1970.

SN 354,852. Kolb-Lena Cheese Co., Lena, Ill. Filed Mar. 18, 1970.



No registration rights are claimed herein for the words "Old Heidelberg Cheese" apart from the mark as shown in the drawing; but the applicant waives none of its common-law rights in said mark or any feature thereof. Owner of Reg. No. 307,206.

For Cheese (Int. Cl. 29).
First use on or about Sept. 14, 1931.

Class 47—Wines

SN 324,300. Michigan Wineries, Inc., Paw Paw, Mich. Filed Apr. 11, 1969.

COLD MACKERAL

For Wine (Int. Cl. 33).
First use Mar. 14, 1969.

SN 330,424. Sociedade Comercial dos Vinhos de Mesa de Portugal, Limitada, Direto, Porto, Portugal. Filed June 18, 1969.

MATEUS

Owner of U.S. Reg. No. 517,897.
For Wines (Int. Cl. 33).
First use 1944; in commerce 1948.

SN 339,907. Paul Masson, Inc., d.b.a. Paul Masson and Paul Masson Vineyards, San Francisco, Calif. Filed Oct. 6, 1969.



Owner of Reg. Nos. 659,906 and 697,283.
For Wines (Int. Cl. 33).
First use June 16, 1958.

SN 353,128. Canandaigua Industries Co., Inc., Canandaigua, N.Y. Filed Mar. 5, 1970.

AQUARIUS

For Wine (Int. Cl. 33).
First use Feb. 26, 1970.

Class 48—Malt Beverages and Liquors

SN 310,537. Brasseries Semeuse S.A., Hellemmes-Lille (Nord), France. Filed Oct. 25, 1968.



Semeuse

Priority claimed under Sec. 44(d) on French Reg. No. 743,971, dated July 22, 1968. The French word "Semeuse" means "sower" or "disseminator"; "Produits Français" means "French products." No exclusive claim is made to the words "Produits Français" apart from the mark as shown.

For Beer, Ale, and Porter (Int. Cl. 32).

Class 49—Distilled Alcoholic Liquors

SN 271,657. Charles Tanqueray & Co. Limited, London, England. Filed May 18, 1967.



The mark consists of the conformation of a bottle used as the container for the goods. The drawing is lined for green and red, which colors are claimed as a feature of the mark.

For Gin (Int. Cl. 33).

First use March 1949; in commerce May 1949.

SN 296,333. Mar-Sale Chicago Co., d.b.a. Jerome Co., Chicago, Ill. Filed Apr. 33, 1968.

JOHN HANCOCK

The name "John Hancock" was the name of an historical character, now deceased.

For Kentucky Bourbon Whiskey (Int. Cl. 33).

First use on or about Feb. 8, 1934.

SN 297,911. Zimmerman's Cut Rate Liquor Store, Inc., Chicago, Ill. Filed May 10, 1968.

TOURNEAU ET FILS

For Cognac (Int. Cl. 33).
First use September 1961.

SN 318,098. Przedsiębiorstwo Handlu Zagranicznego "Agros," Warsaw, Poland. Filed Jan. 31, 1969.



No claim is made to the words "Krupnik" and "Polish Honey Liqueur" apart from the mark as shown. Owner of Polish Reg. No. 47,862, dated Mar. 7, 1968; and U.S. Reg. Nos. 757,016, 868,237, and others.

For Polish Honey Liqueurs (Int. Cl. 33).

Class 50—Merchandise Not Otherwise Classified

SN 334,501. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed Aug. 5, 1969.

JIGGLY BUTTONS

The word "Buttons" is disclaimed apart from the mark as shown, without disclaiming any common law rights therein. For Novelty Badges (Int. Cl. 20). First use Oct. 12, 1968.

SN 341,386. Hardigg Industries, Inc., South Deerfield, Mass. Filed Oct. 22, 1969.

TORO-PAD

For Plastic Pads for Absorbing and Otherwise Dissipating Shocks (Int. Cl. 20). First use at least as early as Apr. 28, 1969.

SN 341,713. Uniroyal, Inc., New York, N.Y. Filed Oct. 24, 1969.

MEMORY

For Offset Printing Blankets (Int. Cl. 7). First use at least as early as Sept. 11, 1969.

SN 342,073. Harold Soper Advertising, Glendale, Calif. Filed Oct. 29, 1969.

ULTRA-VISION

For Changeable Display Billboards (Int. Cl. 20). First use Sept. 12, 1969.

SN 342,382. The Akro Corporation, Canton, Ohio. Filed Nov. 3, 1969.

AKRO

Owner of Reg. Nos. 876,701, 876,702, and 878,835. For Carpet-to-Vinyl Mats and Matting (Int. Cl. 27). First use on or about Apr. 1, 1969.

SN 351,544. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 16, 1970.

MANY MOODS

For Wall Plaques (Int. Cl. 20). First use on or about Oct. 20, 1969.

SN 315,757. Horace C. Hudgins, d.b.a. Driver Education Equipment & Supply Co., Jacksonville, Fla. Filed Feb. 19, 1970.

DEESCO

For Miniature Traffic Signs, Sign Posts and Bases, and Pennants Used Primarily for Driver Education (Int. Cl. 6). First use Nov. 24, 1969.

Class 51—Cosmetics and Toilet Preparations

SN 298,610. Les Parfums Madeleine de Rauch, Paris, France. Filed Mar. 16, 1970.

DE RAUCH

Owner of French Reg. No. 704,176, dated Jan. 6, 1966; and U.S. Reg. Nos. 879,307 and 884,295.

For Perfumes, Toilet Waters, Colognes, Pre- and After-Shave Lotions, Talcum Powder, Bath Oils, Bath Salts, Face Creams, Hand Creams, Skin Creams, Eye Shadow, Liquid Eye Liner, Mascara, Face Make-Up, Lipsticks, Nail Polish, Perfume Waters, Milk Baths, Hair Spray, Brilliantines, Sun-tan Cream, Sun-tan Oil, Bath Powder, Bath Cream, and Liquid Make-Up Removers (Int. Cl. 3). First use April 1966; in Commerce February 1967.

SN 308,361. Cameo, Inc., Toledo, Ohio. Filed Sept. 27, 1968.

PEARL DROPS

Owner of Reg. Nos. 849,577 and 849,578. For Liquid Dentifrice (Int. Cl. 3). First use Apr. 25, 1968.

SN 342,412. Chesebrough-Pond's Inc., New York, N.Y. Filed Nov. 3, 1969.

ODORONO

Owner of Reg. Nos. 96,159, 320,892, and others. For Personal Deodorants and Preparations for Preventing Excessive Perspiration (Int. Cl. 5). First use prior to 1915.

SN 353,132. A. W. Curtis Laboratories, Inc., Detroit, Mich. Filed Mar. 5, 1970.

SN 342,600. Topco Associates, Inc., Skokie, Ill. Filed Nov. 4, 1969.

BRONZE BARON

Applicant disclaims the word "Bronze" apart from the mark as shown. For Cologne and Talcum Powder (Int. Cl. 3). First use Jan. 23, 1948.

Class 52—Detergents and Soaps

SN 314,004. Walter Corporation, Denver, Colo. Filed Dec. 9, 1968.



For Household Preparation for Removing Wax, Asphalt, Tar, Shoe Polish, Lipstick and Sticky Substances Such as Chewing Gum, Bumper Stickers, Labels, Mastics, Rubber Cement, and the Like (Int. Cl. 3). First use Nov. 29, 1968; on or about Nov. 12, 1967, in a different form.

SN 325,384. Plumbcraft Manufacturing Corporation, Bedford Heights, Ohio. Filed Apr. 23, 1969.

SUPER PLUMB

Applicant disclaims exclusive rights to the word "Super" apart from the mark as shown. For Drain Pipe Opener and Cleaner for Bathroom, Laundry, Traps and Septic Systems (Int. Cl. 3). First use January 1965.

SERVICE MARKS

Class 100—Miscellaneous

SN 310,664. Instrument Society of America, Pittsburgh, Pa. Filed Oct. 28, 1968.



Owner of Reg. Nos. 773,215 and 775,952. For Association Services—Namely, the Promotion of the Interests of Members and Others by Advancement of Instrumentation in Industry and Technology by Dissemination of Information, Through Conferences, Symposia, Exhibits, and Meetings at the International, National, Regional, and Local Levels; Through Stimulation of Educational Activities; and Through Publications (Int. Cl. 42). First use April 1948.



Owner of Reg. Nos. 667,516, 814,231, and others. For Oven Cleaner (Int. Cl. 3). First use May 19, 1967.

SN 343,188. Twinoak Products, Inc., North Aurora, Ill. Filed Nov. 10, 1969.

FLUSH-CLEAR

For Cleaning, Sanitizing and Deodorizing Compound for Toilet Bowls (Int. Cl. 3). First use at least as early as September 1969.

SN 346,606. Delmar Products, Inc., d.b.a. Yankee Chemical Company, Philadelphia, Pa. Filed Dec. 18, 1969.

BORASOPE

For Borax Based Hand Cleansers (Int. Cl. 3). First use in or about 1947.

SN 354,347. Century Creations, Incorporated, Venice, Calif. Filed Mar. 18, 1970.

DR CARE

For Hand and Skin Cleanser (Int. Cl. 3). First use June 20, 1969.



SN 310,666. Instrument Society of America, Pittsburgh, Pa. Filed Oct. 28, 1968.

Owner of Reg. Nos. 773,215 and 775,952. For Association Services—Namely, the Promotion of the Interests of Members and Others by Advancement of Instrumentation in Industry and Technology by Dissemination of Information, Through Conferences, Symposia, Exhibits, and Meetings at the International, National, Regional, and Local Levels; Through Stimulation of Educational Activities; and Through Publications (Int. Cl. 42). First use December 1963.

Class 101—Advertising and Business

SN 311,854. Foote, Cone & Belding, Inc., New York, N.Y.
Filed Nov. 12, 1968.



For Marketing Research and Advertising Consultation Services for Consumer and Industrial Products and Services (Int. Cl. 35).

First use at least as early as February 1965.

SN 311,855. Foote, Cone & Belding, Inc., New York, N.Y.
Filed Nov. 12, 1968.

FOCUS RESEARCH

No claim is made to the exclusive use of the word "Research" apart from the mark as shown.

For Marketing Research and Advertising Consultation Services for Consumer and Industrial Products and Services (Int. Cl. 35).

First use at least as early as February 1965.

SN 322,960. Hal Butts, Jr., Atlanta, Ga. Filed Mar. 27, 1969.

DIAL-A-LETTER

For Secretarial and Office Management Services (Int. Cl. 35).

First use on or about Apr. 2, 1968.

SN 322,961. Hal Butts, Jr., Atlanta, Ga. Filed Mar. 27, 1969.



The representation of a telephone is disclaimed apart from the mark as shown.

For Secretarial and Office Management Services (Int. Cl. 35).

First use on or about Apr. 2, 1968.

SN 324,731. Mr. Tony's Submarine Shops, Inc., Southfield, Mich. Filed Apr. 16, 1969.

**MR. TONY'S**

For Restaurant Services—Namely, Supervision and Assistance in Management and Operation of Food Service Facilities (Int. Cl. 40).

First use Nov. 1, 1967.

SN 325,617. MPA Franchise Systems, Inc., Fort Lauderdale, Fla. Filed Apr. 25, 1969.



The drawing is lined, in part, for the color red, but no claim to color is made.

For Retail Grocery and Butcher Shop Services (Int. Cl. 35).

First use May 15, 1968.

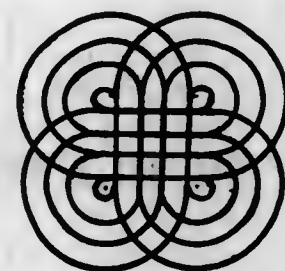
SN 335,920. Gilbert Laboratories, Bernardsville, N.J. Filed Aug. 21, 1969.



For Distribution Services in the Pharmaceutical Field (Int. Cl. 35).

First use on or about June 1, 1969.

SN 340,989. Numerax, Inc., Englewood Cliffs, N.J. Filed Oct. 17, 1969.



For Furnishing Comparative Tariff Rates to Others and Up-Dating Such Rates on a Continual Basis (Int. Cl. 35).

First use Sept. 27, 1969.

SN 340,990. Numerax, Inc., Englewood Cliffs, N.J. Filed Oct. 17, 1969.

NUMERAX

For Furnishing Comparative Tariff Rates to Others and Up-Dating Such Rates on a Continual Basis (Int. Cl. 35).

First use Sept. 27, 1969.

SN 341,575. Computer Services Corporation, Dallas, Tex. Filed Oct. 20, 1969.



The mark consists of a fanciful design of the letters "CSC." For Services Rendered to Subscribers to Applicant, Particularly College Students, Which Services Include the Arranging for Discount Prices on Miscellaneous Goods and Services of Others, Procurement of Insurance, Employment Placement, and Book Exchange Services (Int. Cl. 35).

First use at least as early as August 1969.

SN 341,576. Computer Services Corporation, Dallas, Tex. Filed Oct. 20, 1969.

THE INCREDIBLE CARD

Without waiving any common law rights therein, and for purposes of registration, applicant disclaims the word "Card" apart from the mark as shown.

For Services Rendered to Subscribers to Applicant, Particularly College Students, Which Services Include the Arranging for Discount Prices on Miscellaneous Goods and Services of Others, Procurement of Insurance, Employment Placement, and Book Exchange Services (Int. Cl. 35).

First use at least as early as August 1969.

SN 341,577. Computer Services Corporation, Dallas, Tex. Filed Oct. 20, 1969.

MORE OF EVERYTHING FOR COLLEGE STUDENTS... WITH MORE TO COME...

For Services Rendered to Subscribers to Applicant, Particularly College Students, Which Services Include the Arranging for Discount Prices on Miscellaneous Goods and Services of Others, Procurement of Insurance, Employment Placement, and Book Exchange Services (Int. Cl. 35).

First use at least as early as August 1969.

SN 345,747. Camco Systems, Inc., Madison, Wis. Filed Dec. 10, 1969.

CAMCO

For Supervisory Services for Establishing and Operating a Tax Return Preparation Service (Int. Cl. 35).

First use Nov. 17, 1969.

SN 349,797. Fisher-Stevens, Inc., Clifton, N.J. Filed Jan. 28, 1970.

CAPIS

For Computerized Service to Medical Societies for the Maintenance of Membership Records, Dues, Billing, Preparation of Forms and Reports, Addressing and Mailing Correspondence (Int. Cl. 35).

First use April 1968.

Class 102—Insurance and Financial

SN 311,858. First Federal Savings and Loan Association of Peoria, Peoria, Ill. Filed Nov. 12, 1968.



For Passbook Savings Accounts Services (Int. Cl. 36).

First use Jan. 1, 1968.

SN 326,665. The Marina City Bank, Chicago, Ill. Filed May 7, 1969.

EXECREDIT

For Special Checking Account Services With Automatic Borrowing Features (Int. Cl. 36).

First use Apr. 14, 1969.

Class 105—Transportation and Storage

SN 318,194. Integrated Container Service, Inc., New York, N.Y. Filed Feb. 8, 1969.



The mark consists of the stylized Representation of the letters "ICS."

For Transportation by Air, Sea and Land of the Goods of Others, in Specially Designed Containers Provided by the Applicant and Not Sold (Int. Cl. 39).

First use Oct. 11, 1964.

Class 106—Material Treatment

SN 318,412. Flame Spray, Inc., Denver, Colo. Filed Feb. 5, 1969.



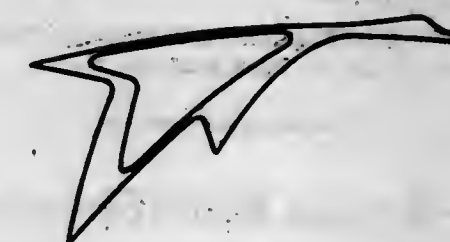
The wording "Flame Spray, Inc." is disclaimed apart from the mark as shown.

For Application of Flame Sprayed Coatings of Metals, Ceramics, and Ceramics to Metallic and Non-Metallic Surfaces (Int. Cl. 40).

First use Sept. 7, 1968.

Class 107—Education and Entertainment

SN 337,226. Harbinger Productions, Inc., New York, N.Y. Filed Sept. 8, 1969.



For Motion Picture Production Services to the Order and/or Specification of Others (Int. Cl. 41).

First use Mar. 25, 1969.

SN 347,800. WSM, Incorporated, Nashville, Tenn. Filed Jan. 5, 1970.

SIXTEENTH AVENUE, SOUTH

For Television Programs in the Nature of Musical Entertainment (Int. Cl. 41).

First use Aug. 25, 1969.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 892,624. SCOTHANE. McCrory Industrial Products Co. SN 288,528. Pub. 3-31-70. Filed 1-10-68.
892,625. PAR. R. T. Vanderbilt Company, Inc. SN 292,229. Pub. 8-26-69. Filed 2-29-68.
892,626. TERPHANE. La Cellophane. SN 297,714. Pub. 3-31-70. Filed 5-8-68.
892,627. SLX. Hughes Hybrids, Inc. SN 311,871. Pub. 11-25-69. Filed 11-5-68.
892,628. GRIFF-FOAM. Griffolyn Co., Inc. SN 312,194. Pub. 3-31-70. Filed 11-14-68.
892,629. TRANSPARA-FILM. Seal, Incorporated. SN 314,271. Pub. 3-31-70. Filed 12-11-68.
892,630. AVISTAR. FMC Corporation. SN 316,801. Pub. 3-31-70. Filed 1-10-69.
892,631. SILASTIC LS-53. Dow Corning Corporation. SN 316,708. Pub. 3-31-70. Filed 1-16-69.
892,632. DOW CORNING 804. Dow Corning Corporation. SN 316,719. Pub. 3-31-70. Filed 1-16-69.
892,633. SNOW BALL. Golden State Sheep Tanning Co. SN 326,227. Pub. 3-31-70. Filed 5-2-69.
892,634. CHINCHI FROST. Golden State Sheep Tanning Co. SN 326,229. Pub. 3-31-70. Filed 5-2-69.
892,635. SNO BALL. Golden State Sheep Tanning Co. SN 326,230. Pub. 3-31-70. Filed 5-2-69.
892,636. VALENSET. Dow Badische Company. SN 336,516. Pub. 3-31-70. Filed 8-28-69.
892,637. NORLIB. Dow Badische Company. SN 336,518. Pub. 3-31-70. Filed 8-28-69.

Class 2—Receptacles

- 892,638. DOVO AND DESIGN. Fritz Bracht. MULTIPLE CLASS (Classes 2, 23, and 44). SN 318,644. Pub. 3-31-70. Filed 2-7-69.
892,639. PICK-A-PAT. Sales Builders, Inc. SN 327,173. Pub. 3-31-70. Filed 5-13-69.
892,640. GIFT MATE. Reliance Packaging Products Inc. SN 328,340. Pub. 1-20-70. Filed 5-26-69.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 892,641. MASCOT. Apex Products Corporation. MULTIPLE CLASS (Classes 3, 8, 13, 21, 22, 23, 26, 28, 32, 37, 38, and 40). SN 278,712. Pub. 3-31-70. Filed 6-13-67.

Class 4—Abrasives and Polishing Materials

- 892,642. BLUE MAGIC. Thermo Cote Inc. SN 312,254. Pub. 6-10-69. Filed 11-14-68.
892,643. ROD & ROAD. The Drackett Company. SN 312,570. Pub. 3-31-70. Filed 11-19-68.
892,644. SMART. American Home Products Corporation. SN 326,713. Pub. 12-2-69. Filed 5-8-69.

Class 6—Chemicals and Chemical Compositions

- 892,645. MOORE'S. Abraham F. Moore, d.b.a. A. F. Moore & Company. SN 271,061. Pub. 3-31-70. Filed 5-9-67.
892,646. S AND DESIGN. The Superior Oil Company. SN 286,200. Pub. 12-30-69. Filed 12-4-67.
892,647. MONOCHROM. Monogram Industries, Inc. SN 289,709. Pub. 3-31-70. Filed 1-26-68.
892,648. CETONAL. Glvaudan Corporation. SN 290,388. Pub. 1-13-70. Filed 2-6-68.
892,649. FERVIN. Schering Aktiengesellschaft. SN 298,056. Pub. 3-31-70. Filed 8-12-68.
892,650. HOOKER TF 400 LINE. Hooker Chemical Corporation. SN 301,428. Pub. 10-7-69. Filed 6-26-68.
892,651. PAPER/BLEND. Baton Allen Corp. SN 302,466. Pub. 3-31-70. Filed 7-11-68.
892,652. W-6 AND DESIGN. W-6 Incorporated. SN 306,969. Pub. 3-31-70. Filed 9-9-68.
892,653. GRANOBLACK. Amchem Products, Inc. SN 310,433. Pub. 3-31-70. Filed 10-24-68.
892,654. NEUTRA-GEL. Union Carbide Corporation. SN 315,127. Pub. 3-31-70. Filed 12-23-68.
892,655. OMNISPRAY. New England Nuclear Corp. SN 318,567. Pub. 3-31-70. Filed 2-6-69.
892,656. OCC AND DESIGN. Oxirane Chemical Company. SN 321,924. Pub. 3-31-70. Filed 3-10-69.
892,657. INSTANT AND DESIGN. Aptar Industries, Inc. SN 323,077. Pub. 3-31-70. Filed 3-28-69.
892,658. BUTISAN. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 326,840. Pub. 3-31-70. Filed 5-9-69.
892,659. NORTH STAR. Northwestern Refining Co. MULTIPLE CLASS (Classes 6, 15, and 103). SN 329,920. Pub. 3-31-70. Filed 7-29-69.
892,660. DREYER. P. R. Dreyer, Inc. SN 331,356. Pub. 3-31-70. Filed 6-30-69.
892,661. ORGANOKROME. Chas. Pfäfer & Co., Inc. SN 337,189. Pub. 3-31-70. Filed 9-5-69.
892,662. AMPHOCHEM. American Photochemicals, Inc. SN 337,222. Pub. 3-31-70. Filed 9-8-69.
892,663. KROMABOND. Chas. Pfäfer & Co., Inc. SN 337,238. Pub. 3-31-70. Filed 9-8-69.
892,664. D-TRANS. McLaughlin Gormley King Company. SN 340,222. Pub. 3-31-70. Filed 10-9-69.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 892,641. (See Class 3 for this trademark.)
892,665. VISE-O-MATIC. Fedtro, Inc. SN 341,979. Pub. 3-31-70. Filed 10-29-69.
892,666. INSTAMATIC. Fedtro, Inc. SN 341,980. Pub. 3-31-70. Filed 10-29-69.

Class 10—Fertilizers

- 892,667. SIMONSEN AND DESIGN. Simonsen Mill-Rendering Plant, Inc. MULTIPLE CLASS (Classes 10, 18, 46, and 100). SN 290,899. Pub. 2-8-70. Filed 2-12-68.

JUNE 16, 1970

U. S. PATENT OFFICE

TM 151

Class 11—Inks and Inking Materials

- 892,668. MISCELLANEOUS DESIGN. Formulabs, Incorporated. SN 296,014. Pub. 3-31-70. Filed 4-19-68.
892,669. SINCLAIR & VALENTINE. Martin Marietta Corporation. SN 312,684. Pub. 3-31-70. Filed 11-20-68.
892,670. TRU-TONE. Milton Bradley Company. MULTIPLE CLASS (Classes 11 and 16). SN 324,327. Pub. 3-31-70. Filed 4-14-69.

Class 12—Construction Materials

- 892,671. FASTER FROM FOSTER AND DESIGN. L. B. Foster Company. SN 284,645. Pub. 3-31-70. Filed 11-13-67.
892,672. PLASTIGARD. Lumsade, Inc. SN 297,686. Pub. 1-20-70. Filed 5-8-68.
892,673. GYPSUM GEORGE AND DESIGN. Westlund-Westerberg Lumber Company. SN 311,198. Pub. 1-20-70. Filed 11-1-68.
892,674. CABLECAP. Sta-Crete, Inc., d.b.a. Black Technical Industries, Inc. SN 315,111. Pub. 3-31-70. Filed 12-23-68.
892,675. GRAND CANYON. The Filmtkote Company. SN 321,209. Pub. 3-31-70. Filed 3-10-69.
892,676. FOAM-TILE. Tibbels Flooring Company. SN 330,862. Pub. 3-31-70. Filed 6-24-69.
892,677. JAMISONIC. Jamison Door Company. SN 341,279. Pub. 3-31-70. Filed 10-21-69.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 892,641. (See Class 3 for this trademark.)
892,678. IDEAL SECURITY ETC. AND DESIGN. Ideal Security Hardware Corporation. SN 292,483. Pub. 3-31-70. Filed 3-5-68.
892,679. MICRO-SEAL. DuPage Manufacturing Company. SN 323,948. Pub. 2-3-70. Filed 4-8-69.
892,680. ULTRA BLUEJET. Celanese Corporation. SN 327,590. Pub. 12-2-69. Filed 5-19-69.
892,681. PLUS LATCH. Hartwell Corporation. SN 329,717. Pub. 3-31-70. Filed 6-11-69.
892,682. CANADIANA. Everingham Brothers Limited. SN 332,466. Pub. 3-31-70. Filed 7-14-69.
892,683. ERLAU AND TRIANGLE DESIGN. Eisen- und Drahtwerk erlau Aktiengesellschaft Aalen. SN 333,697. Pub. 3-31-70. Filed 7-28-69.
892,684. PAR-T-JEL. Dart Industries Inc., d.b.a. Tupperware. SN 334,058. Pub. 3-31-70. Filed 7-31-69.
892,685. TEC-LINE. Amtec Corporation. SN 334,680. Pub. 3-31-70. Filed 8-7-69.
892,686. TALE. Tech Aero Incorporated. SN 334,752. Pub. 3-31-70. Filed 8-7-69.
892,687. PJ DESIGN. Fiberglass Resources Corporation. SN 334,881. Pub. 3-31-70. Filed 8-8-69.
892,688. HILITE. Rusco Industries, Inc. SN 335,611. Pub. 3-31-70. Filed 8-18-69.
892,689. GRIPLAM. The Steel Company of Canada, Limited. SN 335,618. Pub. 3-31-70. Filed 8-18-69.
892,690. CAVITROL. Fisher Controls Company. SN 337,160. Pub. 3-31-70. Filed 9-5-69.
892,691. STINGER. C & D Valve Mfg. Co., Inc. SN 337,263. Pub. 3-31-70. Filed 9-8-69.
892,692. SMP. Southern Mechanical Products Company. SN 340,994. Pub. 3-31-70. Filed 10-17-69.
892,693. VANGUARD. Henry Soss and Company. SN 342,598. Pub. 3-31-70. Filed 11-4-69.
892,694. BILOCULINE. Turbotec, Inc. SN 344,085. Pub. 3-31-70. Filed 11-20-69.

Class 14—Metals and Metal Castings and Forgings

- 892,695. BORALLOY. Paper, Calmenson & Co. SN 336,769. Pub. 3-31-70. Filed 5-8-69.
892,696. UNITRU. Cyclops Corporation. SN 338,747. Pub. 3-31-70. Filed 8-20-69.
892,697. LINE 'N SHINE. Colgate-Palmolive Company. SN 342,351. Pub. 3-31-70. Filed 11-3-69.
892,698. RIBAND. United States Steel Corporation. SN 343,638. Pub. 3-31-70. Filed 11-17-69.

Class 15—Oils and Greases

- 892,659. (See Class 6 for this trademark.)
892,699. MARTIN AND DESIGN. Martin Oil Service, Inc. SN 307,901. Pub. 3-31-70. Filed 9-20-68.
892,700. SWISSOIL. Fairchild Chemical Corporation. SN 310,276. Pub. 3-4-69. Filed 10-23-68.
892,701. BP SUPER. The British Petroleum Company Limited. SN 325,168. Pub. 3-31-70. Filed 4-22-69.
892,702. SANDELITES AND DESIGN. Marion L. Butzow. SN 325,170. Pub. 3-31-70. Filed 4-22-69.
892,703. STEHL ENGINE OIL AND DESIGN. Stehl Oil, Inc. SN 328,860. Pub. 3-31-70. Filed 5-26-69.
892,704. BORON HEAT. The Standard Oil Company. SN 328,455. Pub. 3-31-70. Filed 5-27-69.
892,705. GOLDEN EAGLE AND EAGLE DESIGN. Golden Eagle Refining Company, Inc. SN 340,969. Pub. 3-24-70. Filed 10-27-69.

Class 16—Protective and Decorative Coatings

- 892,670. (See Class 11 for this trademark.)
892,706. VINYL-X. Harris Paint Company. SN 295,334. Pub. 12-16-69. Filed 4-10-68.
892,707. SE-BO. Seal Bond, Inc. SN 312,812. Pub. 3-31-70. Filed 11-21-68.
892,708. THE IDEA HOUSE AND DESIGN. The Idea House, Inc. SN 316,203. Pub. 3-31-70. Filed 1-9-69.
892,709. DEFLECTITE. Ranco Industrial Products Corporation. SN 316,826. Pub. 3-31-70. Filed 1-16-69.
892,710. HENCO-PHOS AND DESIGN. H. A. Henderson Company. SN 318,189. Pub. 3-24-70. Filed 2-3-69.
892,711. FOAM-N-TONE. U.S. Plywood-Champion Papers, Inc. SN 326,965. Pub. 3-31-70. Filed 5-12-69.

Class 17—Tobacco Products

- 892,712. TRUE AND DESIGN. Lorillard Corporation, by merger from P. Lorillard Company. SN 242,996. Pub. 5-2-67. Filed 4-8-66.
892,713. TRUE BLUE. Liggett & Myers Incorporated, by merger from Liggett & Myers Tobacco Company. SN 264,480. Pub. 5-9-67. Filed 2-13-67.
892,714. ORNELAS. Tabacos Ornelas, S.A. SN 314,868. Pub. 3-31-70. Filed 12-12-68.
892,715. FLOR DE CANARIAS AND DESIGN. Compania Insular Tabacalera, S.A. SN 314,701. Pub. 3-31-70. Filed 12-17-68.
892,716. CULLODEN. P. J. Carroll & Company Limited. SN 317,819. Pub. 3-31-70. Filed 1-29-69.
892,717. HIGH KINGS. P. J. Carroll & Company Limited. SN 317,820. Pub. 3-31-70. Filed 1-29-69.

- 892,718. CONDOR. Martin Brinkmann AG. SN 380,183. Pub. 1-6-70. Filed 6-16-69.
- 892,719. ESPERANTO. Poul Petersen Cigar- & Tobakfabriker, d.b.a. Pete Bros. SN 389,982. Pub. 3-31-70. Filed 10-6-69.
- 892,720. BALSAM. American Brands, Inc. SN 340,976. Pub. 3-31-70. Filed 10-17-69.
- 892,721. MESA. American Brands, Inc. SN 340,978. Pub. 3-31-70. Filed 10-17-69.
- 892,722. ORLEANS. American Brands, Inc. SN 340,979. Pub. 3-31-70. Filed 10-17-69.
- 892,723. TANDEM. American Brands, Inc. SN 340,980. Pub. 3-31-70. Filed 10-17-69.
- 892,724. TRIBUNE. American Brands, Inc. SN 340,981. Pub. 3-31-70. Filed 10-17-69.
- 892,725. CONTRABAND. Eugene A. Neaderhiser, d.b.a. Contraband Tobacco Co. SN 342,508. Pub. 3-31-70. Filed 11-3-69.
- 892,726. STILETTO. General Cigar Co., Inc. SN 342,632. Pub. 3-31-70. Filed 11-4-69.
- 892,727. HANS BRINKERS AND DESIGN. Gesty Trading and Manufacturing Corp. SN 342,633. Pub. 3-31-70. Filed 11-4-69.
- 892,728. SIGMA. Philip Morris Incorporated. SN 342,798. Pub. 3-31-70. Filed 11-6-69.
- 892,729. SIGMA VII. Philip Morris Incorporated. SN 342,800. Pub. 3-31-70. Filed 11-6-69.
- 892,730. PRINCETON. Philip Morris Incorporated. SN 342,890. Pub. 3-31-70. Filed 11-6-69.
- 892,731. CREST. Larus & Brother Company. SN 343,138. Pub. 3-31-70. Filed 11-10-69.

Class 18—Medicines and Pharmaceutical Preparations

- 892,667. (See Class 10 for this trademark.)
- 892,732. DEXABID. Meyer Laboratories Inc. SN 280,323. Pub. 7-2-68. Filed 9-14-67.
- 892,733. PRENEMA. Bellevue Laboratories, Inc. SN 282,170. Pub. 1-13-70. Filed 10-10-67.
- 892,734. ASSURE. The Proctor & Gamble Company, assignee of Bristol-Myers Company. SN 296,641. Pub. 5-6-69. Filed 4-26-68.
- 892,735. HARVATRATE. S. F. Durst & Company, Inc., assignee of Tilden-Yates Laboratories, Inc. SN 301,278. Pub. 4-15-69. Filed 6-24-68.
- 892,736. VASITOL. Rowell Laboratories, Inc. SN 301,358. Pub. 3-31-70. Filed 6-25-68.
- 892,737. EMERSAL. Medco Lab, Inc. SN 305,954. Pub. 3-31-70. Filed 8-26-68.
- 892,738. OLBESE NO. 1. Drug Industries Company. SN 306,228. Pub. 3-31-70. Filed 8-29-68.
- 892,739. NALLPEN. Beecham Inc. SN 311,766. Pub. 3-31-70. Filed 11-12-68.
- 892,740. GOLDEN T. T.G. & Y. Stores Company. SN 312,917. Pub. 3-31-70. Filed 11-22-68.
- 892,741. PROGRESS. Progress Laboratories, Inc. SN 314,456. Pub. 3-31-70. Filed 12-13-68.
- 892,742. EUCALIPTINO. The Granchel Medicine Co., Inc. SN 317,911. Pub. 3-31-70. Filed 1-30-69.
- 892,743. GONIOSOL. Tilden-Yates Laboratories, Inc. SN 319,515. Pub. 3-31-70. Filed 2-18-69.
- 892,744. CYTERGON. A. Nattermann & Cie., G.m.b.H. SN 321,527. Pub. 12-23-69. Filed 3-12-69.
- 892,745. TUNE-UP. Honeggers' & Co., Inc. SN 327,625. Pub. 3-31-70. Filed 5-19-69.
- 892,746. ENTOLASE. A. H. Robins Company, Incorporated. SN 327,678. Pub. 3-31-70. Filed 5-19-69.
- 892,747. Q-U. Eastwood Pharmacal Co., Inc. SN 328,044. Pub. 3-31-70. Filed 5-22-69.

- 892,748. STIMUPAK. Bialston Purina Company. SN 338,638. Pub. 12-23-69. Filed 7-23-69.
- 892,749. PASDIUM. Kasar Company. SN 334,768. Pub. 3-31-70. Filed 8-8-69.
- 892,750. CANTHARONE. Ingram Pharmaceutical Co. SN 335,166. Pub. 3-31-70. Filed 8-18-69.
- 892,751. FERTI-CREPT. Eli Lilly and Company. SN 342,358. Pub. 3-31-70. Filed 11-3-69.
- 892,752. SCHEDULIN. Warner-Lambert Pharmaceutical Company. SN 342,604. Pub. 3-31-70. Filed 11-4-69.

Class 19—Vehicles

- 892,753. DENNIS MITCHELL AND DESIGN. Buckeye Plastics Company. SN 295,610. Pub. 3-31-70. Filed 4-15-68.
- 892,754. AIR-PAK. Automatic Radio Mfg. Co., Inc. SN 308,180. Pub. 1-20-70. Filed 9-25-68.
- 892,755. DYNAPLASTICS. Dynaplastics, Inc. SN 308,609. Pub. 3-31-70. Filed 10-1-68.
- 892,756. ITALIA GFX WITHIN A DESIGN. Torino of America, Inc. SN 308,725. Pub. 3-31-70. Filed 10-2-68.
- 892,757. CAVEMAN (DESIGN). Di Giorgio Leisure Products, Inc., assignee of Caveman Campers, Inc. SN 326,071. Pub. 3-31-70. Filed 5-1-69.
- 892,758. FEATHER LIGHT. Cannon Products, Inc. SN 326,627. Pub. 3-31-70. Filed 5-7-69.
- 892,759. DEERE. Deere & Company. MULTIPLE CLASS (Classes 19 and 28). SN 331,568. Pub. 3-31-70. Filed 7-2-69.
- 892,760. JOHN DEERE. Deere & Company. MULTIPLE CLASS (Classes 19 and 28). SN 331,569. Pub. 3-31-70. Filed 7-2-69.
- 892,761. DUTCH CRAFT. Farenwald Enterprises, Inc. SN 332,931. Pub. 3-31-70. Filed 7-18-69.
- 892,762. AMERIGO AND DESIGN. Gardner, Inc. SN 337,036. Pub. 3-31-70. Filed 9-4-69.
- 892,763. ENCHANTRESS. The Firestone Tire & Rubber Company. SN 343,688. Pub. 3-31-70. Filed 11-17-69.

Class 20—Linoleum and Oiled Cloth

- 892,764. CORRIE MARBLE. Armstrong Cork Company. SN 334,962. Pub. 3-31-70. Filed 8-11-69.
- 892,765. SANTA CRUZ. Armstrong Cork Company. SN 334,963. Pub. 3-31-70. Filed 8-11-69.
- 892,766. TYBLOX. Monsanto Company. SN 336,000. Pub. 3-31-70. Filed 8-22-69.
- 892,767. TERRINA. Armstrong Cork Company. SN 338,114. Pub. 3-31-70. Filed 9-17-69.

Class 21—Electrical Apparatus, Machines, and Supplies

- 892,641. (See Class 3 for this trademark.)
- 892,768. SONIFORM. Rohr Corporation (Delaware corporation), by merger from Rohr Corporation (California corporation). SN 221,303. Pub. 6-28-66. Filed 6-16-65.
- 892,769. SONIFORM AND DESIGN. Rohr Corporation (Delaware corporation), by merger from Rohr Corporation (California corporation). SN 221,304. Pub. 6-28-66. Filed 6-16-65.
- 892,770. EDC. Electro Development Corporation. MULTIPLE CLASS (Classes 21 and 26). SN 297,858. Pub. 1-20-70. Filed 5-10-68.

Class 22—Games, Toys, and Sporting Goods

- 892,641. (See Class 3 for this trademark.)
- 892,805. SPEAR'S GAMES. J. W. Spear & Sons Limited. SN 304,505. Pub. 3-31-70. Filed 8-8-68.
- 892,806. DISCOVERY PLAYTHINGS. Allied Stores Corporation. SN 316,581. Pub. 12-23-69. Filed 1-16-69.
- 892,807. BEELINE AND DESIGN. Samuel Lombardo. SN 318,313. Pub. 3-31-70. Filed 2-4-69.
- 892,808. MISCELLANEOUS DESIGN. Dynamic Classics, Ltd. SN 325,655. Pub. 1-18-70. Filed 4-28-69.
- 892,809. SNAGLESS SALLY. John J. Hildebrandt Corporation. SN 326,036. Pub. 3-31-70. Filed 5-1-69.
- 892,810. DIAMOND RATTLER. James W. Strader. SN 330,785. Pub. 3-31-70. Filed 6-23-69.
- 892,811. FJORD. Complex (Japan), Ltd. SN 331,589. Pub. 3-31-70. Filed 7-2-69.
- 892,812. BUSY BUILDER. Mattel, Inc. SN 339,806. Pub. 3-31-70. Filed 10-6-69.
- 892,813. BIG THUMB. Mattel, Inc. SN 340,322. Pub. 3-31-70. Filed 10-10-69.
- 892,814. WORKING WHEELS. Mattel, Inc. SN 340,323. Pub. 3-31-70. Filed 10-10-69.
- 892,815. RITA RYME. Mattel, Inc. SN 340,692. Pub. 3-31-70. Filed 10-10-69.
- 892,816. FOOZIE WOZIE. Mattel, Inc. SN 340,724. Pub. 3-31-70. Filed 10-15-69.
- 892,817. SHORT-ORDER. Mattel, Inc. SN 340,725. Pub. 3-31-70. Filed 10-15-69.
- 892,818. THE HEAVYWEIGHTS. Mattel, Inc. SN 340,887. Pub. 3-31-70. Filed 10-16-69.
- 892,819. SPRING CHICKEN. Mattel, Inc. SN 340,889. Pub. 3-31-70. Filed 10-16-69.
- 892,820. DAZZLEMS. Mattel, Inc. SN 341,988. Pub. 3-31-70. Filed 10-29-69.
- 892,771. MINIBRIDGE. Electronic Devices, Inc. SN 298,586. Pub. 3-31-70. Filed 5-20-68.
- 892,772. TEMAG (DESIGN). Andrews Manufacturing Company, assignee, by means assignment, of Elecrag Corporation. SN 299,958. Pub. 3-31-70. Filed 6-7-68.
- 892,773. ELECTROPHONICS EP TRANSDUCER AND DESIGN. Electrophonics, Inc. SN 305,822. Pub. 7-1-69. Filed 8-23-68.
- 892,774. ELECTROPHONIC. Morse Electro Products Corp. MULTIPLE CLASS (Classes 21 and 36). SN 305,847. Pub. 7-1-69. Filed 8-23-68.
- 892,775. TYCO. Tyco Laboratories, Inc. MULTIPLE CLASS (Classes 21, 26, and 100). SN 306,093. Pub. 11-4-69. Filed 8-28-68.
- 892,776. REPRESENTATION OF A FANCIFUL ELECTRICAL DEVICE. General Electric Company. SN 307,020. Pub. 3-31-70. Filed 9-10-68.
- 892,777. SYMPHONIC DOOR-TONE. Winston E. Kock. SN 307,785. Pub. 3-31-70. Filed 9-16-68.
- 892,778. STAB-REG. American Plasticraft Company. SN 312,784. Pub. 3-31-70. Filed 11-21-68.
- 892,779. ILP ETC. AND DESIGN. Industrial Lighting Products, Inc. SN 315,684. Pub. 3-31-70. Filed 12-16-68.
- 892,780. ACS AND DESIGN. ACS Industries, Inc. SN 319,787. Pub. 3-31-70. Filed 2-24-69.
- 892,781. PACK-CON. General Motors Corporation. SN 321,489. Pub. 3-31-70. Filed 8-12-69.
- 892,782. STUB-E. The Pyle-National Company. SN 323,842. Pub. 3-31-70. Filed 4-7-69.
- 892,783. HANDYLAB. Motorola, Inc. SN 325,064. Pub. 3-31-70. Filed 4-21-69.
- 892,784. POWERLINE. Midas, Inc. SN 332,503. Pub. 3-17-70. Filed 7-14-69.
- 892,785. SSK AND DESIGN. S. S. Kresge Company. SN 333,931. Pub. 3-31-70. Filed 7-30-69.
- 892,786. TRONICDRUM. Meazzi, S.r.l. SN 334,105. Pub. 3-31-70. Filed 7-31-69.
- 892,787. TPI AND DESIGN. Tri-Point Industries, Inc. SN 334,647. Pub. 3-31-70. Filed 8-6-69.
- 892,788. MISCELLANEOUS DESIGN. Roltec, Inc. SN 334,866. Pub. 3-31-70. Filed 8-9-69.
- 892,789. SPA. Air Reduction Company, Incorporated. SN 335,181. Pub. 3-31-70. Filed 8-13-69.
- 892,790. PAIGIE. Harry O. Petersen. SN 335,258. Pub. 3-31-70. Filed 8-18-69.
- 892,791. ACCUPOWER. Borg-Warner Corporation. SN 336,310. Pub. 3-31-70. Filed 8-26-69.
- 892,792. HOLIDAY. Electronic Research & Development H.K. Limited. SN 336,323. Pub. 3-31-70. Filed 8-26-69.
- 892,793. HUNTER. Electronic Research & Development H.K. Limited. SN 336,324. Pub. 3-31-70. Filed 8-26-69.
- 892,794. BADGER. Emerson Electric Co. SN 336,431. Pub. 3-31-70. Filed 8-27-69.
- 892,795. CONTROL-O-MATIC. Fedtro, Inc. SN 336,789. Pub. 3-31-70. Filed 9-2-69.
- 892,796. FLEETRITE. International Harvester Company. SN 336,802. Pub. 3-31-70. Filed 9-2-69.
- 892,797. THREE STAR AND DESIGN. Union Oil Company of California. SN 336,961. Pub. 3-31-70. Filed 9-3-69.
- 892,798. SPLIT HYSTERESIS LOOP DESIGN. Magnetics, Inc. SN 337,556. Pub. 3-31-70. Filed 9-10-69.
- 892,799. METRO-PAGE. Motorola, Inc. SN 337,563. Pub. 3-31-70. Filed 9-10-69.
- 892,800. AUTOMUTE. Motorola, Inc. SN 337,564. Pub. 3-31-70. Filed 9-10-69.
- 892,801. MINI-PRO. Berkey/Colortran Mfg., Inc. SN 342,203. Pub. 3-31-70. Filed 10-31-69.
- 892,802. GLASROPE. Hotwatt, Inc. SN 342,206. Pub. 3-31-70. Filed 10-31-69.
- 892,803. CONDUCTOMER. Scientific Advances, Inc. SN 342,705. Pub. 3-31-70. Filed 11-5-69.
- 892,804. LITE-O-MATIC. Fedtro, Inc. SN 344,286. Pub. 3-31-70. Filed 11-24-69.
- 892,821. (See Class 2 for this trademark.)
- 892,841. (See Class 3 for this trademark.)
- 892,759. (See Class 19 for this trademark.)
- 892,760. (See Class 19 for this trademark.)
- 892,821. PRIME LINE. Allied-Walbro Corporation, assignee of John R. Parts Company. SN 279,076. Pub. 2-3-70. Filed 8-25-67.
- 892,822. MISCELLANEOUS DESIGN. Bearing Headquarters Co. SN 282,766. Pub. 3-31-70. Filed 10-18-67.
- 892,823. HJ AND DESIGN. Hall Marine Corporation. SN 291,509. Pub. 3-31-70. Filed 2-20-68.
- 892,824. ROADMASTER. Tofo Manufacturing Corporation. SN 301,282. Pub. 5-27-69. Filed 6-24-68.
- 892,825. SCULPTURED FLUIDS. Rain Jet Corporation. SN 309,095. Pub. 3-31-70. Filed 10-7-68.
- 892,826. SCULPTURED WATER. Rain Jet Corporation. SN 309,096. Pub. 3-31-70. Filed 10-7-68.
- 892,827. TAPCO. Toledo Automatic Products Company. SN 311,313. Pub. 2-3-70. Filed 11-4-68.
- 892,828. EXLINE AND DESIGN. Exline, Inc. MULTIPLE CLASS (Classes 23 and 26). SN 312,446. Pub. 3-31-70. Filed 11-18-68.
- 892,829. HANDI HOT OVEN CADDY AND DESIGN. Handi Caddy Inc., assignee of James N. Demetree, d.b.a. Handi Caddy Company. SN 312,661. Pub. 3-31-70. Filed 11-20-68.
- 892,830. GOLDEN T. T.G. & Y. Stores Company. SN 312,918. Pub. 3-31-70. Filed 11-22-68.
- 892,831. IMPERIAL AND DESIGN. Imperial Stamp & Engraving Co., Inc. SN 314,563. Pub. 3-31-70. Filed 12-16-68.
- 892,832. ECONOVAC. FMC Corporation. SN 315,099. Pub. 3-31-70. Filed 12-23-68.

- 892,833. MARKTRONIC 150. The Monarch Marking System Company. SN 815,091. Pub. 3-31-70. Filed 12-23-68.
- 892,834. TIPTON AND DESIGN. Kabushiki-Kaisha Shikishima Tipton, d.b.a. Shikishima Tipton Mfg. Co., Ltd. SN 318,213. Pub. 3-31-70. Filed 1-9-69.
- 892,835. METASERV. Metallurgical Services Laboratories Limited. MULTIPLE CLASS (Classes 28, 32, and 34). SN 316,325. Pub. 3-31-70. Filed 1-10-69.
- 892,836. BORON-C. New England Carbide Tool Co., Incorporated. SN 317,361. Pub. 3-31-70. Filed 1-28-69.
- 892,837. PORTA-PHOS. Amchem Products, Inc. SN 319,256. Pub. 3-31-70. Filed 4-10-69.
- 892,838. ERIE MASTER AND TOOL DESIGN. Textron, Inc. SN 321,052. Pub. 3-31-70. Filed 3-7-69.
- 892,839. T-LINE. The Duriron Company, Inc. SN 324,182. Pub. 3-31-70. Filed 4-10-69.
- 892,840. CERAMAGRAIN. American Graded Sand Co., assignee of Agco Corporation. SN 320,055. Pub. 3-31-70. Filed 5-1-69.
- 892,841. GOSCU. Goss Multiple Tools Limited. SN 327,018. Pub. 3-31-70. Filed 5-16-69.
- 892,842. HERCULES. Hercules S.A.-Fabrica de Talheres. SN 327,753. Pub. 3-31-70. Filed 5-20-69.
- 892,843. COILOCK AND DESIGN. Freundlich-Gomez Machinery Corporation. MULTIPLE CLASS (Classes 28 and 37). SN 332,707. Pub. 3-31-70. Filed 7-19-69.
- 892,844. PARKS AND DESIGN. Parks Woodworking Machine Company. SN 332,849. Pub. 3-31-70. Filed 7-17-69.
- 892,845. MY-KITCHEN. Sumitomo Bakelite Co., Ltd. SN 333,454. Pub. 3-31-70. Filed 7-24-69.
- 892,846. ORBIT. Richard Sizer Limited. SN 334,624. Pub. 3-31-70. Filed 8-6-69.
- 892,847. LEBO. Bettcher Industries, Inc. SN 335,540. Pub. 3-31-70. Filed 8-18-69.
- 892,848. BP. Bryant-Poff, Inc. SN 335,741. Pub. 3-31-70. Filed 8-20-69.
- 892,849. FISH AND FIRE DESIGN. Fishburne Equipment Company, Inc. SN 335,860. Pub. 3-31-70. Filed 8-21-69.
- 892,850. ALGARVE. Imperial International Corp. SN 335,869. Pub. 3-31-70. Filed 8-21-69.
- 892,851. DUET. Spiral Binding Company, Inc. SN 336,023. Pub. 3-31-70. Filed 8-22-69.
- 892,852. SENSAMATIC. Northrop Weaving Machinery Limited. SN 336,345. Pub. 3-31-70. Filed 8-26-69.
- 892,853. T AND DESIGN. Tweedy of Burnley Limited. SN 336,355. Pub. 3-31-70. Filed 8-26-69.
- 892,854. MORDEN TWIN AND DESIGN. Morden Machines Company. SN 336,587. Pub. 3-31-70. Filed 8-28-69.
- 892,855. CSM AND DESIGN. Curtis Systems Ltd. SN 337,013. Pub. 3-31-70. Filed 9-4-69.
- 892,856. UNILATE. F. D. Farnam Co. SN 343,046. Pub. 3-31-70. Filed 11-10-69.

Class 24—Laundry Appliances and Machines

- 892,857. SUPERTWIN. McGraw-Edison Company. SN 311,164. Pub. 11-18-69. Filed 11-1-68.

Class 26—Measuring and Scientific Appliances

- 892,841. (See Class 3 for this trademark.)
- 892,770. (See Class 21 for this trademark.)
- 892,775. (See Class 21 for this trademark.)
- 892,838. (See Class 28 for this trademark.)
- 892,858. DATALOCK. Bell & Howell Company, assignee of Consolidated Electrodynamics Corporation. SN 236,566. Pub. 4-2-68. Filed 1-17-66.

- 892,859. UNI-LOC AND DESIGN. Universal Interloc, Inc. (Pennsylvania corporation), assignee of Universal Interloc, Inc. (California corporation). SN 305,359. Pub. 3-31-70. Filed 8-16-68.
- 892,860. TIME/DATA. Time/Data Corporation. SN 305,595. Pub. 3-31-70. Filed 8-21-68.
- 892,861. I PLATE. Becton, Dickinson and Company. SN 305,876. Pub. 3-31-70. Filed 8-26-68.
- 892,862. INFORMATION INTERNATIONAL AND DESIGN. Information International, Inc. SN 313,001. Pub. 3-31-70. Filed 11-25-68.
- 892,863. BRIRO. Firma G. Reicherter, Betelligungs- und Verwaltungsgesellschaft mit beschränkter Haftung. SN 313,407. Pub. 3-31-70. Filed 12-2-68.
- 892,864. UNILOGIC. Robertshaw Controls Company. SN 313,521. Pub. 2-3-70. Filed 12-8-68.
- 892,865. MEDALLION. Midland International Corporation. SN 314,577. Pub. 3-31-70. Filed 12-16-68.
- 892,866. 6016. Elliott Business Machines, Inc. SN 315,631. Pub. 3-31-70. Filed 12-17-68.
- 892,867. BERKEYCOLOR. Berkey Photo, Inc. SN 317,309. Pub. 3-31-70. Filed 1-23-69.
- 892,868. B-G TEST DIALYZER. University of Washington. SN 317,899. Pub. 1-6-70. Filed 1-23-69.
- 892,869. THE BEAUTY MAKER. Stimulant Products, Inc. SN 317,644. Pub. 3-31-70. Filed 1-27-69.
- 892,870. VALVE-PAK. Howe Richardson Scale Company. SN 318,423. Pub. 3-31-70. Filed 2-5-69.
- 892,871. ALL-N-ONE. The Stanley Works. SN 319,390. Pub. 3-31-70. Filed 2-17-69.
- 892,872. HAREL. Harrel, Incorporated. MULTIPLE CLASS (Classes 26 and 34). SN 319,759. Pub. 3-31-70. Filed 2-24-69.
- 892,873. SEEDMINDER. Calark, Inc. SN 319,818. Pub. 3-31-70. Filed 2-24-69.
- 892,874. GEMCO. Paul S. Heitman, d.b.a. Gem-Mounts and Gem-Masks Co. SN 319,836. Pub. 3-31-70. Filed 2-24-69.
- 892,875. AES AND DESIGN. Automated Environmental Systems, Inc. SN 325,331. Pub. 3-31-70. Filed 4-23-69.
- 892,876. ASTROTYPE. Information Control Systems, Inc. SN 326,880. Pub. 3-31-70. Filed 5-9-69.
- 892,877. GE AND DESIGN. General Electric Company. SN 328,120. Pub. 3-31-70. Filed 5-27-69.
- 892,878. ACCU-LOG. American Gage & Machine Company. SN 330,811. Pub. 3-31-70. Filed 6-24-69.
- 892,879. THE IMAGE MAKER. Stimulant Products, Inc. SN 331,947. Pub. 3-31-70. Filed 7-7-69.
- 892,880. GRAND SLAM. Charles Daly, Inc. SN 332,222. Pub. 3-31-70. Filed 7-10-69.
- 892,881. EKTAPAN. Eastman Kodak Company. SN 333,354. Pub. 3-31-70. Filed 7-23-69.
- 892,882. INCUTROL. Hach Chemical Company. SN 333,401. Pub. 3-31-70. Filed 7-24-69.
- 892,883. LUM-O-TRON. Royal Industries, Inc. SN 334,745. Pub. 3-31-70. Filed 8-7-69.
- 892,884. VIEW-MASTER. GAF Corporation. SN 340,709. Pub. 3-31-70. Filed 10-15-69.
- 892,885. ROMISCOPE. Paul Rosenthal, Inc. SN 342,212. Pub. 3-31-70. Filed 10-31-69.
- 892,886. HYDRA METER AND DESIGN. AMBAC Industries, Incorporated. SN 342,349. Pub. 3-31-70. Filed 11-3-69.

Class 27—Horological Instruments

- 892,887. EVERSWEISS. Youmard Montres S.A. SN 336,357. Pub. 3-31-70. Filed 8-26-69.

Class 28—Jewelry and Precious-Metal Ware

- 892,841. (See Class 3 for this trademark.)

- 892,888. M AND DESIGN. Maui Divers of Hawaii Ltd. SN 330,604. Pub. 3-31-70. Filed 6-20-69.
- 892,889. MISCELLANEOUS DESIGN. Jostens, Inc. MULTIPLE CLASS (Classes 28 and 38). SN 325,915. Pub. 3-31-70. Filed 4-30-69.

Class 29—Brooms, Brushes, and Dusters

- 892,890. TASKMASTER. Johnson & Johnson, d.b.a. Cel-Fibe. MULTIPLE CLASS (Classes 29, 37, and 42). SN 324,201. Pub. 3-31-70. Filed 4-10-69.
- 892,891. SHOEMASTER. Lloyd H. Leonard, d.b.a. Leonard Industries. SN 336,582. Pub. 3-31-70. Filed 8-28-69.
- 892,892. NYREL. Paint Brush Corporation. SN 342,702. Pub. 3-31-70. Filed 11-5-69.

Class 32—Furniture and Upholstery

- 892,841. (See Class 3 for this trademark.)
- 892,835. (See Class 23 for this trademark.)
- 892,893. SLIDE DESK. Business Efficiency Aids, Inc. SN 282,052. Pub. 6-11-68. Filed 10-9-67.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 892,835. (See Class 23 for this trademark.)
- 892,872. (See Class 26 for this trademark.)
- 892,894. JET-AIR. King-Seely Thermos Co. (Delaware corporation), assignee of King-Seely Thermos Co. (Michigan corporation). SN 296,545. Pub. 7-22-69. Filed 4-25-68.
- 892,895. NICRO. Cory Corporation. SN 305,505. Pub. 8-19-69. Filed 8-20-68.
- 892,896. VAPORALL. Harvestall Industries, Inc. SN 310,098. Pub. 3-31-70. Filed 10-21-68.
- 892,897. FECCO. Bangor Punta Operations, Inc. SN 312,764. Pub. 3-31-70. Filed 11-21-68.
- 892,898. D/B AND DESIGN. Dunham-Bush, Inc. SN 315,664. Pub. 3-31-70. Filed 12-30-68.
- 892,899. CHROMALOX. Emerson Electric Co. SN 325,854. Pub. 12-2-69. Filed 4-29-69.
- 892,900. BISCUIT. Rotron Incorporated. SN 335,060. Pub. 3-31-70. Filed 8-11-69.
- 892,901. CHEVRON (DESIGN). Standard Oil Company of California. SN 335,879. Pub. 3-31-70. Filed 8-14-69.
- 892,902. ROLL-IN-RAY. Bettcher Manufacturing Corporation. SN 336,081. Pub. 3-31-70. Filed 8-25-69.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 892,903. CROWN. Page Belting Company. SN 339,743. Pub. 3-31-70. Filed 10-3-69.
- 892,904. MULTIGLAS. Cordovan Associates, Incorporated. SN 342,144. Pub. 3-31-70. Filed 10-30-69.

Class 36—Musical Instruments and Supplies

- 892,774. (See Class 21 for this trademark.)
- 892,905. HIGHLANDER. Minnesota Mining and Manufacturing Company. SN 342,173. Pub. 3-31-70. Filed 10-30-69.

Class 37—Paper and Stationery

- 892,841. (See Class 3 for this trademark.)
- 892,843. (See Class 23 for this trademark.)
- 892,890. (See Class 39 for this trademark.)
- 892,906. BANNER. H. A. Friend & Company, Inc. SN 206,253. Pub. 9-14-65. Filed 11-16-64.
- 892,907. M. MARSH. Marsh Stencil Machine Company. SN 278,327. Pub. 3-31-70. Filed 8-14-67.
- 892,908. MINI-NAP. Fort Howard Paper Company, assignee of Concel Inc., d.b.a. Orchids Products. SN 301,187. Pub. 8-27-68. Filed 3-15-68.
- 892,909. HI-WRAP. Mitsui Toatsu Chemicals, Inc., by merger from Mitsui Kagaku Kogyo Kabushiki Kaisha. SN 298,292. Pub. 12-16-69. Filed 2-14-68.
- 892,910. THE REYNOLDS & REYNOLDS COMPANY AND DESIGN. The Reynolds and Reynolds Company. SN 314,618. Pub. 3-31-70. Filed 12-16-68.
- 892,911. FINGERSEAL. Avrick & Company, Inc. SN 326,975. Pub. 3-31-70. Filed 5-12-69.
- 892,912. LADYBUG. Villager Industries, Inc. SN 337,566. Pub. 3-31-70. Filed 5-19-69.
- 892,913. ELASTO-PAK. Phillips Petroleum Company. SN 328,199. Pub. 3-31-70. Filed 5-23-69.
- 892,914. MACHINE MATED. The Standard Register Company. SN 328,782. Pub. 3-31-70. Filed 6-2-69.

Class 38—Prints and Publications

- 892,841. (See Class 3 for this trademark.)
- 892,889. (See Class 23 for this trademark.)
- 892,915. MINI-GOLD. Chronicle Publishing Company. SN 302,800. Pub. 3-31-70. Filed 7-9-68.
- 892,916. MINI-DATE. Chronicle Publishing Company. SN 302,802. Pub. 3-31-70. Filed 7-9-68.
- 892,917. THINK GERMAN. Visual Education Association, Inc. SN 310,156. Pub. 3-31-70. Filed 10-21-68.
- 892,918. AVON. Avon Printed Hospital Products Corporation. SN 315,877. Pub. 8-5-69. Filed 1-6-69.
- 892,919. AVON AND DESIGN. Avon Printed Hospital Products Corporation. SN 315,878. Pub. 7-29-69. Filed 1-6-69.
- 892,920. DATA-TEK AND DESIGN. F. Edmund Naumann, d.b.a. Data-Tek Publishing Company. SN 318,667. Pub. 12-16-69. Filed 2-7-69.
- 892,921. ISI. Institute for Scientific Information, Inc. MULTIPLE CLASS (Classes 38, 100, 101, and 107). SN 318,878. Pub. 12-30-69. Filed 2-11-69.

Class 39—Clothing

- 892,922. TINA CHAPMAN. Cail Chapman, Inc., assignee of Stockton Manufacturing Co., Inc. SN 276,485. Pub. 3-11-69. Filed 7-20-67.
- 892,923. PEBBLESTONE. Phillips-Van Heusen Corporation. SN 301,445. Pub. 3-31-70. Filed 6-26-68.
- 892,924. THE FURRY NECK THING. Riemel, Inc. SN 310,589. Pub. 3-31-70. Filed 10-25-68.
- 892,925. MARK ONE. The Commercial Electric Company. SN 323,263. Pub. 3-31-70. Filed 4-1-69.
- 892,926. "FUL-LY." Exquisite Form Industries, Inc., by change of name and assignment from Exquisite Form Industries, Inc. SN 323,281. Pub. 3-31-70. Filed 4-1-69.
- 892,927. EAGLE CARDINAL CLOTHES. Eagle Clothes, Inc. SN 323,542. Pub. 3-31-70. Filed 4-3-69.
- 892,928. KEEMOE. Auerbach Bath Robe Corp. SN 325,569. Pub. 3-31-70. Filed 4-25-69.
- 892,929. SILQUILT. Collins & Aikman Corporation. SN 327,359. Pub. 3-31-70. Filed 5-21-69.

- 892,980. MISS ELLIETTE. Continental Alliance Corporation. SN 327,862. Pub. 3-31-70. Filed 5-21-69.
- 892,981. LINCOLN CORNER. Mayflower Dress Co., Inc. SN 328,713. Pub. 3-31-70. Filed 5-29-69.
- 892,982. VALNIT (DESIGN). Valnit Hosiery, Inc. SN 329,906. Pub. 3-31-70. Filed 6-12-69.
- 892,983. NO-POP-POCKET. The Moyer Co. SN 330,843. Pub. 3-24-70. Filed 6-24-69.
- 892,984. COTTON-FLAIR. Wembley, Inc. SN 334,655. Pub. 3-31-70. Filed 8-6-69.
- 892,985. DOGGERS BY BEASLEY AND DESIGN. Thomas J. Beasley, Jr. SN 335,735. Pub. 3-31-70. Filed 8-20-69.
- 892,986. VF, V.F. Corporation. SN 336,036. Pub. 3-31-70. Filed 8-22-69.
- 892,987. BLEEKER STREET. Jonathan Logan, Inc. SN 339,201. Pub. 3-31-70. Filed 9-29-69.
- 892,988. EZ AND ELF DESIGN. E-Z Mills, Inc. SN 342,115. Pub. 3-31-70. Filed 10-30-69.
- 892,989. HINDSIGHT. The Lovable Company. SN 342,592. Pub. 3-31-70. Filed 11-4-69.

Class 40—Fancy Goods, Furnishings, and Notions

- 892,641. (See Class 3 for this trademark.)
- 892,940. THE EASY EYE. Ishmael McCullough, Ltd. SN 312,788. Pub. 3-31-70. Filed 11-21-68.
- 892,941. IMPOSTER. Preferred Fashions, Inc. SN 341,596. Pub. 3-31-70. Filed 10-24-69.
- 892,942. CHELSEA. Preferred Fashions, Inc. SN 341,597. Pub. 3-31-70. Filed 10-24-69.

Class 41—Canes, Parasols, and Umbrellas

- 892,943. ODEN. Okuda Company New York, Inc. SN 331,231. Pub. 3-31-70. Filed 6-27-69.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 892,890. (See Class 29 for this trademark.)
- 892,944. CANADIAN MIST AND DESIGN. Chemcell Limited, assignee of Duplan Textiles Limited. SN 232,986. Pub. 1-6-70. Filed 11-19-65.
- 892,945. EVER-WHER. Deering Milliken, Inc., assignee of Callaway Mills Company. SN 269,853. Pub. 1-2-68. Filed 4-24-67.
- 892,946. FASHION MATES. Liberty Fabrics of New York, Inc. SN 318,792. Pub. 3-31-70. Filed 2-10-69.
- 892,947. CARESO. Klopman Mills, Inc. SN 320,614. Pub. 1-18-70. Filed 3-8-69.
- 892,948. HOMESTAKE. Kentile Floors Inc. SN 331,515. Pub. 3-31-70. Filed 7-1-69.
- 892,949. SCOTTEX. Scottex Corporation. SN 331,543. Pub. 3-31-70. Filed 7-1-69.
- 892,950. FLAMBOYANT. Deering Milliken, Inc. SN 340,704. Pub. 3-31-70. Filed 10-15-69.
- 892,951. YSL. Lanvin-Charles of the Ritz, Inc. SN 340,717. Pub. 3-31-70. Filed 10-15-69.
- 892,952. YVES SAINT LAURENT. Lanvin-Charles of the Ritz, Inc. SN 340,718. Pub. 3-31-70. Filed 10-15-69.

- 892,953. COLOR-SPACE. E. T. Barwick Industries, Inc. SN 341,079. Pub. 3-31-70. Filed 10-15-69.

Class 43—Thread and Yarn

- 892,954. HIGH HONOR. VSC, Inc. SN 338,099. Pub. 3-31-70. Filed 9-17-69.

Class 44—Dental, Medical, and Surgical Appliances

- 892,938. (See Class 2 for this trademark.)
- 892,955. COROMETRICS. Corometrics Medical Systems, Inc. SN 314,532. Pub. 3-31-70. Filed 12-16-68.
- 892,956. CAPIROLA. Capilastro S.P.R.L. SN 322,962. Pub. 3-31-70. Filed 3-27-69.
- 892,957. MEDI WARE AND DESIGN. The General Tire & Rubber Company. SN 323,555. Pub. 3-31-70. Filed 4-3-69.

Class 45—Soft Drinks and Carbonated Waters

- 892,958. ALPA. Peter Eckes. SN 310,870. Pub. 3-31-70. Filed 10-30-68.
- 892,959. PARTY KING K-OLE AND DESIGN. Kings Beverage Co. Inc. SN 332,397. Pub. 3-31-70. Filed 7-11-69.
- 892,960. WAVE AND OVAL DESIGN. Ocean Spray Cranberries, Inc. MULTIPLE CLASS (Classes 45 and 46). SN 334,987. Pub. 3-31-70. Filed 8-1-69.

Class 46—Foods and Ingredients of Foods

- 892,967. (See Class 10 for this trademark.)
- 892,960. (See Class 45 for this trademark.)
- 892,961. INO-ICHIBAN. Takeda Chemical Industries, Ltd. SN 304,715. Pub. 3-31-70. Filed 8-8-68.
- 892,962. MARGOTIN. Compagnie des Maitres Fromagers-C.D.M.F. SN 305,315. Pub. 1-18-70. Filed 8-16-69.
- 892,963. CALIFORNIA "HI-LITES." Wilbur A. Lee, d.b.a. California "Hi-Lites." SN 305,658. Pub. 3-31-70. Filed 8-21-68.
- 892,964. GUESTIME. Guestime Products Limited. SN 307,105. Pub. 3-31-70. Filed 9-11-68.
- 892,965. DAINTY COOKIES, INC. AND DESIGN. Dainty Cookies, Inc. SN 313,079. Pub. 3-31-70. Filed 11-26-68.
- 892,966. RUFALFA. Western Alfalfa Corporation. SN 319,655. Pub. 3-31-70. Filed 2-19-69.
- 892,967. DON ALFONSO. Conservas de Badajoz S.A. SN 319,696. Pub. 3-31-70. Filed 2-20-69.
- 892,968. OR-MIL ETC. AND DESIGN. Pola-Rona, Inc. SN 324,834. Pub. 3-31-70. Filed 4-17-69.
- 892,969. FRESHIE AND DESIGN. Twin Packing Company, Inc. SN 326,008. Pub. 12-16-69. Filed 4-30-69.
- 892,970. CAMPERS. Beatrice Foods Co., d.b.a. Chocolate Company of America. SN 326,985. Pub. 3-31-70. Filed 5-12-69.
- 892,971. ZINGS. National Biscuit Company. SN 332,039. Pub. 3-31-70. Filed 7-8-69.

- 892,972. GUARDEX. General Mills, Inc. SN 332,580. Pub. 3-31-70. Filed 7-15-69.
- 892,973. SHAKE-O POOFS. General Mills, Inc. SN 332,582. Pub. 3-31-70. Filed 7-15-69.
- 892,974. POOFS. General Mills, Inc. SN 332,583. Pub. 3-31-70. Filed 7-15-69.
- 892,975. ALL SAFF FOR HEARTS SAKE AND DESIGN. Polyunsaturates, Inc. SN 335,957. Pub. 3-31-70. Filed 8-11-69.

Class 47—Wines

- 892,976. ROYAL BEAUJOLAIS. J. Thorin. SN 305,577. Pub. 1-6-70. Filed 8-20-68.

Class 49—Distilled Alcoholic Liquors

- 892,977. KEGLEVICH. Distillerie Stock U.S.A., Ltd. SN 309,850. Pub. 3-31-70. Filed 10-17-68.
- 892,978. CIAO LIQORE CIAO AND DESIGN. Mediterranean Importing Co., Inc. SN 326,540. Pub. 3-31-70. Filed 5-6-69.
- 892,979. THE DEW OF KILKARREN. Jay Lewis Ambrose, d.b.a. Scoresby Distillers Import Company. SN 336,266. Pub. 3-31-70. Filed 8-18-69.
- 892,980. SITKA. Grenier Wholesale Liquors, assignee of E. Martinoni Co., d.b.a. National Bottlers Ltd. SN 340,220. Pub. 3-31-70. Filed 10-9-69.
- 892,981. CHATHAM. Grenier Wholesale Liquors, assignee of E. Martinoni Co., d.b.a. The Richards Company. SN 340,221. Pub. 3-31-70. Filed 10-9-69.

Class 50—Merchandise Not Otherwise Classified

- 892,982. COW BOSS. Wallace L. Baker. SN 298,101. Pub. 3-31-70. Filed 5-14-68.

Class 51—Cosmetics and Toilet Preparations

- 892,983. ZP 11. Revlon, Inc. SN 255,723. Pub. 10-31-67. Filed 10-4-66.
- 892,984. LABORATOIRE LACHARTRE. Laboratoire Lachartre S.A. SN 299,776. Pub. 3-31-70. Filed 11-25-69.
- 892,985. SHERPA TENSING AND DESIGN. Gerda Spillmann, d.b.a. Gerda Spillmann, Beauty Preparations. SN 310,040. Pub. 3-31-70. Filed 10-21-68.
- 892,986. MIGHTY MOUTH. Carter-Wallace, Inc. SN 323,188. Pub. 12-23-69. Filed 4-1-69.
- 892,987. C CLINIQUE AND DESIGN. Clinique Laboratories, Inc. SN 325,842. Pub. 1-27-70. Filed 4-29-69.
- 892,988. BLUE FERN. The Mitchum Company, d.b.a. Wrisley. SN 325,885. Pub. 3-31-70. Filed 4-29-69.
- 892,989. ALO-V AND DESIGN. Aloe Creme Laboratories, Inc. SN 326,613. Pub. 3-31-70. Filed 5-7-69.
- 892,990. BIOLITE. Redken Laboratories, Inc. SN 328,778. Pub. 10-28-69. Filed 6-2-69.
- 892,991. EMPRISE. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 329,563. Pub. 12-23-69. Filed 6-10-69.
- 892,992. TOUCHSTONE. Vitabath Inc. SN 330,077. Pub. 3-31-70. Filed 6-16-69.
- 892,993. BRECK SATIN. John H. Breck, Inc. SN 330,712. Pub. 3-31-70. Filed 6-23-69.
- 892,994. PERMA-FACE. Skyline Ind., Inc., d.b.a. Countess Devere Cosmetic. SN 332,425. Pub. 3-31-70. Filed 7-14-69.

- 892,995. LAVENDOMEAL. Yardley of London, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 336,508. Pub. 3-31-70. Filed 8-28-69.

Class 52—Detergents and Soaps

- 892,991. (See Class 51 for this trademark.)
- 892,995. (See Class 51 for this trademark.)
- 892,996. TIGER. The State Chemical Manufacturing Company, assignee of Tiger Distributing Company, Inc., d.b.a. Tiger Manufacturing Co. SN 371,643. Pub. 5-7-68. Filed 5-15-67.
- 892,997. LITTLE TIGER ETC. AND DESIGN. The State Chemical Manufacturing Company. SN 373,335. Pub. 11-19-68. Filed 6-7-67.
- 892,998. SUPER-CON. Wm. B. Rely & Company, Inc., d.b.a. Standard Coffee Company. SN 293,401. Pub. 10-7-69. Filed 2-15-68.
- 892,999. COSTABRAYA. Antonio Puig, S.A. SN 308,671. Pub. 3-31-70. Filed 10-2-68.
- 893,000. ZUDS. Caled Products Company, Inc. SN 316,614. Pub. 3-31-70. Filed 1-15-69.
- 893,001. TUFF STUFF. Union Carbide Corporation. SN 321,301. Pub. 3-31-70. Filed 3-10-69.
- 893,002. QUANTO. Huntington Laboratories, Inc. SN 322,791. Pub. 3-31-70. Filed 3-26-69.
- 893,003. ZOWIE. Huntington Laboratories, Inc. SN 323,792. Pub. 3-31-70. Filed 3-26-69.
- 893,004. TERN. The Hy-Trous Corporation. SN 331,379. Pub. 3-31-70. Filed 6-30-69.
- 893,005. ENTRE NOUS. Lever Brothers Company. SN 333,631. Pub. 3-31-70. Filed 7-23-69.
- 893,006. BRECK ONE. John H. Breck, Inc. SN 336,668. Pub. 3-31-70. Filed 8-29-69.
- 893,007. BRECK AHEAD. John H. Breck, Inc. SN 338,364. Pub. 3-31-70. Filed 9-19-69.
- 893,008. BRECK ONE & ONLY. John H. Breck, Inc. SN 338,365. Pub. 3-31-70. Filed 9-19-69.
- 893,009. BRECK ONE BEAUTIFUL. John H. Breck, Inc. SN 338,366. Pub. 3-31-70. Filed 9-19-69.
- 893,010. RECOUP. Huntington Laboratories, Inc. SN 342,117. Pub. 3-31-70. Filed 10-30-69.
- 893,011. IAS AND DESIGN. Intermountain Appliance Supply Corporation. SN 343,061. Pub. 3-31-70. Filed 11-10-69.

Service Marks

Class 100—Miscellaneous

- 892,967. (See Class 10 for this trademark.)
- 892,775. (See Class 21 for this trademark.)
- 892,921. (See Class 38 for this trademark.)
- 893,012. GEONUCLEAR CORPORATION. CER Geonuclear Corporation. SN 290,823. Pub. 3-31-70. Filed 2-12-68.
- 893,013. OMEGA-T. Omega-T Systems Incorporated. SN 291,088. Pub. 3-31-70. Filed 2-14-68.
- 893,014. OMEGA-T AND DESIGN. Omega-T Systems Incorporated. SN 291,089. Pub. 3-31-70. Filed 2-14-68.
- 893,015. SMC. Science Management Corporation. SN 297,710. Pub. 12-30-69. Filed 5-8-68.
- 893,016. SAN-SERV ETC. AND DESIGN. Insect Control & Research, Inc. SN 302,841. Pub. 11-18-69. Filed 7-16-68.
- 893,017. PIK-N-PAY. The Macke Company. SN 309,445. Pub. 3-31-70. Filed 10-11-68.
- 893,018. H HYSTER AND DESIGN. Hyster Company. MULTIPLE CLASS (Classes 100, 102, 103, and 107). SN 317,565. Pub. 3-31-70. Filed 1-27-69.

- 893,019. EDDY'S. Eddy Arnold's Tennessee Fried Chicken, Inc. SN 325,691. Pub. 3-31-70. Filed 4-28-69.
 893,020. SONESTA BEACH. Hotel Corporation of America. SN 333,338. Pub. 3-31-70. Filed 7-24-69.
 893,021. ST. GEORGE AND THE DRAGON. Angel Foods Systems, Inc. SN 339,661. Pub. 3-31-70. Filed 10-3-69.
 893,022. GOLDEN ANCHOR. Marriott Corporation. SN 343,222. Pub. 3-31-70. Filed 11-12-69.
 893,023. FANTASTACO AND DESIGN. Taco Bell, Inc. SN 343,635. Pub. 3-31-70. Filed 11-17-69.

Class 101—Advertising and Business

- 893,921. (See Class 38 for this trademark.)
 893,024. JACKPOT BINGO. Bradfute Corporation. SN 237,928. Pub. 3-19-67. Filed 2-3-66.
 893,025. TOWER. Tower Personnel Service, Inc. SN 294,545. Pub. 3-31-70. Filed 3-29-69.
 893,026. ELECTRO-COUNT. Doane Agricultural Service, Inc. SN 309,165. Pub. 3-31-70. Filed 10-8-68.
 893,027. UPS 'N DOWNS. Susan Ives Stores, Inc. SN 329,316. Pub. 3-31-70. Filed 6-6-69.
 893,028. T.D.S. Continental Telephone Corporation. SN 337,275. Pub. 3-31-70. Filed 9-8-69.
 893,029. STOC'S. Computer Systems Laboratories, Incorporated. SN 339,786. Pub. 3-31-70. Filed 10-6-69.

Class 102—Insurance and Financial

- 893,018. (See Class 100 for this trademark.)
 893,030. MISTER "C" SAYS AND DESIGN. Century Mutual Insurance Company. SN 308,362. Pub. 3-31-70. Filed 9-27-68.
 893,031. BENEFACTOR. The College Life Insurance Company of America. SN 322,520. Pub. 3-31-70. Filed 8-24-69.
 893,032. MISCELLANEOUS DESIGN. Family Finance Corporation. SN 324,810. Pub. 3-31-70. Filed 4-17-69.
 893,033. UNION BANK—TOMORROW'S BANK TODAY AND DESIGN. Union Bank. SN 341,608. Pub. 3-31-70. Filed 10-24-69.

Class 103—Construction and Repair

- 892,659. (See Class 6 for this trademark.)
 893,018. (See Class 100 for this trademark.)
 893,034. RING, ARROWS IN RECTANGULAR DESIGN. Springfield Enterprises, Inc. SN 318,589. Pub. 3-31-70. Filed 2-6-69.
 893,035. GAS 'N GLO. Earl Snyder Associates, Ltd. SN 320,887. Pub. 12-23-69. Filed 2-28-69.
 893,036. BP. The British Petroleum Company Limited. SN 323,247. Pub. 3-31-70. Filed 4-1-69.

Class 104—Communication

- 893,037. THE WORLD'S MOST BEAUTIFUL MUSIC. WAIT. SN 307,695. Pub. 3-31-70. Filed 9-18-68.

Class 105—Transportation and Storage

- 893,038. PAC AND INDIAN HEAD DESIGN. Pacific Inland Navigation Company, Inc. SN 304,881. Pub. 3-31-70. Filed 3-6-68.

- 893,039. MISCELLANEOUS DESIGN. Risa International Corporation. SN 323,846. Pub. 3-31-70. Filed 4-7-69.
 893,040. AA AND DESIGN. American Airlines, Inc. SN 326,738. Pub. 1-13-70. Filed 5-8-69.
 893,041. T TOURSTARS AND DESIGN. Tourstars Inc. SN 332,674. Pub. 3-31-70. Filed 7-16-69.
 893,042. T AND DESIGN. The Flying Tiger Line Inc. SN 336,058. Pub. 3-31-70. Filed 8-25-69.

Class 106—Material Treatment

- 893,043. DIAMOND BRIGHT AND DESIGN. Howard's Photo Laboratories, Inc. SN 300,356. Pub. 3-31-70. Filed 6-13-68.
 893,044. ALLSTATE PHOTO AND DESIGN. Naturalike Photo Finishing Company, Inc. SN 312,318. Pub. 2-3-70. Filed 11-15-68.
 893,045. C AND DESIGN. Carhart Photo, Inc. SN 320,430. Pub. 3-31-70. Filed 3-3-69.

Class 107—Education and Entertainment

- 892,921. (See Class 38 for this trademark.)
 893,018. (See Class 100 for this trademark.)
 893,046. IPA AND DESIGN. The International Platform Association. SN 290,858. Pub. 3-31-70. Filed 2-12-68.
 893,047. EDU PAC. Erie Technological Products, Inc. SN 301,825. Pub. 3-31-70. Filed 7-2-68.
 893,048. GROOMING DYNAMICS AND DESIGN. Don Maurice, d.b.a. Grooming Dynamics. SN 303,059. Pub. 3-31-70. Filed 7-18-68.
 893,049. CINCINNATI REDS. Cincinnati Reds, Inc. SN 319,280. Pub. 3-31-70. Filed 2-17-69.
 893,050. FAIR AND WARMER. Stefan T. Shmitt, d.b.a. "Stuffy" Shmitt. SN 324,759. Pub. 3-31-70. Filed 4-16-69.
 893,051. RED WINGS. The Detroit Hockey Club, Inc. SN 326,589. Pub. 3-31-70. Filed 5-7-69.
 893,052. BLACK HAWKS. Chicago Blackhawk Hockey Team, Inc. SN 328,107. Pub. 3-31-70. Filed 5-26-69.
 893,053. INDIAN HEAD DESIGN. Chicago Blackhawk Hockey Team, Inc. SN 328,108. Pub. 3-31-70. Filed 5-26-69.
 893,054. CIRCLE AND GROTESQUE (DESIGN). Wenner-Gren Foundation for Anthropological Research, Inc. SN 333,069. Pub. 3-31-70. Filed 7-22-69.
 892,055. SEALS. San Francisco-Oakland Hockey Club, Inc. SN 338,327. Pub. 3-31-70. Filed 9-19-69.
 893,056. BERLITZ. Berlitz Schools of Languages of America, Inc. SN 340,875. Pub. 3-31-70. Filed 10-16-69.
 893,057. THE CITY AND CIRCLE AND BRIDGE DESIGN. San Francisco Warriors. SN 341,000. Pub. 3-31-70. Filed 10-17-69.

Collective Membership Mark

Class 200

- 893,058. JESUS' CHURCH. Jesus' Church, Inc. SN 307,031. Pub. 3-31-70. Filed 9-10-68.

Certification Mark

Class A—Goods

- 893,059. CERTIFIED BIA AND CIRCULAR DESIGN. Boat- ing Industry Association. SN 342,400. Pub. 3-31-70. Filed 11-3-69.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

SECTION 1

(Combined Certificates)

- 893,060. Lexalite Corporation, Charlevoix, Mich. SN 305,947. Filed P.R. 3-26-68; Am. S.R. 2-20-70.
 893,064. The Singer Company, New York, N.Y. SN 332,831. Filed P.R. 7-18-69; Am. S.R. 3-23-70.

"THE INDESTRUCTIBLES"

Class 2—Receptacles

For Polycarbonate Tumblers (Int. Cl. 21).
 First use on or about Dec. 1, 1967.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Polycarbonate Lighting Globes and Refractors (Int. Cl. 11).
 First use on or about June 1, 1965.

SECTION 2

Class 2—Receptacles

893,060. See Section 1 (Combined Certificate).

Class 5—Adhesives

893,061. Adhesive Tape Corporation, Brooklyn, N.Y. SN 320,925. Filed P.R. 3-6-69; Am. S.R. 3-9-70.

STAK 'N' STAY

For Pressure-Sensitive Tape Used for Securing Carpeting, Linoleum, Floor Coverings, and Tiles (Int. Cl. 17).
 First use Feb. 18, 1969.

Class 21—Electrical Apparatus, Machines, and Supplies

893,064. See Section 1 (Combined Certificate).
 893,062. Defiance International, Ltd., Jamaica, N.Y. SN 295,424. Filed P.R. 4-11-68; Am. S.R. 3-11-70.

POWER MODULE

For Electrical Motor Units for Combination Refrigerator-Freezers (Int. Cl. 7).
 First use Jan. 29, 1968.

893,063. General Electric Company, Plainville, Conn. SN 311,028. Filed P.R. 10-31-68; Am. S.R. 3-4-70.

COMMERCIAL-LINE

For Switchboard Sections (Int. Cl. 9).
 First use Sept. 6, 1968.

BALLANTINE

Class 21—Electrical Apparatus, Machines, and Supplies

For AC/DC Converters and Amplifiers (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Calibration Error Computers, Calibrators, Capacitance Meters, Micropotentiometers, Multimeters, and Voltmeters (Int. Cl. 9).
 First use Nov. 4, 1968.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

893,065. SW Industries, Inc., Newton, Mass. SN 262,351. Filed P.R. 1-11-67; Am. S.R. 2-16-70.

BLACK VELVET

For Rolls for Machinery and Roll Coverings for Rolls (Int. Cl. 7).
 First use May 18, 1965.

893,066. Donaldson Company, Inc., Minneapolis, Minn. SN 302,057. Filed P.R. 7-5-68; Am. S.R. 1-15-70.

POWER-TUNED

For Mufflers for Internal Combustion Engines (Int. Cl. 7).
 First use May 25, 1968.

893,067. Textron Inc., Erie, Pa. SN 321,051. Filed P.R. 3-7-69; Am. S.R. 3-10-70.

SPEED-TE

For Pipe Threaders, Abrasive Saws, Pipe Cutters, Pipe Vices, Pipe and Tube Benders (Int. Cl. 7).
 First use Sept. 1, 1968.

893,068. Jet Aeration Company, Cleveland, Ohio. SN 322,167. Filed P.R. 3-19-69; Am. S.R. 3-16-70.

AIR-SEAL

For Gas Diffusers for Use in Sewage Treatment Plants and Parts Thereof (Int. Cl. 11).
 First use on or about Feb. 24, 1969.

Class 26—Measuring and Scientific Appliances

893,064. See Section 1 (Combined Certificate).

Class 34—Heating, Lighting, and Ventilating Apparatus

893,060. See Section 1 (Combined Certificate).

Class 36—Musical Instruments and Supplies

893,069. Boone Records, Inc., Goodlettsville, Tenn. SN 311,011. Filed P.R. 10-31-68; Am. S.R. 3-31-70.

BOONE

For Phonograph Records (Int. Cl. 9).
First use Aug. 1, 1967.

Class 37—Paper and Stationery

893,070. Forbes Labeltape Company, Grand Rapids, Mich. SN 289,018. Filed P.R. 1-17-68; Am. S.R. 1-18-70.

PALLETAG

For Adhesive Backed Labels (Int. Cl. 16).
First use Apr. 4, 1967.

893,071. Sturgis Newport Business Forms, Inc., Sturgis, Mich. SN 292,018. Filed P.R. 2-27-68; Am. S.R. 1-27-70.

BUSINESS FORMS BUSINESS IS OUR BUSINESS

For Business Forms, and Carbonless Copy Paper (Int. Cl. 16).
First use on or about Nov. 15, 1967.

Class 38—Prints and Publications

893,072. The Penton Publishing Company, Cleveland, Ohio. SN 312,902. Filed P.R. 11-21-68; Am. S.R. 3-9-70.

AD FAX

For Report in Magazine Form Published From Time to Time (Int. Cl. 16).
First use on or about June 24, 1968.

893,073. Patient Publishing Company, Chicago, Ill. SN 314,606. Filed P.R. 12-16-68; Am. S.R. 3-2-70.

PATIENT

For Magazine (Int. Cl. 16).
First use July 1967.

893,074. American Nuclear Society Incorporated, Hinsdale, Ill. SN 316,965. Filed P.R. 1-21-69; Am. S.R. 3-11-70.

NUCLEAR TECHNOLOGY

For Magazine Published Periodically (Int. Cl. 16).
First use on or before Dec. 9, 1968.

893,075. Vernon Book Sales Corp., Harrison, N.Y. SN 329,169. Filed P.R. 6-4-69; Am. S.R. 11-14-69.

The Mutual -NUMBER- GUIDE

For Numerology Booklet Published Annually (Int. Cl. 16).
First use Feb. 17, 1949.

893,076. (See Class 106 for this trademark.)

Class 40—Fancy Goods, Furnishings, and Notions

893,077. C-B Manufacturing, Inc., Salt Lake City, Utah. SN 295,804. Filed P.R. 4-17-68; Am. S.R. 3-12-70.

Lifelike

For Men's Hairpieces, False Mustaches, False Sideburns and False Beards (Int. Cl. 26).
First use Apr. 5, 1967, on hairpieces.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

893,078. Texoprint, N.V., Helmond, Holland. SN 311,420. Filed P.R. 11-5-68; Am. S.R. 4-7-70.

GUARANTEED DUTCH WAX

For Cotton Piece Goods (Int. Cl. 24).
First use 1910; in commerce March 1966.

893,079. Texoprint, N.V., Helmond, Holland. SN 314,633. Filed P.R. 12-16-68; Am. S.R. 4-7-70.

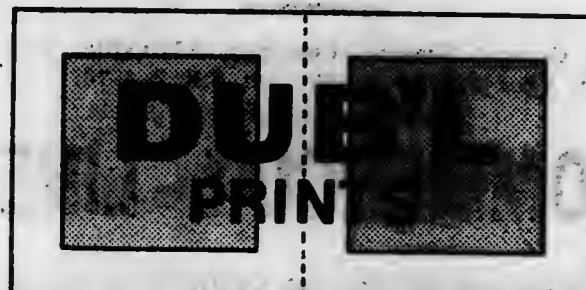
GUARANTEED DUTCH JAVA PRINT

For Cotton Piece Goods (Int. Cl. 24).
First use 1910; in commerce March 1966.

Service Mark

Class 106—Material Treatment

893,076. Kasper's Photo Shop, Billings, Mont. SN 334,092. Filed P.R. 7-31-69; Am. S.R. 3-23-70.



For Photo Processing Service (Int. Cl. 16).
First use Feb. 4, 1969.

TRADEMARK REGISTRATIONS RENEWED

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|---|--|
| 34,562. VULCAN. Cl. 14 (Int. Cl. 6). 4-24-1900. | 522,930. LOCK-ON. Cl. 23 (Int. Cl. 8). 3-28-50. |
| 75,751. CARNATION. Cl. 46 (Int. Cls. 29 and 30). 11-9-09. | 522,938. MOTOTRUC AND DESIGN. Cl. 23 (Int. Cl. 12). 3-28-50. |
| 77,278. BERNARD. Cl. 28 (Int. Cl. 8). 3-22-10. | 522,973. KENMORE. Cl. 21 (Int. Cls. 7, 9, 10, and 11). 3-28-50. |
| 78,605. HOFFMANN. Cl. 14 (Int. Cl. 6). 6-28-10. | 522,992. BLUE RIBBON. Cl. 12 (Int. Cl. 19). 3-28-50. |
| 78,619. SUBURBAN. Cl. 1 (Int. Cl. 31). 6-28-10. | 523,025. CHELSKA. Cl. 26 (Int. Cl. 9). 3-28-50. |
| 79,089. MONITOR. Cl. 27 (Int. Cl. 14). 8-2-10. | 523,048. LABELRITE. Cl. 23 (Int. Cl. 7). 3-28-50. |
| 263,117. EVERBOND. Cl. 5 (Int. Cl. 1). 10-29-29. | 523,063. BARKER'S. Cl. 46 (Int. Cl. 31). 3-28-50. |
| 263,206. RELIANCE. Cl. 26 (Int. Cl. 9). 11-5-29. | 523,078. VOGUE. Cl. 2 (Int. Cl. 10). 3-28-50. |
| 263,788. INCOR ETC. AND DESIGN. Cl. 12 (Int. Cl. 19). 11-12-29. | 523,091. MACHLETT AND DESIGN. Cl. 21 (Int. Cl. 10). 3-28-50. |
| 266,052. ESCOLLOID. Cl. 52 (Int. Cl. 3). 1-14-30. | 523,188. BEFOREHAND. Cl. 51 (Int. Cl. 3). 3-28-50. |
| 267,046. AMAFLEECR. Cl. 43 (Int. Cl. 23). 2-11-30. | 523,196. DESERT SPRINGS. Cl. 46 (Int. Cl. 31). 3-28-50. |
| 268,486. REPRESENTATION OF DIAMOND-SHAPED FIG-
URE. Cl. 9 (Int. Cl. 18). 3-18-30. | 523,197. DESERT VALLEY. Cl. 46 (Int. Cl. 31). 3-28-50. |
| 268,553. DUETTE. Cl. 28 (Int. Cl. 14). 3-18-30. | 523,910. LITOCROME. Cl. 12 (Int. Cl. 2). 4-11-50. |
| 269,117. TREMCO. Cl. 12 (Int. Cls. 1, 17, and 19). 3-25-30. | 524,070. GRIDDER. Cl. 39 (Int. Cl. 25). 4-18-50. |
| 270,495. VELVET. Cl. 4 (Int. Cl. 3). 6-4-30. | 524,119. DURACILIN. Cl. 18 (Int. Cl. 5). 4-18-50. |
| 270,849. TREMCO. Cl. 16 (Int. Cl. 2). 5-18-30. | 524,168. CUT-O-MATIC. Cl. 34 (Int. Cl. 7). 4-18-50. |
| 271,237. ARCHER AND REPRESENTATION OF INDIAN
WITH BOW AND ARROW. Cl. 15 (Int. Cl. 4). 5-27-30. | 524,179. REDIFLUXED. Cl. 14 (Int. Cl. 6). 4-18-50. |
| 271,664. DULLOFOLD. Cl. 37 (Int. Cl. 16). 6-17-30. | 524,823. INLAND. Cl. 103 (Int. Cl. 37). 5-2-50. |
| 271,704. CENTRIFINER. Cl. 23 (Int. Cl. 7). 6-17-30. | 524,824. INLAND ETC. AND DESIGN. Cl. 103 (Int. Cl. 37). 5-2-50. |
| 271,757. HINGFOLD. Cl. 37 (Int. Cl. 16). 6-17-30. | 524,825. REPRESENTATION OF LITTLE MAN. Cl. 103 (Int. Cl. 37). 5-2-50. |
| 272,928. VORTOX. Cl. 23 (Int. Cl. 7). 7-15-30. | 525,323. NOBELCO. Cl. 23 (Int. Cl. 8). 5-16-50. |
| 273,080. FLUXO. Cl. 23 (Int. Cl. 7). 7-22-30. | 525,383. WEBB'S SYRUP ETC. AND DESIGN. Cl. 46 (Int. Cl. 30). 5-23-50. |
| 273,546. TUMBLER LINED FOR RED. Cl. 4 (Int. Cl. 3). 8-5-30. | 525,478. EUTEC ARC. Cl. 34 (Int. Cl. 7). 5-23-50. |
| 273,830. BELLESSA. Cl. 42 (Int. Cl. 24). 8-12-30. | 525,479. EUTEC TORCH. Cl. 34 (Int. Cl. 11). 5-23-50. |
| 273,984. BEAR KAT. Cl. 39 (Int. Cl. 25). 8-19-30. | 525,612. ABC INDUSTRIES AND DESIGN. Cl. 23 (Int. Cls. 7 and 8). 5-30-50. |
| 274,026. AUTOGART. Cl. 39 (Int. Cl. 25). 8-19-30. | 525,681. CENTENNIAL. Cl. 22 (Int. Cl. 28). 5-30-50. |
| 274,178. CHAMPION. Cl. 39 (Int. Cl. 25). 8-19-30. | 526,057. DUN-D. Cl. 46 (Int. Cl. 31). 6-8-50. |
| 274,389. MANDARINE. Cl. 51 (Int. Cl. 3). 8-26-30. | 526,073. GLC AND DESIGN. Cl. 21 (Int. Cl. 9). 6-6-50. |
| 274,403. POINT. Cl. 42 (Int. Cl. 24). 8-26-30. | 526,187. SUPERPAN. Cl. 26 (Int. Cl. 1). 6-18-50. |
| 274,448. FLYCASTERS MIXTURE AND DESIGN. Cl. 17 (Int. Cl. 34). 8-26-30. | 526,262. BARCLAY'S. Cl. 49 (Int. Cl. 33). 6-18-50. |
| 274,931. MANABOG AND DESIGN. Cl. 46 (Int. Cl. 30). 9-9-30. | 526,323. PERMALACE. Cl. 40 (Int. Cl. 26). 6-18-50. |
| 275,130. VELVOCEL. Cl. 42 (Int. Cl. 24). 9-16-30. | 526,609. MICRO-FILE. Cl. 26 (Int. Cls. 1 and 9). 6-20-50. |
| 275,321. CELOCREPE. Cl. 42 (Int. Cl. 24). 9-23-30. | 526,742. MAYFAIR. Cl. 39 (Int. Cl. 25). 6-27-50. |
| 443,890. ST AND DESIGN. Cl. 46 (Int. Cl. 30). 4-4-50. | 526,762. WELLESLEY. Cl. 39 (Int. Cl. 25). 6-27-50. |
| 444,022. TEX-TOGS TEXAS STYLED & MADE. Cl. 39 (Int. Cl. 25). 6-6-50. | 526,838. ALL CRAFT. Cl. 34 (Int. Cl. 11). 6-27-50. |
| 444,066. BREEZEBUILDER. Cl. 21 (Int. Cl. 11). 7-4-50. | 526,849. COPLEY. Cl. 37 (Int. Cl. 16). 6-27-50. |
| 444,078. WILSON JONES RECORD KEEPING ESSEN-
TIALS AND DESIGN. Cl. 23 (Int. Cl. 16). 7-11-50. | 527,080. INDIWEIGHT. Cl. 39 (Int. Cl. 25). 7-4-50. |
| 507,757. FAT-SAVER. Cl. 31 (Int. Cl. 11). 3-15-49. | 527,081. KINGSCLOTH. Cl. 39 (Int. Cl. 25). 7-4-50. |
| 510,168. THERMO-GSN. Cl. 12 (Int. Cl. 19). 5-31-49. | 527,869. YAKIMA. Cl. 42 (Int. Cl. 24). 7-4-50. |
| 515,903. RITESPOON. Cl. 23 (Int. Cl. 8). 10-4-49. | 527,787. SEQUESTRENE. Cl. 6 (Int. Cl. 1). 7-18-50. |
| 523,321. B AND DESIGN. Cl. 13 (Int. Cl. 6). 4-4-50. | 527,781. BARBER-COLMAN. Cl. 23 (Int. Cl. 7). 7-18-50. |
| 523,340. MODERNFOLD DOORS AND DESIGN. Cl. 12 (Int. Cl. 19). 4-4-50. | 527,821. KUMA-NO-EN AND DESIGN. Cl. 18 (Int. Cl. 5). 7-18-50. |
| 523,358. ESCUDO. Cl. 46 (Int. Cl. 29). 4-4-50. | 527,845. AKAMATSU MIKKASAN. Cl. 18 (Int. Cl. 5). 7-18-50. |
| 523,564. WALDENIAN. Cl. 46 (Int. Cl. 30). 4-4-50. | 527,858. SIGMA SYMBOL. Cl. 18 (Int. Cl. 5). 7-18-50. |
| 523,628. PRB IN KEYSTONE DESIGN. Cl. 105 (Int. Cl. 39). 4-4-50. | 528,023. CROWN DESIGN. Cl. 46 (Int. Cl. 29). 7-25-50. |
| 528,698. AMERICAN CLASSIC. Cl. 28 (Int. Cls. 8 and 14). 4-11-50. | 528,029. HARRIS. Cl. 23 (Int. Cl. 7). 7-25-50. |
| 528,846. PLUMB. Cl. 23 (Int. Cl. 8). 4-11-50. | 528,074. PLANTERS. Cl. 46 (Int. Cls. 29 and 30). 7-25-50. |
| 528,894. DISPLAY MASTER. Cl. 50 (Int. Cl. 16). 4-11-50. | 528,182. TOLEDO. Cl. 21 (Int. Cl. 7). 8-1-50. |
| 528,895. ILLUSTROS. Cl. 50 (Int. Cl. 16). 4-11-50. | 528,252. NORGINE AND DESIGN. Cl. 13 (Int. Cl. 5). 8-1-50. |
| 528,902. K AND DESIGN. Cl. 50 (Int. Cl. 20). 4-11-50. | 528,478. RONIACOL. Cl. 18 (Int. Cl. 5). 8-1-50. |
| 515,904. RITEFORK. Cl. 23 (Int. Cl. 8). 10-4-49. | 528,520. CAFERGOT. Cl. 18 (Int. Cl. 5). 8-1-50. |
| 520,568. OLD VIRGINIA AND DESIGN. Cl. 46 (Int. Cl. 29). 2-7-50. | 528,784. SKID-A-REE. Cl. 39 (Int. Cl. 25). 8-8-50. |
| 521,180. DEVOE SWEET AND DESIGN. Cl. 17 (Int. Cl. 34). 2-21-05. | 528,785. DESIGN OF BELFRY. Cl. 45 (Int. Cl. 32). 8-8-50. |
| 522,072. HEAT-HOUSER. Cl. 23 (Int. Cl. 12). 3-7-50. | 528,763. GLC AND DESIGN. Cl. 12 (Int. Cl. 19). 8-8-50. |
| 522,112. PARTY LINES BY DOMB AND DESIGN. Cl. 39 (Int. Cl. 25). 3-14-50. | 528,893. LASTING LOVELINESS. Cl. 39 (Int. Cl. 25). 8-8-50. |
| 522,554. MELLANEAR AND DESIGN. Cl. 14 (Int. Cl. 6). 3-21-50. | 528,980. SCHOOLMASTER. Cl. 37 (Int. Cl. 16). 8-15-50. |
| 522,571. JERGENS. Cl. 51 (Int. Cl. 3). 3-21-50. | 528,998. BARNSTEAD. Cl. 26 (Int. Cls. 9 and 11). 8-15-50. |
| 522,715. HOMOCLOAD. Cl. 16 (Int. Cl. 2). 3-21-50. | 529,082. CORSICAN. Cl. 37 (Int. Cl. 16). 8-15-50. |
| | 529,119. JON-E. Cl. 34 (Int. Cl. 11). 8-15-50. |
| | 529,189. MONARCH. Cl. 27 (Int. Cl. 14). 8-15-50. |
| | 529,328. BRECK. Cl. 51 (Int. Cl. 3). 8-22-50. |
| | 529,459. PICTURE OF A MAN. Cl. 46 (Int. Cl. 30). 8-22-50. |
| | 529,471. PIPPIN. Cl. 46 (Int. Cl. 29). 8-22-50. |
| | 529,559. TECHNOFABE. Cl. 26 (Int. Cl. 1). 8-21-50. |

TM 162

OFFICIAL GAZETTE

JUNE 16, 1970

529,604. MONOGRAM. Cl. 40 (Int. Cl. 21). 8-22-50.	530,125. VASCO SUPREME. Cl. 14 (Int. Cl. 6). 9-5-50.
529,637. TRULY TUFF. Cl. 39 (Int. Cl. 25). 8-22-50.	530,185. WEDGE-ON. Cl. 23 (Int. Cl. 8). 9-5-50.
529,682. U.S. MOTORS AND DESIGN. Cl. 21 (Int. Cl. 7). 8-29-50.	530,360. EX-TRAND. Cl. 12 (Int. Cl. 6). 9-5-50.
529,726. S-WC AND DESIGN. Cl. 46 (Int. Cl. 31). 8-29-50.	530,467. ATLAS. Cl. 23 (Int. Cls. 7, 9, 12, and 16). 9-12-50.
529,909. DREAM CLOUD. Cl. 32 (Int. Cl. 20). 8-29-50.	530,468. ATLAS AND DESIGN. Cl. 23 (Int. Cls. 7, 12, and 16). 9-12-50.
529,917. MAIMIN. Cl. 26 (Int. Cl. 7). 8-29-50.	530,478. QUICK-SET. Cl. 28 (Int. Cl. 8). 9-12-50.
529,982. HORSEHEAD DESIGN. Cl. 38 (Int. Cl. 16). 8-29-50.	530,492. O PAL. Cl. 39 (Int. Cl. 25). 9-12-50.
530,035. BOWERS OLD FASHIONED PEANUT CRUNCH AND DESIGN. Cl. 46 (Int. Cl. 30). 8-29-50.	530,536. KETAC. Cl. 6 (Int. Cl. 1). 9-12-50.
	530,851. OLD SPRING. Cl. 49 (Int. Cl. 33). 9-19-50.
	531,081. POSTOP. Cl. 34 (Int. Cl. 11). 9-19-50.

TRADEMARK REGISTRATIONS CANCELED

Section 8

768,737. PERMA-LIFTS. Cl. 39. 1-7-64.

The following registrations issued Apr. 28, 1964

768,704. CCC. Cl. 23.	768,730. PRESSURE PAK. Cl. 26.
768,553. TERPENOX. Cl. 1.	768,735. AQUA-EAR. Cl. 26.
768,563. KOOL KIT. Cl. 2.	768,738. LUCY-ETTE 400. Cl. 26.
768,564. ME-PRO-PAK. Cl. 2.	768,739. SANDS OF TIME AND DESIGN. Cl. 27.
768,565. PAKSTER. Cl. 2.	768,742. D-GL. Cl. 28.
768,566. NEWCREST ECONO PAK AND DESIGN. Cl. 2.	768,744. TY DE UP AND DESIGN. Cl. 29.
768,569. FIBER CRAFT. Cl. 2.	768,747. BEST REST. Cl. 32.
768,572. MELROSE. Cl. 4.	768,750. TEXTRALISS. Cl. 32.
768,573. ARMOUR AND DESIGN. Cl. 5.	768,752. ISEMM. Cl. 32.
	768,753. CUSH-N-LOK. Cl. 32.
	768,760. SLUMBER-AIRE. Cl. 34.
	768,772. DELTA AND DESIGN. Cl. 35.
	768,776. HUMIDENET. Cl. 35.
	768,777. TNT AND DESIGN. Cl. 36.
	768,781. ROYAL ARTIST. Cl. 36.

TRADEMARK REGISTRATIONS AMENDED,
DISCLAIMED, CORRECTED, ETC.

140,588. DOW AND DESIGN. Cl. 6. 8-22-21. The Dow Chemical Company, Midland, Mich. Amended to appear:

528,706. BUTLER. Cl. 12. 8-8-50. Butler Mfg. Company. Butler Manufacturing Company, Kansas City, Mo. Amended to appear:



BUTLER

294,405. DOW AND DESIGN. Cl. 48. 5-24-32. The Dow Chemical Company, Midland, Mich. Amended to appear:

808,002. DEO-DREX. Cl. 6. 5-10-66. Madison Chemical Corporation, Maywood, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.870,878. FREEZ KING. Cl. 31. 6-10-69. Tantee Free Industries, Inc., Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

TM 163

- 529,604. MONOGRAM. Cl. 40 (Int. Cl. 21). 8-22-50.
 529,637. TRULY TUFF. Cl. 39 (Int. Cl. 25). 8-22-50.
 529,682. U.S. MOTORS AND DESIGN. Cl. 21 (Int. Cl. 7). 8-29-50.
 529,726. S-WC AND DESIGN. Cl. 46 (Int. Cl. 31). 8-29-50.
 529,909. DREAM CLOUD. Cl. 32 (Int. Cl. 20). 8-29-50.
 529,917. MAIMIN. Cl. 26 (Int. Cl. 7). 8-29-50.
 529,982. HORSEHEAD DESIGN. Cl. 38 (Int. Cl. 16). 8-29-50.
 530,085. BOWERS OLD FASHIONED PEANUT CRUNCH AND DESIGN. Cl. 46 (Int. Cl. 30). 8-29-50.
 530,125. VASCO SUPREME. Cl. 14 (Int. Cl. 6). 9-5-50.
 530,185. WEDGE-ON. Cl. 23 (Int. Cl. 8). 9-5-50.
 530,360. EX-TRAND. Cl. 12 (Int. Cl. 6). 9-5-50.
 530,467. ATLAS. Cl. 23 (Int. Cls. 7, 9, 12, and 16). 9-12-50.
 530,468. ATLAS AND DESIGN. Cl. 23 (Int. Cls. 7, 12, and 16). 9-12-50.
 530,478. QUICK-SET. Cl. 28 (Int. Cl. 8). 9-12-50.
 530,492. O PAL. Cl. 39 (Int. Cl. 25). 9-12-50.
 530,536. KETAC. Cl. 6 (Int. Cl. 1). 9-12-50.
 530,851. OLD SPRING. Cl. 49 (Int. Cl. 33). 9-19-50.
 531,081. POSTOP. Cl. 34 (Int. Cl. 11). 9-19-50.

TRADEMARK REGISTRATIONS CANCELED

Section 8

- 762,787. PERMA-LIFTS. Cl. 39. 1-7-64.

The following registrations issued Apr. 28, 1964

- 768,704. CCC. Cl. 23.
 768,553. TERPENOX. Cl. 1.
 768,562. KOOL KIT. Cl. 2.
 768,564. ME-PRO-PAK. Cl. 2.
 768,565. PAKSTER. Cl. 2.
 768,566. NEWCREST ECONO PAK AND DESIGN. Cl. 2.
 768,569. FIBER CRAFT. Cl. 2.
 768,572. MELROSE. Cl. 4.
 768,573. ARMOUR AND DESIGN. Cl. 5.
 768,574. STRYPLOC. Cl. 5.
 768,577. PYRO-PRUF. Cl. 6.
 768,579. NUTRI-FOAM. Cl. 10.
 768,582. GIBALTAR. Cl. 12.
 768,584. ETERNA BLOCK. Cl. 12.
 768,589. ROLLA/FLEX. Cl. 12.
 768,590. H-BRACE AND DESIGN. Cl. 12.
 768,591. BRACE AND PADLOCK DESIGN. Cl. 12.
 768,603. EVERGUARD AND DESIGN. Cl. 12.
 768,608. C AND DESIGN. Cl. 13.
 768,609. DOUBLE-TOUGH. Cl. 13.
 768,612. BANTAM. Cl. 13.
 768,613. HANDI-LOCK ETC. AND DESIGN. Cl. 13.
 768,616. MISCELLANEOUS DESIGN. Cl. 13.
 768,617. SUNAIRE. Cl. 13.
 768,618. KIRSCH. Cl. 13.
 768,620. TWIN. Cl. 14.
 768,621. SIGMA. Cl. 14.
 768,633. CENTURY GLAZE AND DESIGN. Cl. 16.
 768,634. CENTURY SEAL AND DESIGN. Cl. 16.
 768,635. PRYMENAM. Cl. 16.
 768,640. TIO PEPE. Cl. 17.
 768,641. TEXAN AND DESIGN. Cl. 17.
 768,654. FOAM PAC AND DESIGN. Cl. 19.
 768,657. ZERO ENTRY. Cl. 21.
 768,659. DUO-TROL AND DESIGN. Cl. 21.
 768,660. MEND-IT SLEEVE AND DESIGN. Cl. 21.
 768,661. PETRONICS. Cl. 21.
 768,662. METAMORPHIC. Cl. 21.
 768,666. METAMORPHIC. Cl. 21.
 768,676. DINKY LINKS. Cl. 22.
 768,677. VI-KE. Cl. 22.
 768,679. MARINE EXHAUST MASTER. Cl. 23.
 768,681. FARM-ETTE. Cl. 23.
 768,683. ROTO SHARP. Cl. 23.
 768,686. WATER WONDER. Cl. 23.
 768,688. HARKERMATIC. Cl. 23.
 768,701. MISTER STARTER. Cl. 23.
 768,703. DURA-FLEX. Cl. 23.
 768,707. T AND DESIGN. Cl. 23.
 768,708. TEALE AND DESIGN. Cl. 23.
 768,709. TEALE AND DESIGN. Cl. 23.
 768,713. BUS BROWN. Cl. 23.
 768,719. LIQUI-JET. Cl. 23.
 768,720. LIQUI-JET AND DESIGN. Cl. 23.
 768,722. NEW YORKER. Cl. 23.
 768,723. NEW YORKER AND DESIGN. Cl. 23.
 768,727. OVAL WITH ARROW DESIGN. Cl. 24.
 768,728. UNIT WASH. Cl. 24.
 768,730. PRESSURE PAK. Cl. 26.
 768,735. AQUA-EAR. Cl. 26.
 768,738. LUCY-ETTE 400. Cl. 26.
 768,739. SANDS OF TIME AND DESIGN. Cl. 27.
 768,742. D-GL. Cl. 28.
 768,744. TY DE UP AND DESIGN. Cl. 29.
 768,747. BEST REST. Cl. 32.
 768,750. TEXTRALISS. Cl. 32.
 768,752. ISEEME. Cl. 32.
 768,758. CUSH-N-LOK. Cl. 32.
 768,769. SLUMBER-AIRE. Cl. 34.
 768,772. DELTA AND DESIGN. Cl. 35.
 768,776. HUMIDIBELT. Cl. 35.
 768,777. TNT AND DESIGN. Cl. 36.
 768,781. ROYAL ARTIST. Cl. 36.
 768,783. REGENCY. Cl. 37.
 768,788. DATATAB AND DESIGN. Cls. 37 and 38.
 768,791. WRITE-IN-LITE. Cl. 37.
 768,794. WPM. Cl. 37.
 768,798. NITE-GLO. Cl. 37.
 768,799. TORTOISE-TAC. Cl. 37.
 768,801. LET'S LEARN MONEY. Cl. 38.
 768,803. HY-GENIE. Cl. 39.
 768,806. LEADING MAN. Cl. 39.
 768,807. FOOT SHAPE. Cl. 39.
 768,810. MICHELE. Cl. 39.
 768,811. GOLF TEE. Cl. 39.
 768,812. MADELEINE. Cl. 39.
 768,814. FIVE OAKS. Cl. 39.
 768,816. BRADSHIRE. Cl. 39.
 768,821. MINI-CHEERS. Cl. 39.
 768,823. MISTER WASH. Cl. 39.
 768,825. JACQUES GRIFFE. Cl. 39.
 768,831. SAN-CLAIR. Cl. 39.
 768,835. FOOT FLOATERS. Cl. 39.
 768,837. MISS NEAT. Cl. 39.
 768,839. PAXTON AND DESIGN. Cl. 39.
 768,843. TRIMCO. Cls. 40 and 50.
 768,848. IONIVYL. Cl. 42.
 768,849. MAGILASTIC. Cl. 42.
 768,859. ROLL N'-PIN. Cl. 44.
 768,862. BEAUTY AID. Cl. 44.
 768,863. JET-SET. Cl. 44.
 768,867. VITABASE. Cl. 44.
 768,871. PREGNOMETER. Cl. 44.
 768,878. VULCA-WELT. Cl. 50.
 768,884. MISCELLANEOUS DESIGN. Cl. 103.
 768,885. TWIN TOWER SYMBOL. Cl. 104.
 768,887. PUL LIP ETC. AND DESIGN. Cl. 2.
 768,888. COTTON-GRO. Cl. 10.
 768,896. BROCKWAY. Cl. 27.
 768,901. LITTLE PEOPLE'S PAPERBACKS AND DESIGN. Cl. 38.
 768,902. TESTED. Cl. 46.
 768,904. MAKE YOURS A BOWMAN 2-MILK FAMILY. Cl. 46.
 768,906. COLLECTION OF FARM ANIMALS, ETC. IN CIRCULAR DESIGN. Cl. 46.
 768,909. MOR-TENDER. Cl. 46.
 768,910. BOTTLE DESIGN. Cl. 49.
 768,914. BAY LIME. Cl. 51.
 768,915. SPARKLE BRITE ETC. AND DESIGN.
 768,916. MAIL ORDER METHODS. Cl. 101.

TRADEMARK REGISTRATIONS AMENDED,
DISCLAIMED, CORRECTED, ETC.

140,588. DOW AND DESIGN. Cl. 6. 3-22-21. The Dow Chemical Company, Midland, Mich. Amended to appear:

528,706. BUTLER. Cl. 12. 8-8-50. Butler Mfg. Company. Butler Manufacturing Company, Kansas City, Mo. Amended to appear:

DOW

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BUTLER

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870,878. FREEZ KING. Cl. 31. 6-10-69. Tastee Freez Industries, Inc., Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

TM 163

INDEX OF REGISTRANTS

JUNE 16, 1970

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- ACS Industries, Inc., Van Nuys, Calif. 892,780, pub. 3-31-70. Cl. 21.
- AMBAC Industries, Inc., Garden City, N.Y. 892,886, pub. 3-31-70. Cl. 26.
- Adhesive Tape Corp., Brooklyn, N.Y. 893,061, Cl. 5.
- Adria Knitting Mills, Inc., New York, N.Y. 768,814, ren. 6-16-70. Cl. 89.
- Air Reduction Co., Inc., New York, N.Y. 892,789, pub. 3-31-70. Cl. 21.
- Aizer, Samuel A., New York, N.Y. 768,799, can. Cl. 37.
- Aladdin Laboratories, Inc., Minneapolis, Minn. 529,119, ren. 6-16-70. Cl. 84.
- All American Building Materials Corp., Van Nuys, Calif. 768,903, can. Cl. 12.
- Allcraft Mfg. Co., Inc., Cambridge, Mass. 526,838, ren. 6-16-70. Cl. 84.
- Allied Stores Corp., New York, N.Y. 892,806, pub. 12-23-69. Cl. 22.
- Allied-Walbro Corp., Whitehouse, Ohio, from John R. Parts Co., Cass City, Mich. 892,821, pub. 2-3-70. Cl. 23.
- Aloe Crame Laboratories, Inc., Fort Lauderdale, Fla. 892,989, pub. 3-31-70. Cl. 51.
- Alrose Chemical Co., Cranston, R.I., to Gelgy Chemical Corp., Ardley, N.Y. 527,787, ren. 6-16-70. Cl. 6.
- Amazon Cotton Mills Co., to Amazon Cotton Mills Co., Thomasville, N.C. 267,046, ren. 6-16-70. Cl. 48.
- Ambrose, Jay L., Santa Monica, Calif. 892,979, pub. 3-31-70. Cl. 49.
- Amchem Products, Inc., Ambler, Pa. 892,653, pub. 3-31-70. Cl. 6.
- Amchem Products, Inc., Ambler, Pa. 892,837, pub. 3-19-69. Cl. 23.
- American Airlines, Inc., New York, N.Y. 893,040, pub. 1-13-70. Cl. 105.
- American Brands, Inc., New York, N.Y. 892,720-4, pub. 3-31-70. Cl. 17.
- American Cyanamid Co., Wayne, N.J. 530,536, ren. 6-16-70. Cl. 6.
- American Gage & Machine Co., Chicago, Ill. 892,878, pub. 3-31-70. Cl. 26.
- American Glue Co., Boston, Mass., to The Carborundum Co., Niagara Falls, N.Y. 270,495, ren. 6-16-70. Cl. 4.
- American Graded Sand Co., from Agco Corp., Des Plaines, Ill. 892,840, pub. 3-31-70. Cl. 28.
- American Home Products Corp., New York, N.Y. 892,844, pub. 12-2-69. Cl. 4.
- American Nuclear Society Inc., Hinsdale, Ill. 893,074, Cl. 38.
- American Photochemicals, Inc., Rutherford, N.J. 892,662, pub. 3-31-70. Cl. 6.
- American Plastcraft Co., Chicago, Ill. 892,778, pub. 3-31-70. Cl. 21.
- American Rice Growers Co-Operative Association, Holmwood Division, Inc., Lake Charles, La. 529,459, ren. 6-16-70. Cl. 46.
- American Standard Inc.: See—
New Castle Products.
- Amtec Corp., Grand Rapids, Mich. 892,685, pub. 3-31-70. Cl. 13.
- Andrews Mfg. Co., West Memphis, from Mecmag Corp., Monette, Ark. 892,772, pub. 3-31-70. Cl. 21.
- Angel Foods Systems, Inc., Chicago, Ill. 893,021, pub. 3-31-70. Cl. 100.
- Apex Products Corp., Dania, Fla. 892,841, pub. 3-21-70. Multiple Class (Classes 3, 8, 18, 21, 22, 23, 26, 28, 32, 37, 38, and 40).
- Applied Power Industries, Inc.: See—
Blackhawk Mfg. Co.
- Apter Industries, Inc., McKeesport, Pa. 892,657, pub. 3-31-70. Cl. 6.
- Archer Petroleum Corp.: See—
Skinner, C. A.
- Armour & Co., to Armour & Co., Chicago, Ill. 528,358, ren. 6-16-70. Cl. 46.
- Armour & Co., d.b.a. Armour Alliance Industries, Chicago, Ill. 768,578, can. Cl. 5.
- Armstrong Cork Co., Lancaster, Pa. 892,764-5, pub. 3-31-70. Cl. 20.
- Armstrong Cork Co., Lancaster, Pa. 892,767, pub. 3-31-70. Cl. 20.
- Arnold's, Eddy, Tennessee Fried Chicken, Inc., Nashville, Tenn. 893,019, pub. 3-31-70. Cl. 100.
- Aron, J., & Co., Inc., New Orleans, La. 274,931, ren. 6-16-70. Cl. 48.
- Ashley, John R., d.b.a. Mend-It Sleeve Mfg. Co., Oakland, Calif. 768,660, can. Cl. 21.
- Auerbach Bath Robe Corp., New York, N.Y. 892,928, pub. 3-31-70. Cl. 89.
- Automated Block Corp. of America, New York, N.Y. 768,584, can. Cl. 12.
- Automated Environmental Systems, Inc., Woodbury, N.Y. 892,876, pub. 3-31-70. Cl. 26.
- Automatic Radio Mfg. Co., Inc., Melrose, Mass. 892,754, pub. 1-20-70. Cl. 19.
- Automatic Storage Co. Ltd., The, Harrietsham, England. 768,888, can. Cl. 23.
- Avon Printed Hospital Products Corp., Chicago, Ill. 892,918-19, pub. 3-5-69. Cl. 38.
- Avon Products, Inc., New York, N.Y. 892,901, pub. 12-23-69. Multiple Class (Classes 51 and 52).
- Avrick & Co., Inc., Long Island City, N.Y. 892,911, pub. 3-31-70. Cl. 37.
- Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 892,658, pub. 3-31-70. Cl. 6.
- Baker, Wallace L., Burley, Idaho. 892,982, pub. 3-31-70. Cl. 50.
- Bangor Punta Operations, Inc., Bangor, Maine. 892,897, pub. 3-31-70. Cl. 34.
- Barber-Colman Co., Rockford, Ill. 527,781, ren. 6-16-70. Cl. 23.
- Bar-Book Mfg. Co., Inc., The: See—
Barnes, Taylor.
- Barbour Stockwell Co., Cambridge, to Curtis & Marble Machine Co., Worcester, Mass. 268,208, ren. 6-16-70. Cl. 26.
- Barday, Jas., & Co. Ltd., Detroit, Mich. 526,262, ren. 6-16-70. Cl. 40.
- Barey, William D., d.b.a. Bill Barey Gateway Man's Shop, Beaumont, Tex. 768,823, can. Cl. 39.
- Barker, Moore & Main Co., Philadelphia, to Whitmoyer Laboratories, Inc., Myerstown, Pa. 523,063, ren. 6-16-70. Cl. 46.
- Barnes, Taylor, d.b.a. Shreveport Engineering Co. Assoc. to The Bar-Brook Mfg. Co., Inc., to The Bar-Book Mfg. Co., Inc., Shreveport, La. 444,066, ren. 6-16-70. Cl. 21.
- Barnstead Still & Sterilizer Co., Boston, Mass., to Sybron Corp., Rochester, N.Y. 528,938, ren. 6-16-70. Cl. 23.
- Barwick, R. T. Industries, Inc., Chamblee, Ga. 892,953, pub. 3-31-70. Cl. 42.
- Bearing Headquarters Co., Broadview, Ill. 892,823, pub. 3-31-70. Cl. 23.
- Beasley, Thomas J., Jr., Cocoa, Fla. 892,935, pub. 3-31-70. Cl. 39.
- Beatrice Foods Co., d.b.a. Chocolate Co. of America, Chicago, Ill. 892,970, pub. 3-31-70. Cl. 46.
- Becton, Dickinson & Co., East Rutherford, N.J. 892,861, pub. 3-31-70. Cl. 26.
- Beecham Inc., Clifton, N.J. 892,789, pub. 3-31-70. Cl. 18.
- Beecher, Henry J., d.b.a. Katharine Beecher, Manchester, Pa. 768,906, can. Cl. 48.
- Bell & Howell Co., Chicago, Ill., from Consolidated Electrodynamics Corp., Pasadena, Calif. 892,858, pub. 4-2-68. Cl. 26.
- Bellvue Laboratories, Inc., College Point, N.Y. 892,783, pub. 1-13-70. Cl. 18.
- Berker Sportcraft Ltd., London, England. 768,831, can. Cl. 39.
- Berkey/Colortran Mfg., Inc., Burbank, Calif. 892,801, pub. 3-31-70. Cl. 21.
- Berkey Photo, Inc., New York, N.Y. 892,867, pub. 3-31-70. Cl. 29.
- Berlitz Schools of Languages of America, Inc., New York, N.Y. 893,056, pub. 3-31-70. Cl. 107.
- Best Rest Mattress Inc., San Francisco, Calif. 768,747, can. Cl. 32.
- Bettcher Industries, Inc., Vermillion, Ohio. 892,847, pub. 3-31-70. Cl. 23.
- Bettcher Mfg. Corp., Cleveland, Ohio. 892,902, pub. 3-31-70. Cl. 34.
- Bird Machine Co., South Walpole, Mass. 271,704, ren. 6-16-70. Cl. 23.
- Blackhawk Mfg. Co., to Applied Power Industries, Inc., Milwaukee, Wis. 522,930, ren. 6-16-70. Cl. 23.
- Boating Industry Association, Chicago, Ill. 893,080, pub. 3-31-70. Cl. A.
- Boone Records, Inc., Goodlettsville, Tenn. 893,069, Cl. 36.
- Borg-Warner Corp., Chicago, Ill. 892,791, pub. 3-31-70. Cl. 21.
- Bourjois, Inc., New York, N.Y. 274,389, ren. 6-16-70. Cl. 51.
- Bowman Dairy Co., Chicago, Ill. 768,904, can. Cl. 46.
- Bradfute Corp., Eastchester, N.Y. 893,024, pub. 3-16-67. Cl. 101.
- Bradley, Milton, Co., Springfield, Mass. 526,349, ren. 6-16-70. Cl. 37.
- Bradley, Milton, Co., Springfield, Mass. 892,670, pub. 3-31-70. Multiple Class (Classes 11 and 16).
- Braun, G. A. Inc., Syracuse, N.Y. 768,728, can. Cl. 24.
- Breck, John H., Inc., Springfield, Mass., to John H. Breck, Inc., Wayne, N.J. 529,328, ren. 6-16-70. Cl. 51.
- Breck, John H., Inc., Wayne, N.J. 892,993, pub. 3-31-70. Cl. 51.
- Breck, John H., Inc., Wayne, N.J. 893,006-9, pub. 3-31-70. Cl. 52.
- Brett-Schneider Mills, Inc., Islip Terrace, N.Y. 768,849, can. Cl. 42.
- Bridgeport Silverware, The, Bridgeport, Conn. 768,677, can. Cl. 22.
- Brinkmann, Martin, AG, Bremen, Germany. 892,718, pub. 1-6-70. Cl. 17.
- Bristol-Myers Co.: See—
Procter & Gamble Co., The.
- Bristol-Myers Co., New York, N.Y. 523,183, ren. 6-16-70. Cl. 51.
- British Petroleum Co. Ltd., The, London, England. 892,701, pub. 3-31-70. Cl. 16.

British Petroleum Co. Ltd., The, London England. 893,036, pub. 3-31-70. Cl. 103.
 Broadway Ornamental Products, Inc., Hoboken, N.J. 768,896, can. Cl. 27.
 Brown Mfg. Corp., Woodbine, Iowa. 768,713, can. Cl. 23.
 Bruce, E. L., Co., Inc.: See—
 Cellulose Oak Flooring Inc.
 Bruno, C., & Son, Inc., New York, N.Y. 768,781, can. Cl. 36.
 Brunswick Corp.: See—
 Brunswick-Balke-Collender Co., The.
 Brunswick-Balke-Collender Co., The, to Brunswick Corp., Chicago, Ill. 525,681, ren. 6-16-70. Cl. 22.
 Bryant-Poll, Inc., Coatesville, Ind. 892,848, pub. 3-31-70. Cl. 28.
 Buckeye Plastics Co., Reynoldsburg, Ohio. 892,753, pub. 3-31-70. Cl. 19.
 Bullard, E. D. Co., Sausalito, Calif. 528,784, ren. 6-16-70. Cl. 39.
 Burch Mfg. Co., Inc.: See—
 Fort Dodge Tent & Awning Co.
 Business Efficiency Aids, Inc., Skokie, Ill. 892,893, pub. 6-11-68. Cl. 32.
 Butler Mfg. Co., Kansas City, Mo. 528,706, Am. 7(d). Cl. 12.
 Butzow, Marion L., Glenview, Ill. 892,702, pub. 3-31-70. Cl. 15.
 C-B Mfg., Inc., Salt Lake City, Utah. 893,077, Cl. 40.
 C&D Valve Mfg. Co., Inc., Oklahoma City, Okla. 892,691, pub. 3-31-70. Cl. 13.
 CBR Geonuclear Corp., Las Vegas, Nev. 893,012, pub. 3-31-70. Cl. 100.
 Calark, Inc., Little Rock, Ark. 892,873, pub. 3-31-70. Cl. 26.
 Calad Products Co., Inc., Brentwood, Md. 893,000, pub. 3-31-70. Cl. 52.
 California Date Growers Assoc.: See—
 Swingle, Leonhardt.
 Callaway Mills Co.: See—
 Deering Milliken, Inc.
 Cannon Products, Inc., Faribault, Minn. 892,758, pub. 3-31-70. Cl. 19.
 Capistrano S.P.R.L., Brussels, Belgium. 892,956, pub. 3-31-70. Cl. 44.
 Carborundum Co., The: See—
 American Glue Co.
 Delpark Corp.
 Carhart Photo, Inc., Rochester, N.Y. 893,045, pub. 3-31-70. Cl. 106.
 Carlton Cigarette Co. (PVT) Ltd., Salisbury, Southern Rhodesia. 768,641, can. Cl. 17.
 Carnation Co.: See—
 Ratcliff-Sanders Grocer Co.
 Carroll, P. J., & Co. Ltd., Dublin, Ireland. 892,716-17, pub. 3-31-70. Cl. 17.
 Carter-Wallace, Inc., New York, N.Y. 892,986, pub. 12-23-69. Cl. 51.
 Carton Closing Corp., Chicago, Ill. 768,704, can. Cl. 23.
 Catalina Dental Products: See—
 Catalina Products.
 Catalina Products, Pasadena, to Catalina Dental Products, Dana Point, Calif. 523,073, ren. 6-16-70. Cl. 2.
 Celanese Corp.: See—
 Celanese Corp. of America.
 Celanese Corp., New York, N.Y. 892,680, pub. 12-2-69. Cl. 13.
 Celanese Corp. of America, to Celanese Corp., New York, N.Y. 273,880, ren. 6-16-70. Cl. 42.
 Celanese Corp. of America, to Celanese Corp., New York, N.Y. 275,130, ren. 6-16-70. Cl. 42.
 Celanese Corp. of America, to Celanese Corp., New York, N.Y. 275,821, ren. 6-16-70. Cl. 42.
 Cellulose Oak Flooring Inc., to E. L. Bruce Co., Inc., Memphis, Tenn. 283,117, ren. 6-16-70. Cl. 5.
 Century Bonded Products, Inc., Erie, Pa. 768,633-4, can. Cl. 18.
 Century Mutual Insurance Co., Charlotte, Mich. 893,030, pub. 3-31-70. Cl. 102.
 Champion Coated Paper Co., The, to U.S. Plywood-Champion Papers Inc., Hamilton, Ohio. 271,664, ren. 6-16-70. Cl. 37.
 Champion Coated Paper Co., The, to U.S. Plywood-Champion Papers Inc., Hamilton, Ohio. 271,757, ren. 6-16-70. Cl. 37.
 Champion Knitting Mills, Chattanooga, Tenn., to Kayser-Roth Corp., New York, N.Y. 274,178, ren. 6-16-70. Cl. 89.
 Chance, A. B., Co., Centralia, Mo. 525,612, ren. 6-16-70. Cl. 23.
 Chapman, Cell, Inc., New York, N.Y. from Stockton Mfg. Co., Inc., Dallas, Tex. 892,922, pub. 3-11-69. Cl. 39.
 Chelsea Clock Co., Chelsea, Mass. 523,025, ren. 6-16-70. Cl. 26.
 Chemcell Ltd., from Duplan Textiles Ltd., Montreal, Quebec, Canada. 892,944, pub. 1-6-70. Cl. 42.
 Chemtron Corp.: See—
 National Cylinder Gas Co.
 Chicago Blackhawks Hockey Team, Inc., Chicago, Ill. 893,052-3, pub. 3-31-70. Cl. 107.
 Chronicle Publishing Co., St. Charles, Ill. 892,915-16, pub. 3-31-70. Cl. 88.
 Cincinnati Reds, Inc., Cincinnati, Ohio. 893,049, pub. 3-31-70. Cl. 107.
 Clay-Adams, Inc., New York, N.Y. 768,791, can. Cl. 37.
 Clear Fir Sales Co., Eugene, to Fibreboard Corp., Springfield, Oreg. 522,992, ren. 6-16-70. Cl. 12.
 Cleveland Twist Drill Co., The, Cleveland, Ohio. 530,478, ren. 6-16-70. Cl. 23.
 Clinique Laboratories, Inc., New York, N.Y. 892,987, pub. 1-27-70. Cl. 51.
 Cohn & Rosenberger, Inc., to Coro, Inc., New York, N.Y. 263,553, ren. 6-16-70. Cl. 28.
 Colgate-Palmolive Co., New York, N.Y. 892,697, pub. 3-31-70. Cl. 14.

College Life Insurance Co. of America, The, Indianapolis, Ind. 893,031, pub. 6-31-70. Cl. 102.
 Collins & Atkman, Corp., New York, N.Y. 892,929, pub. 3-31-70. Cl. 39.
 Commercial Electric Co., The, Toledo, Ohio. 892,925, pub. 3-31-70. Cl. 39.
 Commonwealth Pencil Co., Inc., Shelbyville, Tenn. 768,798, can. Cl. 37.
 Compagnie des Maitres Fromagers—C.D.M.F., Paris, France. 892,962, pub. 1-18-70. Cl. 48.
 Compania Insular Tabacalera, S.A., Canaria, Canary Islands. 892,715, pub. 3-31-70. Cl. 17.
 Complex (Japan), Ltd., Fukui-ku, Kobe, Japan. 892,811, pub. 3-31-70. Cl. 22.
 Computer Systems Laboratories, Inc., Red Bank, N.J. 893,029, pub. 3-31-70. Cl. 101.
 Conservas de Badajoz S.A., Madrid, Spain. 892,907, pub. 3-31-70. Cl. 46.
 Consolidated Pipe Co. of America, Stow, Ohio. 768,608, can. Cl. 13.
 Continental Alliance Corp., Denver, Colo. 892,930, pub. 3-31-70. Cl. 39.
 Continental Coatings Corp., New York, N.Y. 768,635, can. Cl. 16.
 Continental Telephone Corp., St. Louis, Mo. 893,028, pub. 3-31-70. Cl. 101.
 Cordovan Associates, Inc., Dayton, Ohio. 892,904, pub. 3-31-70. Cl. 35.
 Corman & Wasserman, Inc., Baltimore, Md. 526,742, ren. 6-16-70. Cl. 39.
 Corning Glass Works, Corning, N.Y. 768,609, can. Cl. 13.
 Coro, Inc.: See—
 Cohn & Rosenberger, Inc.
 Corometrics Medical Systems, Inc., North Haven, Conn. 892,955, pub. 3-31-70. Cl. 44.
 Cory Corp., Chicago, Ill. 892,895, pub. 3-19-69. Cl. 34.
 Coshocton Glove Co., Coshocton, Ohio, to Indianapolis Glove Co., Indianapolis, Ind. 273,984, ren. 6-16-70. Cl. 39.
 Cowles Detergent Co., The, Cleveland, Ohio, to Stauffer Chemical Co., New York, N.Y. 266,052, ren. 6-16-70. Cl. 52.
 Crane Co., St. Louis, Mo. 768,612, can. Cl. 13.
 Creations et Haute-Couture de Paris, Paris, France. 768,825, can. Cl. 39.
 Crocker Corp., Burlington, Mass. 768,589, can. Cl. 12.
 Cullen, Willard Rush, Delavan, Wis. 768,739, can. Cl. 27.
 Curtis, Helene Industries, Inc., Chicago, Ill. 768,862, can. Cl. 44.
 Curtis & Marble Machine Co.: See—
 Harbours Stockwell Co.
 Curtis Systems Ltd., Basel, Switzerland. 892,855, pub. 3-31-70. Cl. 23.
 Cyclops Corp., Pittsburgh, Pa. 892,696, pub. 3-31-70. Cl. 14.
 Dainty Cookies, Inc., Palisades Park, N.J. 892,965, pub. 3-31-70. Cl. 46.
 Daly, Charles, Inc., New York, N.Y. 892,880, pub. 3-31-70. Cl. 26.
 Dart Industries Inc., d.b.a. Tupperware, Los Angeles, Calif. 892,684, pub. 3-31-70. Cl. 13.
 Deers & Co., Moline, Ill. 892,759-60, pub. 3-31-70. Multiple Class (Classes 18 and 23).
 Deering Milliken, Inc., Spartanburg, S.C. from Callaway Mills Co., La Grange, Ga. 892,945, pub. 1-2-68. Cl. 42.
 Deering Milliken, Inc., New York, N.Y. 892,950, pub. 3-31-70. Cl. 42.
 Defiance International, Ltd., Jamaica, N.Y. 893,062, Cl. 21.
 Delpark Corp., Lebanon, Ind., to The Carborundum Co., Niagara Falls, N.Y. 507,757, ren. 6-16-70. Cl. 31.
 Delta Tire Corp., Detroit, Mich. 768,772, can. Cl. 35.
 Detroit Hockey Club, Inc., The, Detroit, Mich. 893,051, pub. 3-31-70. Cl. 107.
 Di Giorgio Leisure Products, Inc., San Francisco, Calif., from Caveman Campers, Inc., Grants Pass, Oreg. 892,757, pub. 3-31-70. Cl. 19.
 Distillerie Stock U.S.A., Ltd., Woodside, N.Y. 892,977, pub. 3-31-70. Cl. 49.
 Dixie Lilly Milling Co.: See—
 Webb, Cecil M.
 Doane Agricultural Service, Inc., St. Louis, Mo. 893,026, pub. 3-31-70. Cl. 101.
 Domb, Emma, Inc.: See—
 Domb Mfg. Co.
 Domb Mfg. Co., to Emma Domb, Inc., San Francisco, Calif. 522,112, ren. 6-16-70. Cl. 39.
 Donaldson Co., Inc., Minneapolis, Minn. 893,066, Cl. 23.
 Dow Badische Co., Williamsburg, Va. 892,686-7, pub. 3-31-70. Cl. 1.
 Dow Chemical Co., The, Midland, Mich. 140,588, Am. 7(d). Cl. 6.
 Dow Chemical Co., The, Midland, Mich. 294,405, Am. 7(d). Cl. 46.
 Dow Chemical Co., The, Midland, Mich. 768,783, can. Cl. 37.
 Dow Corning Corp., Midland, Mich. 892,631-2, pub. 3-31-70. Cl. 1.
 Drackett Co., The, Cincinnati, Ohio. 892,643, pub. 3-31-70. Cl. 4.
 Dreyer, P. R. Inc., New York, N.Y. 892,660, pub. 3-31-70. Cl. 6.
 Drug Industries Co., Detroit, Mich. 892,738, pub. 3-31-70. Cl. 18.
 Dundee Citrus Growers Assn., Dundee, Fla. 526,057, ren. 6-16-70. Cl. 46.
 Dunham-Bush, Inc., West Hartford, Conn. 892,898, pub. 3-31-70. Cl. 34.
 Dupage Mfg. Co., Downers Grove, Ill. 892,679, pub. 2-3-70. Cl. 13.
 Dura Corp., Oak Park, Mich. 768,703, can. Cl. 23.

Duriron Co., Inc., The, Dayton, Ohio. 892,889, pub. 3-31-70. Cl. 33.
 Durst, S. F. & Co., Inc., Philadelphia, Pa. from Tilden-Yates Laboratories, Inc., Worcester, Mass. 892,785, pub. 4-15-69. Cl. 12.
 Dynamic Classics, Ltd., New York, N.Y. 892,808, pub. 1-18-70. Cl. 33.
 Dynamilis, Ltd., Aurora, Colo. 768,676, can. Cl. 32.
 Dynaplastics, Inc., Fort Worth, Tex. 893,765, pub. 3-31-70. Cl. 19.
 E-B Mills, Inc., New York, N.Y. 892,938, pub. 3-31-70. Cl. 39.
 Eagle Clothes, Inc., New York, N.Y. 893,927, pub. 3-31-70. Cl. 39.
 Earles, Bowers Co., Philadelphia, to C. J. Webb, Inc., Dresher, Pa. 530,035, ren. 6-16-70. Cl. 46.
 Easterling Co., The, Wheaton, Ill. 523,699, ren. 6-16-70. Cl. 28.
 Eastman Kodak Co., Rochester, N.Y. 526,009, ren. 6-16-70. Cl. 26.
 Eastman Kodak Co., Rochester, N.Y. 893,831, pub. 3-31-70. Cl. 26.
 Eastwood Pharmacal Co., Inc., Bridgeport, Conn. 892,747, pub. 3-31-70. Cl. 13.
 Eaton Allen Corp., Brooklyn, N.Y. 892,651, pub. 3-31-70. Cl. 6.
 Ebec Mfg. Co., The, Columbus, Ohio. 768,776, can. Cl. 35.
 Ecken, Peter, Nieder-Olm, Mainz, Germany. 892,953, pub. 3-31-70. Cl. 45.
 Eisen- und Drahtwerk Erlau Aktiengesellschaft, Aalen, Germany. 892,453, pub. 3-31-70. Cl. 12.
 Electro Development Corp., Lynnwood, Wash. 892,770, pub. 1-20-70. Multiple Class (Classes 21 and 26).
 Electro Materials Corp., La Jolla, Calif. 768,662, can. Cl. 21.
 Electro Materials Corp., La Jolla, Calif. 768,666, can. Cl. 21.
 Electronic Devices, Inc., Yonkers, N.Y. 892,771, pub. 3-31-70. Cl. 31.
 Electronic Research & Development H.K. Ltd., Hong Kong, Kowloon, Hong Kong. 892,762-3, pub. 3-31-70. Cl. 31.
 Electrophonics, Inc., San Juan, Puerto Rico. 892,773, pub. 7-1-69. Cl. 21.
 Elliott Business Machines, Inc., Randolph, Mass. 892,866, pub. 3-31-70. Cl. 28.
 Elm Hk Corp.: See—
 Sapphire Hosiery Corp.
 Emerson Electric Co.: See—
 U.S. Electrical Motors, Inc.
 Emerson Electric Co., St. Louis, Mo. 892,794, pub. 3-31-70. Cl. 21.
 Emerson Electric Co., St. Louis, Mo. 892,899, pub. 12-2-69. Cl. 24.
 Ennis, William W., Long Beach, Calif. 768,661, can. Cl. 21.
 Enro Shirt Co., Inc., The, Louisville, Ky. 768,816, can. Cl. 39.
 Erie Technological Products, Inc., Erie, Pa. 893,047, pub. 3-31-70. Cl. 107.
 Estee Candy Co., New York, N.Y. to Estee Candy Co., Inc., Palisades Park, N.Y. 443,890, ren. 6-16-70. Cl. 46.
 Estee Candy Co., Inc.: See—
 Estee Candy Co.
 Eutectic Corp.: See—
 Eutectic Welding Alloys Corp.
 Eutectic Welding Alloys Corp., New York, to Eutectic Corp., Flushing, N.Y. 525,478-9, ren. 6-16-70. Cl. 34.
 Everingham Bros. Ltd., Toronto, Ontario, Canada. 892,482, pub. 3-31-70. Cl. 18.
 Exline, Inc., Salina, Kans. 892,828, pub. 3-31-70. Multiple Class (Classes 23 and 28).
 Exquisite Form Industries, Inc., from Exquisite Form Industries, Inc., New York, N.Y. 892,926, pub. 3-31-70. Cl. 59.
 FMC Corp., Philadelphia, Pa. 892,430, pub. 3-31-70. Cl. 1.
 FMC Corp., San Jose, Calif. 892,832, pub. 3-31-70. Cl. 23.
 Fairbanks, Morse & Co., New York, N.Y. 768,701, can. Cl. 28.
 Fairchild Chemical Corp., Farmingdale, N.Y. 892,700, pub. 3-4-69. Cl. 15.
 Family Finance Corp., Wilmington, Del. 893,082, pub. 3-31-70. Cl. 102.
 Farah-Agee Mfg. Co., Inc. to Tex-Togs, Inc., El Paso, Tex. 444,022, ren. 6-16-70. Cl. 39.
 Farnwald Enterprises, Inc., Lancaster, Pa. 892,761, pub. 3-31-70. Cl. 19.
 Farnham, F. D., Co., Lyons, Ill. 892,856, pub. 3-31-70. Cl. 22.
 Fedtro, Inc., Rockville Centre, N.Y. 892,845-6, pub. 3-31-70. Cl. 5.
 Fedtro, Inc., Rockville Centre, N.Y. 892,795, pub. 3-31-70. Cl. 21.
 Fedtro, Inc., Rockville Centre, N.Y. 892,804, pub. 3-31-70. Cl. 21.
 Fiber Craft, Inc., Greeley, Colo. 768,569, can. Cl. 2.
 Fiberboard Corp.: See—
 Clear Fir Sales Co.
 Fiberglass Resources Corp., Farmingdale, N.Y. 892,657, pub. 3-31-70. Cl. 13.
 Fidalgo Island Packing Co., to Whitney-Fidalgo Seafoods, Inc., Seattle, Wash. 538,023, ren. 6-16-70. Cl. 46.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 892,763, pub. 3-31-70. Cl. 19.
 Firma G. Reigart, Esslingen am Neckar, Germany. 892,803, pub. 3-31-70. Cl. 26.
 Fisburne Equipment Co., Inc., Arden, N.C. 892,849, pub. 3-31-70. Cl. 23.
 Fisher Controls Co., Marshalltown, Iowa. 892,690, pub. 3-31-70. Cl. 13.
 Flintkote Co., The, White Plains, N.Y. 892,675, pub. 3-31-70. Cl. 12.
 Flying Tiger Line Inc., The, Los Angeles, Calif. 893,042, pub. 3-31-70. Cl. 105.
 Forbes Labeltape Co., Grand Rapids, Mich. 893,070. Cl. 37.

Formulabs, Inc., Escondido, Calif. 892,668, pub. 3-31-70. Cl. 11.
 Fort Dodge Tent & Awning Co., to Burch Mfg. Co., Inc., Fort Dodge, Iowa. 522,073, ren. 6-16-70. Cl. 23.
 Fort Howard Paper Co., Green Bay, Wis. Connel Inc., d.b.a. Orchids Products, New York, N.Y. 892,905, pub. 3-31-70. Cl. 37.
 Foster, L. B., Co., Pittsburgh, Pa. 893,671, pub. 3-31-70. Cl. 12.
 Frankenstein, H. Co., d.b.a. Del Mar Sportswear, to M. Frankenstein, d.b.a. Grider Sportswear, Los Angeles, Calif. 524,070, ren. 6-16-70. Cl. 39.
 Frankenstein, Melvin: See—
 Frankenstein, H. Co.
 Franklin, Dale J., d.b.a. Fireproof Starch Co., Fort Worth, Tex. 768,577, can. Cl. 6.
 Freundlich-Gomes Machinery Corp., College Point, N.Y. 892,843, pub. 3-31-70. Multiple Class (Classes 23 and 37).
 Friend, H. A., & Co., Inc., Zion, Ill. 892,906, pub. 3-31-70. Cl. 37.
 Bracht, Fritz, Solingen-Wald, Germany. 892,988, pub. 3-31-70. Multiple Class (Classes 2, 23, and 44).
 GAF Corp.: See—
 General Aniline & Film Corp.
 GAF Corp., New York, N.Y. 892,884, pub. 3-31-70. Cl. 26.
 Garcia, Humberto A., d.b.a. The New Yorker Sewing Machine Co., New York, N.Y. 768,723-3, can. Cl. 33.
 Gardner, Inc., Bristol, Ind. 892,762, pub. 3-31-70. Cl. 19.
 Geigy Chemical Corp.: See—
 Alrore Chemical Co.
 General Aniline & Film Corp., to GAF Corp., New York, N.Y. 526,187, ren. 6-16-70. Cl. 26.
 General Bearing Co., Inc., Nyack, N.Y. 768,616, can. Cl. 13.
 General Cigar Co., Inc., New York, N.Y. 892,726, pub. 3-31-70. Cl. 17.
 General Dynamics Corp., New York, N.Y. 768,719-20, can. Cl. 23.
 General Electric Co., Owensboro, Ky. 892,776, pub. 3-31-70. Cl. 31.
 General Electric Co., Schenectady, N.Y. 892,877, pub. 3-31-70. Cl. 26.
 General Electric Co., Plainville, Conn. 893,962, Cl. 21.
 General Mills, Inc., Minneapolis, Minn. 892,973-4, pub. 3-31-70. Cl. 46.
 General Motors Corp., Detroit, Mich. 768,769, can. Cl. 24.
 General Motors Corp., Detroit, Mich. 892,781, pub. 3-31-70. Cl. 21.
 General Time Corp.: See—
 Western Clock Mfg. Co., The.
 General Tire & Rubber Co., The, Akron, Ohio. 892,957, pub. 3-31-70. Cl. 44.
 Geety Trading & Mfg. Corp., New York, N.Y. 892,787, pub. 3-31-70. Cl. 17.
 Gilling, Ernest O., Fort Worth, Tex. 768,583, can. Cl. 12.
 Glivudan Corp., Clifton, N.J. 892,648, pub. 1-18-70. Cl. 6.
 Glimby Co., Inc., The, New York, N.Y. to G. C. Murphy Co., McKeesport, Pa. 525,004, ren. 6-16-70. Cl. 40.
 Golden Eagle Refining Co., Inc., Los Angeles, Calif. 892,705, pub. 3-24-70. Cl. 15.
 Golden State Sheep Tanning Co., Brooklyn, N.Y. 892,693-5, pub. 3-31-70. Cl. 1.
 Goos Multiple Tools Ltd., London, England. 892,841, pub. 3-31-70. Cl. 23.
 Governor & Co. of Adventurers of England Trading into Hudson's Bay, The, to The Governor & Co. of Adventurers of England Trading into Hudson's Bay, d.b.a. Hudson's Bay Co., London, England. 274,403, ren. 6-16-70. Cl. 42.
 Granchel Medicine Co., Inc., The, Habana Liana, Puerto Rico. 892,742, pub. 3-31-70. Cl. 18.
 Great Lakes Carbon Corp., New York, N.Y. 526,073, ren. 6-16-70. Cl. 31.
 Great Lakes Carbon Corp., New York, N.Y. 526,763, ren. 6-16-70. Cl. 12.
 Gremier Wholesale Liquors, from H. Martineau Co., d.b.a. National Bottlers Ltd., San Francisco, Calif. 892,980-1, pub. 3-31-70. Cl. 49.
 Grifolys Co., Inc., Houston, Tex. 892,695, pub. 3-31-70. Cl. 1.
 Guestline Products Ltd., Scarborough, Ontario, Canada. 892,964, pub. 3-31-70. Cl. 46.
 HDN Corp., New York, N.Y. 768,553, can. Cl. 1.
 Hach Chemical Co., Ames, Iowa. 892,833, pub. 3-31-70. Cl. 26.
 Hall Marine Corp., Princeton, N.J. 892,823, pub. 3-31-70. Cl. 23.
 Handi Caddy Inc., from James N. Demetris, d.b.a. Handi Caddy Co., Kansas City, Mo. 892,829, pub. 3-31-70. Cl. 23.
 Hanes-Millie Sales Corp., High Point, N.C. 768,578, can. Cl. 39.
 Harrel, Inc., East Norwalk, Conn. 892,873, pub. 3-31-70. Multiple Class (Classes 26 and 34).
 Harris Paint Co., Tampa, Fla. 892,706, pub. 12-16-69. Cl. 16.
 Harris-Intertype Corp.: See—
 Harris-Seybold Co.
 Harris-Benwick Co. Ltd., The, Ottawa, Ontario, Canada. 763,787, can. Cl. 39.
 Harris-Seybold Co., to Harris-Intertype Corp., Cleveland, Ohio. 538,029, ren. 6-16-70. Cl. 23.
 Hartwell Corp., Los Angeles, Calif. 892,681, pub. 3-31-70. Cl. 13.
 Harvestall Industries, Inc., New Hapton, Iowa. 892,894, pub. 3-31-70. Cl. 34.
 H-Brace, Inc., Miami, Fla. 768,590-91, can. Cl. 13.
 Heitman, Paul S., d.b.a. Gem-Mounts & Gem-Masks Co., New York, N.Y. 892,874, pub. 3-31-70. Cl. 26.
 Henckels, J. A., Zwillingswerk Aktiengesellschaft, Solingen, Germany. 768,620, can. Cl. 14.
 Henderson, H. A., Co., Los Angeles, Calif. 892,710, pub. 3-31-70. Cl. 16.

Hercules Hose & Rubber Co., Philadelphia, Pa. 768,613, can. Cl. 13.
 Hercules S.A.-Fabrica De Talheres, Rio Grande Do Sul, Brazil. 892,842, pub. 3-31-70. Cl. 23.
 Hickey-Freeman Co., to Hickey-Freeman Co., Inc., Rochester, N.Y. 827,080-1, ren. 6-16-70. Cl. 39.
 Higgins Industries, Inc., New Orleans, La., to Netherlands Antilles Patent Services N.V., Oranjestad, Aruba, Netherlands Antilles. 510,168, ren. 6-16-70. Cl. 12.
 Hildebrandt, John J., Corp., Logansport, Ind. 892,809, pub. 3-31-70. Cl. 22.
 Hill, George W., & Co.: See—
 McCullough's J. M. Sons Co., The.
 Hoffmann, Ernst Gustav, New Rochelle, N.Y., to The Hoffmann Mfg. Co. Ltd., Chelmsford, England. 78,606, ren. 6-16-70. Cl. 14.
 Hoffmann Mfg. Co. Ltd.: See—
 Hoffmann, Ernst Gustav.
 Hoffmann-La Roche Inc., Nutley, N.J. 523,476, ren. 6-16-70. Cl. 18.
 Holeproof Hosiery Co., Milwaukee, Wis., to Kayser-Roth Corp., New York, N.Y. 274,026, ren. 6-16-70. Cl. 39.
 Holophane Co., Inc., New York, N.Y. 531,081, ren. 6-16-70. Cl. 34.
 Honessers' & Co., Inc., Fairbury, Ill. 892,745, pub. 3-31-70. Cl. 18.
 Hooker Chemical Corp., Niagara Falls, N.Y. 892,650, pub. 10-7-69. Cl. 6.
 Hoosier Book & Supply Co., Inc.: See—
 Knowlton, Raymond E.
 Horowitz, Michael, d.b.a. Leading Man & Mike Howard, New York, N.Y. 768,906, can. Cl. 39.
 Hotel Corp. of America, Boston, Mass. 893,020, pub. 3-31-70. Cl. 100.
 Hotwatt, Inc., Danvers, Mass. 892,802, pub. 3-31-70. Cl. 21.
 House for Men, Inc., The, Chicago, Ill. 763,914, can. Cl. 51.
 Howard's Photo Laboratories, Inc., Fort Wayne, Ind. 893,043, pub. 3-31-70. Cl. 106.
 Howe Sound Co., New York, N.Y. 768,867, can. Cl. 44.
 Hoyer, Ted, & Co., Inc., Oshkosh, Wis. 768,783, can. Cl. 26.
 Huetten-und Bergwerke Rheinhausen Aktiengesellschaft, Essen, Germany, 768,621, can. Cl. 14.
 Hughes Hybrids, Inc., Woodstock, Ill. 892,627, pub. 11-25-69. Cl. 1.
 Hunt Electronics Co., Dallas, Tex. 768,659, can. Cl. 21.
 Huntington Laboratories, Inc., Huntington, Ind. 893,002-3, pub. 3-31-70. Cl. 52.
 Huntington Laboratories, Inc., Huntington, Ind. 893,010, pub. 3-31-70. Cl. 52.
 Huntington National Mattress Co.: See—
 International Bedding Co., The.
 Hyster Co., Portland, Ore. 893,918, pub. 3-31-70. Multiple Class (Classes 100, 102, 103, and 107).
 Hy-Trous Corp., The, Boston, Mass. 893,004, pub. 3-31-70. Cl. 52.
 Idaho Falls Bonded Produce & Supply Co., Idaho Falls, Idaho. 768,902, can. Cl. 46.
 Idea House, Inc., The, Baton Rouge, La. 892,708, pub. 3-31-70. Cl. 16.
 Ideal Security Hardware Corp., Red Bank, N.J. 892,678, pub. 3-31-70. Cl. 13.
 Imoco-Gateway Corp.: See—
 Trumbler, Joseph A.
 Imperial International Corp., New York, N.Y. 892,850, pub. 3-31-70. Cl. 23.
 Imperial Stamp & Engraving Co., Inc., Mount Prospect, Ill. 892,831, pub. 3-31-70. Cl. 23.
 Indianapolis Glove Co.: See—
 Cochocton Glove Co.
 Industrial Lighting Products, Inc., Brooklyn, N.Y. 892,779, pub. 3-31-70. Cl. 21.
 Industrial Oxygen Co., Louisville, Ky. 524,168, ren. 6-16-70. Cl. 34.
 Information Control Systems, Inc., Ann Arbor, Mich. 892,876, pub. 3-31-70. Cl. 26.
 Information International, Inc., Cambridge, Mass. 892,862, pub. 3-31-70. Cl. 26.
 Ingraham, E. Co., The, Bristol, Conn. to McGraw-Edison Co., Elgin, Ill. 529,189, ren. 6-16-70. Cl. 27.
 Ingram Pharmaceutical Co., San Francisco, Calif. 892,750, pub. 3-31-70. Cl. 18.
 Inland Mfg. Co., Omaha, Nebr. 524,823-5, ren. 6-16-70. Cl. 103.
 Insect Control & Research, Inc., Baltimore, Md. 893,016, pub. 11-18-69. Cl. 100.
 Institute for Scientific Information, Inc., Philadelphia, Pa. 892,821, pub. 12-30-69. Multiple Class (Classes 38, 100, 101, and 107).
 Intermountain Appliance Supply Corp., Salt Lake City, Utah. 893,011, pub. 3-31-70. Cl. 52.
 International Bedding Co., The, Baltimore, Md., to Huntington National Mattress Co., Huntington, W. Va. 529,909, ren. 6-16-70. Cl. 32.
 International Cement Corp., New York, N.Y., to Lone Star Cement Corp., Greenwich, Conn. 263,786, ren. 6-16-70. Cl. 12.
 International Harvester Co., Chicago, Ill. 768,681, can. Cl. 23.
 International Harvester Co., Chicago, Ill. 892,796, pub. 3-31-70. Cl. 21.
 International Platform Association, The, Cleveland Heights, Ohio. 893,048, pub. 3-31-70. Cl. 107.
 International Vulcanizing Corp., Boston, Mass. 768,878, can. Cl. 50.
 Ives, Susan, Stores, Inc., New York, N.Y. 893,027, pub. 3-31-70. Cl. 101.
 Jamison Door Co., Hagerstown, Md. 892,677, pub. 3-31-70. Cl. 12.
 Janeway Meisenheimer, Eau Claire, Wis. 768,752, can. Cl. 22.
 Janus Products, Inc., Syosset, N.Y. 768,735, can. Cl. 20.
 Jergens, Andrew, Co., The, Cincinnati, Ohio. 522,571, ren. 6-16-70. Cl. 51.
 Jesus Church Inc., Huntington, W. Va. 893,058, pub. 3-31-70. Cl. 200.
 Jet Aeration Co., Cleveland, Ohio. 893,088, Cl. 23.
 Johnson & Johnson, d.b.a. Cel-Fibe, New Brunswick, N.J. 892,890, pub. 3-31-70. Multiple Class (Classes 29, 37, and 42).
 Jostens, Inc., Owatonna, Minn. 892,889, pub. 3-31-70. Multiple Class (Classes 28 and 38).
 Kabushiki-Kaisha Shikishima Tipton, Nagoya, Japan. 892,834, pub. 3-31-70. Cl. 23.
 Kasar Co., Niles, Ill. 892,749, pub. 3-31-70. Cl. 18.
 Kasper's Photo Shop, Billings, Mont. 893,076, Cl. 106.
 Kaufman, David, d.b.a. Dagil Jewelers, New York, N.Y. 768,742, can. Cl. 23.
 Kayser-Roth Corp.: See—
 Champion Knitting Mills.
 Kayser-Roth Corp., New York, N.Y. 892,948, pub. 3-31-70. Cl. 42.
 King, Robert C., & Co., to J. J. Leavitt, d.b.a. Robert C. King & Co., New York, N.Y. 526,762, ren. 6-16-70. Cl. 39.
 King-Seely Thermos Co., from King-Seely Thermos Co., Ann Arbor, Mich. 892,894, pub. 7-22-69. Cl. 34.
 Kings Beverage Co., Inc., Brooklyn, N.Y. 892,959, pub. 3-31-70. Cl. 45.
 Kirsch Co., Sturgis, Mich. 768,617-18, can. Cl. 13.
 Klopman Mills, Inc., Rockleigh, N.J. 892,947, pub. 1-12-70. Cl. 42.
 Knowlton, Raymond E., d.b.a. Hoosier Book & Supply Co., to Hoosier Book & Supply Co., Inc., Indianapolis, Ind. 523,980, ren. 6-16-70. Cl. 37.
 Koch, Winston E., Ann Arbor, Mich. 892,777, pub. 3-31-70. Cl. 21.
 Kool Kit Corp., Indianapolis, Ind. 768,582, can. Cl. 2.
 Kresge, S. S., Co., Detroit, Mich. 892,785, pub. 3-31-70. Cl. 21.
 Laboratoire Lachartre S.A., Paris, France. 892,984, pub. 3-31-70. Cl. 51.
 La Cellophane, Paris, France. 892,626, pub. 3-31-70. Cl. 1.
 Lanvin-Charles of the Ritz, Inc., New York, N.Y. 892,951-2, pub. 3-31-70. Cl. 42.
 Larus & Brother Co., Richmond, Va. 892,731, pub. 3-31-70. Cl. 17.
 Leavitt, Julian J.: See—
 King, Robert C., & Co.
 Lee Paper Co., Vicksburg, Mich., to Simpson Lee Paper Co., San Francisco, Calif. 529,032, ren. 6-16-70. Cl. 37.
 Lee, Theo. A., d.b.a. Lee Publishing Co., Louisville, Ky. 768,801, can. Cl. 38.
 Lee, Wilbur A., d.b.a. California "Hi-Lites," Monterey Park, Calif. 892,963, pub. 3-31-70. Cl. 46.
 Leonard, Lloyd H., d.b.a. Leonard Industries, Sherman Oaks, Calif. 892,891, pub. 3-31-70. Cl. 29.
 Leslie, John J., Jr., d.b.a. Leslie Creations, Lafayette Hill, Pa. 768,916, can. Cl. 101.
 Lever Brothers Co., New York, N.Y. 893,005, pub. 3-31-70. Cl. 52.
 Lexalite Corp., Charlevoix, Mich. 893,060, Multiple Class (Classes 2 and 34).
 Liberty Fabrics of New York, Inc., New York, N.Y. 892,946, pub. 3-31-70. Cl. 42.
 Liggett & Myers Inc., from Liggett & Myers Tobacco Co., New York, N.Y. 892,713, pub. 5-9-67. Cl. 17.
 Lilly, Eli & Co., Indianapolis, Ind. 524,119, ren. 6-16-70. Cl. 18.
 Lilly, Eli, & Co., Indianapolis, Ind. 892,751, pub. 3-31-70. Cl. 18.
 Logan, Jonathan Inc., New York, N.Y. 892,937, pub. 3-31-70. Cl. 39.
 Lombardo, Samuel, Palos Verdes Peninsula, Calif. 892,807, pub. 3-31-70. Cl. 32.
 Lone Star Boat Co., Plano, Tex. 768,654, can. Cl. 19.
 Lone Star Cement Corp.: See—
 International Cement Corp.
 Lorillard Corp., from F. Lorillard Co., New York, N.Y. 892,712, pub. 5-2-67. Cl. 17.
 Lovable Co., The, Atlanta, Ga. 892,939, pub. 3-31-70. Cl. 39.
 Lumsade, Inc., Milwaukee, Wis. 892,672, pub. 1-20-70. Cl. 13.
 Machlett Laboratories Inc., Springfield, to The Machlett Laboratories, Inc., Stamford, Conn. 523,091, ren. 6-16-70. Cl. 21.
 Macke Co., The, Cheverly, Md. 893,017, pub. 3-31-70. Cl. 100.
 Madison Chemical Corp., Maywood, Ill. 893,002, cor. Cl. 6.
 Magnetics, Inc., East Butler, Pa. 892,798, pub. 3-31-70. Cl. 21.
 Maimin, H., Co. Inc., New York, N.Y. 893,917, ren. 6-16-70. Cl. 26.
 Mangel Stores Corp., New York, N.Y. 768,810, can. Cl. 39.
 Marriott Corp., Washington, D.C. 893,022, pub. 3-31-70. Cl. 100.
 Marsh Stencil Machine Co., Belleville, Ill. 892,907, pub. 3-31-70. Cl. 37.
 Martin Marietta Corp., New York, N.Y. 892,669, pub. 3-31-70. Cl. 11.
 Martin Oil Service, Inc., Blue Island, Ill. 892,699, pub. 3-31-70. Cl. 15.
 Mattel, Inc., Hawthorne, Calif. 892,812-20, pub. 3-31-70. Cl. 22.
 Maui Divers of Hawaii Ltd., Honolulu, Hawaii. 892,888, pub. 3-31-70. Cl. 23.
 Maurice, Don, d.b.a. Grooming Dynamics, San Diego, Calif. 893,048, pub. 3-31-70. Cl. 107.
 Mayflower Dress Co., Inc., New York, N.Y. 892,931, pub. 3-31-70. Cl. 39.

McCreary Industrial Products Co., Indiana, Pa. 892,624, pub. 3-31-70. Cl. 1.
 McCullough's J. M. Sons Co., The, Cincinnati, Ohio, to George W. Hill & Co., Florence, Ky. 78,619, ren. 6-16-70. Cl. 1.
 McGraw-Edison Co.: See—
 Ingraham, E. Co., The.
 McGraw-Edison Co., Elgin, Ill. 892,857, pub. 11-18-69. Cl. 24.
 McLaughlin Gormley King Co., Minneapolis, Minn. 892,664, pub. 3-31-70. Cl. 6.
 McMullough, Ismael, Ltd., New York, N.Y. 892,940, pub. 3-31-70. Cl. 40.
 Meazzi, S.R.L., Milan, Italy. 892,786, pub. 3-31-70. Cl. 21.
 Medco Lab, Inc., Sioux City, Iowa. 892,787, pub. 3-31-70. Cl. 18.
 Mediterranean Importing Co., Inc., Long Island City, N.Y. 892,978, pub. 3-31-70. Cl. 49.
 Melrose Chemicals, Inc., South Fulton, Tenn. 768,572, can. Cl. 4.
 Membrino, Hercules d.b.a. Hercules Sales Co., Paoli, Pa. 768,837, can. Cl. 2.
 Merck & Co., Inc., Rahway, N.J. 768,888, can. Cl. 10.
 Metallurgical Services Laboratories Ltd., Betchworth, Surrey, England. 892,835, pub. 3-31-70. Multiple Class (Classes 23, 32, and 34).
 Meyer Laboratories Inc., Detroit, Mich. 892,732, pub. 7-2-68. Cl. 18.
 Midas, Inc., Chicago, Ill. 892,784, pub. 3-17-70. Cl. 21.
 Midland-International Corp., North Kansas City, Mo. 892,865, pub. 3-31-70. Cl. 34.
 Milson Mfg. Corp., Lebanon, Pa. 768,839, can. Cl. 39.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 892,905, pub. 3-31-70. Cl. 36.
 Minor, F. W., & Son, Inc., Batavia, N.Y. 768,807, can. Cl. 39.
 Mission of California, Inc.: See—
 Mission Dry Corp.
 Mission Dry Corp., Los Angeles, Calif., to Mission of California, Inc., New Haven, Conn. 523,735, ren. 6-16-70. Cl. 45.
 Mitchum Co., The, d.b.a. Wisley, Paris, Tenn. 892,938, pub. 3-31-70. Cl. 51.
 Mitsui Kagaku Kogyo Kabushiki Kaisha, from Mitsui Toatsu Chemicals, Inc., Tokyo, Japan. 892,909, pub. 12-16-69. Cl. 37.
 Mitten, Frank P., Redlands, Calif. 523,894-5, ren. 6-16-70. Cl. 50.
 Monarch Marking System Co., The, Dayton, Ohio. 892,833, pub. 3-31-70. Cl. 23.
 Monogram Industries, Inc., Los Angeles, Calif. 892,647, pub. 3-31-70. Cl. 6.
 Monsanto Co., St. Louis, Mo. 892,766, pub. 3-31-70. Cl. 20.
 Moore, Abraham F., d.b.a. A. F. Moore & Co., Shrewsbury, Mass. 892,645, pub. 3-31-70. Cl. 6.
 Moran Shoe Co., Carlyle, Ill. 768,835, can. Cl. 39.
 Morden Machines Co., Portland, Ore. 892,854, pub. 3-31-70. Cl. 28.
 Morris, Philip, Inc., New York, N.Y. 892,738-30, pub. 3-31-70. Cl. 17.
 Morse Electro Products Corp., Osone Park, N.Y. 892,774, pub. 7-1-69. Multiple Class (Classes 21 and 36).
 Motorola, Inc., Franklin Park, Ill. 892,783, pub. 3-31-70. Cl. 21.
 Motorola, Inc., Franklin Park, Ill. 892,799-800, pub. 3-31-70. Cl. 21.
 Moto-Truc Co., The, to The Moto-Truc Co., Cleveland, Ohio. 522,933, ren. 6-16-70. Cl. 23.
 Moyer Co., The, New York, N.Y. 892,933, pub. 3-24-70. Cl. 39.
 Murphy, G. C. Co.: See—
 Glemby Co., Inc.
 Murphy, G. C. Co., McKeesport, Pa. 529,637, ren. 6-16-70. Cl. 39.
 National Biscuit Co., New York, N.Y. 892,971, pub. 3-31-70. Cl. 46.
 National Cylinder Gas Co., to Chemetron Corp., Chicago, Ill. 524,179, ren. 6-16-70. Cl. 14.
 National Shoes, Inc., New York, N.Y. 768,803, can. Cl. 39.
 Nattermann, A. & Cie, G.m.b.H., Cologne-Braunsfeld, Germany. 892,744, pub. 12-23-69. Cl. 18.
 Naturalite Photo Finishing Co., Inc., Everett, Wash. 893,044, pub. 3-31-70. Cl. 106.
 Naumann, F. Edmund, d.b.a. Data-Tek Publishing Co., North Haledon, N.J. 892,920, pub. 12-16-69. Cl. 38.
 Neaderhiser, Eugene A., d.b.a. Contraband Tobacco Co., Parkville, Mo. 892,725, pub. 3-21-70. Cl. 17.
 Neitronic Instrument Corp., Houston, Tex. 768,871, can. Cl. 44.
 Netherlands Antilles Patent Services N.V.: See—
 Higgins Industries, Inc.
 New Castle Products, New Castle, Ind., to American Standard Inc., New York, N.Y. 523,840, ren. 6-16-70. Cl. 13.
 New England Carbide Tool Co., Inc., Peabody, Mass. 892,836, pub. 3-31-70. Cl. 23.
 New England Nuclear Corp., Boston, Mass. 892,655, pub. 3-31-70. Cl. 6.
 New Jersey Machine Corp., Hoboken, N.J. 523,048, ren. 6-16-70. Cl. 23.
 New Jersey Zinc Co., The, to The New Jersey Zinc Co., New York, N.Y. 529,982, ren. 6-16-70. Cl. 38.
 Newberry, J. J., Co., New York, N.Y. 768,566, can. Cl. 2.
 Norgine Laboratories, Inc., New York, N.Y. 523,252, ren. 6-16-70. Cl. 18.
 North American Leco Co., Inc., Philadelphia, Pa. 526,323, ren. 6-16-70. Cl. 40.
 North American Phillips Co., Inc., Dobbs Ferry, to North American Phillips Corp., New York, N.Y. 526,323, ren. 6-16-70. Cl. 23.
 North American Phillips Corp.: See—
 North American Phillips Co., Inc.
 Northrop Weaving Machinery Ltd., Blackburn, England. 892,862, pub. 3-31-70. Cl. 23.
 Northwestern Refining Co., St. Paul Park, Minn. 892,650, pub. 3-31-70. Multiple Class (Classes 6, 15, and 103).
 No-Sag Spring Co., Detroit, Mich. 768,758, can. Cl. 32.
 Nutra Foam Products, Inc., Houston, Tex. 768,579, can. Cl. 10.
 O.W.D. Inc.: See—
 Oval Wood Dish Corp.
 Ocean Spray Cranberries, Inc., Hanson, Mass. 892,960, pub. 3-31-70. Multiple Class (Classes 45 and 46).
 Ohio Brass Co., The, Mansfield, Ohio. 523,821, ren. 6-16-70. Cl. 13.
 Okuda Co. of New York, Inc., New York, N.Y. 892,943, pub. 3-31-70. Cl. 41.
 Old Virginia, Inc.: See—
 Old Virginia Packing Co., Inc.
 Old Virginia Packing Co., Inc., to Old Virginia, Inc., Front Royal, Va. 520,568, ren. 6-16-70. Cl. 46.
 Olin Corp.: See—
 Western Cartridge Co.
 Omega-T Systems Inc., Richardson, Tex. 892,013-14, pub. 3-31-70. Cl. 100.
 Oval Wood Dish Corp., to O.W.D. Inc., Tupper Lake, N.Y. 515,903-4, ren. 6-16-70. Cl. 23.
 Owens-Illinois Glass Co., to Owens-Illinois, Inc., Toledo, Ohio. 523,902, ren. 6-16-70. Cl. 50.
 Owens-Illinois, Inc.: See—
 Owens-Illinois Glass Co.
 Oxirane Chemical Co., Houston, Tex. 892,656, pub. 3-31-70. Cl. 6.
 Pacific Inland Navigation Co., Inc., Seattle, Wash. 893,038, pub. 3-31-70. Cl. 105.
 Page Belting Co., Concord, N.H. 892,903, pub. 3-31-70. Cl. 35.
 Paint Brush Corp., Melrose Park, Ill. 892,892, pub. 3-31-70. Cl. 29.
 Paper, Calmenson & Co., St. Paul, Minn. 892,695, pub. 3-31-70. Cl. 14.
 Parks Woodworking Machine Co., Cincinnati, Ohio. 892,844, pub. 3-31-70. Cl. 23.
 Patent Novelty Co., Fulton, Ill. 768,744, can. Cl. 29.
 Pendleton Woolen Mills, Portland, Ore. 527,869, ren. 6-16-70. Cl. 42.
 Penn Central Transportation Co.: See—
 Pennsylvania Railroad Co., The.
 Pennsylvania Railroad Co., The, to Penn Central Transportation Co., Philadelphia, Pa. 523,625, ren. 6-16-70. Cl. 105.
 Penton Publishing Co., The, Cleveland, Ohio. 893,072-3, Cl. 38.
 Petersen, Poul, Cigar- & Tobakfabriker, d.b.a. Pete Bros., Horsens, Jutland, Denmark. 892,719, pub. 3-31-70. Cl. 17.
 Peterson, Harry O., Minneapolis, Minn. 892,790, pub. 3-31-70. Cl. 21.
 Pfister, Chas., & Co., Inc., New York, N.Y. 892,661, pub. 3-31-70. Cl. 6.
 Pfister, Chas., & Co., Inc., New York, N.Y. 892,663, pub. 3-31-70. Cl. 6.
 Phillips Petroleum Co., Bartlesville, Okla. 768,565, can. Cl. 2.
 Phillips Petroleum Co., Bartlesville, Okla. 892,918, pub. 3-31-70. Cl. 37.
 Phillips-Van Heusen Corp., New York, N.Y. 892,923, pub. 3-31-70. Cl. 39.
 Planters Nut & Chocolate Co., Wilkes-Barre, Pa., to Standard Brands Inc., New York, N.Y. 523,074, ren. 6-16-70. Cl. 46.
 Plumb, Fayette R., Inc., Philadelphia, Pa. 523,848, ren. 6-16-70. Cl. 23.
 Pola-Rona, Inc., Winter Haven, Fla. 892,968, pub. 3-31-70. Cl. 46.
 Polynsatrates, Inc., Garden Grove, Calif. 892,975, pub. 3-31-70. Cl. 46.
 Portno, Nathan J., d.b.a. Marvel Merchandise Co., to Ultra Smart Hosiery Co., Inc., New York, N.Y. 530,493, ren. 6-16-70. Cl. 39.
 Potron Inc., Woodstock, N.Y. 892,900, pub. 3-31-70. Cl. 24.
 Pottebaum, Gerard A., Dayton, Ohio. 768,901, can. Cl. 38.
 Preferred Fashions, Inc., Kansas City, Mo. 892,941-2, pub. 3-31-70. Cl. 40.
 Pressure Pak, Inc., West Palm Beach, Fla. 768,730, can. Cl. 26.
 Procter & Gamble Co., The, Cincinnati, Ohio, from Bristol Myers Co., New York, N.Y. 892,734, pub. 5-4-69. Cl. 13.
 Progress Laboratories, Inc., Los Angeles, Calif. 892,741, pub. 3-31-70. Cl. 18.
 Pulp Antonio, S.A., Barcelona, Spain. 892,999, pub. 3-31-70. Cl. 52.
 Pyle-National Co., The, Chicago, Ill. 892,783, pub. 3-31-70. Cl. 21.
 Rain Jet Corp., Burbank, Calif. 892,825-6, pub. 3-31-70. Cl. 23.
 Ralston Purina Co., St. Louis, Mo. 892,748, pub. 12-22-69. Cl. 18.
 Ranco Industrial Products Corp., Cleveland, Ohio. 892,709, pub. 3-31-70. Cl. 16.
 Ratcliff-Sanders Grocer Co., Tulsa, Okla., to Carnation Co., Los Angeles, Calif. 75,751, can. Cl. 46.
 Radken Laboratories, Inc., Van Nuys, Calif. 892,990, pub. 10-28-69. Cl. 51.
 Rely, Wm. B., & Co., Inc., d.b.a. Standard Coffee Co., New Orleans, La. 892,998, pub. 10-7-69. Cl. 52.
 Reliance Electric Co.: See—
 Toledo Scale Co.
 Reliance Packaging Products Inc., Long Island City, N.Y. 892,640, pub. 1-20-70. Cl. 2.
 Revlon, Inc., New York, N.Y. 892,933, pub. 10-3-67. Cl. 51.
 Revvo-Life, Inc., Brocton, N.Y. 768,859, can. Cl. 44.

Reynolds & Reynolds Co., The, Dayton, Ohio. 892,910, pub. 3-31-70. Cl. 37.
 Richard Couture, Inc., New York, N.Y. 768,312, can. Cl. 39.
 Richardson, Howe Scale Co., Clifton, N.J. 892,970, pub. 3-31-70. Cl. 23.
 Ricmel, Inc., Plainfield, N.J. 892,924, pub. 3-31-70. Cl. 39.
 Riss International Corp., Kansas City, Mo. 893,089, pub. 3-31-70. Cl. 105.
 Robertshaw Controls Co., Richmond, Va. 892,864, pub. 2-3-70. Cl. 26.
 Robins, A. H. Co., Inc., Richmond, Va. 892,746, pub. 3-31-70. Cl. 18.
 Rogell & Best Contracting Co. Inc., New York, N.Y. 768,884, can. Cl. 103.
 Rohr Corp., from Rohr Corp., Chula Vista, Calif. 892,768-9, pub. 6-28-66. Cl. 21.
 Roltec, Inc., River Falls, Wis. 892,768, pub. 3-31-70. Cl. 21.
 Rosenthal, Paul, Inc., Great Neck, N.Y. 892,885, pub. 3-31-70. Cl. 26.
 Roto Sharp, Inc., Dayton, Ohio. 768,683, can. Cl. 23.
 Rowell Laboratories, Inc., Baudette, Minn. 892,736, pub. 3-31-70. Cl. 18.
 Royal Industries, Inc., Pasadena, Calif. 892,883, pub. 3-31-70. Cl. 26.
 Rusco Industries, Inc., Fullerton, Calif. 892,688, pub. 3-31-70. Cl. 13.
 S.A. Vinco, Seine Maritime, France. 768,750, can. Cl. 32.
 SKF Industries, Inc., Philadelphia, Pa. 530,467-8, ren. 6-16-70. Cl. 23.
 SW Industries, Inc., Newton, Mass. 893,065. Cl. 23.
 Saffir, Eric, Port Chester, N.Y. 768,811, can. Cl. 39.
 St. John Thomas B., Troy, Ohio. 768,564, can. Cl. 2.
 St. Regis Paper Co., New York, N.Y. 768,674, can. Cl. 5.
 Sales Builders, Inc., Bronx, N.Y. 892,689, pub. 3-31-70. Cl. 2.
 Samuel, Joseph, & Son Ltd., London, England. 768,640, can. Cl. 17.
 San Francisco Warriors, San Francisco, Calif. 893,057, pub. 3-31-70. Cl. 107.
 San Francisco-Oakland Hockey Club, Inc., Oakland, Calif. 893,055, pub. 3-31-70. Cl. 107.
 Sandos Chemical Works, Inc., New York, N.Y. to Sandos-Wander Inc., Hanover, N.J. 523,520, ren. 6-16-70. Cl. 13.
 Sandos-Wander Inc.: See—
 Sandos Chemical Works, Inc.
 Sapphire Hosiery Corp., to Elm Hs Corp., New York, N.Y. 523,593, ren. 6-16-70. Cl. 39.
 Sargent & Co.: See—
 Schellhorn, William, Co., The.
 Schell "Cap" & Associates, Inc., New York, N.Y. 768,679, can. Cl. 23.
 Schering Aktiengesellschaft, Berlin, Germany. 892,649, pub. 3-31-70. Cl. 6.
 Schellhorn, William, Co., The, to Sargent & Co., New Haven, Conn. 77,278, ren. 6-16-70. Cl. 23.
 Science Management Corp., Moorestown, N.J. 893,015, pub. 12-30-69. Cl. 100.
 Scientific Advance, Inc., Columbus, Ohio. 892,808, pub. 3-31-70. Cl. 21.
 Scofield, L. M. Co., Huntington Park, Calif. to L. M. Scofield Co., Los Angeles, Calif. 523,910, ren. 6-16-70. Cl. 12.
 Scott Aviation Corp., Lancaster, N.Y. 768,843, can. Cl. 44.
 Scottex Corp., Brooklyn, N.Y. 892,949, pub. 3-31-70. Cl. 42.
 Seal Bond, Inc., Lubbock, Tex. 892,707, pub. 3-31-70. Cl. 16.
 Seal, Inc., Derby, Conn. 892,629, pub. 3-31-70. Cl. 1.
 Sears, Roebuck & Co., Chicago, Ill. 522,973, ren. 6-16-70. Cl. 21.
 Sherwin-Williams Co., The, Cleveland, Ohio. 522,715, ren. 6-16-70. Cl. 16.
 Sherwin-Williams Co., The, Cleveland, Ohio. 529,726, ren. 6-16-70. Cl. 48.
 Shmitt, Stefan T., d.b.a. Stuffy Shmitt, Milwaukee, Wis. 893,050, pub. 3-31-70. Cl. 107.
 Sigma Chemical Co., to Sigma Chemical Co., St. Louis, Mo. 527,858, ren. 6-16-70. Cl. 18.
 Simonsen Mill-Rendering Plant, Inc., Quimby, Iowa. 892,667, pub. 2-3-70. Multiple Class (Classes 10, 18, 46, and 100).
 Simpson Lee Paper Co.: See—
 Lee Paper Co.
 Singer Co., The, New York, N.Y. 893,064, Multiple Class (Classes 21 and 26).
 Siser, Richard, Ltd., Wilmington, Hall, England. 892,846, pub. 3-31-70. Cl. 23.
 Skinner, C. A., Council Bluffs, Iowa, to Archer Petroleum Corp., Omaha, Nebr. 271,237, ren. 6-16-70. Cl. 15.
 Skylene Ind., Inc., d.b.a. Countess De Vere Cosmetic, Charlottesville, Va. 892,984, pub. 3-31-70. Cl. 51.
 Smidth, F. L., & Co., New York, N.Y., to F. L. Smidth & Co., Cresskill, N.J. 275,080, ren. 6-16-70. Cl. 23.
 Snyder, Earl, Associates, Ltd., Washington, D.C. 893,085, pub. 12-23-69. Cl. 103.
 Societe Anonyme des Etablissements Louis Regnier, Dijon, Cote d'Or, France. 768,910, can. Cl. 49.
 Societe Rhovyl, Paris, France. 768,848, can. Cl. 42.
 Sosa, Henry, & Co., Los Angeles, Calif. 892,693, pub. 3-31-70. Cl. 13.
 Southern Mechanical Products Co., Greensboro, N.C. 892,692, pub. 3-31-70. Cl. 13.
 Spear, J. W., & Sons Ltd., Enfield, Middlesex, England. 892,805, pub. 3-31-70. Cl. 22.
 Spillmann, Gerda, d.b.a. Gerda Spillmann Beauty Preparations, Zurich, Switzerland. 892,985, pub. 3-31-70. Cl. 51.
 Spillmann, Gerda, Beauty Preparations: See—
 Spillmann, Gerda.
 Spiral Binding Co., Inc., New York, N.Y. 892,851, pub. 3-31-70. Cl. 23.
 Springfield Enterprises, Inc., Lubbock, Tex. 893,084, pub. 3-31-70. Cl. 103.
 Sta-Creta, Inc., d.b.a. Black Technical Industries, Inc., San Francisco, Calif. 892,674, pub. 3-31-70. Cl. 12.
 Standard Brands Inc.: See—
 Planters Nut & Chocolate Co.
 Standard Oil Co., The, Cleveland, Ohio. 892,704, pub. 3-31-70. Cl. 15.
 Standard Oil Co. of California, San Francisco, Calif. 892,901, pub. 3-31-70. Cl. 34.
 Standard Register Co., The, Dayton, Ohio. 892,914, pub. 3-31-70. Cl. 37.
 Stanley Works, The, New Britain, Conn. 892,871, pub. 3-31-70. Cl. 29.
 State Chemical Mfg. Co., The, Cleveland, Ohio, from Tiger Distributing Co., Inc., Kent, Wash. 892,996, pub. 5-7-68. Cl. 52.
 State Chemical Mfg. Co., The, Cleveland, Ohio. 892,997, pub. 11-19-68. Cl. 52.
 Stauffer Chemical Co.: See—
 Cowles Detergent Co., The.
 Steel Co. of Canada, Ltd., The, Hamilton, Ontario, Canada. 892,689, pub. 3-31-70. Cl. 13.
 Stihl Oil, Inc., Sayner, Wis. 892,703, pub. 3-31-70. Cl. 15.
 Stimulant Products, Inc., Los Angeles, Calif. 892,869, pub. 3-31-70. Cl. 26.
 Stimulant Products, Inc., Los Angeles, Calif. 892,870, pub. 3-31-70. Cl. 26.
 Stin Abbreviation of Societe de Techniques Industrielles Nouvelles, Boulogne (Seine), France. 768,727, can. Cl. 24.
 Strader, James W., Fort Lauderdale, Fla. 892,810, pub. 3-31-70. Cl. 22.
 Sturgis Newport Business Forms, Inc., Sturgis, Mich. 893,071, Cl. 37.
 Sugardale Provision Co., The, Canton, Ohio. 768,909, can. Cl. 46.
 Sumitomo Bakelite Co., Ltd., Tokyo, Japan. 892,845, pub. 3-31-70. Cl. 23.
 Sunshine Broadcasting Co., Fort Lauderdale, Fla. 768,885, can. Cl. 104.
 Superior Oil Co., The, Houston, Tex. 892,646, pub. 12-30-69. Cl. 6.
 Sutliff, Henry, d.b.a. H. Sutliff Pipe Shop, San Francisco, Calif., to Sutliff Tobacco Co., Richmond, Va. 274,448, ren. 6-16-70. Cl. 17.
 Sutliff Tobacco Co.: See—
 Sutliff, Henry.
 Swingle, Leonhardt, d.b.a. Valley Date Gardens, to California Date Growers Association, Indio, Calif. 523,196-7, ren. 6-16-70. Cl. 46.
 Swirline Inc.: See—
 Wilson-Jones Co.
 Sybron Corp.: See—
 Barnstead Still & Sterilizer Co.
 T.G. & Y. Stores Co., Oklahoma City, Okla. 892,740, pub. 3-31-70. Cl. 18.
 T.G. & Y. Stores Co., Oklahoma City, Okla. 892,830, pub. 3-31-70. Cl. 23.
 TNT Music, Inc., San Antonio, Tex. 768,777, can. Cl. 36.
 TRW Inc.: See—
 Williams, J. H., & Co.
 Tabacos Ornelas, S.A., Guadalajara, Jal., Mexico. 892,714, pub. 3-31-70. Cl. 17.
 Taco Bell, Inc., Torrance, Calif. 893,023, pub. 3-31-70. Cl. 100.
 Takaki, Ralph N., d.b.a. Takaki Sanyo-Do, Honolulu, Hawaii. 527,821, ren. 6-16-70. Cl. 18.
 Takaki, Ralph N., d.b.a. Takaki Sanyo-Do, Honolulu, Hawaii. 527,845, ren. 6-16-70. Cl. 18.
 Takeda Chemical Industries, Ltd., Osaka, Japan. 892,961, pub. 3-31-70. Cl. 46.
 Taste Freez Industries, Inc., Chicago, Ill. 870,878, cor. Cl. 31.
 Teale & Co., Omaha, Nebr. 768,707-9, can. Cl. 23.
 Tech Aero Inc., North Hollywood, Calif. 892,686, pub. 3-31-70. Cl. 13.
 Technicolor, Inc.: See—
 Technicolor Motion Picture Corp.
 Technicolor Motion Picture Corp., to Technicolor, Inc., Hollywood, Calif. 529,559, ren. 6-16-70. Cl. 26.
 Tetson Chemical Corp., Holyoke, Mass. 768,915, can. Cl. 52.
 Texprint, N.V., Helmond, Holland. 893,078-9. Cl. 42.
 Tex-Togs, Inc.: See—
 Farah-Agee Mfg. Co., Inc.
 Textron Inc., Erie, Pa. 892,838, pub. 3-31-70. Cl. 23.
 Textron Inc., Erie, Pa. 893,067. Cl. 23.
 Thermo Cote, Inc., Paterson, N.J. 892,642, pub. 6-10-69. Cl. 4.
 Thomas & Betts Co., The, to Thomas & Betts Corp., Elizabeth, N.J. 530,135, ren. 6-16-70. Cl. 23.
 Thomas & Betts Corp.: See—
 Thomas & Betts Co., The.
 Thorin, J., Pontanevaux, Saone-Et-Loire, France. 892,976, pub. 1-6-70. Cl. 47.
 Tibbals Flooring Co., Onedda, Tenn. 892,676, pub. 3-31-70. Cl. 12.
 Tiger Distributing Co., Inc.: See—
 State Chemical Mfg. Co., The.
 Tilden-Yates Laboratories, Inc.: See—
 Durst, S. F., & Co., Inc.
 Tilden-Yates Laboratories, Inc., Wayne, N.J. 892,743, pub. 3-31-70. Cl. 13.
 Time/Data Corp., Palo Alto, Calif. 892,860, pub. 3-31-70. Cl. 26.
 Tobin Packing Co., Inc., Rochester, N.Y. 529,471, ren. 6-16-70. Cl. 46.
 Toledo Automatic Products Co., Toledo, Ohio. 892,827, pub. 2-3-70. Cl. 23.
 Toledo Scale Co., Toledo, to Reliance Electric Co., Euclid, Ohio. 528,182, ren. 6-16-70. Cl. 21.

Torino of America, Inc., Union, N.J. 892,756, pub. 3-31-70. Cl. 19.
 Toro Mfg. Corp., Minneapolis, Minn. 892,824, pub. 5-27-69. Cl. 25.
 Tourstars Inc., New York, N.Y. 893,041, pub. 3-31-70. Cl. 105.
 Tower Personnel Service, Inc., Fort Wayne, Ind. 893,025, pub. 3-31-70. Cl. 101.
 Tremco Mfg. Co., The, Cleveland, Ohio. 269,117, ren. 6-16-70. Cl. 12.
 Tremco Mfg. Co., The, Cleveland, Ohio. 270,849, ren. 6-16-70. Cl. 18.
 Trim Corp. of America, New York, N.Y. 768,843, can. Multiple Class (Classes 40 and 50).
 Tri-Point Industries, Inc., Commack, N.Y. 892,787, pub. 3-31-70. Cl. 21.
 Tumbler, Joseph A., assor., to J. A. Tumbler Laboratories, Baltimore, Md., to Imeco-Gateway Corp., d.b.a. Tumbler Laboratories, Inc., Chicago, Ill. 275,546, ren. 6-16-70. Cl. 4.
 Turbotec, Inc., South Windsor, Conn. 892,694, pub. 3-31-70. Cl. 13.
 Tweedy of Burnley Ltd., Burnley, England. 892,853, pub. 3-31-70. Cl. 23.
 Twin Packing Co., Inc., Philadelphia, Pa. 892,969, pub. 12-16-69. Cl. 46.
 Tyco Laboratories, Inc., Waltham, Mass. 892,775, pub. 11-4-69. Multiple Class (Classes 21, 26, and 100).
 Ultra Smart Hosiery Co., Inc.: See—
 Portnol, Nathan J.
 Union Bank, Los Angeles, Calif. 893,033, pub. 3-31-70. Cl. 102.
 Union Carbide Corp., New York, N.Y. 892,654, pub. 3-31-70. Cl. 6.
 Union Carbide Corp., New York, N.Y. 893,001, pub. 3-31-70. Cl. 62.
 Union Oil Co. of California, Los Angeles, Calif. 892,797, pub. 3-31-70. Cl. 21.
 U.S. Electrical Motors, Inc., Los Angeles, Calif., to Emerson Electric Co., St. Louis, Mo. 529,652, ren. 6-16-70. Cl. 21.
 U.S. Plywood-Champion Papers, Inc.: See—
 Champion Coated Paper Co., The.
 U.S. Plywood-Champion Papers Inc., New York, N.Y. 892,711, pub. 3-31-70. Cl. 16.
 United States Steel Corp., Pittsburgh, Pa. 892,698, pub. 3-31-70. Cl. 14.
 United States Tobacco Co., New York, N.Y. 521,180, ren. 6-16-70. Cl. 17.
 Universal Interloc, Inc., Trevesa, Pa., from Universal Interloc, Inc., Santa Ana, Calif. 892,859, pub. 3-31-70. Cl. 26.
 University of Washington, Seattle, Wash. 892,863, pub. 1-6-70. Cl. 26.
 V.F. Corp., Wyomissing, Reading, Pa. 892,956, pub. 3-31-70. Cl. 39.
 VSC, Inc., Clara City, Minn. 892,954, pub. 3-31-70. Cl. 43.
 Valnit Hosiery, Inc., New York, N.Y. 892,932, pub. 3-31-70. Cl. 39.
 Vanderbilt, R. T., Co., Inc., New York, N.Y. 892,625, pub. 3-26-69. Cl. 1.
 Vanadium-Alloys Steel Co., to Vasco Metals Corp., Latrobe, Pa. 530,125, ren. 6-16-70. Cl. 14.
 Vasco Metals Corp.: See—
 Vanadium-Alloys Steel Co.
 Vernon Book Sales Corp., Harrison, N.Y. 893,075. Cl. 33.
 Villager Industries, Inc., Philadelphia, Pa. 893,912, pub. 3-31-70. Cl. 37.
 Visual Education Association, Inc., Dayton, Ohio. 892,917, pub. 3-31-70. Cl. 38.
 Vitabath Inc., New York, N.Y. 893,992, pub. 3-31-70. Cl. 31.
 Vortex Mfg. Co., to Vortex Mfg. Co., Claremont, Calif. 372,923, ren. 6-16-70. Cl. 23.
 Vonmard Montres S.A., Hauterive, Neuchatel, Switzerland. 892,887, pub. 3-31-70. Cl. 27.
 WAIT, Chicago, Ill. 893,037, pub. 3-31-70. Cl. 104.
 W-6 Inc., Reno, Nev. 893,652, pub. 3-31-70. Cl. 6.
 Waldensian Bakeries, Inc., Valdese, N.C. 523,564, ren. 6-16-70. Cl. 44.
 Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 892,782, pub. 3-31-70. Cl. 18.
 Watts, Alfred Allen Co., Inc., Clifton, N.J. 768,788, can. Multiple Class (Classes 37 and 38).
 Wausau Paper Mills, Brokaw, Wis. 768,794, can. Cl. 37.
 Webb, C. J., Inc.: See—
 Harler, Bowers Co.
 Webb, Cecil M., d.b.a. Webb's Syrup Co., to Dixie Lily Milling Co., Tampa, Fla. 523,835, ren. 6-16-70. Cl. 46.
 Wembley, Inc., New Orleans, La. 892,934, pub. 3-31-70. Cl. 39.
 Wenner-Gren Foundation for Anthropological Research, Inc., New York, N.Y. 893,064, pub. 3-31-70. Cl. 107.
 Wertheimer, L. & M., Inc., Cincinnati, Ohio. 530,851, ren. 6-16-70. Cl. 49.
 Western Alfalfa Corp., Kansas City, Mo. 892,966, pub. 3-31-70. Cl. 46.
 Western Brass Works, Los Angeles, Calif. 768,686, can. Cl. 23.
 Western Cartridge Co., East Alton, Ill., to Olin Corp., New Haven, Conn. 768,456, ren. 6-16-70. Cl. 9.
 Western Clock Mfg. Co., The, Peru, Ill., to General Time Corp., Phoenix, Ariz. 79,069, ren. 6-16-70. Cl. 27.
 Westlund-Westerberg Lumber Co., Minneapolis, Minn. 892,673, pub. 1-30-70. Cl. 12.
 Wheeling Corrugating Co., to Wheeling-Pittsburgh Steel Corp., Wheeling, W. Va. 530,360, ren. 6-16-70. Cl. 12.
 Wheeling-Pittsburgh Steel Corp.: See—
 Wheeling Corrugating Co.
 Whitmoyer Laboratories, Inc.: See—
 Barker, Moore & Main Co.
 Whitney-Fidalgio Seafoods, Inc.: See—
 Fidalgio Island Packing Co.
 Wiggins, H.B., Oil Tool Co., Inc., Los Angeles, Calif. 768,657, can. Cl. 21.
 Williams, Harvey & Co. Ltd., Liverpool, England. 522,554, ren. 6-16-70. Cl. 14.
 Williams, J. H., & Co., New York, N.Y., to TRW Inc., Cleveland, Ohio. 34,562, ren. 6-16-70. Cl. 14.
 Wilson-Jones Co., Chicago, Ill., to Swingline Inc., Niles, Ill. 444,078, ren. 6-16-70. Cl. 23.
 Yardley of London, Inc., New York, N.Y. 892,995, pub. 3-31-70. Multiple Class (Classes 51 and 52).
 Youngwear, Inc., New York, N.Y. 768,821, can. Cl. 39.



U.S. DEPARTMENT OF COMMERCE

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June 23, 1970

Volume 875

Number 4

PATENTS NOTICES

Board of Appeals Decisions Rendered in the Month of May 1970

Examiner affirmed	115
Examiner affirmed in part	17
Examiner reversed	37
Total	169

Disclaimer

3,310,444.—Jack R. Gould, Monsey, and Edward M. Butler, Yonkers, N.Y. MONOPROPELLANT COMPRISING A DIFLUORAMINOALKANE AND FUMING NITRIC ACID. Patent dated March 21, 1967. Disclaimer filed May 11, 1970, by the assignee, Stauffer Chemical Company.

Hereby enters this disclaimer to claims 1, 2, and 6 of said patent.

Secrecy of Certain Inventions and Licenses to File Applications in Foreign Countries

[37 CFR Part 5]

Defense Inspection of Patent Applications

Notice is hereby given that, pursuant to the authority contained in section 6 of the Act of July 10, 1952 (66 Stat. 793; 35 U.S.C. 6), the Patent Office proposes to revise § 5.1 of Title 37, Code of Federal Regulations, as set forth below.

Parties who desire to present their views, objections, recommendations, or suggestions in connection with this proposed revision are invited to do so by letter addressed to the Commissioner of Patents, Washington, D.C. 20231, on or before July 24, 1970. An oral hearing will not be scheduled.

Any written comments or suggestions not specifically designated as confidential may be inspected by any person upon written request a reasonable time after the closing date for submitting comments.

The proposed revision of § 5.1 would modify the procedures for administering 35 U.S.C. 181. As currently written, § 5.1 authorizes defense agencies to inspect patent applications relating to national security only at the Patent Office. Many representatives of defense agencies, however, are not located in the Washington, D.C. area. The requirement for representatives to travel to the Patent Office often results in considerable expense and delay in conducting the security review.

Under the proposed revision of § 5.1, the Patent Office would send copies of these applications to the defense agencies instead of waiting for the representatives to come to the Office. Since some representatives travel to the Patent Office only two or three times per year, this procedure would enable more prompt review in many cases.

Under the proposed change, the Patent Office would send, in microfilm form, copies of applications which might be related to national security, to defense agencies under conditions insuring the confidentiality required by 35 U.S.C. 122. The copies would be sent with the requirement that they would be promptly returned to the Patent Office or destroyed if a secrecy order were not imposed. If a secrecy order were imposed, the copy would be promptly destroyed or returned when the order was rescinded. Access to the copies would be limited to responsible agency representatives who would be required to sign an acknowledgement accepting the condition that information obtained would be used for no other purpose than the administration of 35 U.S.C. 181-188. Such a procedure would provide better service to the public by enabling the defense agencies to inspect applications promptly and at less expense.

§ 5.1 Defense inspection of certain applications.

In accordance with the provisions of 35 U.S.C. 181, patent applications containing subject matter the disclosure of which might be detrimental to the national security are made available for inspection by defense agencies as specified in said section. Only applications obviously relating to national security, and applications within fields indicated to the Patent Office by the defense agencies as so related, are made available. The inspection will be made only by responsible representatives authorized by the agency to review applications. Such representatives are required to sign a dated acknowledgment of access accepting the condition that information obtained from the inspection will be used for no purpose other than the administration of 35 U.S.C. 181-188. Applications relating to atomic energy are made available to the Atomic Energy Commission as specified in § 1.14 of this chapter.

WILLIAM E. SCHUYLER, JR.,
Commissioner of Patents.

Approved: May 22, 1970.

MYRON TRIBUS,
Assistant Secretary for
Science and Technology.

[F.R. Doc. 70-6551; Filed, May 26, 1970; 8:49 a.m.]

Published in 35 F.R. 8290, May 27, 1970

New Applications Received During April 1970

Patents	9009
Designs	599
Plant Patents	6
Reissues	49
Total	9663

Issue—June 23, 1970

Patents	1301—No. 3,510,091 to No. 3,517,301, incl.
Designs	48—No. 217,845 to No. 217,892, incl.
Plant Patents	4—No. 2,970 to No. 2,973, incl.
Reissues	11—No. 26,910 to No. 26,920, incl.
Def. Pub.	5—No. T875,019 to No. T875,023, incl.
Total	1369

Certificates of Correction for the Week of June 23, 1970

PP. 2,950	3,470,157	3,484,550	3,490,159
Re. 26,783	3,471,018	3,484,699	3,490,192
2,916,142	3,471,424	3,484,960	3,490,308
3,255,411	3,472,215	3,485,225	3,490,387
3,275,831	3,472,859	3,485,315	3,490,482
3,338,800	3,473,083	3,485,447	3,490,529
3,369,920	3,474,041	3,485,765	3,490,707
3,394,992	3,475,215	3,485,785	3,490,763
3,401,019	3,475,272	3,485,819	3,490,895
3,418,119	3,476,395	3,485,836	3,491,006
3,420,857	3,477,947	3,485,858	3,491,084
3,420,864	3,477,977	3,486,099	3,491,091
3,422,091	3,477,989	3,486,179	3,491,158
3,424,432	3,478,019	3,486,230	3,491,166
3,427,344	3,478,364	3,486,556	3,491,167
3,427,561	3,478,468	3,486,571	3,491,238
3,428,646	3,478,645	3,486,582	3,491,276
3,429,708	3,478,993	3,486,626	3,491,286
3,430,693	3,479,301	3,486,632	3,491,309
3,440,215	3,479,416	3,486,646	3,491,342
3,441,010	3,479,480	3,486,698	3,491,368
3,442,369	3,479,623	3,486,801	3,491,443
3,444,140	3,479,813	3,486,930	3,491,979
3,446,113	3,479,878	3,487,182	3,492,083
3,447,055	3,480,135	3,487,176	3,492,102
3,447,564	3,480,448	3,487,460	3,492,172
3,448,651	3,480,570	3,487,648	3,492,205
3,449,502	3,480,747	3,487,818	3,492,226
3,454,494	3,481,089	3,487,829	3,492,267
3,454,876	3,481,725	3,487,864	3,492,288
3,455,958	3,481,745	3,488,059	3,492,299
3,456,010	3,481,992	3,488,308	3,492,335
3,457,285	3,481,993	3,488,334	3,492,377
3,458,443	3,482,099	3,488,353	3,492,962
3,460,543	3,482,321	3,488,364	3,493,227
3,460,686	3,482,413	3,488,405	3,493,581
3,461,204	3,482,545	3,488,612	3,493,633
3,461,542	3,482,963	3,488,708	3,493,756
3,462,366	3,482,994	3,488,768	3,493,764
3,462,682	3,483,029	3,488,783	3,493,868
3,463,007	3,483,037	3,488,930	3,493,905
3,464,357	3,483,219	3,488,960	3,493,983
3,464,623	3,483,301	3,489,122	3,494,039
3,465,193	3,483,596	3,489,491	3,494,537
3,466,314	3,483,748	3,489,600	3,494,612
3,466,377	3,484,155	3,489,629	3,494,669
3,466,882	3,484,171	3,489,675	3,494,839
3,468,687	3,484,266	3,489,760	3,495,202
3,468,812	3,484,436	3,489,781	3,496,089
3,469,415	3,484,501	3,490,006	3,496,145

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner
F. H. BRONAUGH, Deputy Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JUNE 2, 1970

PATENT EXAMINING GROUPS	Actual Filing Date of Oldest New Case Awaiting Action
CHEMICAL EXAMINING GROUPS	
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. STERMAN, Director	5-24-68
Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	
GENERAL ORGANIC CHEMISTRY, GROUP 120—L. MARCUS, Director	1-12-68
Heterocyclics; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director	8-08-68
Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pure-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Adhering Compositions; Molding, Shaping, and Treating Processes.	
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—A. P. KENT, Director	5-02-68
Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director	3-04-68
Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	
ELECTRICAL EXAMINING GROUPS	
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—N. ANSHER, Director	3-07-60
Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	
SECURITY, GROUP 220—S. BOYD, Director	7-22-68
Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—J. F. COUCH, Director	6-03-68
Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director	9-26-68
Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	
PHYSICS, GROUP 260—R. L. EVANS, Director	6-04-68
Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	
DESIGNS, GROUP 290—S. BOYD, Director	8-28-60
Industrial Arts; Household, Personal and Fine Arts.	
MECHANICAL EXAMINING GROUPS	
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director	12-24-68
Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Bots; Ships; Aeronautics; Motor and Land Vehicles and Apparatuses; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—D. J. STOCKING, Director	8-06-68
Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders; Woodworking; Tools; Cutlery; Jacks.	
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director	10-21-68
Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toddlery; Printing; Typewriters; Stationery; Information Dissemination.	
HEAT, POWER AND FLUID ENGINEERING, GROUP 340—O. F. GAREAU, Director	5-21-60
Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission; Fluid Handling; Lubrication; Joint Packing.	
CONSTRUCTIONS, SUPPORTS, TEXTILES, CLEANING, GROUP 350—T. J. HICKEY, Director	2-03-60
Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures; Centrifugal Separations; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes; Sewing Machines; Winding and Reeling.	
Total number of pending applications (excluding Designs).....	184,056
Total number of Design applications pending.....	3,282

Expiration of patents: The patents within the range of numbers indicated below expire during June 1970, except those which may have expired earlier due to shortened terms under the provisions of Public Law 600, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 615, 86th Congress, approved August 23, 1944 (68 Stat. 764), or which may have had their terms curtailed by disclaimer under the provisions of 35 U.S.C. 283. Other patents, issued after the dates of the range of numbers indicated below, may have expired before the full term of 17 years for the same reasons, or have lapsed under the provisions of 35 U.S.C. 151.

Patents..... Numbers 3,440,195 to 3,444,153, inclusive
Plant Patents..... Numbers 1,191 to 1,200, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE THE CHESAPEAKE CORPORATION OF VIRGINIA

No. 8251. Decided February 5, 1970

[57 CCPA —; 420 F.2d 754; 164 USPQ 395]

1. TRADEMARK—DESCRIPTIVENESS—SECONDARY MEANING UNITARY DESIGNATION— "SUPERWATERFINISH" FOR KRAFT PAPER.

"We consider it well settled that to show that a common descriptive name has acquired a de facto secondary meaning, in the sense that some or even many people have come to associate it with a particular producer, is not in itself enough to show that it has become entitled to registration as a trademark. *Roselux Chemical Co. v. Parsons Ammonia Co., Inc.*, 49 CCPA 931, 299 F.2d 855, 132 USPQ 627 (1962). However, we do not feel that that statement of law applies to the facts of this case. The Board admits, properly we believe, that the composite mark SUPERWATERFINISH as such has not been shown to be a common descriptive name of a paper finishing process. While 'water finish' may be descriptive of an attribute of the paper, more specifically its finish, it cannot be said, based on this record, that the unitary designation here in question is no more than a common descriptive name for kraft paper itself. Appellant's customers referred to appellant's product and like products from competitors variously as 'Modelfinish' or 'butcher paper.' The weight of the evidence indicates that the unitary designation SUPERWATERFINISH is considered to be distinctive of appellant's goods by those in the trade, and we do not consider it to be so highly descriptive as to be incapable of registration."

2. SAME—SAME—ORDINARY USE OF DESCRIPTIVE WORDS.

"In response to the Board's view that the registration here sought would preclude others from describing the finish of their products, we note this court's observation in *In re Automatic Radio Mfg. Co.*, 56 CCPA 817, 404 F.2d 1391, 160 USPQ 233 (1969), that 'descriptive words may become trademarks and subject to protection as such, without inhibiting the use of the same words in a nontrademark sense.'"

APPEAL from Patent Office. Serial No. 177,682.

REVERSED.

Jacobi, Davidson & Jacobi (Siegfried A. Schoedal, of counsel) for appellant.

Joseph Schimmel (D. Lenore Lady, of counsel) for the Commissioner of Patents.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN, LANE, Associate Judges, and McMANUS, Chief Judge, sitting by designation. ALMOND, J., delivered the opinion of the court.

This is an appeal from a decision of the Trademark Trial and Appeal Board, 154 USPQ 248, affirming the Examiner's refusal to register on the Principal Register "SUPERWATERFINISH" as a trademark for kraft paper¹ on the ground that the mark is "so highly descriptive of the goods as to be merely an apt commercial designation * * * believed to be without the ability to distinguish the goods of one entity from the goods of another." Exclusive and continuous use of the mark since at least 1949 is asserted.

The Examiner characterized the refusal as being based on the preference to section 2 and the definition of a trademark in section 45 of

¹ Application Serial No. 177,682, filed September 25, 1963.

JUNE 23, 1970

U. S. PATENT OFFICE

377

the Trademark Act of 1946 (15 U.S.C. 1052, 1127). Appellant, on the other hand, contends that the mark is not "merely descriptive" of its goods under section 2(e) of the Act (15 U.S.C. 1052(e)) and, moreover, it is not generically descriptive and has become distinctive of appellant's goods in commerce so as to permit registration under section 2(f) of the Act (15 U.S.C. 1052(f)). We agree with the Solicitor that appellant's contentions frame the questions involved in this appeal.

In a comprehensive opinion dispositive of the issues, the Board found and held, one member dissenting, as follows:

The designation "SUPERWATERFINISH" is not only composed of three descriptive words; but the term "WATER FINISH" admittedly has a well-known meaning in the paper industry and manifestly the addition of the term "SUPER" does not in any way change the inherent meaning of the term "WATER FINISH." * * * In fact, since applicant admittedly is applying a water finish to its kraft paper, the adjectival superlative designation serves only to emphasize or enhance the descriptive significance of "WATER FINISH," as in the case of a "super-calendering" finish, rather than lend any distinctive character thereto. As such, "SUPERWATERFINISH" is merely descriptive of applicant's kraft paper which has been treated with applicant's super water finish. * * *

Although, as alleged by applicant, it may be the only one in the trade to have used the term "SUPERWATERFINISH" over a seventeen-year period, a word or term such as that involved in this proceeding, which by its very nature conveys a readily understood meaning and significance, is not elevated to the stature of a registrable trademark merely as a result of origination and long use. * * * That applicant may have adopted and used the term "SUPERWATERFINISH" on its goods with an intent that it function as a trademark does not necessarily establish that it has succeeded in that regard. That is to say, the ultimate test in a proceeding of this character is what do the customers for kraft paper understand by the term "SUPERWATERFINISH."

The Board then considered ten letters from appellant's customers received in reply to appellant's request to them stating, in essence, that "we would appreciate your indicating whether or not the mark 'SUPERWATERFINISH' identifies only the products of Chesapeake." The Board found that a majority of the letters generally indicated an association of the mark in question with appellant's product, stating, however, that the weight to be accorded such letters depends to a large degree on the nature of the mark sought to be registered in each particular case. The Board cited several decisions of this court and concluded:

It is our opinion that the designation in issue herein "SUPERWATERFINISH" * * * falls within the category of marks * * * that may have acquired a "de facto secondary meaning" but which because of its inherent character is not entitled to registration as a trademark under the statute. Admittedly, the record does not show that the composite mark "SUPERWATERFINISH" as such is a common descriptive name of a paper finishing process. But, "WATERFINISH" is and, as indicated above, the addition of the superlative "SUPER" does not change the inherent significance thereof. Certainly, any manufacturer of kraft paper treating its product with a water finish which it believes to be superior to similar finishes employed by others should be free to use various adjectives including "super" to describe or extol its finish. The registration sought by applicant would preclude this right.

[1] We consider it well settled that to show that a common descriptive name has acquired a de facto secondary meaning, in the sense that some or even many people have come to associate it with a particular producer, is not in itself enough to show that it has become

entitled to registration as a trademark. *Roselux Chemical Co. v. Parsons Ammonia Co., Inc.*, 49 CCPA 981, 299 F.2d 855, 132 USPQ 627 (1962). However, we do not feel that that statement of law applies to the facts of this case. The Board admits, properly we believe, that the composite mark SUPERWATERFINISH as such has not been shown to be a common descriptive name of a paper finishing process. While "water finish" may be descriptive of an attribute of the paper, more specifically its finish, it cannot be said, based on this record, that the unitary designation here in question is no more than a common descriptive name for kraft paper itself. Appellant's customers referred to appellant's product and like products from competitors variously as "Modelfinish" or "butcher paper." The weight of the evidence indicates that the unitary designation SUPERWATERFINISH is considered to be distinctive of appellant's goods by those in the trade, and we do not consider it to be so highly descriptive as to be incapable of registration. The situation before us is not unlike that in *In re Ada Milling Co.*, 40 CCPA 1076, 205 F.2d 315, 98 USPQ 267 (1953), where this court stated with regard to the mark "Start-grolay":

Here appellant has so combined three words into a unitary notation as to result in a mark which, in our opinion, may suggest but does not necessarily describe the character of its goods. While it is, of course, true that if the mark were dissected, the words "Start," "grow," and "lay" might well be descriptive of the characteristics of various types of poultry feed, it is our belief that when the mark is viewed in its entirety, as it is viewed in the market place, it is capable of distinguishing applicant's goods from those of others.

[2] In response to the Board's view that the registration here sought would preclude others from describing the finish of their products, we note this court's observation in *In re Automatic Radio Mfg. Co.*, 56 CCPA 817, 404 F.2d 1391, 160 USPQ 233 (1969), that "descriptive words may become trademarks and subject to protection as such, without inhibiting the use of the same words in a non-trade-mark sense."

The decision of the Board is, accordingly, reversed.
REVERSED.

United States Court of Appeals
District of Columbia Circuit

ALEXANDER P. DE SEVERSKY, APPELLANT

v.

EDWARD J. BRENNER, COMMISSIONER OF PATENTS

No. 22,202. Decided February 13, 1970

[— U.S.App.D.C. —; — F.2d —; 164 USPQ 495]

1. CIVIL ACTION UNDER 35 U.S.C. 145—WEIGHT DUE FINDINGS OF PATENT OFFICE—OBVIOUSNESS.

"The District Court's salient conclusions of law stated: 'In Trials *de novo* under 35 U.S.C. 145, great weight attaches to the expertise of the Patent Office and its findings on the issue of obviousness, particularly in highly technical matters, and the decision of the Patent Office will not be overturned unless new evidence is introduced which carries "thorough conviction" that the Patent Office erred.' The principles stated by the District Court are sound."

2. SAME—EXHAUSTION OF ADMINISTRATIVE REMEDIES—NEW ISSUES PRECLUDED.

"In an action under 35 U.S.C. § 145, the plaintiff has a trial *de novo* and

may introduce evidence not previously presented to the Patent Office. But he is precluded from presenting new issues, at least in the absence of some reason of justice put forward for failure to present the issue to the Patent Office. This rule, set forth in *California Research Corp. v. Ladd*, 123 U.S.App.D.C. 60, 88, 356 F.2d 813, 821 (1966), is a phase of the doctrine of exhaustion of administrative remedies, a doctrine that is applicable to actions brought to overturn determinations of the Patent Office. *General Motors Corp. v. Dietz Co.* * * * This doctrine, which requires courts to abstain from consideration of an issue that has not been presented to the Patent Office, is a necessity of sound judicial administration, since the application of Patent Office expertise in the first instance may either obviate the need for judicial consideration, or illuminate the issues and facilitate the court's disposition."

3. SAME—SAME—SAME—EVIDENCE.

"Although each side 'may strengthen its case with additional material' the plaintiff may not submit for the first time evidence which he was negligent in failing to submit to the Patent Office, see *Killian v. Watson*. * * * In short, the District Court proceeding may not be conducted in disregard of the general policy of encouraging full disclosure to administrative tribunals. * * *

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

John F. Smith (John M. Calimafde, of counsel), for appellant.

S. Wm. Cochran (Joseph F. Nakamura, of counsel), for appellee.

Before BAZELON, Chief Judge, LEVENTHAL and ROBB, Circuit Judges
PER CURIAM:

The application for patent filed by Appellant discloses an electrostatic precipitator for cleaning contaminated or polluted air, the walls of the precipitator, which resembles two concentric cylinders with a passage between them, being continuously cleaned by a uniform film of flowing water. An original application filed January 5, 1955, resulted in the issuance of Patent 2,937,709 on May 24, 1960. The application involved in this appeal is a division of the original application, and contained five claims. Four claims were allowed. Claim 20 was denied.

The Patent Office held that appellant's claim represented merely an obvious following of the teaching of three prior patents. The appellant filed an action under 35 U.S.C. § 145, and had a trial *de novo* at which he presented new evidence. The District Court entered findings of fact supporting the conclusion of obviousness in relation to the prior patents.¹

[1] The District Court's salient conclusions of law stated: "In trials *de novo* under 35 U.S.C. 145, great weight attaches to the expertise of the Patent Office and its findings on the issue of obviousness, particularly in highly technical matters, and the decision of the Patent Office will not be overturned unless new evidence is introduced which carries 'thorough conviction' that the Patent Office erred." The prin-

¹ The District Court found: "4. The Burns patent, No. 1,250,088, discloses the concept of a wet precipitator utilizing a flowing liquid film as an electrode and shows that this concept is old. 5. The Nesbit patent, No. 1,357,202, while it relates to a dry rather than a wet precipitator, yet encompasses the broad teaching of an annular gas flow passage and precipitator devices in general. 6. Penney et al., in their Patent No. 2,448,046, teach the recirculation of the liquid used in a wet precipitator. 7. It would constitute merely an obvious following of Nesbit's teaching to modify the Burns device to provide it with a gas flow passage annular rather than purely cylindrical configuration. In the light of the modification involved, and the trough shown by Burns for collecting and discharging the liquid films, concentric troughs, one for each tubular film, would be logically expected. 8. In view of the Penney et al. patent, it would be an obvious expedient to provide the Burns device with means for recirculating the liquid used therein."

ciples stated by the District Court are sound.² Indeed appellant goes so far as to attack the basic premise of the District Court, that the action must fail because appellant had not shown that the Patent Office erred, precisely on the ground that this was not necessary because "appellant presented vitally new issues and new evidence never considered by the Patent Office" (Br. 2).

What is stressed on appeal as non-obvious is appellant's testimony at trial that he discovered he could pass air through the precipitator at high velocity without blowing out the water applied to the outside curved surface of the inner tube. This he accomplished by providing a venturi expanding the incoming air as it was admitted into the space between the tubes, so that the air acted as a cloud of force and velocity that pushed the water back against the tube wall.

Appellant did not refer to the venturi in the application before us.³ It may be that he would have been entitled in the Patent Office to rely on certain general wording of part of claim 20 cast in functional terms,⁴ at least to the extent of the description of venturi set forth in the original application which resulted in a patent. The Patent Office takes issue, saying that the original application referred to a venturi for air coming into a tube, and not an annular passage between tubes.

We do not pause to consider this issue on the merits. It is enough to say that appellant not only failed to present this matter in the claim and application, but also failed to present the issue to the Patent Office.

[2] In an action under 35 U.S.C. § 145, the plaintiff has a trial *de novo* and may introduce evidence not previously presented to the Patent Office. But he is precluded from presenting new issues, at least in the absence of some reason of justice put forward for failure to present the issue to the Patent Office. This rule, set forth in *California Research Corp. v. Ladd*, 123 U.S.App.D.C. 60, 68, 356 F.2d 813, 821 (1966),⁵ is a phase of the doctrine of exhaustion of administrative remedies, a doctrine that is applicable to actions brought to overturn determinations of the Patent Office. *General Motors Corp. v. Dietz Co.*, — U.S.App.D.C. —, — F.2d —, — (slip opin. p. 5), (June 6, 1969). This doctrine, which requires courts to abstain from consideration of an issue that has not been presented to the Patent Office, is a necessity of sound judicial administration, since the application of Patent Office expertise in the first instance may either obviate the need for judicial consideration, or illuminate the issues and facilitate the court's disposition.

Since appellant advances no reason for failure to present the issue to the Patent Office, we need not consider in what circumstances the interest of justice may carve an implied exception out of the exhaustion doctrine requiring presentation of issues in the first instance to the Patent Office.

AFFIRMED.

² *National Distillers & Chemical Corp. v. Brenner*, 128 U.S.App.D.C. 386, 389 F.2d 927 (1967); *California Research Corp. v. Ladd*, 123 U.S.App.D.C. 60, 356 F.2d 813 (1966).

³ Compare *Lincoln Engineering Co. v. Stewart-Warner Corp.*, 303 U.S. 545, 550 (1938).

⁴ Claim 20, section (b) refers to a "means . . . to produce a downwardly flowing and substantially uniform liquid film on those surfaces of said inner and outer tubes which line said passage."

⁵ "Although each side 'may strengthen its case with additional material' the plaintiff may not submit for the first time evidence which he was negligent in failing to submit to the Patent Office, see *Killian v. Watson*, 121 U.S.P.Q. 507 (D.D.C. 1958). In short, the District Court proceeding may not be conducted in disregard of the general policy of encouraging full disclosure to administrative tribunals, cf. *United States v. Carlo Bianchi & Co.*, 373 U.S. 109, 716-717, 83 S.Ct. 1409, 10 L.Ed.2d 652 (1963); *National Broadcasting Co. v. United States*, 319 U.S. 190, 227, 63 S.Ct. 997, 87 L.Ed. 1844 (1943)."

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,568,250. (See 2,508,200.)

2,578,900. (See 2,508,200.)

2,582,350. (See 2,508,200.)

2,508,290. W. J. O'Brien, AREA IDENTIFICATION SYSTEM; 2,582,350, same, RADIO BEACON SYSTEMS; 2,578,900, same, RADIO-FREQUENCY NAVIGATION SYSTEMS; 2,568,250, same, PHASE COMPARATOR CIRCUITS, filed Aug. 24, 1964, Ct. of Cl., Washington, D.C., Doc. 274-64, *Decca Limited v. The United States*. Claims 15 to 19 of Patent 2,508,290 not infringed; claim 3 of Patent 2,582,350 invalid; claims 1 to 3 of Patent 2,578,900 invalid and claims 6 and 7 not infringed; claim 1 of Patent 2,568,250 not infringed, and that plaintiff is not entitled to recover anything. The petition is dismissed, decided Jan. 23, 1970.

2,717,793. J. F. Nenzell, FLUID SEAL AND APPARATUS FOR MANUFACTURE THEREOF, filed Mar. 30, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-669-CC, *Parker-Hannifin Corporation v. Paul F. Smith et al.*

2,802,580. E. A. Larsson, CAR COUPLERS; 2,802,581, same, AUTOMATIC COUPLER WITH RELEASE, filed Sept. 20, 1960, D.C., W.D.N.Y. (Buffalo), Doc. C-1960-360, *The Ohio Brass Company v. Dresser Industries, Inc.* Stipulation and order of dismissal, Mar. 30, 1970.

2,802,581. (See 2,802,580.)

2,804,633. (See 2,814,700.)

2,806,131. S. L. Palmer, RUNWAY EMERGENCY LIGHTS, filed Mar. 7, 1960, Ct. of Cl., Washington, D.C., Doc. 86-06, *Samuel L. Palmer and Standard Parts & Equipment Corporation v. The United States*. Sole patent claim held valid and infringed, decided Mar. 20, 1970.

2,843,513. R. Stricklen, MIXTURE AND METHOD FOR IMPARTING A CORROSION-RESISTANT SURFACE TO ALUMINUM, ALUMINUM ALLOYS, AND SILVER; 2,851,596, H. J. Hartman, METHOD FOR COATING ZINC AND ZINC ALLOY SHEETS, filed Mar. 10, 1970, D.C., N.D. Ill. (Chicago), Doc. 70c021, *Allied Research Products, Inc. v. J. M. Elitzroth & Associates, Inc.*

2,851,596. (See 2,843,513.)

2,900,302. C. W. Mullis, ROTARY DEBARKER HAVING PIVOTABLE BARK-REMOVING TOOLS BIASED BY FLUID UNDER PRESSURE IN AN ANNULAR TANK, filed July 31, 1962, D.C. Md. (Baltimore), Doc. 13978, *Carl W. Mullis, Sr. and Carl W. Mullis Engineering and Manufacturing Company, Inc. v. E. S. Adkins Company*. Case dismissed by the court for failure of counsel to comply with Local Rule 30 which provides for counsel to submit proposed order after advising court that case has been settled, Apr. 8, 1970.

2,914,779. A. B. Walker, BOARDING RAMP; 2,904,633, Taylor and Fraebel, INFLATABLE LIFE RAFT COMPRISING IMPROVED CANOPY AND SUPPORTING MEANS THEREFOR, filed Aug. 30, 1965, U.S. Ct. of Cl., Washington, D.C., Doc. 312-65, *The Garrett Corporation v. The United States*. Patent No. 2,914,779, claims 2, 5, and 6 are invalid; claim 3 is valid and infringed; Patent No. 2,804,633, claims 1-3 are valid and infringed. Plaintiff is entitled to recover reasonable and entire compensation for unauthorized use by defendant and judgment is entered to that effect, decided Feb. 20, 1970.

2,953,270. R. S. Coffman, SAFETY PRESSURE RELIEF DEVICE; 3,294,277, L. E. Wood, SAFETY DEVICE FOR PRESSURE VESSELS, filed Jan. 18, 1968, D.C., W.D. Mo. (Kansas City), Doc. 16752-4, *Black, Sivalls & Bryson, Inc. v. Continental Disc Corporation*. Consent judgment, plaintiff owner of patents; defendant has infringed and is hereby enjoined, Mar. 25, 1970.

2,979,119. H. Kramer, WEB-TO-TUBE FASTENINGS; 3,042,113, same; 3,002,177, same, filed June 3, 1964, D.C., S.D.N.Y., Doc. 64-C-1704, *Hyman Kramer, doing business as Kramer Enterprises v. Duralite Company, Inc.* Judgment, action dismissed with prejudice against defendants Sears, Roebuck & Co. and F. W. Woolworth & Co. Patents in suit owned by plaintiff and infringed by defendant Duralite Co. Inc. Defendant Duralite Co. Inc. is restrained and enjoined, Mar. 20, 1970.

3,006,510. P. H. Sagarin, AEROSOL CAP CONSTRUCTION; 3,198,300, same, HAND-HELD AEROSOL DEVICE; 3,227,321, same, filed May 25, 1967, D.C., S.D.N.Y., Doc. 67-C-2051, *Valco Corporation of America v. Union Carbide Corporation*. Stipulation and order of dismissal, Mar. 20, 1970.

3,027,088. R. E. Goehring, AUTOMATIC HEATER FLOW CONTROL; 3,224,675, E. B. Fox, MEANS FOR PROTECTING THE HEATER IN A CIRCULATING LIQUID SYSTEM, filed Jan. 24, 1969, D.C., W.D. Tenn. (Memphis), Doc. C-69-22, *Purcs Corporation, Ltd. v. Thermo-Pak Bolders, Inc.* Final judgment, *Purcs Corp., Ltd.* is owner of Patent Nos. 3,224,675 and 3,027,088. Patent 3,224,675 has been infringed and is good and valid in law. Patent No. 3,027,088 is good and valid in law. Defendants are perpetually enjoined, Mar. 19, 1970.

3,042,113. (See 2,979,119.)

3,062,177. (See 2,979,119.)

3,130,007. D. W. Breck, CRYSTALLINE ZEOLITE Y; 3,236,762, Rabo, Pickert and Boyle, HYDROCARBON CONVERSION PROCESS WITH THE USE OF A T-TYPE CRYSTALLINE ZEOLITE, filed Mar. 20, 1970, D.C., W.D. La. (Shreveport), Doc. 15,530, *Union Carbide Corporation v. W. R. Grace & Company*.

3,146,200. D. M. Park, ELECTRONIC MUSIC CIRCUIT; 3,383,452, Park and Campbell, MUSICAL INSTRUMENT; Re. 26,521, D. M. Park, AUTOMATIC REPETITIVE RHYTHM INSTRUMENT TIMING CIRCUITRY, filed May 23, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c1123, *The Seeburg Corporation v. National Baron Corp.* Order cause removed from the active calendar of this court with leave to reinstate within 6 months, Mar. 27, 1970.

3,198,300. (See 3,006,510.)

3,224,675. (See 3,027,088.)

3,227,321. (See 3,006,510.)

3,233,557. A. D. Rickel, AUTOMOBILE CONVEYOR, filed Feb. 14, 1960, D.C., S.D. Fla. (Miami), Doc. 66-178-Civ. TC, *Perfecto, Inc. v. Heinicke Instruments Co.* Dismissal with prejudice order, Mar. 5, 1970.

3,236,762. (See 3,130,007.)

3,293,130. Slater and Kucera, PANLEUKOPENIA VACCINE AND METHOD FOR THE PRODUCTION THEREOF; Reg. No. 856,806 (LEUKOGNE-TC), Phillips Roxane, Inc. Feline distemper vaccine, filed Mar. 4, 1970, D.C. Kans. (Kansas City), Doc. KC-3113, *Phillips Roxane, Inc. v. Biotec Labs., Inc. and Dale A. King*.

3,294,277. (See 2,953,279.)

3,383,452. (See 3,146,200.)

3,400,227. Lear and Auld, COMBINED RADIO AND MAGNETIC TAPE PLAYER; 3,403,808, W. P. Lear, MAGNETIC TAPE CARTRIDGE SYSTEM, filed Oct. 14, 1960, D.C., C.D. Calif. (Los Angeles), Doc. 69-2044-IH, *Magnasync Craig Corporation v. Lear Jet Industries, Inc. and The Gates Rubber Company*. Stipulation and order dismissing action without prejudice, Mar. 5, 1970.

3,403,808. (See 3,400,227.)

3,497,577. (See D. 216,577.)

3,502,061. S. P. Amols, CRYOSURGICAL INSTRUMENT, filed Mar. 27, 1970, D.C. Conn. (New Haven), Doc. 13771, *Dynatech Corp. v. Frigtonics, Inc.*

Re. 24,126, H. E. Marvel, WATER-FUEL SEPARATOR, filed Mar. 10, 1970, Ct. of Cl., Washington, D.C., Doc. 92-70, *Bowser Delaware Corporation v. The United States of America*.

Re. 26,521. (See 3,146,200.)

D. 198,858. (See D. 216,577.)

D. 216,577, Greenberg and Diamond, POOL WITH INTEGRAL SLIDE; D. 198,858, L. E. Greenberg, SLED; 3,497,577, Diamond and Greenberg, POOL WITH INTEGRAL SLIDE, filed Mar. 3, 1970, D.C., S.D.N.Y., Doc. 70-C-858, *Coleco Industries, Inc. v. Krotman-Antella*.

Reg. No. 856,806. (See 3,293,130.)

DEFENSIVE PUBLICATIONS

PUBLISHED JUNE 28, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 18, 1969, 869 O.G. 687. The abstracts of Defensive Publication applications are identified by distinctly numbered series and are arranged chronologically. The heading of each abstract indicates the number of pages of specification, including claims and sheets of drawings contained in the application as originally filed. The files of these applications are available to the public for inspection and reproduction may be purchased for 80 cents a sheet.

Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

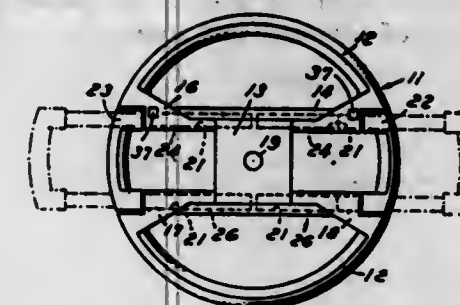
T875,019
ADJUSTABLE DIAMETER STEERING WHEEL
Charles J. Haddad, Allen Park, Robert W. Riley, Taylor, and Richard O. Scott, Trenton, Mich., assigns to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Apr. 3, 1969, Ser. No. 813,200

Int. Cl. B62d 1/04

U.S. Cl. 74-552

1 Sheet Drawing, 5 Pages Specification



An adjustable steering wheel for an automotive vehicle comprising a hub portion and an annular portion interconnected by a number of spoke members. The annular portion includes two movable arcuate sections slidably connected to the spoke members and which are radially displaceable relative to the remainder of the annular portion. In the displaced position the two movable arcuate sections provide a pair of hand grips having increased radii relative to the normal radius of the annular portion. Lock means are provided which selectively lock the movable sections into normal diameter or increased diameter positions. The lock means are releaseable by the depressing of a thumb button located adjacent each movable section.

An alternate embodiment utilizes a handle-bar type steering "wheel" in which the handle portions are displaceable radially outwardly relative to their normal positions.

T875,020
ENZYME-CONTAINING DETERGENT COMPOSITIONS
Joseph Dulat, Fetcham, Surrey, John Frederick Collins, Chessington, Surrey, Walter Jacob Rosenfelder, London, and John Malcolm Schofield, Farnham, Surrey, England, assigns to United States Borax & Chemical Corporation, Los Angeles, Calif.

Filed July 9, 1969, Ser. No. 840,493
Claims priority, application Great Britain, July 24, 1968, 35,396/68

Int. Cl. C11d 3/065, 3/066

U.S. Cl. 252-138

No Drawing, 11 Pages Specification

Detergent compositions containing an enzyme and a combination of sodium phosphate and borate, especially a sodium borate such as borax. The compositions give better stain-removal than obtained without the borate-

phosphate combination builder. The borate has the formula $M_2O \cdot xB_2O_3$, in which M is an alkali metal or ammonium ion and x is 1 to 5. The improved cleaning composition comprises a proteolytic enzyme, a detergent and a builder which consists of at least one sodium phosphate, such as sodium tripolyphosphate, and from 10% to 90% by weight of at least one borate. Preferably the proportion of borate to phosphate is in the range of about 1:3 to about 3:1.

T875,021
HIGH MODULUS POLYETHYLENE TEREPHTHALATE FIBERS
Darryl S. Addington, 182 Hillview, Memphis, Tenn. 38109, and Gordon W. Spangler, P.O. Box 511, Kingsport, Tenn. 37662

Filed Aug. 18, 1969, Ser. No. 855,071

Int. Cl. C08g 17/06; D02j 1/22, 11/00

U.S. Cl. 260-75

1 Sheet Drawing, 9 Pages Specification

High modulus polyethylene terephthalate staple fibers having a high degree of dimensional stability. The fibers are characterized by an ultimate tenacity greater than 5 grams/denier, an ultimate elongation less than 30%, a tenacity at 10% elongation greater than 3 grams/denier and a shrinkage in 190° C. air less than 4%. Dimensional stability is accomplished by subjecting the fiber to a 2 step heatsetting process whereby the fiber is first heatset at constant length and then in a tensionless state at a temperature between 110° C. and 160° C.

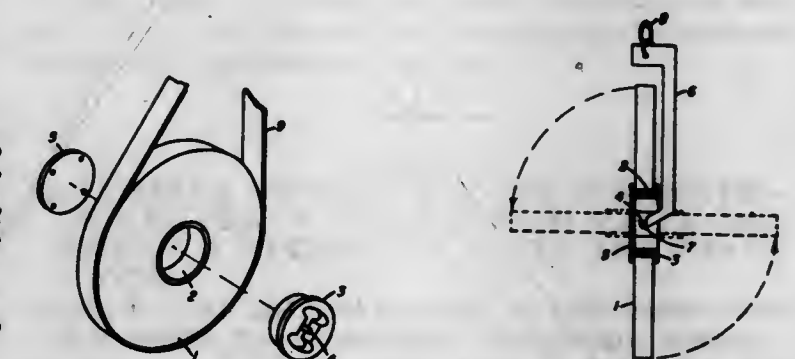
T875,022
APPARATUS FOR TILTING WOUND ROLLS
Heinz C. Altmann, 58 Bristol Ave., Clifford B. Bushnell, 746 Oakridge Drive, and Henry L. West, 169 Rosemont Drive, all of Rochester, N.Y. 14617

Filed Oct. 13, 1969, Ser. No. 865,578

Int. Cl. B65g 69/00

U.S. Cl. 214-1

1 Sheet Drawing, 5 Pages Specification



A large roll of web material (1) having a core (2) may be tilted by securing a core insert (3) within the core (2). The insert (3) has a tilt bar (4) which is pivotally engageable with a hook (7) on a lift bar (6).

The roll is removed from a winding machine by means of a sling (9), or the like; then the hook (7) is engaged with the bar (4) and the roll tilted about bar (4), so that the rotary axis of the roll becomes vertical, to facilitate roll handling. The tilt bar could also be part of the core, or part of the core insert.

T875,023

CONTINUOUS MELT PHASE MANUFACTURE OF LOW MOLECULAR WEIGHT POLYAMIDES

M B Knowles, Harrell Julian Lewis, and Roy Clifford Stephens, all of P.O. Box 511, Kingsport, Tenn. 37662

Continuation of application Ser. No. 685,734, Nov. 16, 1967. This application Dec. 12, 1969, Ser. No. 880,506

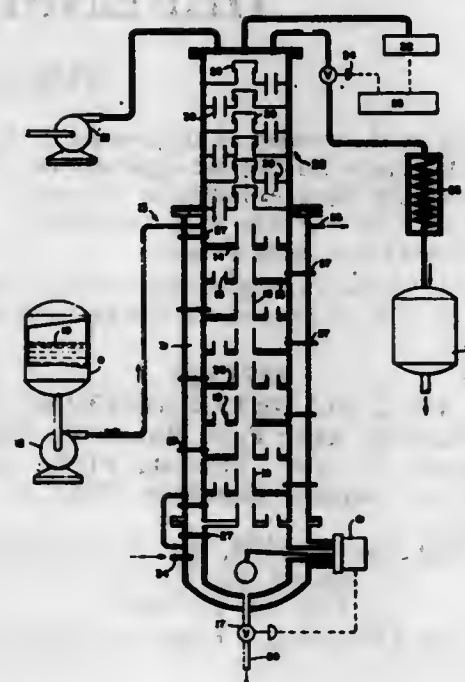
Int. Cl. C08g 20/20

U.S. Cl. 260-78

2 Sheets Drawing. 18 Pages Specification

Water-free, low molecular weight polyamides may be prepared from aqueous solutions of polyamide salts under superatmospheric pressure by passing a solution of a polyamide salt through a plurality of heated zones at a superatmospheric pressure while under essentially plug-flow conditions, the zones being heated to a temperature sufficient to eliminate water in vapor form from the resulting low molecular weight polyamide, and the zones providing a decreasing ratio of heating surface to volume

of material being treated in the direction of flow, and withdrawing a substantially water-free low molecular



weight polyamide from the last of the zones at a pressure below that of the said last zone.

REISSUES

JUNE 23, 1970

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,910 HIGH SPEED DATA CONVERSION AND HANDLING

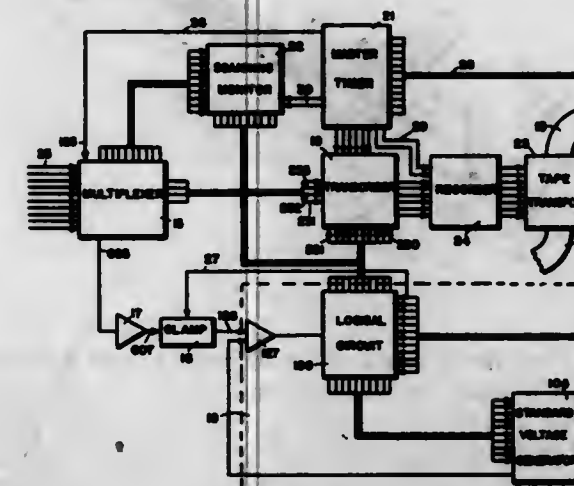
Martin L. Klein, San Clemente, Harry C. Morgan, Anaheim, and Richard B. Rush, Granada Hills, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

Original No. 3,293,608, dated Dec. 20, 1966, Ser. No. 653,455, Apr. 17, 1957. Application for reissue Dec. 13, 1968, Ser. No. 786,504

Int. Cl. G06f 7/00

U.S. Cl. 340-172.5

22 Claims



A system is set forth that converts analog data to digital data at high speed. Analog signals are received successively in a multiplicity of channels of a multiplexor, converted to digital form in the single unit so as to produce a single intermixed output suitable to be recorded and played back. Increased speed and accuracy are facilitated by sampling the multiplexor output near the end of the interval during which one analog input signal is handled by one channel of the multiplexor to allow more time for such output to attain the level of the analog input signal. The sampled signal is then held and digitized during the time that an immediately succeeding analog input signal is being handled.

26,911 AUTOMATIC PRODUCTION OF GRAMOPHONE RECORDS

Walter Leslie Rand, Gerrards Cross, and Leslie Eric Zouch, Hayes, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Original No. 3,264,386, dated Aug. 2, 1966, Ser. No. 229,332, Oct. 9, 1962. Application for reissue July 30, 1968, Ser. No. 754,162

Claims priority, application Great Britain, Oct. 11, 1961, 36,423/61

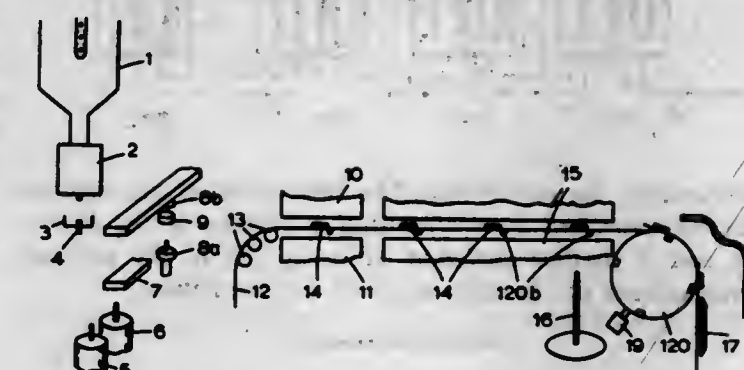
Int. Cl. B29d 17/00

U.S. Cl. 264-107

14 Claims

Gramophone records are manufactured by applying a quantity of thermoplastic material in a softened condition between two labels and pressing the labels on the material sufficiently to cause the labels to adhere thereto. The labels and the adhering thermoplastic material is then transferred to a moulding press while one of the labels is held by means of suction applied to that label. When the labels and the material are in position in the press, the suction is removed so releasing the material and the

labels to the press and the record is then formed in the moulding press. Subsequently, the record is removed from



the press by gripping excess material around the periphery of the record, extruded during the pressing process.

26,912

PILE DIAPER

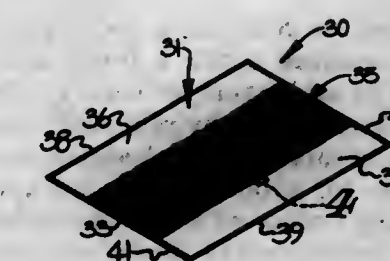
Stanley C. Scheler, East Greenwich, R.I., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

Original No. 3,367,333, dated Feb. 6, 1968, Ser. No. 471,216, July 12, 1965. Application for reissue Apr. 24, 1969, Ser. No. 824,010

Int. Cl. A61f 13/16

U.S. Cl. 128-284

20 Claims



20. A pliable integrated sheetlike diaper adapted to be worn, including a base of pliable material, hydrophilic fibers incorporated in said diaper providing the desired absorbency therein, said diaper being characterized by a pile area on at least one face thereof extending lengthwise of said diaper and disposed intermediate of two non-pile areas also extending lengthwise of said diaper, said pile area comprising raised pile yarns noncontinuous with any yarns of said base material and formed of yarn loops threaded through other yarn loops.

26,913

MULTISTAGE PROCESS FOR THE CONCENTRATION OF HEAVY WATER IN FEED WATER COMPRISING A MIXTURE OF WATER AND HEAVY WATER

Gerald P. Lewis and Paul Ruetschi, by ESB Incorporated, Philadelphia, Pa., a corporation of Delaware, assignee

Original No. 3,396,832, dated Feb. 28, 1967, Ser. No. 201,978, June 12, 1962. Application for reissue Aug. 3, 1967, Ser. No. 662,215

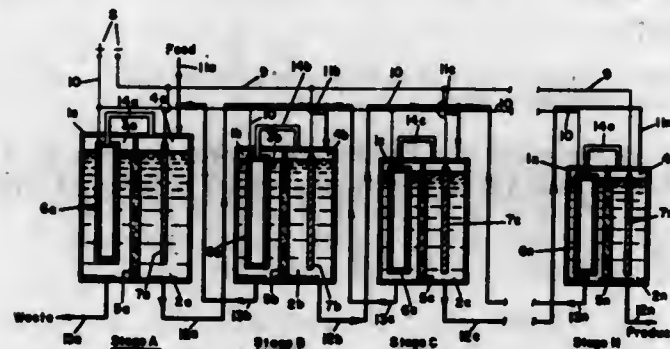
Int. Cl. B01k 1/00; C02b 1/82

U.S. Cl. 204-101

6 Claims

A process for concentrating heavy water using successive stages by electrolyzing a mixture of water and heavy water to produce hydrogen and deuterium gas at the

cathode and oxidizing the gas mixture at the anode. The cathode and anode are separated by a diffusion barrier which prevents instantaneous mixing of the electrolyte from the source that is reflected by a target. The radiation from said source is formed into a beam for reflection from a remote target. The detector is disposed in the beam of radiation.



surrounding the electrodes. The electrolyte at the cathode becomes enriched by preferential evolution of the hydrogen and is further enriched by being fed to the cathode compartment of the next stage of concentration.

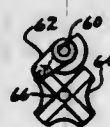
26,914 APPARATUS FOR PRODUCING GEAR TEETH OR THE LIKE

Albert F. Tremblay, Toledo, Ohio, assignor to Kent-Owens Machine Company, Toledo, Ohio, a corporation of Ohio
Original No. 3,292,405, dated Dec. 20, 1966, Ser. No. 309,121, Sept. 16, 1963. Application for reissue Mar. 18, 1968, Ser. No. 717,479

Int. Cl. B68g 7/03

U.S. Cl. 72—216

14 Claims



1. In a machine for contouring the surface of a workpiece to a predetermined depth, a frame, a tool supporting shaft carried by said frame for rotation about an axis, a work forming tool rotated by said shaft, said tool having a work forming surface for embedment into the workpiece, first means for supporting the workpiece so that said work forming surface of said tool projects into said workpiece to a predetermined depth, and second means to provide relative movement between said work forming surface of said tool and the surface of the workpiece in a direction perpendicular to the axis of rotation of said tool during rotation of said shaft so that said work forming surface of said tool produces a rolling, burnishing action at said predetermined depth in the workpiece.

26,915 SCANNER APPARATUS

Phillip J. Cade, Winchester, Mass., assignor to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
Original No. 3,341,710, dated Sept. 12, 1967, Ser. No. 271,418, Apr. 8, 1963. Application for reissue Aug. 15, 1968, Ser. No. 758,638

Int. Cl. H01L 15/00

U.S. Cl. 250—239

10 Claims



A radiation sensing apparatus including a radiation source and a detector arranged to respond to radiation from the source that is reflected by a target. The radiation from said source is formed into a beam for reflection from a remote target. The detector is disposed in the beam of radiation.

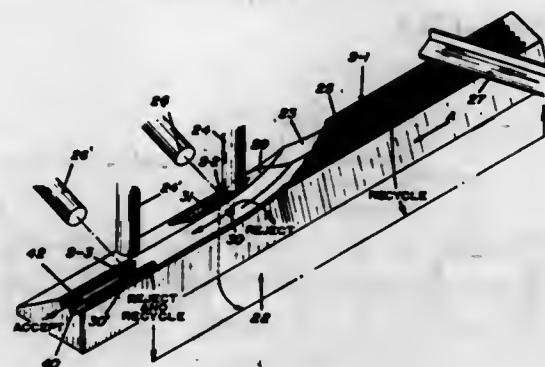
26,916 RADIANT ENERGY METHOD AND AP- PARATUS OF DETERMINING PHYSICAL CHARACTERISTICS

Benson M. Austin, Pottersville, N.J., assignor to Affiliated Manufacturing Corporation, a corporation of New Jersey
Original No. 3,357,557, dated Dec. 12, 1967, Ser. No. 476,031, July 30, 1965. Application for reissue Dec. 10, 1968, Ser. No. 786,502

Int. Cl. B07c 3/14

U.S. Cl. 209—74

22 Claims



Accuracy of dimensions of small bodies with flat upper surfaces are assured by feeding the bodies on a support surface past a sensing station having a radiant energy emitter directing energy onto the station, and a detector for detecting the magnitude of energy reflected off of either the support surface or body at the station. An air blast orifice at the station is provided to eject any of the bodies which reflect substantially less energy than the support surface and therefore have an upper surface which is not parallel to the support surface.

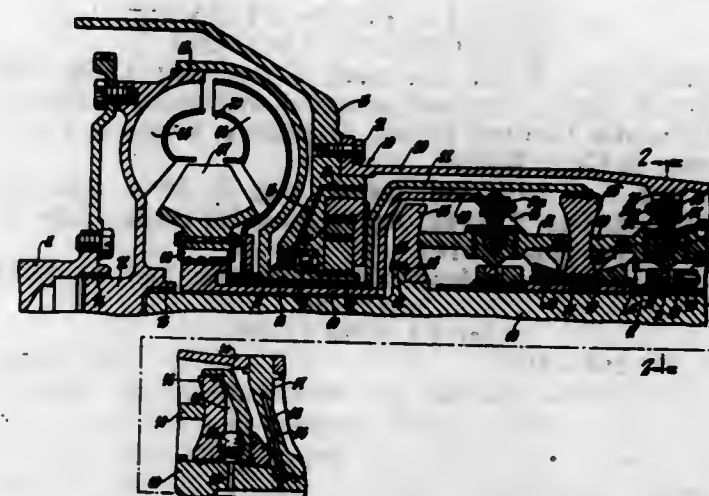
26,917 TRANSMISSION AND CONTROL SYSTEM

Frank Dickenbrock, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original No. 3,394,617, dated July 30, 1968, Ser. No. 535,824, Mar. 21, 1966. Application for reissue May 6, 1969, Ser. No. 830,893

Int. Cl. F16h 47/08, 15/50, 15/38

U.S. Cl. 74—730

16 Claims



A roller friction transmission having two friction units and a hydrodynamic torque converter wherein a common input race for both friction units is driven by the con-

verter turbine, wherein the reaction torque of the torque converter and the reaction torque of one friction roller unit are both transmitted to the transmission case through the reaction spider of the other friction unit.

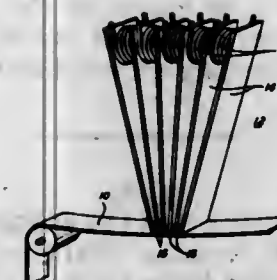
26,918 MULTIBIT MAGNETIC TRANSDUCER

Daryl M. Chapin, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Original No. 3,196,450, dated July 20, 1965, Ser. No. 85,821, Jan. 30, 1961. Application for reissue Dec. 8, 1966, Ser. No. 612,743

Int. Cl. G11b 5/02, 5/20

U.S. Cl. 346—74

9 Claims



A multiple gap magnetic recording head for recording, in serial order on magnetic tape, data received in parallel form. The recording head comprises n laminations of magnetic material arranged such that one end of each joins at the vertex of a V-shaped structure to define n-1 parallel and closely-spaced signal translating gaps. The laminations fan out, substantially equally-spaced apart, toward the open end of the V-shaped structure. Individual signal translating windings for each gap are located between each adjacent pair of laminations at the open end of the V-structure.

26,919 INFORMATION STORAGE AND RETRIEVAL SYSTEM

David W. Hagelbarger and William G. Hall, Morris Township, Morris County, and William A. Malthaner, Colts Neck, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

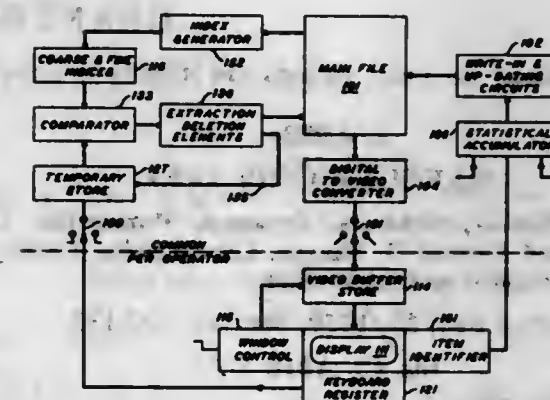
Original No. 3,242,470, dated Mar. 22, 1966, Ser. No. 218,271, Aug. 21, 1962. Application for reissue Mar. 29, 1967, Ser. No. 637,030

Int. Cl. H04J 3/14

U.S. Cl. 340—172.5

32 Claims

An information retrieval system is disclosed wherein a plurality of operators obtain access on a time-sharing basis to a machine readable information storage file. To reduce the time required for searching through the file, indexing apparatus is provided whereby certain request information from the different operators is compared on a character-by-character basis with index information to identify the general location of the requested information in the file. If, for a specific request, this comparing operation cannot be completed because of insufficient request information, the indexing apparatus is released to other operators for use by them until the particular inquiry in question is more fully specified. When access is restored and upon receipt and comparison of sufficient



the requesting operator for display on a cathode ray viewing tube.

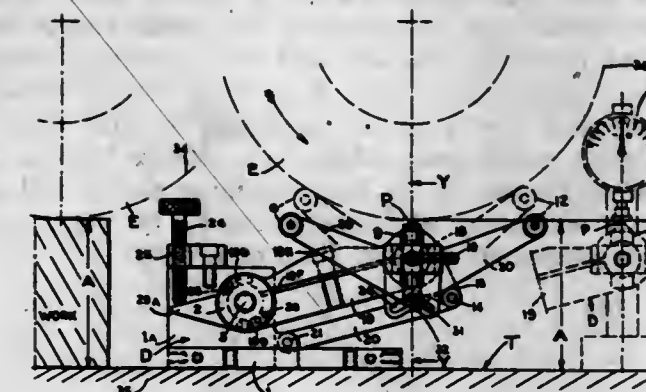
26,920 DIAMOND DRESSING DEVICE

Nicolas Parapetti, 615 N. 1st St., Rockford, Ill. 61107
Original No. 3,378,001, dated Apr. 16, 1968, Ser. No. 484,641, Sept. 2, 1965. Application for reissue Dec. 5, 1968, Ser. No. 787,292

Int. Cl. B24b 53/00

U.S. Cl. 125—11

19 Claims



This dressing device is for use on a work table to dress an emery wheel thereabove from the bottom. A horizontal tool holder holds the shank of a diamond point in a vertical plane and is supported on a base on a pair of equal length elongated parallel parallelogram arms pivoted at spaced points on the base at one end and at the other end at correspondingly spaced points on the tool holder, one of the arms being split lengthwise from one pivot all the way to the other end and having means intermediate its ends for forcing the split portions together to bind the arm on the pivots at its opposite ends to keep an adjusted position, and one arm also having a radius arm on its pivoted end, and a manually adjustable screw bearing on the arm to adjust the tool holder vertically relative to the base, other means for this manual adjustment being also shown. Centering means is carried on the tool holder in axially spaced relation to the diamond point and adjustable vertically relative to the tool holder and arranged by manual positioning relative to the lower half of an emery wheel to locate the diamond point accurately on a vertical radius line of the wheel and at its lowest point for dressing the wheel accurately to a desired elevation relative to the table.

PLANT PATENTS

GRANTED JUNE 23, 1970

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,970

NAVEL ORANGE TREE

John V. Walker, 1661 N. Prospect, Porterville, Calif. 93257, and Everett R. Skaggs, Los Angeles, Calif.; said Skaggs assignor to said Walker

Filed Feb. 27, 1969, Ser. No. 803,135

Int. Cl. A01h 5/08

U.S. Cl. Plt.—45

1 Claim

1. A new and distinct variety of navel orange tree as described and illustrated, characterized particularly by its earlier maturity, its larger fruit, its greater juice content per fruit and the smoother rind surface of its fruits; all as compared with the Washington navel orange.

2,971

AZALEA PLANT

Howard Kerrigan, 3003 Totterdell St., Oakland, Calif. 94611

Filed June 3, 1968, Ser. No. 734,177

Int. Cl. A01h 5/02

U.S. Cl. Plt.—55

1 Claim

1. A new and distinct variety of azalea plant of the Belgian-Indica type substantially as herein shown and described primarily characterized by: a normal flowering date substantially later than most Belgian-Indicas reaching peak bloom about the second or third week in May, by its nearly pure white, fully double blooms; by its profuse bloom; by its long blooming period and exceptional retention of blooms and by its vigor, ease of propagation and compact habit of growth.

388

2,972

RAPHIOLEPIS INDICA

Ernest P. Bordier, Glendora, Calif., assignor to Bordier's Nursery, Inc., Santa Ana, Calif.

Filed Sept. 9, 1968, Ser. No. 758,633

Int. Cl. A01h 5/00

U.S. Cl. Plt.—54

1 Claim

1. A new and distinct variety of *Raphiolepis indica*, substantially as shown and described, characterized particularly as to novelty by the distinctive and unique coloring of the flowers which are Amaranth Rose; by the broadly pyramidal shape of the panicles of flowers; by the unique undulating shape of the leaves; by the shiny, satiny appearance of its leaves; by the satiny bronze appearance of its leaves in the fall and winter months; and by its compact mounding growth habit.

2,973

NORWAY MAPLE TREE

Edward H. Scanlon, 7621 Lewis Road, Olmsted Falls, Ohio 44138

Filed Apr. 26, 1968, Ser. No. 724,645

Int. Cl. A01h 5/12

U.S. Cl. Plt.—51

1 Claim

A new and distinct variety of Norway maple tree (*Acer platanoides*) having an equally restricted uniform growth in lateral branch length in substantially the entire crown, generally equal spacing of lateral branches on the trunk and in turn on the structural branches, dense peripheral growth of twigs and foliage, and a resultant globular crown whereby it is primarily distinguished from the species and known varieties. The variety assumes its characterizing shape more rapidly, and has a better resistance to sunburning of the foliage, than known varieties.

PATENTS

GRANTED JUNE 23, 1970

GENERAL AND MECHANICAL

3,516,091

OMNIDIRECTIONAL JOINT

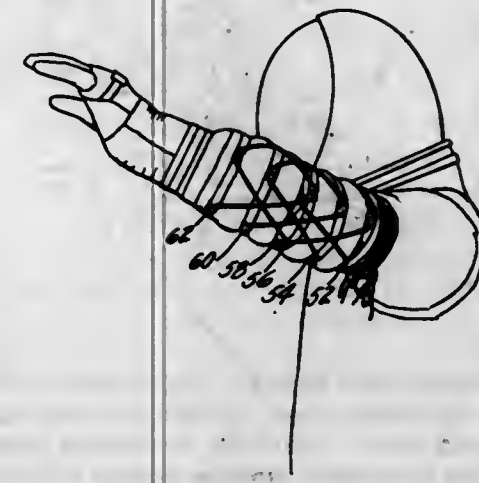
Michael A. Marroni, San Jose, Calif., and John C. Hardy, Westogue, and Mark E. Baker, Winsted, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Oct. 7, 1966, Ser. No. 586,329

Int. Cl. B63c 11/04

U.S. Cl. 2—2.1

3 Claims



A cord restraint system for pressurized suit includes axially spaced circumferential convolute roots spaced about the axis of rotation of a limb which carry a plurality of restraint sets. Each set includes a cord movable relative to points of attachment which extend from points above and below the bending axis and are in pairs each of which are diametrically opposed on the respective convolute roots and each pair being circumferentially spaced 90° from each other. The cord is serially laced through each point of attachment.

3,516,092

HEAD SUSPENSION FOR SAFETY HAT

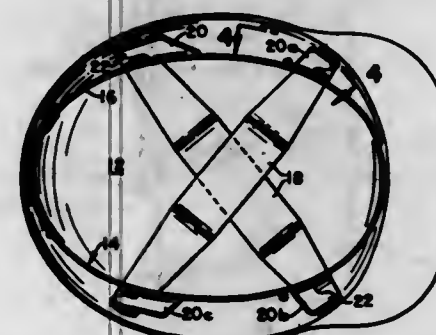
Herbert A. Raschke, Sanacito, Calif., assignor to E. D. Ballard Company, Sanacito, Calif.

Filed Nov. 15, 1967, Ser. No. 683,194

Int. Cl. A42b 1/08

U.S. Cl. 2—3

3 Claims



A suspension harness for a safety hat that has flexible tabs that form the sole connection between the hat and a headband that forms a part of the suspension harness. The tabs include circumferential appendages that have posts projecting therefrom; the hat shell has holes through which the posts extend. Crown straps that crisscross over the top of the wearer's head are fastened in the hat shell by the posts.

3,516,093

GARMENT

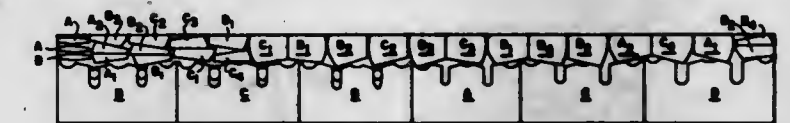
Trent B. Terry, Charlottesville, Va., assignor to Pennington Garment Company, Pennington Gap, Va., a corporation of Virginia

Filed Dec. 6, 1967, Ser. No. 688,418

Int. Cl. A41d 9/00

U.S. Cl. 2—83

10 Claims



A garment comprising a shirt made from a one-piece main body blank and other additional blanks and pants made entirely from a one-piece blank. A new, economical space saving arrangement of shirt blanks, a new, economical space saving arrangement of pants blanks and a new, interrelated combination of shirt and pants blanks on a length of 45" wide material.

3,516,094

TOILET FLUSHING APPARATUS

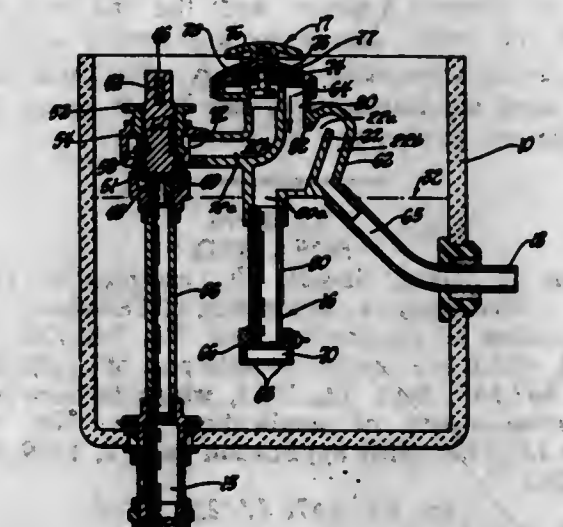
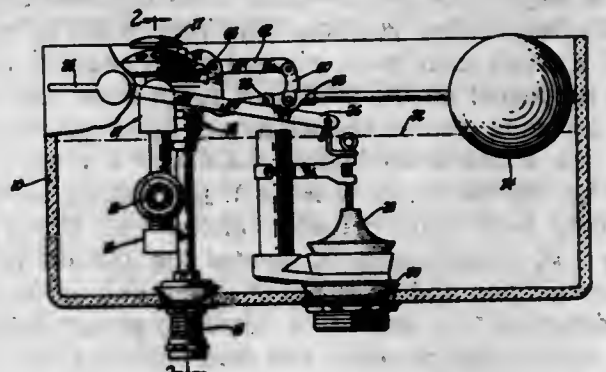
Cleo A. Reagan, Frankfort, Ind., assignor to The Indiana Brass Co., Inc., Frankfort, Ind., a corporation of Indiana

Filed Feb. 20, 1968, Ser. No. 706,952

Int. Cl. E03d 1/36

U.S. Cl. 4—41

4 Claims

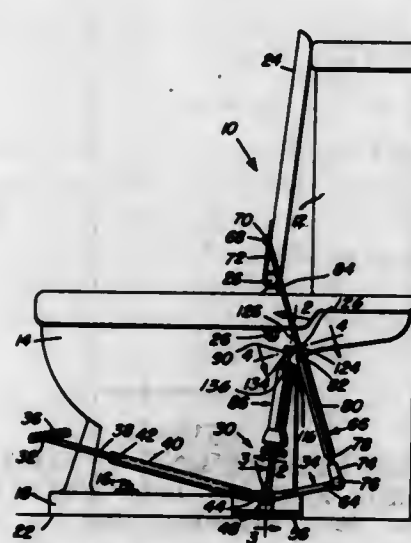


In a preferred form, the present invention relates to toilet bowl washing apparatus wherein water is provided for washing the rim of the toilet bowl between the time flow starts to refill the tank and the time when the tank is completely filled. The subject toilet bowl washing apparatus has only one moving part which is a slidable

389

valve and only water in excess of that needed to fill the tank is utilized to wash the rim of the toilet bowl. The subject invention incorporates a husher tube having a variable volume outlet and additionally includes anti-siphon means disposed in the system so that all the water going past the inlet valve passes through the anti-siphon means.

3,516,095
DOUBLE ACTION SANITARY COMMODE SEAT LIFTING AND LOWERING DEVICE
John M. Clifton and Rebecca A. Clifton, both of P.O. Box 234, Lyman, Minn. 55501
Filed Aug. 22, 1967, Ser. No. 662,426
Int. Cl. A47k 13/10
U.S. Cl. 4—251 10 Claims

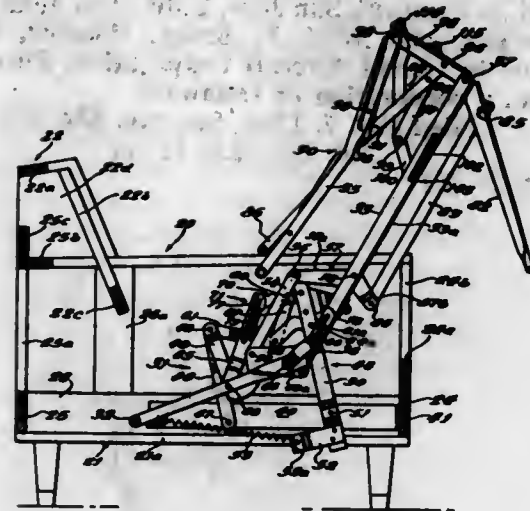


This invention is a double action lifting and lowering device for moving a commode or toilet seat between raised and lowered position in either direction. It includes a single foot pedal which, when depressed, moves the seat from either position. The foot pedal is on one end of a crank arm lever, pivoted at its angle to a base that is supported on the commode room floor, and made secure by being secured to a commode bowl securing bolt, and a link at the other end of the lever is pivotally attached to one side of the toilet seat. In addition, an action cushioning pneumatic cylinder, piston and piston connecting rod combination is pivoted on the crank arm pivot at one end and on the seat lifting link at the other end, permitting the seat to be lifted, in either direction, to the dead-center position, and then cushions the fall of the seat from such dead-center position to the desired raised or lowered position. Both the link and the pedal arm of the crank arm lever are readily adjustable in length, being telescopic, for ready adjustment to fit different sized commodes, and can be set up or detached from the seat in very few minutes.

3,516,096
SOFA BED
Aloysius J. Mikos, Skokie, Ill., assignor to The Seng Company, a corporation of Delaware
Continuation of application Ser. No. 748,121, July 26, 1968, which is a continuation-in-part of application Ser. No. 667,145, Sept. 12, 1967, which in turn is a continuation-in-part of application Ser. No. 555,599, June 16, 1966. This application June 2, 1969, Ser. No. 834,201
Int. Cl. A47c 17/22, 17/14
U.S. Cl. 5—13 37 Claims

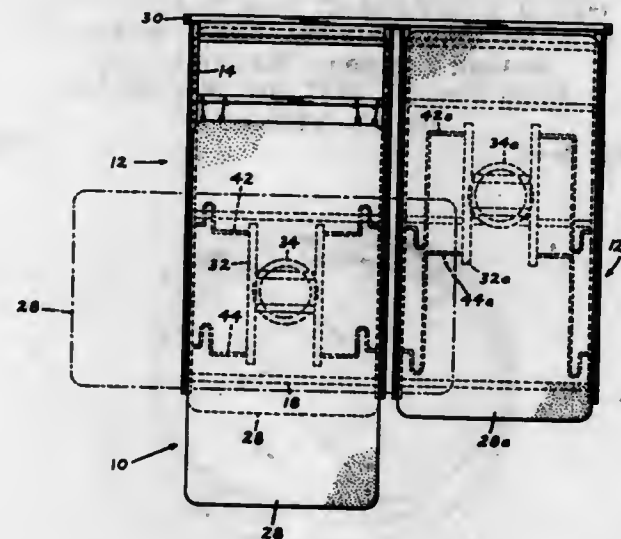
A four section foldable sofa bed of the type wherein the inner, intermediate and outer bed sections are disposed substantially entirely below the plane of the top surface of a relatively high fixed front rail of a sofa frame in the retracted position of the bed sections, with the head or rear bed section being supported from the inner bed section rather than from the sofa frame.

A primary linkage system for moving the inner bed section between its retracted position and its extended position comprises rear support link means and front support link means combined with two actuating links which interconnect the rear and front support link means, and one of the two actuating links (herein a "control link") moves in a substantially translatory fashion as the inner bed section moves between said positions. A secondary, or connecting linkage system pivots the rear bed section on the inner bed section between an upright stored position and a normally horizontal extended position, and the connecting linkage system includes a guiding link which is directly operatively connected to the rear bed section and which is operatively connected to the control link a substantial distance behind the front support link means.



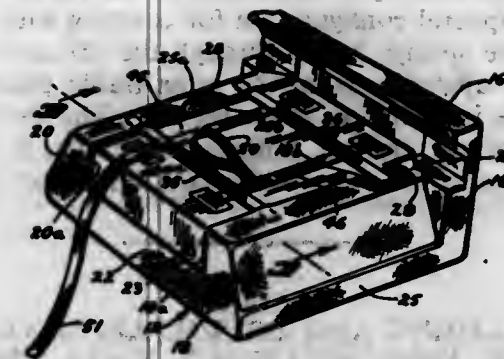
ondary, or connecting linkage system pivots the rear bed section on the inner bed section between an upright stored position and a normally horizontal extended position, and the connecting linkage system includes a guiding link which is directly operatively connected to the rear bed section and which is operatively connected to the control link a substantial distance behind the front support link means.

3,516,097
MOVABLE BED APPARATUS
Robert H. Angus, 1835 Vauxhall Road, Union, N.J. 07083
Filed June 27, 1967, Ser. No. 649,269
Int. Cl. A47c 21/00
U.S. Cl. 5—323 11 Claims



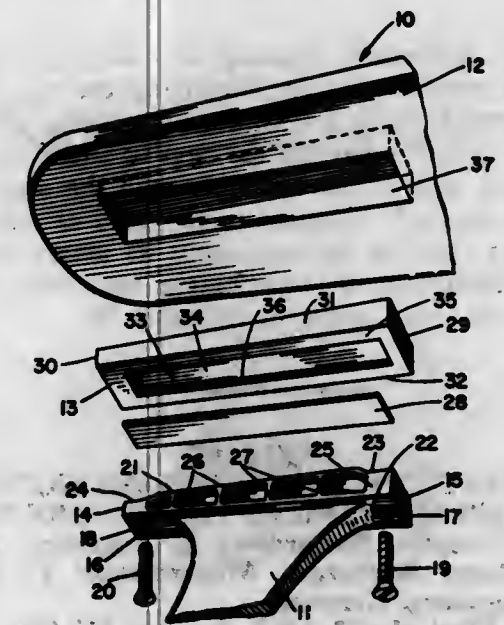
This invention relates to a bed which is capable of being raised and moved forwardly on a fixed frame and which is rotatable in its raised position. The invention is comprised of lifting means connectable to the frame of the bed which is capable of raising the box spring and mattress and moving the same toward the foot end of the bed. A rotatable means is disposed on the lifting means for permitting the rotation of the box spring and mattress.

3,516,098
FLOATABLE LIFE PRESERVER SEAT INSERT
Maurice H. O'Link, St. Cloud, Minn., assignor to Stearns Manufacturing Company, St. Cloud, Minn., a corporation of Minnesota
Filed July 9, 1969, Ser. No. 840,316
Int. Cl. B63c 9/30; B64d 25/04
U.S. Cl. 9—12 2 Claims



A life preserver cushion formed as an insert for an airplane seat structure being removably carried within a chamber formed within the underside portion of the removable bottom seating portion of said seat structure, said cushion being of relatively small size for convenient handling and use, being well adapted to support a person in a body of water, and having arm grasping and wrist holding straps for secure holding and a trailer strap for recovery thereof if floating free. Said cushion in stored position serves as an integral supporting portion of said seating portion.

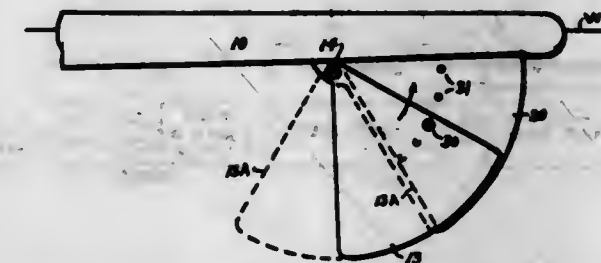
3,516,099
MOUNTING STRUCTURE FOR REMOVABLE SURFBOARD FIN
Thomas H. Morey, 36 Lincoln Drive, and Karl D. Pope III, 6377 Clemens St., both of Ventura, Calif. 93003; and Robert R. Tierney, 412 Mallory Way, Ojai, Calif. 93023
Filed June 17, 1968, Ser. No. 737,413
Int. Cl. A63c 15/00
U.S. Cl. 9—310 5 Claims



A mounting structure for tightly securing a skeg or fin to a surfboard includes a channeled mounting box bonded in the rearward portion of a surfboard. The side-walls of the fin or skeg base section and sidewalls of the box are shaped with complementary tapering. The base of the fin is secured in the box by screws, which upon tightening, snugly wedge the sidewalls together to prevent wobbling or other relative movement between the fin and box that could interfere with surfing operations.

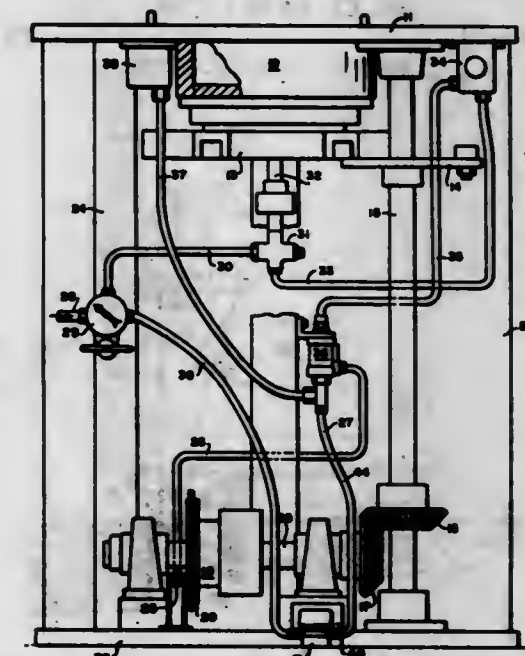
The fin and box are formed with recesses during their fabrication by an injection molding process so that their walls will be uniformly cooled to thereby avoid shrinkage and warpage which could cause misalignment between the complementary tapered sidewalls.

3,516,100
AUTOMATICALLY ADJUSTING SKEG FOR SURFBOARDS
Robert E. Marasco, 350 Lomas Santa Fe, Solana Beach, Calif. 92075
Filed Mar. 13, 1968, Ser. No. 712,853
Int. Cl. A63c 15/00
U.S. Cl. 9—310 7 Claims



The skeg of the surfboard is mounted on a pivot from the bottom rear end of the board and hangs downward by gravity, the skeg being adapted to swing backward and upward from its pivot so as to both decrease the area and decrease the depth thereof under the water line as the speed of the board increases. The skeg may also be in two parts, one part rigidly attached to the board while the pivoted skeg moves in a vertical plane in relation thereto, means being also provided to set the movable skeg in any desired fixed position and also to adjust the degree of resistance of the skeg to the water as the surfboard moves forward. Both rigidly attached and movable skegs being of the same configuration and area so that the movable skeg can exactly cover the rigid skeg to secure the minimum area.

3,516,101
TURRET TYPE SOLE PRESS
Harold E. Marasco, Beverly, Mass., assignor to Marasco Shoe Machinery Company, Lynn, Mass., a corporation of Delaware
Filed Oct. 31, 1968, Ser. No. 772,241
Int. Cl. A43d 89/00
U.S. Cl. 12—36.8 4 Claims



A sole press of the turret type having a series of turret stations, each provided with a shoe supporting jack and an associated pad box, together with clutch-controlled

indexing mechanism for the turret, fluid pressure connections to the pad boxes and a valve system including an independent valve for controlling the clutch of the turret indexing mechanism independently of the fluid pressure connections to the turret stations.

3,516,102

METHOD OF MAKING STREET SHOES

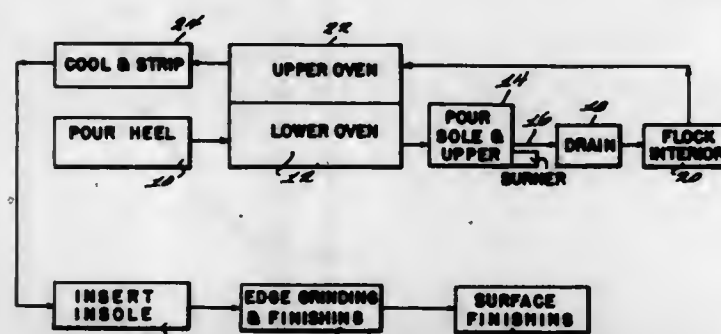
Terry Allen Mosher, Atlanta, Ga., assignor, by means assignments, to Imaginering Industries, Inc., St. Louis, Mo., a corporation of Missouri

Filed June 15, 1967, Ser. No. 646,307

Int. Cl. B29d 3/00; A43d 65/00

U.S. Cl. 12-142

5 Claims



A method for making slush molded plastic type street shoes which includes pouring plastisol into the sole and heel cavities of a suitable mold, heating the mold, pouring plastisol into the mold in quantities sufficient to form the upper portion of the shoe, dumping excess plastisol from the mold, flocking the interior surface of the resinous shoe in the mold, heating the mold to fuse the resinous material in the mold, stripping the shoe from the mold and finishing the collar of the shoe by and solvent treatment to impart a roller-over or bulbous configuration thereto.

Additionally the outer surface of the shoe can be sprayed with a pigment composition to achieve a cordovan or antique finish.

3,516,103
DOCKBOARD

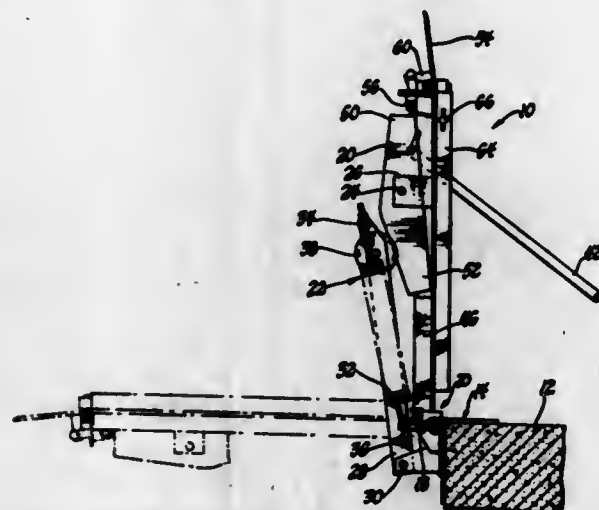
Robert W. Hecker, Jr., Clare, Mich., and Robert C. Beckwith, Milwaukee, Wis., assignors to Loomis Machine Company, Clare, Mich., a corporation of Michigan

Filed May 8, 1968, Ser. No. 727,561

Int. Cl. B65g 11/00

U.S. Cl. 14-71

15 Claims



A dockboard for a loading dock including a support structure with a ramp pivotally connected to the support structure for movement between a raised position and dock level or cross traffic position where traffic may move between the dock and a vehicle disposed adjacent the

dock. A cam is rotatably connected to the ramp and a lift arm is pivotally attached to the support structure. A roller is rotatably connected to the lift arm and engages the cam. Springs are attached to the lift arm for biasing the lift arm to pivot upwardly. A handle is operatively supported on the ramp and rotates a rod having a crank arm on the end thereof. The crank arm engages the cam for rotating the cam upon movement of the handle. The cam has a peripheral configuration for coacting with the roller so that the springs acting through the lift arm will raise the ramp upwardly from the cross traffic position when the handle is rotated to rotate the cam. The forces applied by the springs are not sufficient, however, to raise the ramp when in the cross traffic position unless the cam is rotated.

3,516,104

WASHING AND DRYING APPARATUS

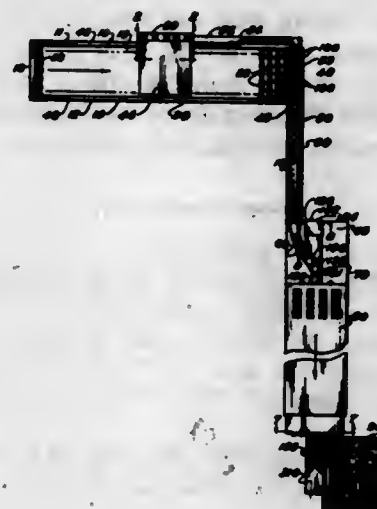
Howard H. Hobbs and Calvin S. Kunkle, Tipton, Ind., and Aclal L. Cataline, Canton, Ga., assignors to Bramco Inc., Canton, Ga., a corporation of Georgia

Filed Oct. 10, 1966, Ser. No. 585,657

Int. Cl. A01h 43/00; A23n 13/00

U.S. Cl. 15-3.13

6 Claims



An egg inspection, washing and drying machine including a cross loader for arranging the eggs in transversely spaced rows, a washing and drying assembly, a helix conveyor for passing the eggs in single file through the washing and drying assembly with the major axis of each egg angularly oriented to the path of travel of the eggs while rotating the egg about its major axis, and a transfer mechanism to transfer the eggs from the cross loader to the helix conveyor in single file.

3,516,105

AUTOMATIC DEVICE FOR WASHING MOTOR VEHICLES PASSING THERE THROUGH

Gebhard Weigle, Bismarckweg 2, Augsburg, Germany, and Johann Seitzberger, Mozartstrasse 17, Steppach, near Augsburg, Germany

Filed May 7, 1968, Ser. No. 727,220

Claims priority, application Germany, Dec. 16, 1967, W 45,358

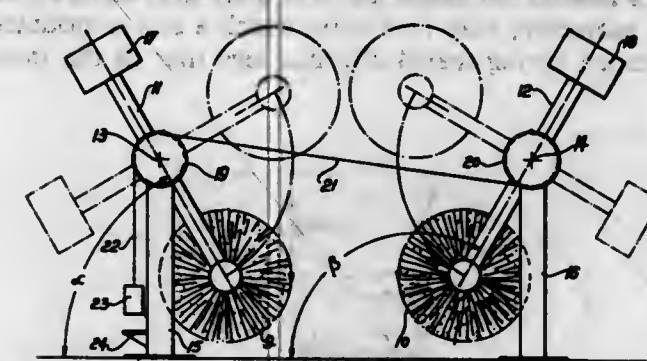
Int. Cl. B60s 3/06

U.S. Cl. 15-21

9 Claims

This invention relates to a washing device for motor vehicles of the type having a large rotating brush vertically movable by orbiting about a horizontal axis. In the device of the invention, at least two such brushes are provided, same being movable orbitally around two spaced axes and interconnected so that upward movement of the first brush to be engaged by a vehicle passing through a

washing line will effect corresponding upward movement of the other brush but downward movement of said first



brush will permit but not cause downward movement of the second brush.

3,516,106

TOOL FOR DRESSING FRESHLY CUT MEAT

Thomas A. Roofaro, 135 N. Millvale Ave., Pittsburgh, Pa. 15224

Filed Nov. 9, 1967, Ser. No. 681,757

Int. Cl. A22c 17/00

U.S. Cl. 15-236

2 Claims



Tool comprises a resilient plastic sheet having a portion adapted to be manually grasped and one or more working edges each having a greater thickness at its extremity than the remainder of the sheet. Tool is utilized by passing one working edge thereof along the surfaces of freshly cut meat slices or pieces to remove bone dust, loose fat particles, etc. therefrom.

3,516,107

PILE LIFTER FOR A FLOOR CARE MACHINE

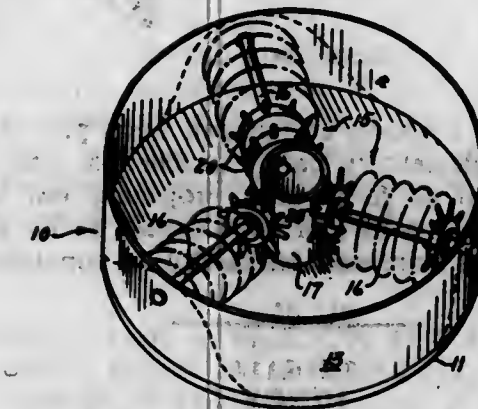
Frank K. Bayless, Darien, Conn., Raymond Descaries, Montreal, Quebec, Canada, R. Erik Ohlson, Stamford, Conn., and James Anderson, Bale d'Urfe, Quebec, Canada, assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Filed Jan. 31, 1968, Ser. No. 701,911

Int. Cl. A41l 13/00

U.S. Cl. 15-246

6 Claims



A pile lifter which is attached to a floor care machine in place of the rug shampoo brushes for lifting the matted pile of a rug. The mounting disc of the pile lifter is rotated by the floor care machine and a plurality of wheels having a number of radially projecting resilient pegs, which are in engagement with the matted pile, are rotated about a radial axis of the mounting disc thereby agitating the matted rug so that the pile resumes its normal upstanding position.

3,516,108

BOTTLE CLEANING MACHINE

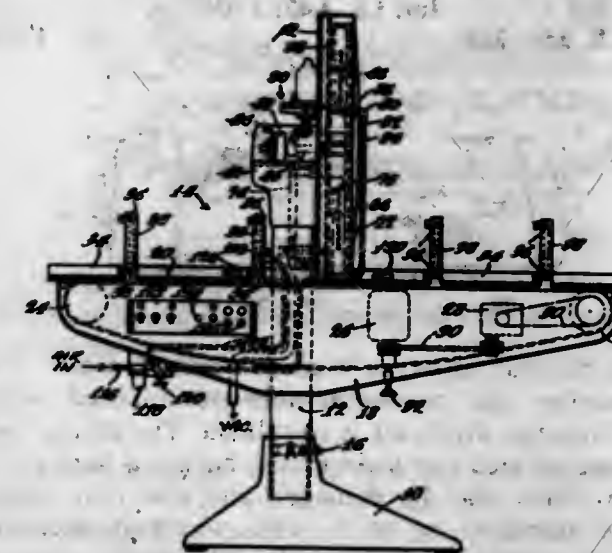
George F. Loebler, Barrington Hills, Ill., assignor to Thomas Machinery Corporation, Hoffman Estates, Ill., a corporation of Illinois

Filed Sept. 26, 1967, Ser. No. 670,652

Int. Cl. A47l 15/00; B67c 1/00

U.S. Cl. 15-304

11 Claims



The bottle cleaning machine comprises a horizontal conveyor for delivering bottles in upright position to and from a bottle inverting wheel disposed transversely of the conveyor intermediate its length. The wheel has spaced pockets for receiving the bottles one by one and carrying them to an inverted position and back to an upright position. Automatic air jet means are associated with the wheel pockets for supplying a blast of cleansing air or other fluid to the interior of each bottle while in an inverted position, and means are provided for collecting and removing debris blasted from the bottles.

3,516,109

DUST MITT CLEANING ATTACHMENT FOR A VACUUM CLEANER AND THE LIKE

Robert J. Clarke, 434 S. Hart St.,

Palatine, Ill. 60067

Filed Sept. 27, 1967, Ser. No. 670,891

Int. Cl. B08b 11/02

U.S. Cl. 15-310

5 Claims



A vacuum cleaning device for a dusting mitt including a housing having a first aperture connectable to a vacuum cleaner, a second aperture adapted to suspend the dusting mitt actuation of the vacuum cleaner causing drawing off of dust and dirt from the mitt.

3,516,110 HORIZONTAL TANK-TYPE VACUUM CLEANER HAVING SOFT COVERING

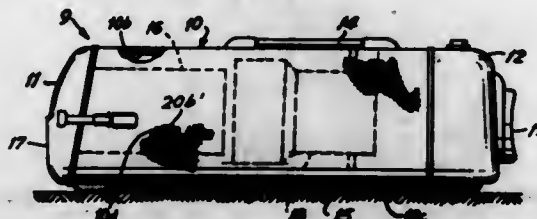
Bengt Erik Nilsson, Hagersten, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Filed Nov. 14, 1966, Ser. No. 594,128
Claims priority, application Sweden, Nov. 18, 1965,
14,919/65

Int. Cl. A47I 5/00

U.S. Cl. 15-325

1 Claim



In horizontal tank-type vacuum cleaners, a dust collecting member and motor-fan unit are disposed within a casing through which air is circulated. The casing usually is formed of metal or rigid plastic having a hard outward surface which may be damaged and also may injure or damage furniture or walls with which it accidentally comes in contact during use. To effectively reduce such injury and damage, the hard outward surface of the casing is provided with a soft covering formed of material that yields and moves inward responsive to physical force applied to its outward surface. The soft covering, which may be formed of elastomeric material, includes an inner portion and an outer portion, the inner portion being softer than the outer portion and recessed to enhance its softness.

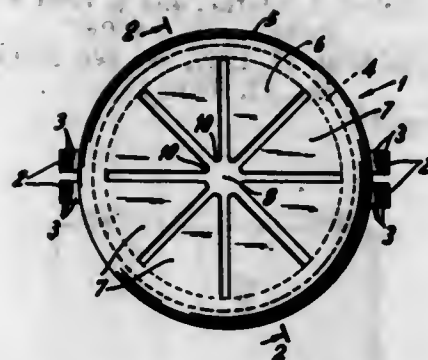
3,516,111 UNIVERSAL BUSHING

Kerry Heyman, Summit, N.J., assignor to Heyman Manufacturing Company, Kenilworth, N.J., a corporation of New Jersey

Filed Dec. 22, 1967, Ser. No. 692,854
Int. Cl. F16I 5/00

U.S. Cl. 16-2

1 Claim



A new self-locking bushing adapted to be fitted into an aperture in a panel, the bushing having an opening therethrough and a plurality of supports radiating about an epicenter in the bushing opening with the supports substantially covering the area of the opening in the bushing, the supports adapted to yield in resilient engagement with an element extending through the bushing opening.

3,516,112 ACOUSTIC DAMPING GLIDE

Donald G. Neville, Los Angeles, Calif., and Ernest J. Straits, St. Charles, Ill., assignors to Plastiglide Mfg. Corp., Santa Monica, Calif.

Filed Feb. 10, 1966, Ser. No. 526,507

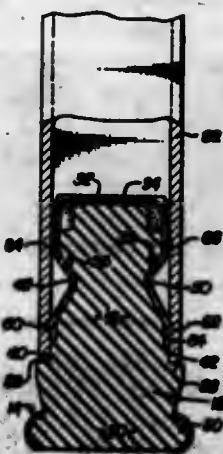
Int. Cl. A47b 91/06

U.S. Cl. 16-42

39 Claims

The acoustic damping glide includes a body made of acoustic damping material having a high bulk modulus of

elasticity. The body has an insert part that fits into the end of a tubular furniture leg. The body also has a downwardly projecting base part upon which a cap is mounted. A U-shaped spring-sealed clip has legs that fit the insert



part. Insertion of the glide constricts the insert part whereby the side surfaces bulge outwardly firmly to lock the leg whereby the weight is transmitted to the body substantially independently of the shoulder.

3,516,113 PROJECTING RAIL

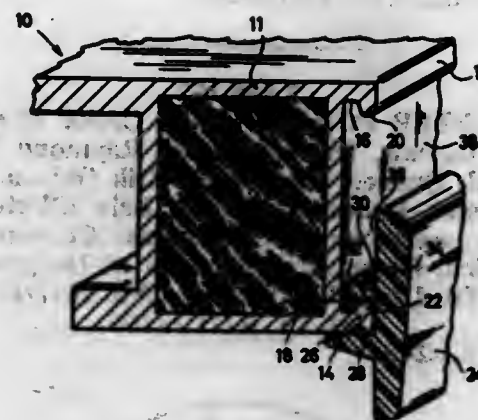
Wilhelm Hachtel, 6994 Niederstetten, Germany

Filed Mar. 8, 1968, Ser. No. 711,700
Claims priority, application Germany, Mar. 25, 1967,
H 62,252

Int. Cl. A47h 1/04, 15/00

U.S. Cl. 16-94

10 Claims



A portion of a known curtain rail has a pair of guide ledges. A supplementary bar is attached to one of the guide ledges so as to form a projecting rail with a guide groove having its rear wall formed by the curtain rail body and its front wall formed by the supplementary bar.

3,516,114 HINGE

Edward F. Joyce III, 114 Beach St., Rockaway, N.J. 07866

Filed Oct. 14, 1968, Ser. No. 767,245

Int. Cl. E05d 9/00

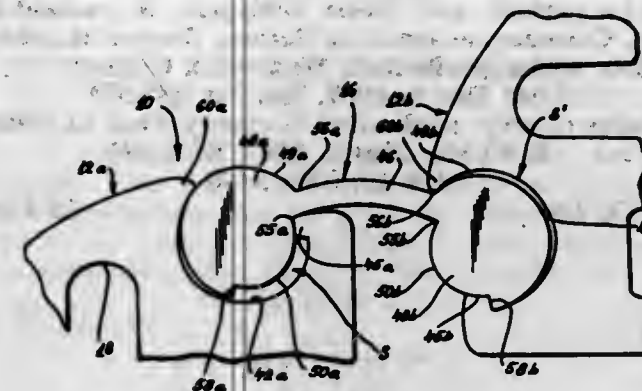
U.S. Cl. 16-150

8 Claims

A hinge assembly has a bridge type pintle formed with cylindrical edges having two radii of curvature to define radial abutments. The edges of the pintle rotate in cylindrically curved sockets of hinge members. The sockets are formed with radial abutments. When the hinge is closed opposite edges of the sockets engage edges of the

pintle. When the hinge is opened, abutments of the pintle and hinge members engage in cooperation with engage-

another endless chain. Both chains move at equal speed and in different senses, with the rigid forming elements and the ribbon extending with said sheet between them



3,516,115 PLASTIC HINGE

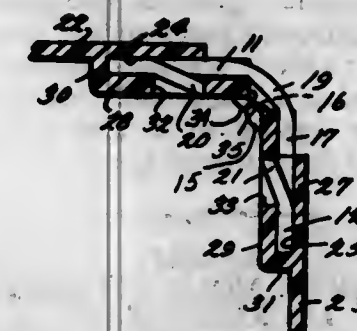
Otto Koleske, Sunbury, Pa., assignor to Wilson Manufacturing Corporation, Sunbury, Pa., a corporation of New York

Filed Apr. 24, 1968, Ser. No. 723,868

Int. Cl. E05d 1/02

U.S. Cl. 16-150

7 Claims



A hinge molded from one of the memory plastics to be used primarily with plastic containers. One leaf of the hinge fitting a recess in the base of the container and the other leaf fitting a recess in the cover. Each leaf of the hinge provided with means cooperating with the recesses in the base and cover of the container to hold the hinge in its assembled position. Stop straps having each of their ends connected to one of the leaves and having a body portion unconnected to the hinge and extending over the pivot point of the hinge. The straps being thickened at their middle portion and controlling the normal opening of the cover to substantially 90° but permitting the cover to be opened to a greater angle without damaging the container parts.

3,516,116 DEVICE AND A PROCESS FOR CONTINUOUSLY FORMING A SHEET OF THERMOPLASTIC MATERIAL

Jacques E. Ledyjanski, 22 Rue Heyvaert, Brussels, Belgium

Filed Feb. 24, 1967, Ser. No. 618,490

Claims priority, application Luxembourg, Mar. 31, 1966,
50,798

Int. Cl. B29c 17/02

U.S. Cl. 18-4

1 Claim

Device for continuously forming a sheet of thermoplastic material in which the sheet is fed, transported and compressed between rigid forming elements mounted on an endless chain and an endless ribbon mounted on



over a sufficient length for the sheet, which cools during its transport along the said length, to remain formed at the end of the latter.

3,516,117 APPARATUS FOR BEDDING A PANEL INTO A FRAME

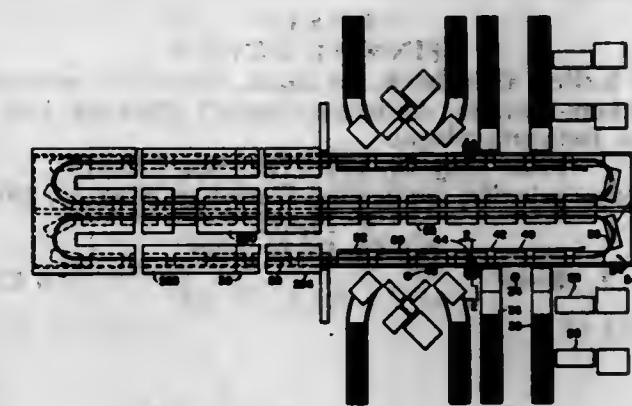
Howard J. Shockey, 1218 Seneca Road, Benton Harbor, Mich. 49022

Filed Aug. 4, 1967, Ser. No. 672,946

Int. Cl. B29c 3/02, 6/04; B31b 31/02

U.S. Cl. 18-4

14 Claims



The apparatus comprises conveyor means for supporting and moving a plurality of fixtures. Each of the fixtures includes a frame mounting member and a panel mounting member which are relatively movable. Means are positioned adjacent to the conveyor for injecting a metered amount of heat curable liquid bedding material into the channel of a frame as the fixture carrying the frame passes thereby. Fixture closing means are positioned adjacent to the conveyor to move the fixture mounting members towards each other after the panel and frame have been mounted and the bedding material has been injected to position a marginal edge portion of the panel in the frame channel. Heating means are then provided to elevate the temperature of the bedding material and cure it to a solid form.

3,516,118 BLOW EXTRUSION APPARATUS

Pierre-Henri Gallay, Neuilly-sur-Seine, France, assignor to Mecaplast S.A., Geneva, Switzerland, a Swiss body corporate

Filed Aug. 2, 1967, Ser. No. 657,809

Claims priority, application France, Aug. 4, 1966,
72,155

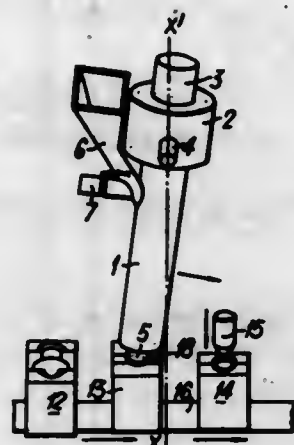
Int. Cl. B29c 17/07; B29d 23/03

U.S. Cl. 18-5

6 Claims

The disclosure relates to a blow extrusion apparatus in which a parison is extruded into a blowing mould, the

extrusion head being moveable along a path corresponding in part to the path of movement of the moulds, which may be moved on a straight path and the extruder oscillate about a horizontal axis above the moulds, whereby



the extrusion head contacts one of the moulds for a short period. Alternatively the moulds are on a rotary table and the extruder rotates through a small angle with its head in contact with a mould.

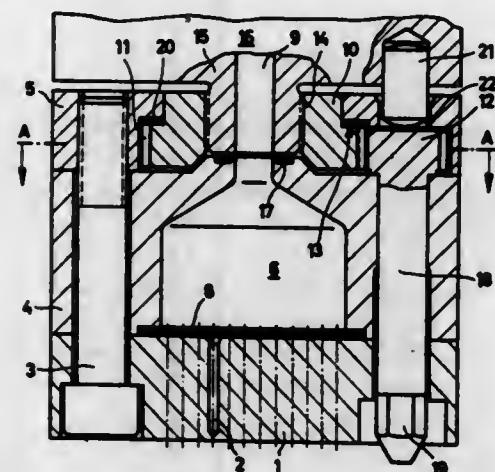
3,516,119 SPINNING DEVICE

Willi Keller, Offenbach am Main, Germany, assignor to Vickers-Zimmer Aktiengesellschaft Planung und Bau von Industrieanlagen

Filed May 10, 1968, Ser. No. 728,119
Claims priority, application Germany, May 22, 1967, V 33,693

Int. Cl. D01d 3/00

U.S. Cl. 18-8



This invention relates to a spinning apparatus for the manufacture of synthetic fibers and the like from molten synthetic polymers. The spinning apparatus has an outlet for the molten synthetic material to be spun and a nozzle block operatively attached to the outlet. The nozzle block comprises a cover plate, a filter casing, and a nozzle plate, which are secured together, respectively, by a securing means. A rotatable threaded annular sleeve means is seated and retained in a recess in the cover plate. A rotating means is provided in the nozzle block for rotating the annular sleeve means which has threads on its inner annular surface to thereby secure the nozzle block to the outlet for the molten synthetic material.

3,516,120 EXTRUSION DIE FOR UNDERWATER GRANULATOR

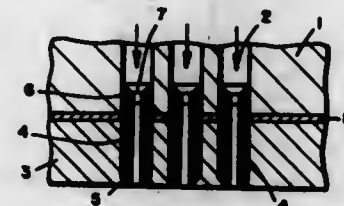
Siegfried Braun, Wupperfurth, Friedrich Ruppel, Wuppertal-Langerfeld, and Heinz Schippers, Remscheid-Lennep, Germany, assignors to Dornag Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal, Germany

Filed Dec. 6, 1967, Ser. No. 688,511
Claims priority, application Germany, Dec. 14, 1966, B 90,300; May 2, 1967, B 92,331

Int. Cl. B29f 3/00

U.S. Cl. 18-12

19 Claims



An extrusion die for an underwater granulator having the usual distributor block in which a synthetic thermoplastic polymer is maintained in molten form, a nozzle plate attached to the block and containing a number of elongated bores or channels through which the molten polymer is extruded to emerge at the face of the die for contact with a cooling fluid thereon, e.g. a bath or spray of water, and cutting means in close proximity to the die face to cut the extruded polymer into granules, wherein plugging of the extrusion bores and/or improper cooling of the extruded plastic is prevented by an inner liner or bushing composed of a heat-resistant material having low heat conductivity applied to at least a portion of the length of each of the extrusion bores.

3,516,121 TIRE RETREADING MOLD APPARATUS HAVING LOCKING MEANS

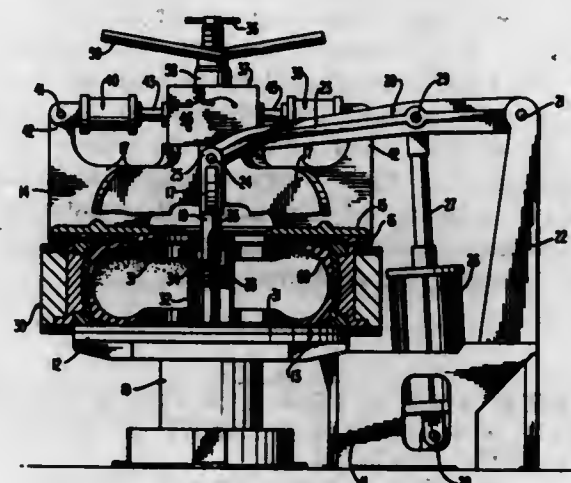
John R. Mattox, Rte. 3, Box 208-A 28210, and Thomas W. Mattox, 7205 Marley Circle 28214, both of Charlotte, N.C.

Filed June 13, 1968, Ser. No. 736,783

Int. Cl. B29f 5/04

U.S. Cl. 18-18

11 Claims



A tire retreading mold structure in which a lower base or stand supports the full circle mold components and the latter are clamped and secured by an overhead clamping unit which is shiftable between inactive and active positions. To eliminate friction and wear on vital parts and to reduce manual labor, a power-operated low friction device is activated to force the clamping unit against

the mold components with great force and thus eliminating the necessity for locking by the manual operation of a heavy clamping nut.

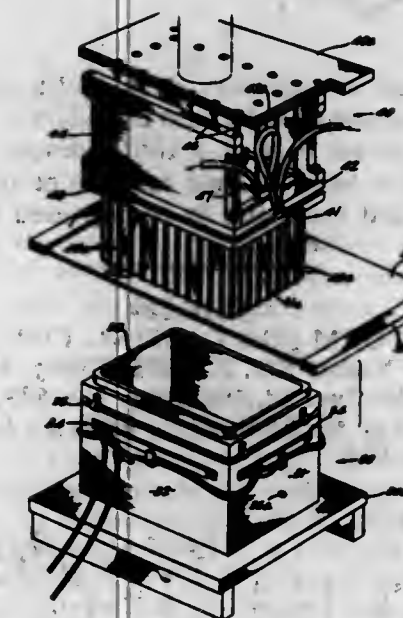
3,516,122 APPARATUS FOR MAKING INTEGRAL CONTAINERS HAVING PARALLEL VERTICAL WALLS

Jacob L. Schwartz, Covina, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Original application Oct. 18, 1963, Ser. No. 317,355, now Patent No. 3,400,111, dated Sept. 3, 1968. Divided and this application May 22, 1967, Ser. No. 640,245

Int. Cl. B29c 17/00

U.S. Cl. 18-19

10 Claims



Adjustable tooling including a male plug of generally rectangular configuration having essentially parallel outer walls; a forming ring circumferentially encircling the male plug and slidable relative thereto; a female die cooperable with the male plug and the forming ring for integrally forming a container having essentially parallel vertical walls; and means for fastening the forming ring at a selected position of adjustment on the male plug corresponding to a selected vertical height of containers to be formed.

3,516,123 INJECTION MOLDING MACHINE

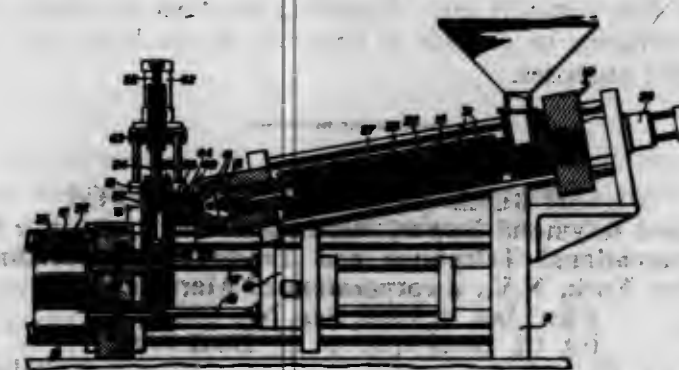
Theo O. Lang, 42 Pleasant Terrace, Leominster, Mass. 01453, and George E. Quist, 120 Worcester St., West Boylston, Mass. 01583

Filed Oct. 3, 1966, Ser. No. 583,524

Int. Cl. B29f 1/04

U.S. Cl. 18-30

11 Claims



This disclosure relates to an injection molding machine for producing thin-walled containers and the like through

the use of high impact energy and having individual metering apparatus associated with each of a plurality of cavities.

3,516,124 CONNECTOR FOR HOLDING ARTICLES TOGETHER

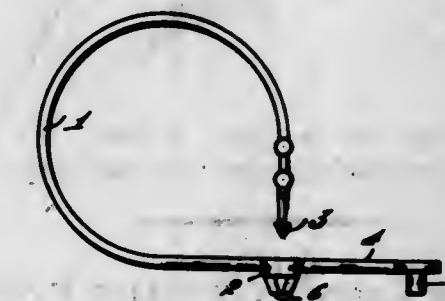
Francis G. Mercer, Framingham, Mass., assignor to Denison Manufacturing Company, Framingham, Mass., a corporation of Nevada

Filed Apr. 18, 1968, Ser. No. 722,321

Int. Cl. B65d 63/00

U.S. Cl. 24-16

4 Claims



A connector comprising a filament having a socket on one end, a head on the other end to snap into the socket and leading from the socket an extension having a protuberance which is expandable to anchor the connector in an opening in a tag or other article.

3,516,125 FASTENER MOUNTING

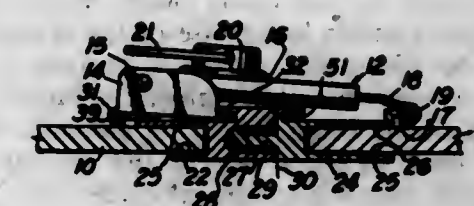
Ernest Schuster, 74 Edwards Road, Troy, N.Y. 12180

Filed Sept. 19, 1968, Ser. No. 760,835

Int. Cl. A44b 21/00

U.S. Cl. 24-73

10 Claims



A bracket for carrying a retractable hasp member mounted on a novel edging strip for a panel without need for holes. Novel means for mounting the bracket on the strip include a tongue in a strip channel and a hook over a strip flange to take the load, and a lock prong to hold the hook and tongue in such position. Usual fastening action may be used to mount the bracket.

3,516,126 GARMENT HANGER COUPLING

Abe Berkovitz, 4864 N. Shoreland, Whitefish Bay, Wis. 53217

Filed Oct. 30, 1968, Ser. No. 771,867

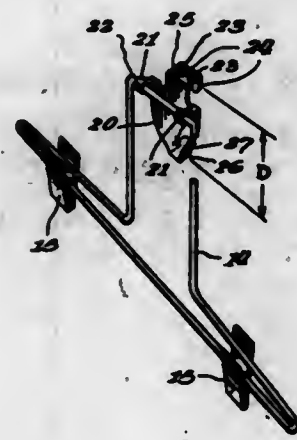
Int. Cl. A41j 51/08

U.S. Cl. 24-84

6 Claims

A clasp that couples an auxiliary clothes hanger to a primary clothes hanger. The clasp and the auxiliary hanger may be clipped and unclipped onto a garment hanger to form a composite garment hanger. Therefore one com-

posite garment hanger is able to keep a set of clothes together such as a woman's blouse and matching skirt or



a man's suit coat and matching trousers. The auxiliary hanger may be rotatably mounted on the clasp.

3,516,127

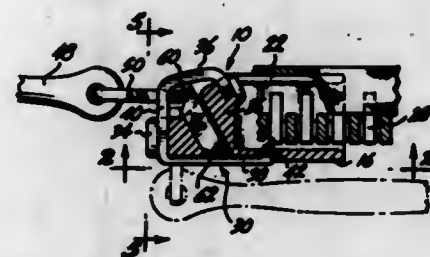
SLIDER FOR A CONCEALED SLIDE FASTENER
Robert B. Howell, 2115 Madrona Point Drive,
Bremerton, Wash. 98310

Filed Feb. 28, 1968, Ser. No. 708,968

Int. Cl. A44b 19/30, 19/32

U.S. Cl. 24-205.14

16 Claims



The slider includes a pull tab mounting ring movable over an endwise protruding portion of the slider's separator into a position in which it surroundingly engages such portion and the pull tab is hidden behind the slider. A spring beam extends lengthwise of the separator, rearwardly of the slider, and carries a locking pawl at its inner end. A ring mount is integrally attached to the opposite end of the beam. This ring mount-locking pawl member is received in a slot in the separator and is clamped tightly between the metal pieces between which the slot is formed.

3,516,128

APPARATUS FOR MOLDING AND ALIGNING PRISMATIC BRICKS HAVING A SUBSTANTIALLY TRAPEZOIDAL BASE

Erwin Lehner, Linz, Austria, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria

Filed Jan. 23, 1968, Ser. No. 699,903

Claims priority, application Austria, Feb. 9, 1967, A 1,231/67

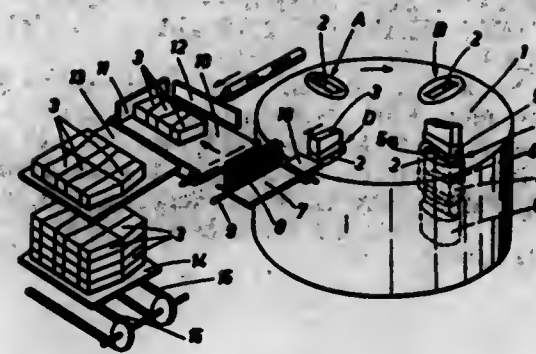
Int. Cl. B28b 5/08

U.S. Cl. 25-67

6 Claims

A mounting plate carries an even number of molds and is horizontally movable into a plurality of positions, in which each of said molds is associated with one working station. Each of the molds comprises a lower die. One of said stations comprises an upper die and a ram, which is vertically reciprocable to repeatedly force said upper die and said lower die in said one station against each other in successive molding operations. The upper die and said lower die in said one station have confronting molding faces for molding oblique side faces of a brick. The mold-

ing faces of said lower dies of adjacent molds are offset by an angle of 180° about a vertical axis. The upper die is rotatable through 180° about a vertical axis between successive molding operations. Another station comprises an ejector operable to eject molded bricks from said mold in



said other station, a delivery table, and a pusher operable to push thus ejected bricks onto the delivery table. The delivery table forms part of a tilting device, which is tiltable to cause a brick on said table to be tilted to rest on the base of said brick and to be delivered to a conveyor.

3,516,129

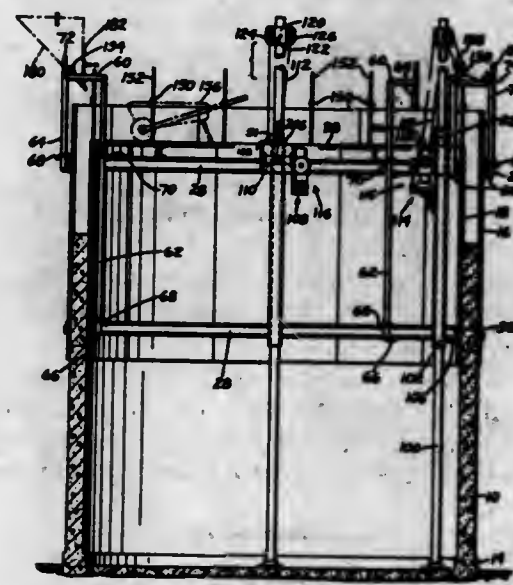
SLIP FORM FOR CASTING CONCRETE
Harvey H. Yoder, Rte. 2, West Liberty, Ohio 43357

Filed Jan. 22, 1968, Ser. No. 699,474

Int. Cl. E04h 7/26; E03b 11/00

U.S. Cl. 25-124

15 Claims



Slip form for casting concrete in which spaced form parts are detachably interconnected and stationary posts adjacent one of said form parts slidably carry frames which are connected to the adjacent form part and which carry winch structures, the winch structures being operable to move the form vertically, electric motors for the winch structures having float switches in circuit therewith, and conduits interconnecting the float chambers of the switches to provide a common liquid level for all control purposes.

3,516,130

FLASH BULB ASSEMBLY APPARATUS

Richard Raymond Bower, Northridge, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland

Filed Jan. 4, 1968, Ser. No. 695,673

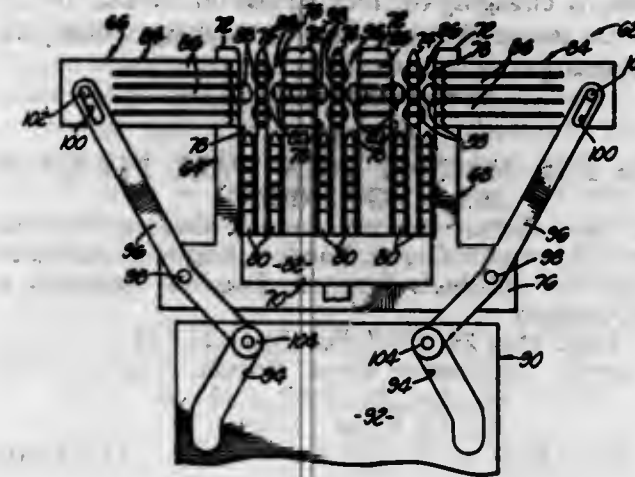
Int. Cl. H01j 9/06; 9/10; H01l 9/46

U.S. Cl. 29-25.19

5 Claims

Apparatus for assembling a plurality of flash bulbs having leads projecting therefrom in generally parallel relationship to a base of a flash bulb assembly having holes therein for receiving said leads. The apparatus has

two sets of spaced, generally parallel fingers mounted for movement at an angle with respect to each other. When the sets of fingers are moved to extend between the leads



of the bulbs, the leads become confined in interstitial openings defined by the spaced fingers, which openings are in registry with the holes in said base.

3,516,131

APPARATUS FOR ASSEMBLING A MULTI-ELEMENT ELECTRON GUN MEMBER

Hidehiko Yoshida, Chigasaki-shi, and Shinichi Sawagata, Tokyo, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan

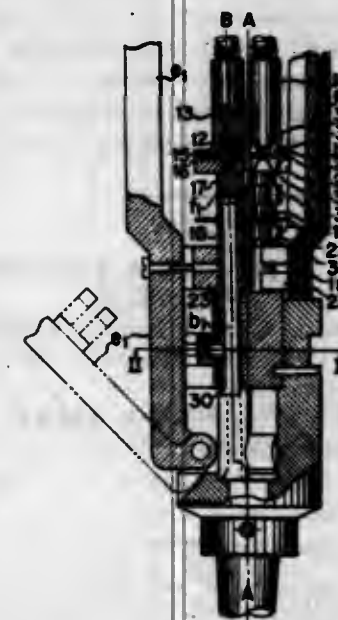
Filed Mar. 18, 1968, Ser. No. 713,782

Claims priority, application Japan, Mar. 23, 1967, 42/23,580

Int. Cl. H01j 9/06, 9/48

U.S. Cl. 29-25.19

1 Claim



An apparatus for assembling a multi-element electron gun member wherein a gauge provided with a plurality of grooves is fixed to a jig body, each central rod is fitted into each groove in such a manner that the extensions of said rods intersect each other at a point, a support member is slidably engaged with the free end of each rod, the circumferential surface of the support member being so constructed as to secure the parts of each electron gun unit with spacers, and support devices are fitted to the jig body for locating said parts in the prescribed position.

3,516,132

PROCESS FOR PRODUCING CRYOGENIC CAPACITORS

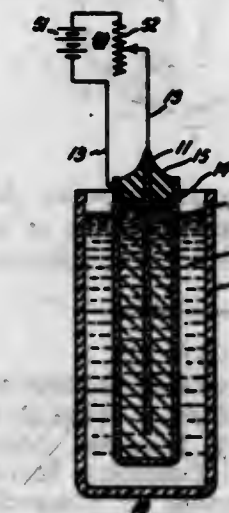
Kenneth N. Mathes, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 8, 1968, Ser. No. 719,541

Int. Cl. H01g 13/00

U.S. Cl. 29-25.41

3 Claims



A superior low temperature capacitor device is produced by surrounding a plurality of electrodes with a liquid consisting of 1-nitropropane or a mixture of 1-nitropropane and isopentane and then applying a direct voltage bias while cooling the device to temperatures below about -100° C.

3,516,133

HIGH TEMPERATURE BULK CAPACITOR

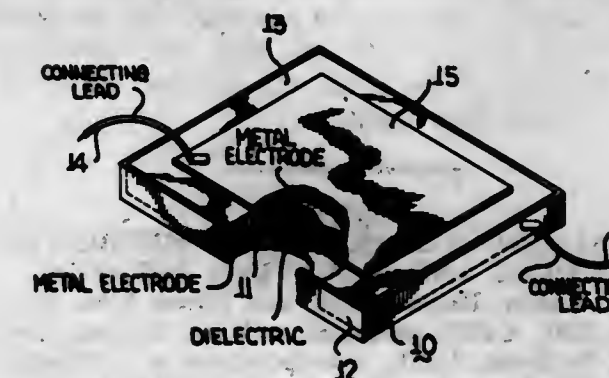
Richard C. Smith, Dayton, and Charles W. Moulton, Columbus, Ohio, and Charles Feldman, Alexandria, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed Oct. 18, 1967, Ser. No. 676,261

Int. Cl. C03b 19/00; C03c 29/00; H01g 13/00

U.S. Cl. 29-25.42

10 Claims



Process of forming a bulk capacitor having stable electrical properties over a wide temperature range, in which the dielectric material is a rare earth sesquioxide-boric oxide glass. The glass is formed in any desired geometrical shape by molding, drawing or extruding techniques, and appropriate conductive electrodes attached.

3,516,134

ADJUSTABLE SPOT FACER

Helmut C. Heuser, Birmingham, Mich., assignor to Bokum Tool Company, Inc., Madison Heights, Mich., a corporation of Michigan

Filed May 13, 1968, Ser. No. 728,719

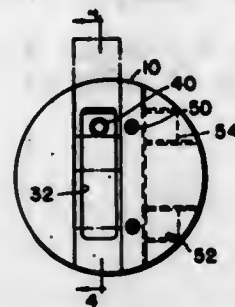
Int. Cl. B26d 1/12; B23b 5/22, 29/02

U.S. Cl. 29-105

10 Claims

A spot facer comprising a rotatable holder having a slot at one end adapted to receive a spot facer blade to extend beyond either end of the slot or beyond the end

of the holder. The blade is coupled to an adjusting block secured to an internally threaded adjusting spool which is movable by rotation of an adjusting screw. The adjusting



block is provided with spaced grooves and the blade carries a pin selectively received in one or the other of said grooves to couple the blade to the adjusting block.

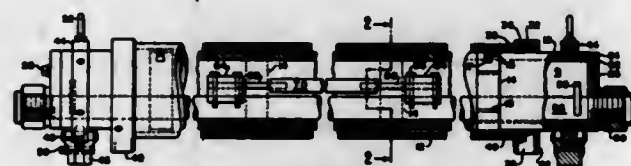
3,516,135

ROLL WITH VIBRATION DAMPING MEANS

James O. Gallant, Rehoboth, George P. Knapp, Waban, and Francis A. Depuy, Somerset, Mass., assignors to Mount Hope Machine Company, Incorporated, Taunton, Mass., a corporation of Massachusetts
Filed Apr. 16, 1968, Ser. No. 721,678
Int. Cl. B21b 13/02

U.S. Cl. 29-116

10 Claims



A roll has means for damping vibrations, comprising a paddle which is mounted by a spring suspension within a fluid-filled chamber inside a stationary axle. The paddle has small clearances with the walls of the chamber and absorbs vibratory energy from the roll by pumping fluid through these clearances at high velocity. The effective spring rate of the paddle suspension may be selected such that the natural frequency of vibration of the paddle equals that of the roll. The roll may have anti-friction or fluid bearings; if the latter, the chamber serves as a reservoir for the fluid supply.

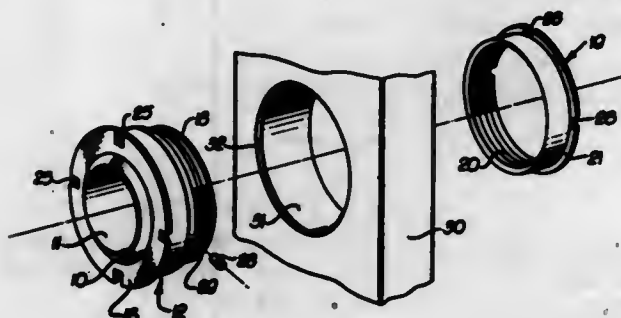
3,516,136

SELF-ALIGNING BEARING AND METHOD OF FORMING AND MOUNTING THEREOF

Willard J. Carter, Decatur, Ga., and Edwin John Turner, Culver City, Calif., assignors to Kahr Bearing Corporation, Burbank, Calif., a corporation of California
Filed June 28, 1968, Ser. No. 741,063
Int. Cl. B23p 11/00; B21d 53/10

U.S. Cl. 29-149.5

10 Claims



A self-aligning bearing and a method of forming and mounting such self-aligning bearing in a housing opening in which a bearing outer race member is formed around a generally spherical inner ball member by forming a flange

at one end of the race member, undercutting and externally threading the other end of the race member, forming a locking nut having complementary internal threads and a flange, and positioning the race member and the inner ball member within a housing opening and threadedly engaging the locking nut on the race member so as to secure the self-aligning bearing within the housing opening.

3,516,137

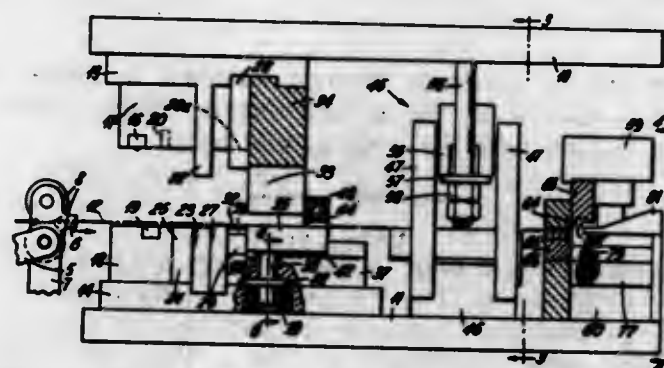
METHOD FOR MAKING THIN WALL FLEXIBLE BEARING LINERS

Norman Ernest Fisher, Harrow, John Whiteside, Naphill, and David Frederick Green, London, England, assignors to Vandervell Products Limited, London, England, a British company

Filed May 29, 1967, Ser. No. 641,945
Claims priority, application Great Britain, June 3, 1966, 24,949/66; Jan. 20, 1967, 3,207/67
Int. Cl. B21d 53/10

U.S. Cl. 29-149.5

13 Claims



The invention provides a method of making thin walled flexible bearing liners in which a strip of material is fed step-by-step past a station at which portions of the strip are rendered arcuate whilst the strip is stationary and at a station at which arcuate portions are severed from the strip whilst the strip is stationary. The operations of rendering the strip arcuate and severing an arcuate portion from the strip are carried out at different times whilst the strip is stationary between movements so that longitudinal spreading of the strip caused by rendering a portion arcuate is not impeded by the severing operation.

3,516,138

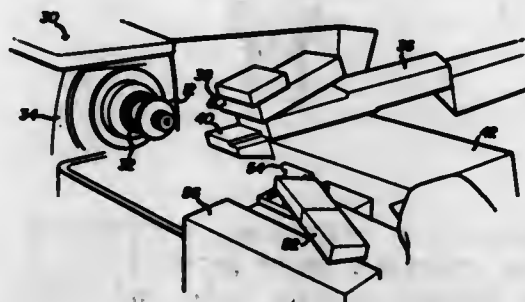
METHOD OF MACHINING A TWO PIECE PULLEY ASSEMBLY

Raymond A. McCarroll, Grosse Pointe Woods, Mich., assignor to Acme Precision Products, Inc., Detroit, Mich., a corporation of Ohio

Filed Apr. 17, 1967, Ser. No. 631,462
Int. Cl. B23b 3/28

U.S. Cl. 29-159

10 Claims



The disclosure provides a method of machining a workpiece having an irregular contour with circular symmetry by single point turning and single point cutting in which the workpiece rotates on a rotary support but remains in a fixed location throughout the turning and cutting steps. The method includes steps of engaging the workpiece with a turning tool, moving the turning tool along

the contour of the workpiece by causing a follower means operatively connected to the turning tool to follow a template which duplicates the contour of the workpiece, thereby machining the contour to predetermined dimensions, and disengaging the turning tool from the workpiece. Thus, the contour of the workpiece is machined to predetermined dimensions by a single point or tool which moves relative to the workpiece. The method further includes steps of engaging a surface of the workpiece with a cutting tool (for threading or boring), moving the cutting tool axially of the workpiece to cut a thread or bore a hole in the workpiece as the workpiece rotates, and disengaging the cutting tool from the workpiece. Thus, threading and/or boring of the workpiece is accomplished while the workpiece remains in the same location by means of a single point or tool which moves relative to the workpiece.

3,516,139

COIL FORMING APPARATUS

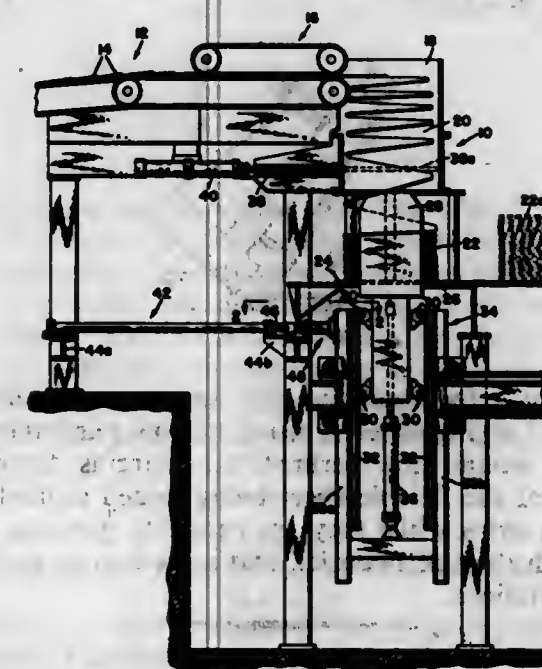
Edgar Harry Pratt, Hamilton, Ontario, Canada, assignor to Morgan Construction Company, Worcester, Mass.

Filed Jan. 30, 1968, Ser. No. 701,785

Int. Cl. B23p 19/00

U.S. Cl. 29-200

7 Claims



An apparatus for collecting rod into a coil after the rod has cooled from rolling heat through transformation in the form of offset overlapping rings on a continuously moving cooling conveyor. The rings drop in a helical formation from the delivery end of the conveyor onto a collecting table. A mandrel extends upwardly through a slot in the collecting table to axially receive each ring being deposited. A short lateral reciprocating motion is imparted to the mandrel while the coil is being accumulated on the table. This reciprocating motion shakes the coil and settles each ring into place, thus insuring substantially uniform density of the coil around its entire circumference.

3,516,140

WIRE WRAPPING TOOL

William D. Bohannon, Jr., Graham, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 1, 1967, Ser. No. 665,109

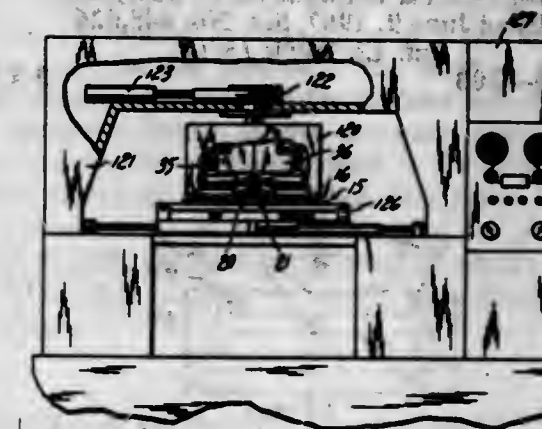
Int. Cl. H01r 43/04; B21d 11/06

U.S. Cl. 29-203

8 Claims

A tool for wrapping the end of a wire on a terminal has three concentric elongated members with the two inner members having aligned transverse slots formed

therethrough for receiving the end of a wire. The innermost member is moved upward with respect to the other members to lay the end of the wire longitudinally within a cavity in the tool. Upon lowering of the tool, the end



of a terminal is received in the cavity and engages an element which slides upward with the cavity to prevent the end of the wire from engaging the terminal within the cavity.

3,516,141

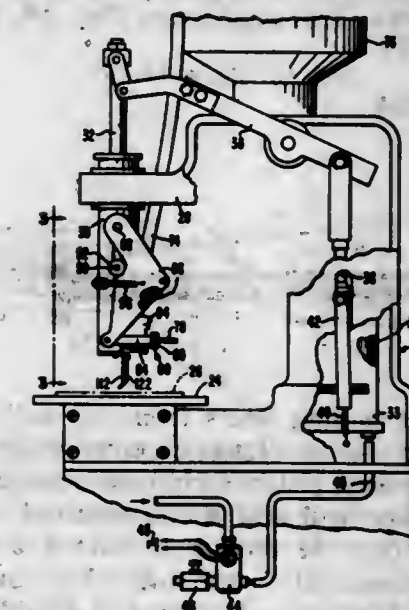
MACHINE FOR ASSEMBLING ELECTRONIC COMPONENTS WITH PRINTED CIRCUIT BOARDS

Jakob Rech, Detroit, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 8, 1968, Ser. No. 696,233

Int. Cl. H05k 13/00; B23q 7/10

U.S. Cl. 29-203

9 Claims



An assembling machine for delivering transistors singly to a vertically movable transistor holder which is movable downwardly from a retracted position to insert electrical leads of the transistor into designated holes of a printed circuit board. A stack of transistors disposed laterally of the holder, is biased downwardly by gravity and is in communication with a horizontal passage which is aligned with the holder when the holder is in a retracted position. Transistors are dispensed from the stack by a horizontal reciprocal pusher in the passage which allows the lowermost transistor to drop down and then be pushed along the passage into the holder. Between the pusher and the holder a pair of yieldable guide members, operated by the pusher, function to locate and steady a transistor as the transistor is being moved along the passage to the holder, thus making it possible to feed the transistor directly to the holder by the pusher which also functions as the transistor dispenser control member.

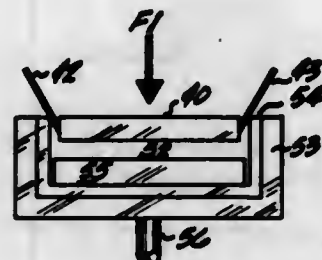
3,516,142

FLAT-PACK MANIPULATION TOOLS

Ralph A. DeRose, Villa Park, Anton J. Mottl, Berwyn, and Richard A. Madden, Hinsdale, Ill., assignors to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed June 9, 1967, Ser. No. 645,026
Int. Cl. H05k 13/04

U.S. Cl. 29—203

3 Claims



A hand-tool has a handle on one end and a pair of arm-like devices on the other end with means for imparting a linear motion to a flat-pack as it is inserted into or removed from a socket. For insertion, the pair of arms are lined with comb-like tines which straighten and support contacts on the flat-pack. For removal, the pair of arms include a bifurcated extractor having bent tips which fit under the flat-pack while it is being lifted.

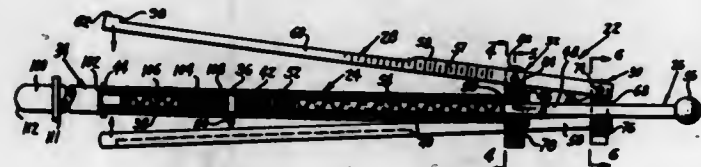
3,516,143

LINER PULLER

Daniel A. Lewallen, P.O. Box 312, Jonesboro, La. 71251
Continuation-in-part of application Ser. No. 571,102, Aug. 8, 1966. This application Dec. 19, 1967, Ser. No. 691,784
Int. Cl. B23p 19/04

U.S. Cl. 29—234

7 Claims



A device for pulling liners from oil well pumps and the like comprising an elongate center shaft with a hydraulically operated piston reciprocally received for extension from one end and a rod received reciprocally for extension from the other end thereof, a plurality of arms pivotally secured to the rod which extends from the other end of the center portion and slidably and pivotally secured to the center portion extending along the sides of the center portion by means of a threadably mounted sleeve on the center portion for engaging a liner and for pulling the liner out of a cylinder is disclosed.

3,516,144

FASTENER APPLICATOR

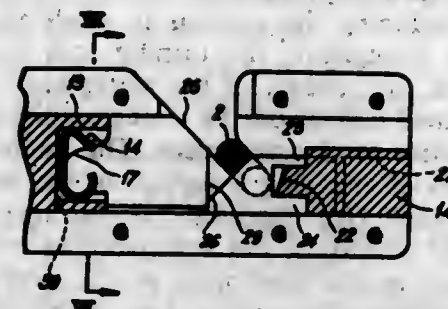
Gérard Normand, Maxonchamp par Rupt-sur-Moselle, Vosges, and Michel Boca, Cremanvillers par Vagny, Vosges, France, assignors to Société Française d'Agrafage Industriel, par abréviation Sofragraf, Saint-Arne, Vosges, France, a French body corporate
Filed Apr. 4, 1968, Ser. No. 718,766
Claims priority, application France, Apr. 6, 1967, 101,744
Int. Cl. B23p 11/00, 19/04; B23q 7/10

U.S. Cl. 29—243.57

6 Claims

A fastener applicator for applying fasteners having hooked shaped ends at one end and bowed portions at the other end to elastic cord and comprising a carrier ar-

ranged to receive the fasteners one at a time from a loader and to convey the fastener along a guide to engage the



cord in the bowed end and thereafter to engage the fastener with an anvil to close the fastener around the cord.

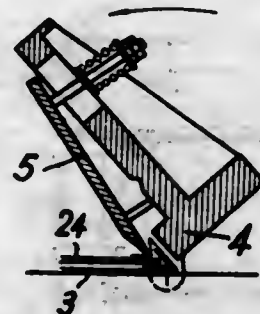
3,516,145

METHOD AND APPARATUS FOR STRETCHING AND SECURING FLEXIBLE SHEETS TO A STIFF SUPPORT

Lidro Ventura Villagrass, Calle Maestro Nicolau 7, Barcelona, Spain
Filed May 12, 1967, Ser. No. 638,006
Claims priority, application Spain, Jan. 17, 1967, 335,741
Int. Cl. B23p 11/00; B21d 39/00

U.S. Cl. 29—243.57

4 Claims



Apparatus for stretching and securing a flexible sheet to a stiff backing sheet by using narrow reinforcing strips inserted around the perimetrical margins thereof, the margins of the flexible sheet being folded around the reinforcing strips while they are bent into gripping engagement with the stiff material, and a method of performing these operations.

3,516,146

METHOD OF ASSEMBLING A HELICAL SCANNING ASSEMBLY

Alexander R. Maxay, Newark, Calif., assignor to Westel Company, San Mateo, Calif., a corporation of California
Filed June 19, 1968, Ser. No. 738,250
Int. Cl. B23p 19/00

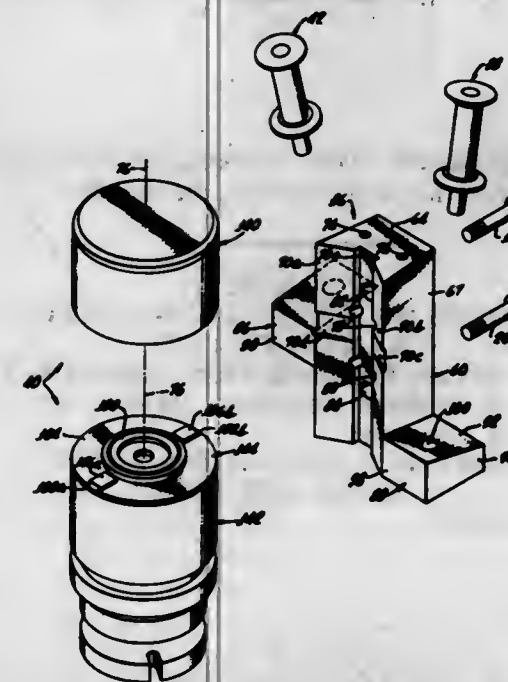
U.S. Cl. 29—434

21 Claims

A scanning assembly for a helical-wrap, drum-type, video tape machine includes entry and exit tape guides and a drum assembly interconnected by a bracket. The drum assembly includes upper and lower cylindrical male guides which butt against an elongate reference way on the bracket to align the axis of the drum assembly. The entry and exit guides are each mounted on the bracket oblique to the drum assembly axis by a pin which extends from the guide into an oversize bore in the bracket and is held in place by adhesive.

The drum assembly and guides are connected on the bracket in precisely the proper position to cause the tape to pass the scanner of the drum assembly at the proper angle and height by a method of assembly which includes connecting the bracket to a fixture with the way reference surfaces of the bracket abutting a cylindrical reference surface of the fixture and a reference plate on top of the bracket abutting a reference surface on top of the fixture. This fixes the bracket references in a known pre-

selected position relative to guide positioning jigs on the fixture. The guide positioning jigs are used to mount the guides on the bracket in the desired relationship to the bracket reference surfaces, precise alignment of the guides being permitted by movement of the guide pins in the oversize bores before applying the adhesive. The bracket then is separated from the fixture and the upper and lower male guides are mounted on the bracket using the reference way and the reference plate to attain the desired relationship to the entry and exit guides.



Straightening posts on the tape recorder chassis are positioned relative to the scanning assembly using a jig, and the scanning assembly is then mounted on the chassis. Proper orientation of the scanning assembly is assured by an aligning pin on the underside of the bracket which cooperates with slots in the fixture and the chassis and corresponds to a pin on the straightening post positioning jig. The scanning assembly is held on the chassis by clamping disks.

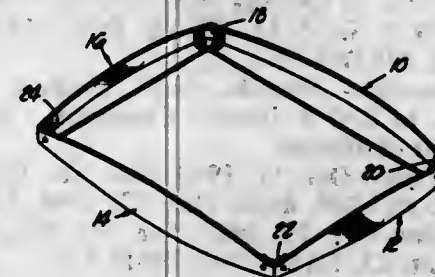
3,516,147

METHOD OF FABRICATION OF METALLIC FRAMES

Alexander Nicholas P. Seedorff, Los Angeles, and Joseph J. Panik, Tarzana, Calif., assignors to A. P. Seedorff & Co., Inc., Lynwood, Calif., a corporation of California
Filed July 17, 1967, Ser. No. 653,836
Int. Cl. B23k 31/02

U.S. Cl. 29—472.1

12 Claims



The invention relates to methods of fabricating metallic frames. The invention particularly relates to frames for use particularly on or with rectangular color television tubes, the frame supporting the perforated steel mask or screen on the front face of the tube. Preferably the finished frame is one having sides comprising angle members, that is, members having substantially, right angle portions. The essence of the method is that of forming the frame in sections, for example, four sections or two sections. Sections are formed or fabricated by rolling or stamping and where necessary forming, i.e. bending. The ends of the preformed sections are abutted

and held in this position in a welding fixture. Angular tie members are formed with a contour to interfit against the abutting end portions of the sections and to bridge them. The tie members are held in the welding fixture along with the sections. Welding guns are held in the welding fixture in a position to simultaneously completely fabricate the frame by making spot welds between the sections and the tie members, the welding guns being held adjacent the surfaces of the sections and tie members.

In preferred forms of the invention the frame may be formed of four sections joined at the corners or two sections joined at mid points of two sides. When four sections are joined at the corners, the tie members are formed to have angular parts lying in planes normal to each other and adapted to interfit with corner parts of the sections.

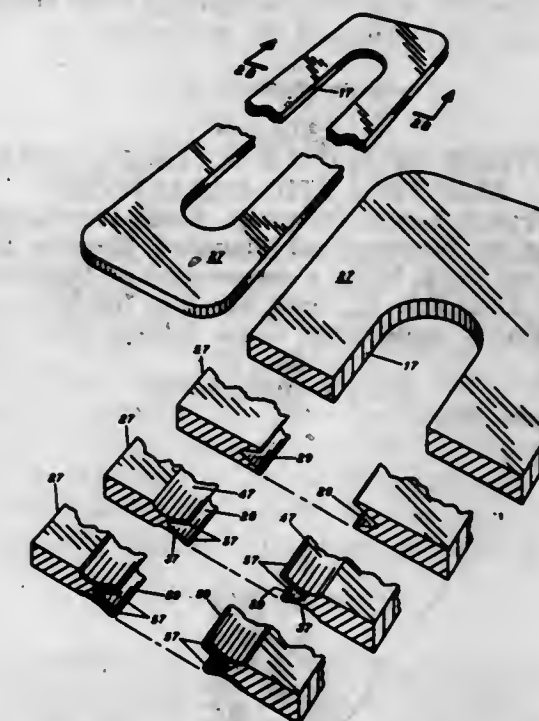
3,516,148

METHOD OF FORMING A HIGH PRESSURE SEAL FOR NONCIRCULAR OPENINGS

Daryl R. Boomer, 18802 Haven Lane, Yorba Linda, Calif. 92686
Filed Mar. 18, 1968, Ser. No. 713,848
Int. Cl. B23k 19/00

U.S. Cl. 29—527.4

2 Claims



A K-configuration self-energizing seal for noncircular openings is formed of flat stock. A groove is cut in the face around the opening and valleys are cut in the upper and lower surfaces of the stock to form the legs of the K. The legs are coated with soft material to assure sealing of the tips of the legs as pressure is applied in the groove.

3,516,149

MACHINING APPARATUS WITH AUTOMATIC TOOL CHANGING MEANS

George Michas, Grosse Pointe Woods, Mich., assignor to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 5, 1968, Ser. No. 703,148
Int. Cl. B23q 3/157

U.S. Cl. 29—568

31 Claims

A horizontal spindle machine that is constructed and arranged to carry out a variety of machining operations such as milling, drilling, boring, tapping and the like, and which includes an automatic tool changing means for transferring tools in a predetermined sequence between a tool storage conveyor and a tool spindle. The machine includes a work table mounted on a rotary index table that is carried on two movable, perpendicularly disposed members to provide movement of the work table along the "X" and "Z" axes. The tool spindle is slidably

sets of slots, which sets are spaced at a different spacing interval than the spacing of the terminals, and for removing successive leading terminals from the strip of terminals and inserting legs projecting from each of the leading terminals into an associated set of the slots in the terminal board. This permits the use of the same progressive punch and die to provide a continuous supply of interconnected terminals for assembly with many different types of boards of electrical insulating material having slots formed therein with spacing which differs for different types of boards.

3,516,158

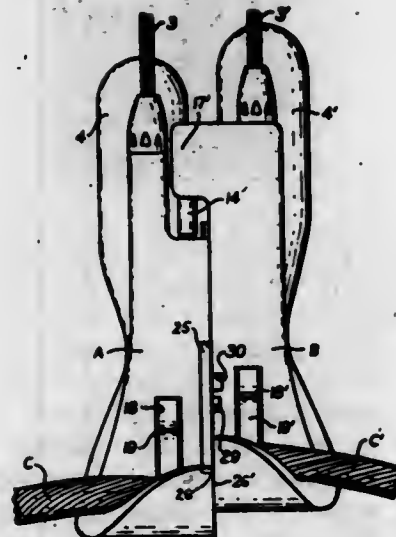
APPARATUS FOR SEVERING AND RECOVERING SUBMARINE CABLES

Antonio Ferrentino, Naples, Italy, assignor to Pirelli S.p.A., Milan, Italy, a corporation of Italy
Filed Feb. 23, 1968, Ser. No. 707,761
Claims priority, application Italy, Mar. 13, 1967, 13,640/67

Int. Cl. B25f 3/00

U.S. Cl. 30—134

9 Claims



A grapple hook for submarine cables has two parts united for longitudinal separation along a median plane. Each part has a reservoir for hydraulic fluid and a hydraulically actuated lever for clamping a cable in the throat of the hook. A hydraulically actuated knife blade is pivoted on the grapple part. When the blade is extended the grapple parts can be forcibly separated longitudinally by a hydraulic actuator in the second part with the action of separation causing severance of the cable. Individual grapple cables retrieve the separated parts with the severed cable.

3,516,159

TERMINAL SCRAPING TOOL

Newton L. Bercler, Kaplan, La., assignor of one-half to O. H. Deshotel and Frank L. Marast, both of Kaplan, La.

Filed Nov. 8, 1967, Ser. No. 681,368

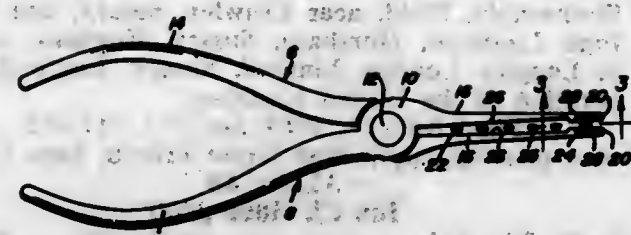
Int. Cl. B27g 17/04

U.S. Cl. 30—169

5 Claims

A tool which enables a user to dispense with make-shift terminal scraping implements when called upon to periodically scrape and clean block connectors or terminals on the main terminal block in a dial telephone system and where the automatic equipment is operatively connected to cables leading to the individual telephone outlets. The tool includes a pair of lever units pivotally connected at their crossed median portions. The lever units define a pair of handles on one side of the pivotal connection and a pair of elongated jaws on the other side. The jaws carry confronting scraping edges at their terminal ends and have spaced apart inner surfaces between

said ends and said pivotal connection for straddling one or more terminals in a group to scrape a distant terminal.



The problem posed is capable of efficient solution by using the herein disclosed pliers.

3,516,160

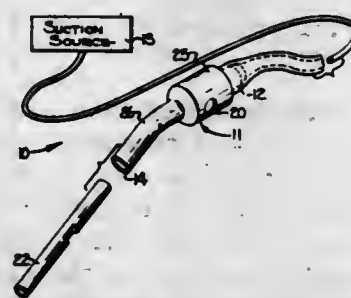
DENTAL ASPIRATING CUSPIDOR

Dennis F. Leffler, Charlotte, N.C., assignor to Pelton & Crane Company, a corporation of North Carolina
Filed Mar. 18, 1968, Ser. No. 713,839

Int. Cl. A61c 17/04

U.S. Cl. 32—33

4 Claims



A dental aspirating cuspidor to be placed in a patient's mouth for ejecting saliva, water and foreign matter therefrom. The aspirating cuspidor comprises an open-ended, tubular housing having a first end adapted to be connected to a source of suction and a second end adapted for the reception of saliva, water and foreign matter and providing an internal ejecting passageway between the ends of sufficient volume to accommodate rapid flow of saliva, water and foreign matter therethrough. The housing includes venting port means between the ends for creating an aspirating suction through the second end of the housing and for avoiding excessive and discomforting suction to the patient's mouth. The dental aspirating cuspidor further includes a removable and replaceable ejecting member frictionally secured in the second end of the housing and adapted to be placed in the patient's mouth for ejecting the saliva, water and foreign matter therefrom and adapted to be removed from the housing and replaced after use by a patient.

3,516,161

AMALGAM PACKER ATTACHMENT FOR DENTAL HANDPIECE

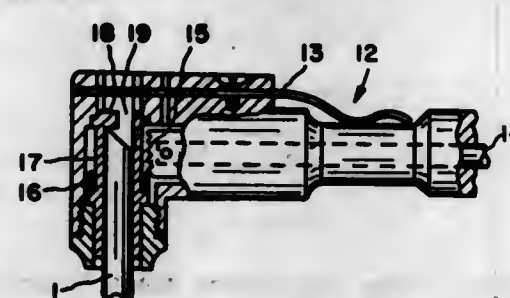
Irving A. Ellman, Auerbach Lane, Lawrence, N.Y. 11559

Filed Aug. 28, 1967, Ser. No. 663,611

Int. Cl. A61c 3/08

U.S. Cl. 32—53

5 Claims



An amalgam packer attachment for use in a normal contra angle dental handpiece. The packer is constructed as a single tool piece with an offset tapered end adapted to be reciprocated by the inner rotating sleeve of the

handpiece. An arm is coupled to the tool and is shaped to engage the handpiece to prevent rotation of the tool and also to prevent the tool from falling out of the handpiece.

3,516,162

DENTAL MATRIX EQUIPMENT

Ira V. Alarworth, 3089 Titanic St., El Paso, Tex. 79904

Continuation-in-part of application Ser. No. 701,810, Jan. 16, 1968. This application May 26, 1969, Ser. No. 827,538

Int. Cl. A61c 5/12

U.S. Cl. 32—63

9 Claims



Dental matrix equipment including a strip type matrix band having apertures in the end portions thereof, with lugs or rivets extended through the apertures and projecting at opposite side faces of the band to provide means for interlocking with a band tightening retainer device, and band retainers adapted for use with bands having such projecting lugs.

3,516,163

MARKING MACHINE

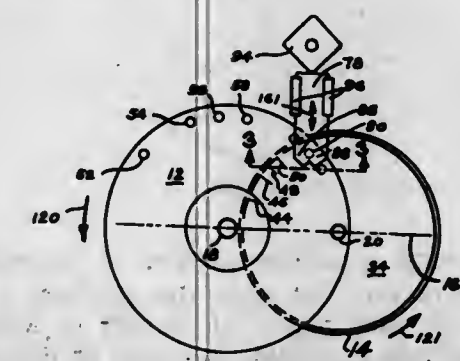
Charles A. Hlaserich, 447 Cabrillo St., Costa Mesa, Calif. 92627

Filed June 3, 1969, Ser. No. 829,855

Int. Cl. B43l 13/24

U.S. Cl. 33—19

8 Claims



A machine for marking or engraving radial calibration lines on instrument dials and the like operates in a continuous mode, rather than requiring intermittent indexing and sliding machine elements.

True straight radial marking lines are generated on a continuously rotating workpiece by marking elements fixed to a continuously rotating carrier. Several marking elements or scribes may be fixed to the carrier, and raised and lowered according to a predetermined program, as by a cam, so that a complete scale can be marked or engraved in a single rotation of the workpiece.

3,516,164

AUTOMATIC MEASURING DEVICE

James F. McCormick, 51 Bleeker St., Newark, N.J. 07102

Filed Mar. 28, 1969, Ser. No. 811,418

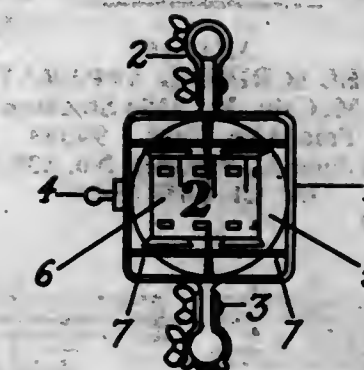
Int. Cl. B43l 9/02; G01b 3/12

U.S. Cl. 33—27

2 Claims

A combined marking and measuring instrument for tracing exterior and interior paths, marking said paths,

and measuring the length or distance traversed by said instrument following said path; wherein the instrument has three closely spaced together elements including a



3,516,165

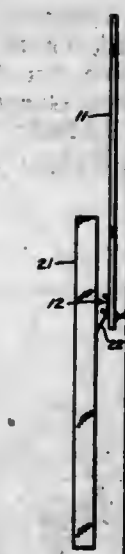
PICTURE HANGING

Arnold Z. Pfeffer, 39 E. 74th St., New York, N.Y. 10021
Filed Jan. 21, 1969, Ser. No. 792,313

Int. Cl. G01b 3/30

U.S. Cl. 33—180

4 Claims



A device for locating the point on a wall at which a nail or special picture hanger is to be installed. In one form the device is a flat vertical rod having a picture hanger at its lower end, on one side, and an aligned pointed element for marking the wall, on the opposite side.

3,516,166

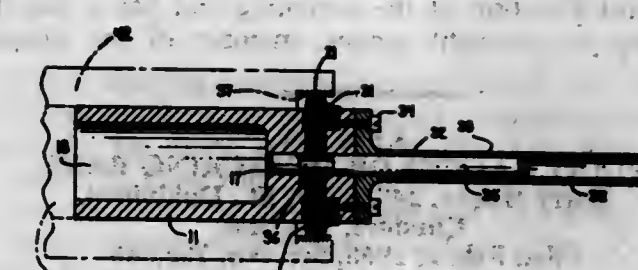
INTERNAL THREAD GAGE

Ned W. Moore, 789 S. Main St., Linton, Ind. 47441
Continuation of application Ser. No. 657,736, July 31, 1967. This application Oct. 7, 1968, Ser. No. 785,834

Int. Cl. G01b 3/48

U.S. Cl. 33—199

8 Claims



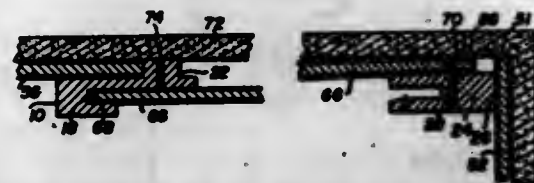
An internal thread gaging device having an elongated cylinder slotted to slidably mount a plurality of thread sections which are biased inwardly. A two-piece handle

has one piece attached to one end of said cylinder and the second piece is rotatable within said first piece and has a cam surface for outwardly moving said thread sections.

3,516,167
PANEL SCRIBING APPARATUS
John P. McCain, Jr., 3350 Stockton Place,
Palo Alto, Calif. 94303
Filed June 5, 1969, Ser. No. 830,703
Int. Cl. B43I 13/02

U.S. Cl. 33-41

8 Claims

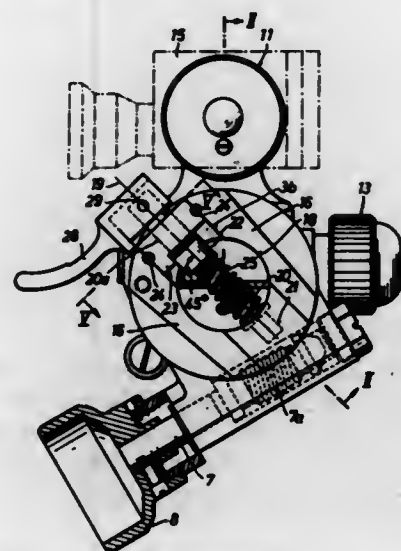


A scribing apparatus for use in preparing wall paneling and the like. The apparatus includes a novel combination of offset jigs and scribing elements which cooperate to precisely mark in accordance with a reference surface an edge of a panel member to be trimmed so that a precision fit between the panel and the surface may be obtained.

3,516,168
GUNSIGHT MOUNTING
Nillo Kalervo Asikainen, Tampere, Finland, assignor to
Etablissement Salgad, Vaduz, Liechtenstein
Filed May 17, 1968, Ser. No. 729,999
Claims priority, application Germany, May 19, 1967,
O 12,503
Int. Cl. F41g 1/38

U.S. Cl. 33-50

7 Claims



This provides a mounting for a positive, securely locked attachment to a gunsight support member on a weapon such as a mortar. The mounting carries a telescopic sight and includes means for adjusting the sight through the three spatial dimensions while attached to the weapon. The mounting locking member includes a rotatable pin whose longitudinal axis runs in the attaching thrust direction of the mounting and has a cam for engaging the gunsight support member of the weapon.

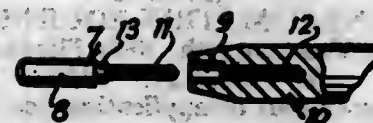
3,516,169
POINT GAUGES OR MEASURING BARS
Harry Hanvy, 249 Astley St., Dukinfield,
Cheshire, England
Filed Feb. 2, 1968, Ser. No. 702,588
Int. Cl. G01b 3/30

U.S. Cl. 33-168

12 Claims

A point gauge comprising a longitudinal body with a cylindrical hole in at least one end. The hole has a cylindrical outer part and a screw-threaded inner part and is

adapted to receive an end piece. The end piece consists of an outer portion, a non-threaded lead-in, and an inner portion, the inner portion being screw-threaded and mating with the inner part, at least part of the lead-in being of larger diameter than the outer part and adapted



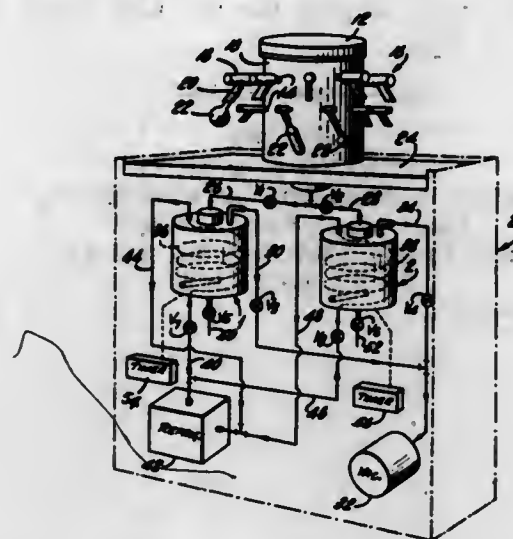
for insertion therein to form an interference fit. The lead-in and the outer part interengage and create substantial pressure between the lead-in and the outer part due to resistance to expansion of the outer part as the lead-in enters it, thereby retaining the end piece in the hole independently of the screw threads.

3,516,170
FREEZE DRYING APPARATUS
Vytautas A. Llobis, deceased, late of Green Brook, N.J.,
by Aldona Llobis, legal representative, and David
Freedman, Highland Park, N.J., assigns to New
Brunswick Scientific Corporation, a corporation of New
Jersey

Filed Apr. 29, 1968, Ser. No. 725,237
Int. Cl. F27b 19/00

U.S. Cl. 34-53

11 Claims



A freeze drying apparatus capable of automatic and continuous operation. The apparatus includes a pair of traps capable of being placed alternately in communication with a vacuum manifold, and each of these traps is capable of coacting with a refrigerating means and with a vacuum-creating means. An automatic control means is provided for operating the apparatus with one of the traps while the other of the traps is cut off from communication with the manifold means and for then operating the apparatus with this other trap while the first trap is cut off from communication with the manifold means, so that with the automatic controls of the invention it is possible to achieve continuous operation in a fully automatic manner.

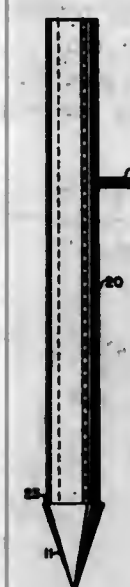
3,516,171
FLEXIBLE GRADE STAKE WITH DRIVING TOOL
Ross E. Martin, 1138 SW. Military Drive,
San Antonio, Tex. 78221
Filed Feb. 20, 1967, Ser. No. 617,267
Int. Cl. G01c 15/08

U.S. Cl. 33-74

4 Claims

A high tensile strength, tough, durable, flexible grade stake including visual graduations adapted to assist and guide a grading machine operator in cutting the final grade of a sub-base for paving. A driving tool including a survey-

ing rod base pin capable of receiving a surveying rod the said driving tool adapted to enclose the flexible grade

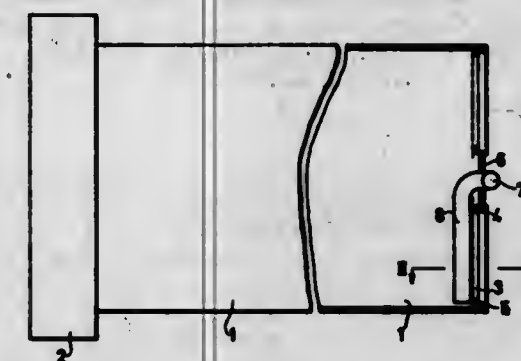


stake and receive and transmit a driving force sufficient to penetrate compacted soil.

3,516,172
DRYING APPARATUS, PARTICULARLY FOR GREEN CROPS
Alfred Thygesen Nielsen, Lyngbakkevej 8, Søllerød pr.
Høje, Denmark
Filed May 27, 1968, Ser. No. 732,158
Claims priority, application Denmark, June 1, 1967,
2,883/67
Int. Cl. F26b 17/32

U.S. Cl. 34-136

2 Claims



In a drying apparatus comprising a preferably rotary drum operating with an axial flow of heated gaseous fluid from which the dried solid material shall be separated, this separation is made possible by a piece of netting allowing the gaseous fluid to pass but retaining the solid matter. This solid matter is continuously removed from the netting by means of at least one suction nozzle arranged adjacent the inner side of the netting and operated by a suction source or vacuum pump from which the solid matter may be fed to a briquetting press.

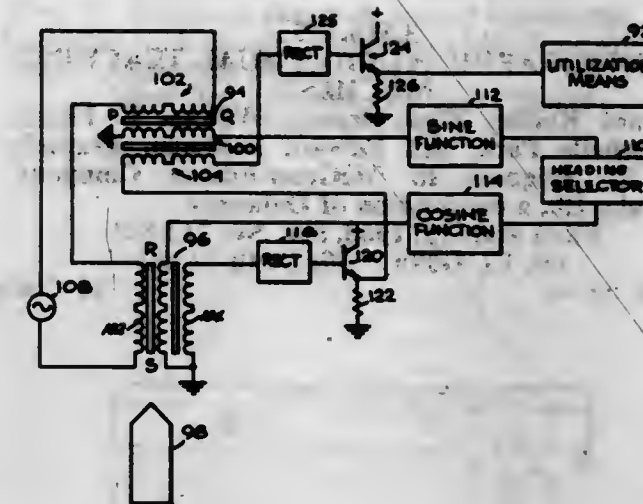
3,516,173
NAVIGATION APPARATUS
Ralph J. Koerber, Canoga Park, Calif., assignor, by mesne
assignments, to The Bunker-Ramo Corporation, Oak
Brook, Ill., a corporation of Delaware
Filed Jan. 18, 1967, Ser. No. 610,186
Int. Cl. G01c 17/02; G01r 33/04

U.S. Cl. 33-222

7 Claims

A system useful in combination with a navigable craft for facilitating alignment of the longitudinal axis of said craft with a selected magnetic heading. The system includes a magnetic field sensing device, e.g., a flux gate magnetometer, which provides an output signal related

to the magnitude of magnetic field components along the axis thereof. The sensing device is mounted on the craft with the axis thereof bearing a fixed relationship to the craft longitudinal axis. Means are provided for applying a selected magnetic field along the sensing device axis to



establish a selected magnetic heading by predetermining the craft orientation at which the component of the ambient field along the sensing device axis is equal and opposite to the selected field applied along that axis, as signaled by a null output.

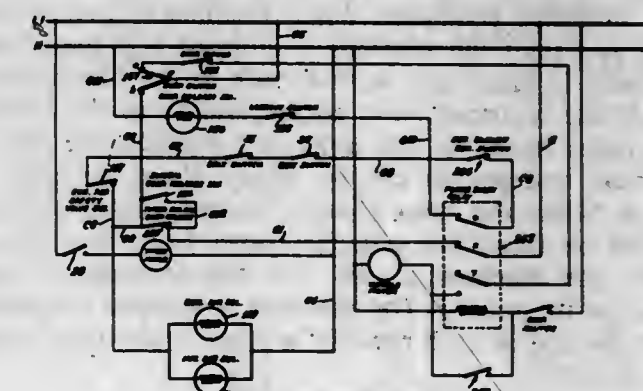
ERRATA

For Classes 34-53 and 34-136 see:
Patent Nos. 3,516,170 and 3,516,172

3,516,174
CONTROL ARRANGEMENT FOR DRY CLEANING MACHINES
Curtis E. Behrens, Effingham, Ill., assignor, by mesne
assignments, to Fedders Corporation, a corporation of
New York
Filed Feb. 26, 1968, Ser. No. 708,044
Int. Cl. F26b 19/00, 21/00

U.S. Cl. 34-45

18 Claims

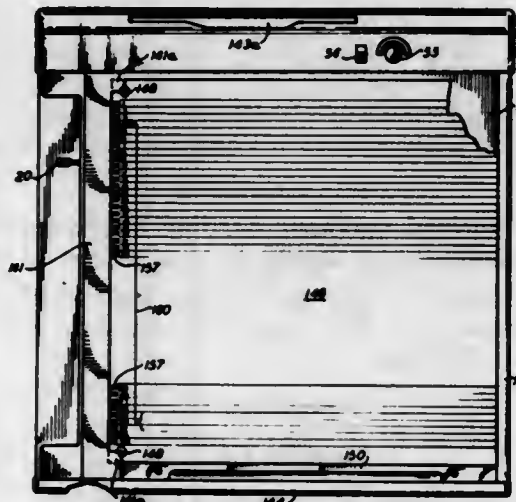


A dry cleaning machine having ventilation arrangement provided by a motorized exhaust fan and an exhaust valve, the fan being operative, in the open position of the valve, to draw room air into an open access door of the machine, through the machine and the exhaust valve to the exterior of a building housing the machine. A safety-interlock system is provided for preventing exposure of the operator to dry cleaning solvent fumes and includes a first circuit for energizing a solenoid operating the exhaust valve to the in-draft open position, and a second circuit for a solenoid releasing a door lock, completion of

the first circuit being accomplished by the operator pushing a door lock release button to close a switch, the exhaust air valve opening movement closing another switch to complete the second circuit to thereby energize the door lock release solenoid so that the door can only be opened when the exhaust valve is in its open ventilating position.

3,516,175 PHONOGRAPHIC AUDIO-VISUAL TEACHING MACHINE

Richard Kobler, West Orange, William F. Fagan, Rochelle Park, and Edward Feldman, Teaneck, N.J., assignors to McGraw-Edition Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 13, 1968, Ser. No. 712,821
Int. Cl. G09b 1/00; G11b 31/00
U.S. Cl. 35—8 30 Claims

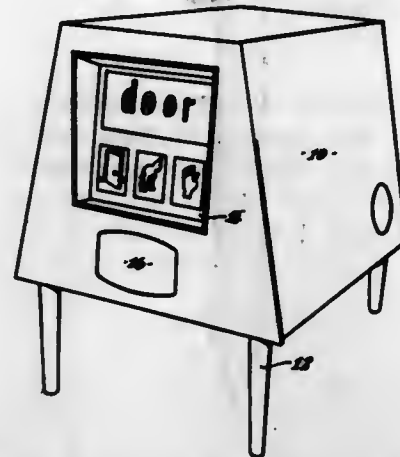


A random access audio-visual phonographic machine is provided for reproducing portions of a sound record according to the positioning of a manual index head carrying a pointer along a printed page mounted on the machine. The printed page may be an individual program sheet or a page of a book or manual. The record is pre-recorded in separate bands with a sound intelligence coordinated with the respective visual items on the printed page. The blank spaces between successive recorded bands are bridged by spiral lead-in grooves. The index head can be latched in any of a series of equally spaced indexing positions. When the index head is unlatched and reset the machine is stopped and the reproducer head is lifted and shifted back to the blank space ahead of the recorded band corresponding to the setting of the index head. In this unlatched position the reproducer head and pointer can be shifted along the edge of the page. When the index head is latched, the reproducer head can be freed for advance travel from its indexed position, the machine started and the reproducer head lowered on the record. The machine is stopped automatically at the end of each band by a prerecorded stop signal on the record.

3,516,176
TOUCH DETECTING TEACHING MACHINE
Alma Cleary, Derek W. Packham, and Jack C. Pashley, Teddington, England, assignors to Behavioural Research & Development, Ltd., Teddington, Middlesex, England, a corporation of Great Britain
Filed Dec. 26, 1967, Ser. No. 693,595
Int. Cl. G09b 7/06
U.S. Cl. 35—9 10 Claims

The invention relates to a touch detecting teaching machine for teaching young children or those with sub-normal intelligence. The subject sits in front of a screen on which there are projected from behind two or more

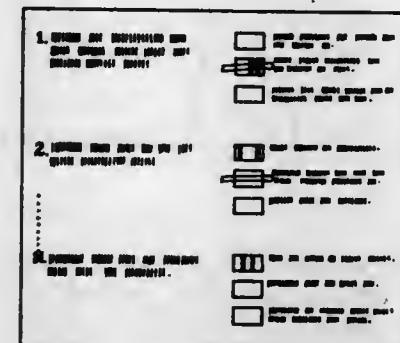
pictorial representations on one part of the screen and a word on the other part which is the correct description of one of the pictures. The areas of the screen on which the two or more pictorial representations are projected are sensitive to touch so that if the correct picture is touched by the subject the machine acknowledges this fact to the subject by speaking the word. The machine auto-



matically moves on to the next set of pictures after a predetermined time whether or not the correct picture has been touched by the subject. An assessment of the subject's performance is continuously made, and the machine gives an indication when the subject's performance has reached a predetermined level so that the subject can be advanced to a more difficult set of pictures.

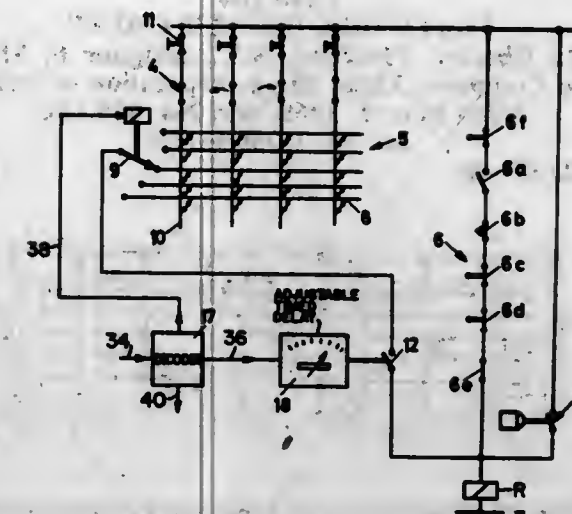
3,516,177 TEACHING DEVICE WITH INVISIBLE ANSWER INDICATOR

Burhus F. Skinner, Cambridge, Mass., assignor to Meredith Corporation, a corporation of Iowa
Filed Feb. 14, 1968, Ser. No. 705,549
Int. Cl. G09b 3/08
U.S. Cl. 35—9 17 Claims



A teaching device for students which includes a worksheet with a number of questions thereon. Adjacent each question are possible answers, and adjacent each answer is an outline in which the student may scribe a mark with a marking pen. Outlines which correspond to a correct answer include a vertical, invisible ink mark passing therethrough. This mark is activated by visible ink from the marking pen and appears as a different color from the visible ink. Since only those outlines corresponding to correct answers contain the invisible marks, a student who scribes a line through the outline corresponding to the correct answer activates the invisible ink and receives an immediate indication that the answer is correct. To prevent cheating, the invisible ink marks are positioned in different portions of each outline. In an alternative arrangement, the outlines are completely filled with invisible ink; however, correct answers are indicated by the absence of invisible ink from certain small areas within the outline.

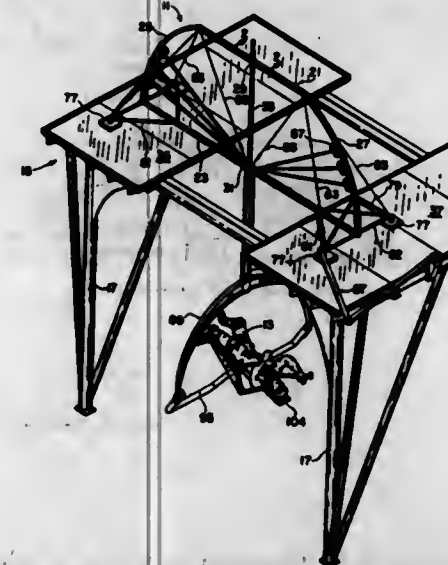
3,516,178
SIMULATOR FOR TEACHING HOW TO DRIVE
Franz H. Mertens, Biederich, Germany, assignor of one-half to Herrn Dr. Phil. Alfred Hanten, Unterbach, Germany
Filed July 10, 1967, Ser. No. 652,331
Int. Cl. G09b 9/02
U.S. Cl. 35—11 2 Claims



A driving simulator includes a crossbar distributor as a memory. The "horizontal" conductors and the "vertical" conductors of this distributor are joined at various of the intersections by switches which may be opened or closed. The "vertical" conductors are respectively connected to means responsive to the actions of the driver in actuating the simulated vehicle in response to driving conditions as projected from a film onto a screen visible to the driver. The "horizontal" conductors are connected to the various contacts of a stepping relay. The film has openings adjacent the edge which produce a signal causing the advance of the stepping relay thus establishing a circuit indicative of a preferred driver response for a particular scene. If the driver does not make the preferred response, this circuit is completed through the memory means to actuate a signal.

3,516,179 MECHANICAL SIMULATOR OF LOW GRAVITY CONDITIONS

Dan H. Dane, Huntsville, Ala., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Jan. 26, 1968, Ser. No. 700,984
Int. Cl. B64g 7/00; G09b 9/00; E04h 12/34
U.S. Cl. 35—12 7 Claims



A mechanical simulator for giving a test subject such as an astronaut six-degree freedom of movement on the earth. A truss supported on air bearing pads is utilized to support an elongated column having at its lower end a

yoke and beam arrangement which supports the test subject for pitch, yaw, and roll movements. The vertical movement of the elongated column is controlled by constant force springs attached to the truss.

3,516,180
ANTI-CHAFING LEG GUARD
Herbert O. Thurston, deceased, late of Centerville, Mass., by Helen E. Thurston, executrix, 1248 Craigville Beach Road, Centerville, Mass. 02632
Filed Oct. 22, 1968, Ser. No. 770,470
Int. Cl. A43b 8 Claims
U.S. Cl. 36—2.5



An accessory for use by a skier. It functions as guard and reduces to a practical minimum painful leg soreness such as ordinarily results from bruising and chafing of the skier's skin in the area directly subjected to frictional pressure, for example, by the usual stiff collar surrounding the high upper of a conventional ski boot. Stated otherwise, it provides an efficient bruise and chafe resisting guard or shield. It is saddled over the vulnerable ankle and leg areas, can be strapped in place and is so shaped and proportional in size that the lower curvate portion can be tucked into the aforementioned collar.

3,516,181
PROTECTIVE FOOTWEAR
Robert D. Jordan, Balboa Island, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 5, 1959, Ser. No. 811,234
Int. Cl. A43b 3/10, 3/12; F41h 5/08
U.S. Cl. 36—7.5 11 Claims



1. Protective gear for the foot comprising, in combination: a substantially horizontal platform for supporting the sole of a foot, the area of said platform being

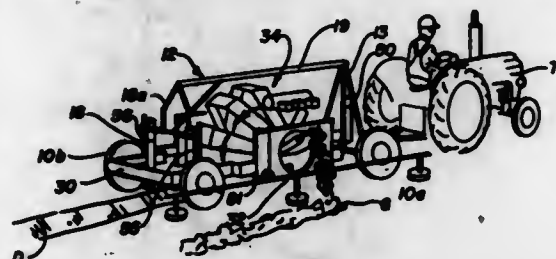
somewhat larger than the area of such sole; a wedge member, the sides of said wedge member supporting and extending convergently downward from said platform to form a longitudinal ridge line, the angle between the outer surfaces of the wedge sides ranging from 45 to 100 degrees; and a longitudinal support member having an upper surface formed with a longitudinal slot therein and a substantially flat lower surface, the ridge line and lower portion of said wedge fitting into said slot and thus being supported in an upright position by said support member, the width of said lower surface being approximately one fourth to one third the width of said platform.

3,516,182 SELF-LEVELLING IRRIGATION DITCHER MACHINE

Jeffie L. Wykert, 304 S. First Ave., Ault, Colo. 80610
Filed Dec. 6, 1967, Ser. No. 688,595
Int. Cl. E02f 5/08

U.S. Cl. 37-97

4 Claims



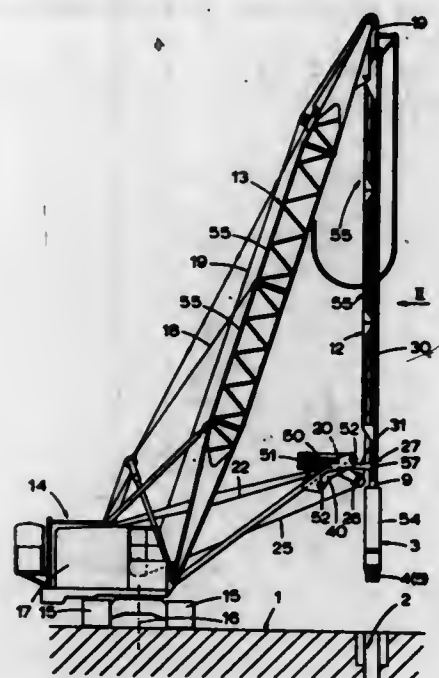
A ditcher for forming irrigation ditches comprising a digging wheel mounted on a towed chassis. An automatic levelling system is provided to maintain the digging wheel axis in a horizontal position on uneven terrain. The automatic levelling system comprises both a grade wire and feeler device as well as a pendulum device for sensing uneven terrain and levelling the digging wheel.

3,516,183 GRAB WITH ADJUSTABLE GUIDE MAST

Stanley Serota, 111 Westminster Bridge Road,
London, SE. 1, England
Filed Jan. 29, 1968, Ser. No. 701,457
Int. Cl. E02f 3/96; E21b 15/00

U.S. Cl. 37-116

7 Claims



An excavator including a crane unit, a jib mounted on the crane unit, and a guide mast suspended from the upper end of the jib. The lower end of the guide mast is adjustably located by an arm extending from the crane unit. The guide mast includes a pair of rails, on which

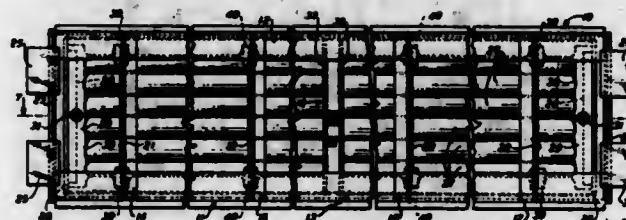
is mounted a carriage that is movable up and down the guide mast. A grab boom, which carries at its lower end a power operable grab, is pivotally suspended at its upper end on the carriage. The grab boom may be power driven downwardly to assist entry of the grab into the ground.

3,516,184 FLATWORK IRONER CHEST

Gene L. Oberley, Pittsford, N.Y., assignor to McGraw-E Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 7, 1969, Ser. No. 805,152
Int. Cl. D06f 63/00

U.S. Cl. 38-56

7 Claims



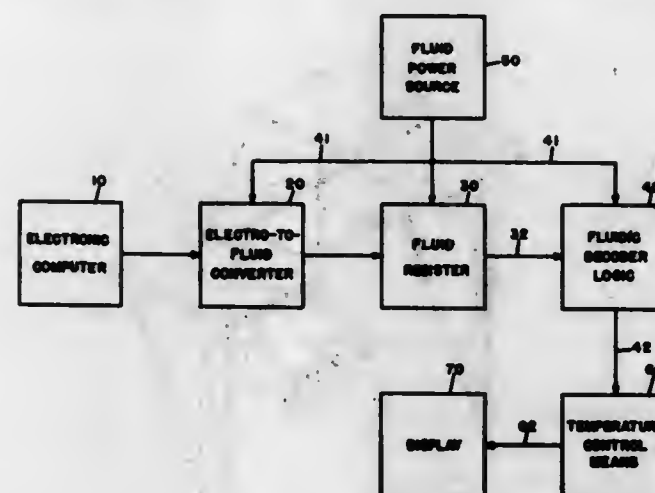
A flatwork ironer chest of fabricated construction comprises a rectilinear pressing trough supported on a rigid elongate frame through a rigid center block and through flexible support plates at the ends of the trough. The center block conforms to and is welded to the outside wall of the trough, but the flexible support plates are secured only to the uppermost side portions of the trough by arms at the ends of the plates to permit a thermal expansion and contraction of the trough without the same being warped out of rectilinearity. Further, the trough has semi-cylindrical channel members welded to the outside wall thereof running from the center block to the ends of the trough to provide heating ducts, and the arms of the flexible support plates are connected to the trough by welding the arms through filler plates to the outermost ones of the channels.

3,516,185 FLUIDIC-THERMOCHROMIC DISPLAY DEVICE

Thomas O. Paine, Deputy Administrator of the National Aeronautics and Space Administration, in respect to an invention of Edwin H. Hilborn, Boston, Mass., and Daniel Grafstein, Morristown, N.J.
Filed July 1, 1968, Ser. No. 741,461
Int. Cl. G09f 11/00

U.S. Cl. 40-28

14 Claims



A display device is disclosed in which a selectively controlled output from a fluidic system of liquids or gases through orifices impinges upon a surface containing thermo-chromic materials to yield a readily observable and reversible color change. The color transition is sharp and is clearly visible under high ambient light conditions.

3,516,186 DECORATIVE AND THE LIKE DEVICE

Francois Arlet, 7 Rue d'Arsonval,
75 Paris 15eme, France
Filed Dec. 7, 1967, Ser. No. 688,904
Int. Cl. G09f 19/00

U.S. Cl. 40-126

7 Claims



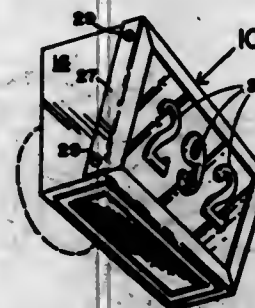
An oblong flexible sheet of elastic material is divided into two adjacent strips by a longitudinal slit extending from a point midway of one of the short ends of the sheet to a point spaced from the opposite short end thereof, a permanent magnet element being affixed to each of the free ends of the strips, to support the strips upon a magnetic base in relatively spaced and mutually rotated relation such as to distort the strips into a desired three-dimensional configuration.

3,516,187 HOUSE NUMBER RECEPTACLE

Adrian O. Espinoza, 2938 NW. 30th St.,
Miami, Fla. 33142
Filed June 17, 1968, Ser. No. 737,558
Int. Cl. G09f 13/00

U.S. Cl. 40-131

2 Claims



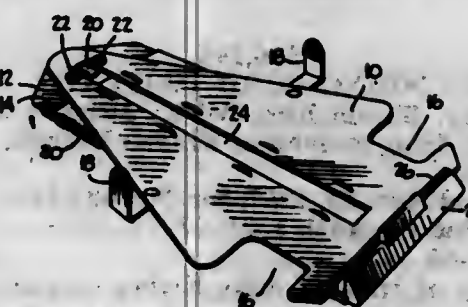
A receptacle is provided with a removable translucent front face on which house numbers are mounted. The rear face is apertured and a collar is crimped into said aperture by which collar the receptacle may be mounted on a conventional outdoor wall bracket.

3,516,188 INDEX SECURING ARRANGEMENT

James P. Foley, 748 Forest Ave.,
Larchmont, N.Y. 10538
Filed Feb. 8, 1968, Ser. No. 703,951
Int. Cl. G09f 3/00

U.S. Cl. 40-336

8 Claims



Arrangements for holding spiral bound index sheets in an under-the-telephone index device wherein alignment

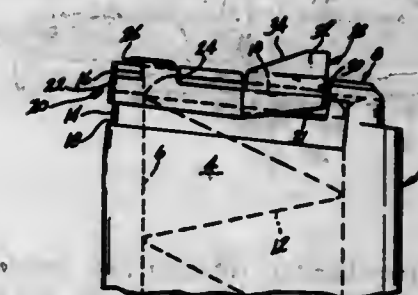
lugs are provided on the index carrier and these fit into holes on the bottom index sheet and the spiral binding on the sheets hangs over the edge of the carrier.

3,516,189 MAGAZINE WITH MOVABLE FEED LIPS AND GUIDE FINGERS

Oliver N. Lewis, Woodbridge, and Joseph A. Badall,
Branford, Conn., assignors to Olin Mathliessen Chemical Corporation, a corporation of Virginia
Filed Apr. 19, 1968, Ser. No. 722,772
Int. Cl. F41c 25/02

U.S. Cl. 42-50

13 Claims



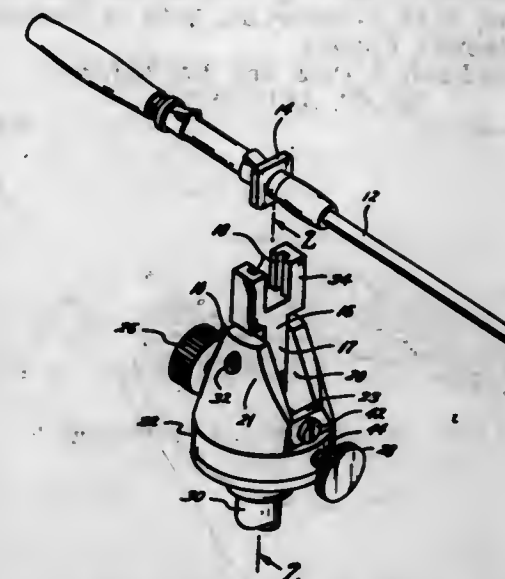
A cartridge magazine having movable cartridge feed lips and movable cartridge guide fingers which may be deflected by a closing bolt without attendant jamming.

3,516,190 FISHING ROD HOLDER

M. L. Cook, P.O. Box 238, Friendswood, Tex. 77546
Filed Apr. 3, 1968, Ser. No. 718,562
Int. Cl. A01k 97/10

U.S. Cl. 43-21.2

17 Claims



In one exemplar embodiment, a fishing rod holder for attachment to a suitable supporting fixture is provided with a body member rotatable with respect to the supporting fixture and a yoke pivotally disposed within the body member cooperating with a screw means for pivoting the yoke to a desired inclined position. An adapter attached to the fishing rod engages the yoke for supporting the rod in a desired inclined position.

3,516,191 FISHING REEL WHEEL

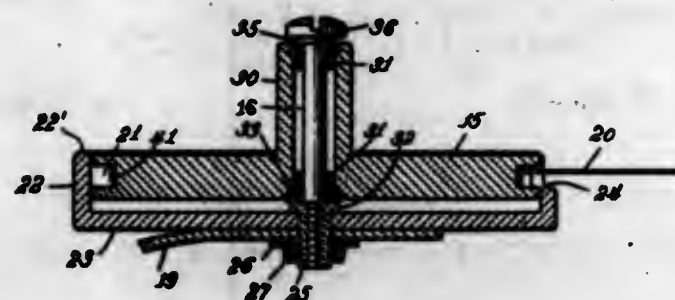
Robert C. Baumiger, 1115 Voltz Road,
Northbrook, Ill. 60062
Filed Aug. 1, 1968, Ser. No. 749,402
Int. Cl. A01k 87/00

U.S. Cl. 43-25

11 Claims

A freewheeling flywheel around which is wound a few turns of fishing line from a fishing reel is mounted on a fishing rod between the reel and the forward end of the

rod to give stationary-spool casting rigs, such as spin-casting rigs or spinning rigs considerable "feel" as to where the bait is going and to consistently cast longer distances. Circumferential enclosure means is disposed around the flywheel and has openings therein for axial passage of line from the reel to and from the flywheel for tangential winding and unwinding. The flywheel is



mounted for freewheeling rotation and touching the flywheel or a projecting hub thereon with the finger while the bait is in flight provides subtle feathering to help increase accuracy of cast. As soon as the line payout stops the elasticity of the line causes it to loosen around the flywheel with the result that the continued spinning of the flywheel has no effect on the line payout.

3,516,192

DETACHABLE SLIP SINKER AND DROP-OFF SINKER

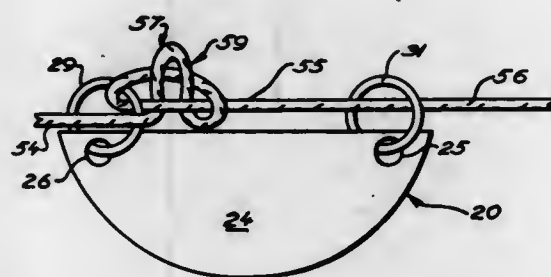
Hugh W. MacLeod, 2244 E. Pender St., and Gardner J. MacLeod, 2741 Venables St., both of Vancouver 6, British Columbia, Canada

Filed July 8, 1968, Ser. No. 743,166

Int. Cl. A01k 95/00

U.S. Cl. 43—43.12

9 Claims



A slip and/or drop-off sinker with spaced rings has a fishing line passing through the rings with a slip knot in the line adjacent to one of the rings for releasably securing the sinker to the line. The knot is released by a fish pulling on the line so that the sinker either drops off or slips down the line according to how the line is associated with the sinker rings.

3,516,193

TOY HAVING LISSAJOUS VIBRATORY MOTION

Donald Max Engelman, Palo Alto, Calif., assignor to Kinetic Objects Inc., San Anselmo, Calif.

Filed Oct. 11, 1968, Ser. No. 766,896

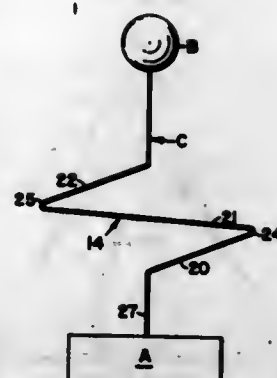
Int. Cl. A63h 33/00

U.S. Cl. 46—1

10 Claims

A toy including a mass mounted on the nonsupported end of an elastic cantilever for vibrational movement. The cantilever, typically constructed from a piece of wire, has

a plurality of coplanar zigzags disposing segments of the wire substantially normal to the cantilever length. These segments provide substantially independent torsion and bending forces acting at right angles one to the other.



The mass, when displaced and set in motion at the non-supported end of a cantilever, undergoes vibrational motion deflected by the independent restoring forces and consequently traces Lissajous figures along its vibratory path.

3,516,194

BUILDING ELEMENTS WITH CONCEALABLE CONNECTING MEANS AND EXTRACTING MEANS THEREFOR

Reinhard Schmidlin, 3125 Toffen, Switzerland

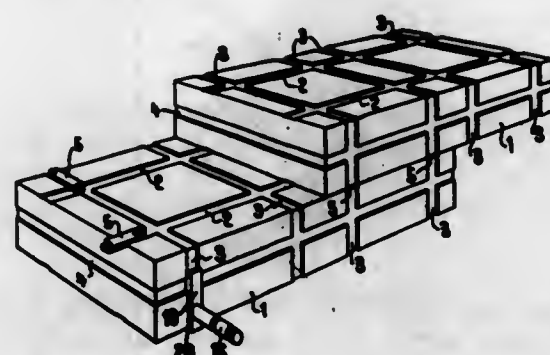
Filed Feb. 27, 1967, Ser. No. 618,735

Claims priority, application Switzerland, Feb. 28, 1966, 2,851/66

Int. Cl. A63h 33/10

U.S. Cl. 46—26

12 Claims



A building set having building elements with dovetail grooves at their surfaces for interconnection of building elements such as blocks and wheels by means of connecting slides inserted into grooves between building elements. A tool or one of the slides themselves serves as means for extracting connecting slides from said grooves.

3,516,195

SOUNDING CORD TWIST TOY

Ray E. Batley, Birmingham, Mich., assignor to Robert A. Kramer, doing business as Kramer Designs, Birmingham, Mich.

Filed Nov. 13, 1967, Ser. No. 682,282

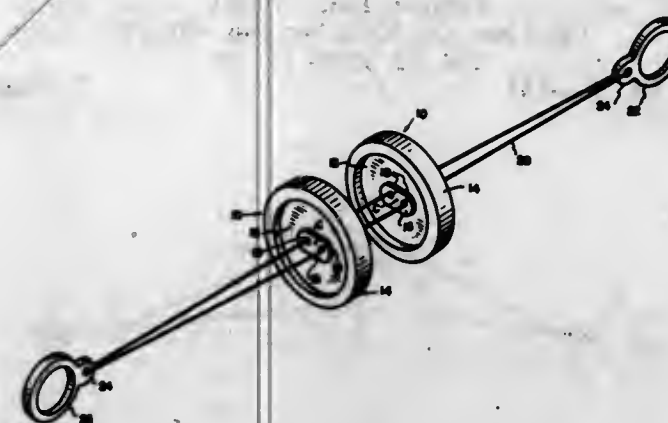
Int. Cl. A63h 1/28, 27/12, 5/00

U.S. Cl. 46—63

6 Claims

A plurality of rimmed disks having centrally located hubs provided with a pair of perforations therethrough are threaded on a loop of cord along with a pair of ring elements which can be held by an operator for manipula-

tion by which the cords are alternately twisted and untwisted to cause the disks to spin oscillatingly and gyro-



scopically and to move together and apart with a rhythmic and percussive effect.

ERRATUM

For Class 47—43 see:
Patent No. 3,516,200

3,516,196

MULCH SHEETS AND SEED MATS AND METHOD OF MAKING SAME

Richard F. Lippoldt and Warren W. Woods, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Original application Nov. 27, 1964, Ser. No. 414,106, now Patent No. 3,427,194, dated Feb. 11, 1969. Divided and this application July 8, 1968, Ser. No. 760,370

Int. Cl. A01c 1/04

U.S. Cl. 47—56

4 Claims



A seed mat is comprised of a biodegradable sheet coated with an asphalt adhesive binding seeds to the upper surface of the biodegradable sheet.

3,516,197

EMERGENCY-RELEASABLE HOLDDOWN MECHANISM FOR HINGED COVER OF A HATCHWAY

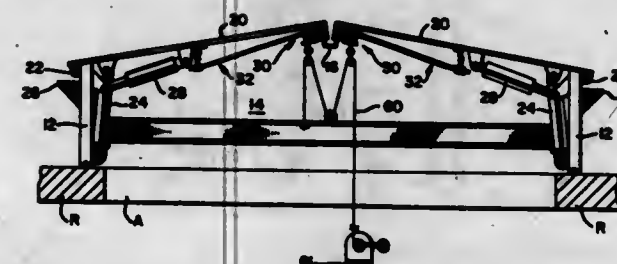
Robert J. Lyons, 1060 Ridge Road, Hamden, Conn. 06514

Filed June 30, 1969, Ser. No. 837,639

Int. Cl. E05f 15/20

U.S. Cl. 49—1

5 Claims



An emergency-releasable holddown mechanism is disclosed for the cover of a smoke or ventilating hatch mounted in the roof of a building. The hatch cover is heavily spring biased to open position but is normally held closed by the holddown mechanism. This mechanism incorporates a lever arm pivotally mounted at one of its ends to the cover, and emergency-releasable means at its remote end preventing pivotal movement relative to the cover. The lever also has a lateral return arm adjacent its pivoted end, and a slide ring is trapped on the lateral arm in the normal condition of the holddown

mechanism. A cable or other tie means on the ring is used to hold the cover in closed position until the emergency-releasable means is actuated. When this occurs the lever swings downwardly about its pivot, thereby allowing the ring to slip off the lateral arm and the cover to spring open. The holddown mechanism also permits manual opening and closing of the cover for normal ventilation without disrupting automatic emergency operation.

3,516,198

EMERGENCY RELEASE LATCH MECHANISM FOR SMOKE HATCH

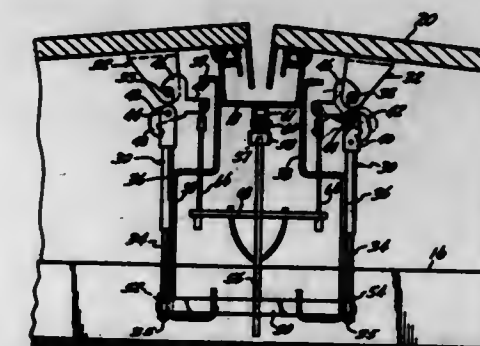
Robert J. Lyons, 1060 Ridge Road, Hamden, Conn. 06514

Filed Jan. 21, 1969, Ser. No. 792,624

Int. Cl. E05f 15/20

U.S. Cl. 49—1

8 Claims



An emergency release latch mechanism for a hinged cover of a hatchway construction, wherein the cover is heavily spring biased to open position but is normally restrained in closed position by the latch mechanism. The mechanism includes an emergency-actuated release member such as a low-temperature fusible metal link which, through a leverage for reducing the tensile load on the link to a low value, normally retains a latching dog in engagement with a shackle pin on the cover but assures positive disengagement therefrom to release the cover to open position in the event of actuation of the emergency-actuated release member.

3,516,199

RAISING AND LOWERING REGULATORS

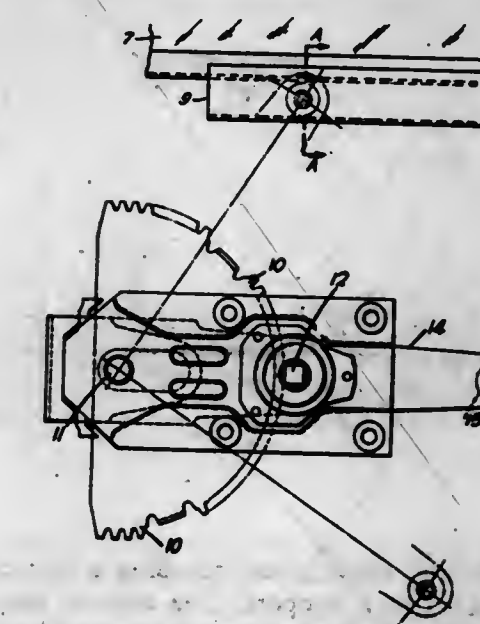
Francis Dennis Priestman, Coventry, England, assignor to Rootes Motors Limited, London, England, a British company

Filed Jan. 10, 1969, Ser. No. 790,360

Int. Cl. E05f 11/52, 11/44

U.S. Cl. 49—40

3 Claims



A lever type regulator for raising and lowering a curved article through a curved path which regulator

comprises a lever rotatable in a vertical plane having means at one end to engage the bottom of the article, the lever being flexible to permit said one end to move transversely to said vertical plane during raising and lowering of the article.

3,516,200
TREE PROP

Emil Marin, 419 Elliott St., Port Arthur,
Ontario, Canada

Filed Feb. 27, 1968, Ser. No. 708,620

Int. Cl. A01g 23/00; B26b 29/00

U.S. Cl. 47—43

10 Claims



A light weight telescopic pulp wood prop and measuring guide having a retractable and extendable spring loaded prong or spike at one end and a sole plate at the other end.

3,516,201
AIR DOOR CONTROL

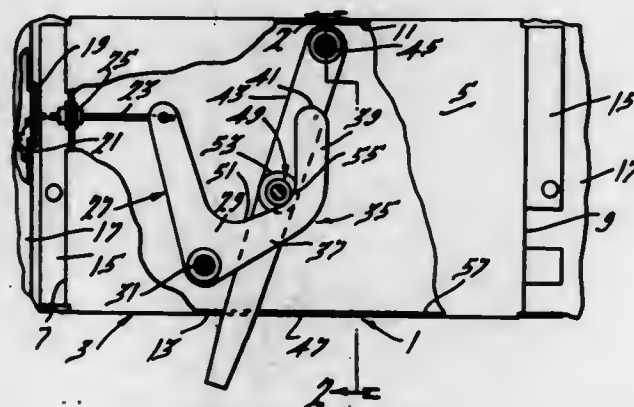
Joseph S. Jesse, Dayton, Ohio, assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Mar. 3, 1969, Ser. No. 803,792

Int. Cl. E05f 11/02

U.S. Cl. 49—324

4 Claims



Door operating mechanism including a bell crank pivotally connected to a support. One arm of bell crank is connected to door and other arm is engaged by lever pivotable to move the bell crank from a position wherein door is closed to a position wherein the door is opened.

3,516,202
PORTABLE VEHICLE OPERATED GATE

Charles R. Justice, 12 N. 41st St.,

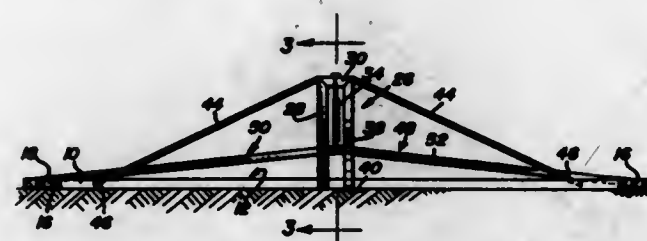
Temple, Tex. 76501

Filed Jan. 16, 1968, Ser. No. 698,178

Int. Cl. E06b 11/04

U.S. Cl. 49—131

2 Claims



This gate is portable and can be readily installed in a gateway leading to and from a fence-enclosed area. Interconnected side rails and end rails provide a sturdy base for a pair of hinged mounted gates which have inward ends which are normally in converging elevated relationship between inverted U-shaped posts or up-rights. These up-rights have adjustable depending gate suspending springs. The gates prevent cattle from passing thereover but allow vehicles to ride thereover in either direction.

3,516,203
METHOD AND MEANS FOR SURFACE FINISHING A WORK PIECE.

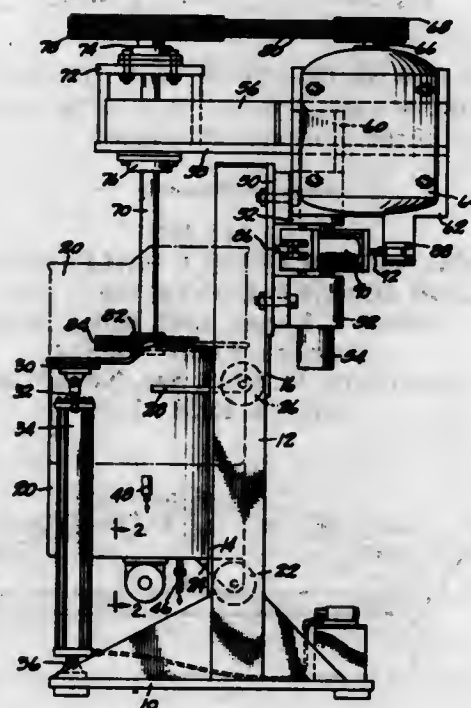
Duane E. Hambricht, Colon, Mich., assignor to Sutton Tool Company, Sturgis, Mich., a corporation of Michigan

Filed May 18, 1967, Ser. No. 639,507

Int. Cl. B24b 19/00, 31/00

U.S. Cl. 51—7

10 Claims



A method and means for surface finishing a work piece. The method involves rotation of a work piece immersed in a bed of finishing media of fluidized character and simultaneously effecting relative bodily movement of the work piece and the bed in one or more directions. The means utilized to practice the method fluidizes the bed of media, swings the work piece laterally in the bed or varies the depth of immersion in the bed, or both, and may periodically reverse the direction of rotation of the work piece.

3,516,204
ABRADING APPARATUS

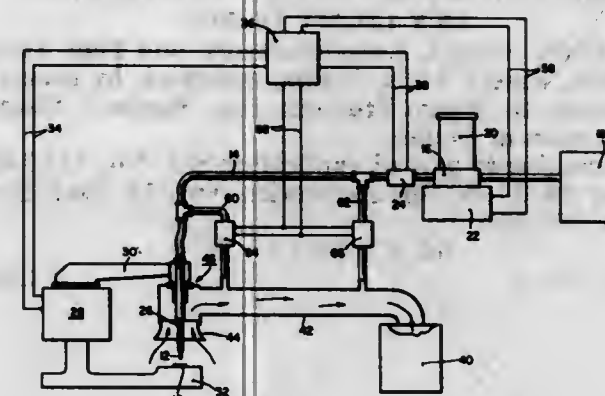
Walter Kallchenko, Staten Island, N.Y., assignor, by mesne assignments, to Pennwalt Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 21, 1967, Ser. No. 661,861

Int. Cl. B24c 3/00

U.S. Cl. 51—8

10 Claims



Abrasive particles are removed from the work site by means of an exhaust line connected to a ducted hood in which the nozzle is movably mounted. On termination of any one abrading operation the stream of airborne abrasive particles is diverted from the line supplying the nozzle to the exhaust line.

3,516,205
SHOT-BLASTING APPARATUS

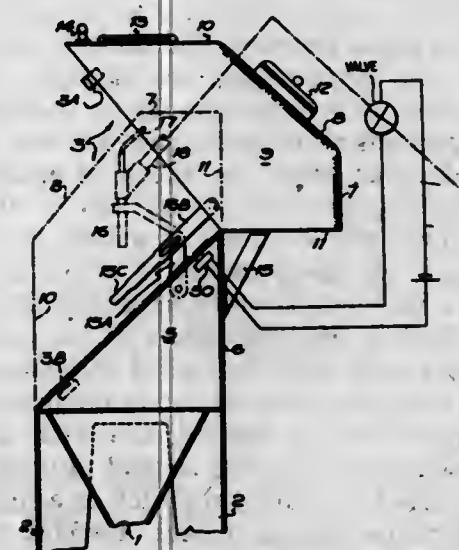
Robert S. Thomson, Pool-in-Wharfedale, England, assignor to Guyson Industrial Equipment Limited, Odley, Yorkshire, England

Filed June 19, 1967, Ser. No. 647,047

Int. Cl. B24c 3/00

U.S. Cl. 51—8

10 Claims



A cabinet of a shot-blasting apparatus comprising a primary portion having a lower part in the shape of an inverted pyramid constituting the cabinet base and a secondary portion which sits over the primary portion, the primary portion having an upper part which includes a rear wall and a pair of side walls the top edges of which are inclined downwardly towards the front, but having no front wall, the secondary portion having a rear wall which is hinged to the rear wall of the upper part of the primary portion, a front and side walls the lower edges of which are inclined to correspond in inclination to the top edges of the side walls of the upper part of the primary portion and which rest upon such side walls.

when the secondary portion is closed upon said primary portion. The front of the secondary portion of the cabinet may include a window and access openings fitted with flexible seals for manual operations.

3,516,206
CONTINUOUSLY-ADJUSTABLE VARIABLE MECHANISMS AND MACHINE TOOLS INCORPORATING SAME

Ardon Y. Kipnis, 1 Haffa Road, Tel Aviv, Israel

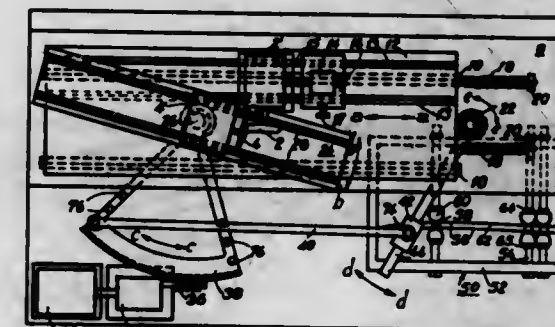
Filed July 17, 1967, Ser. No. 653,801

Claims priority, application Israel, July 18, 1966, 26,170

Int. Cl. B24b 7/02; F16h 53/00

U.S. Cl. 51—46

7 Claims



A control mechanism for coupling together two moving elements comprises a crank pivotable about a fixed pivot point coupled to one of the elements, a slide slidable along the crank, a link coupled to the other of the elements and pivotably connected to the slide at a pivot point overlying the crank, and a changeable program member having a guide surface of a configuration in accordance with the relative movement desired, the slide including a follower that moves along the guide surface during the movement of the link and displaces the slide along the crank to continuously vary the effective length of the crank in accordance with the configuration of the guide surface. Also described is a machine tool, namely one for producing aspherical lenses, embodying the foregoing control mechanism for controlling the movement of the tool holder with respect to the workpiece holder.

3,516,207
BELT GRINDING AND POLISHING MACHINE

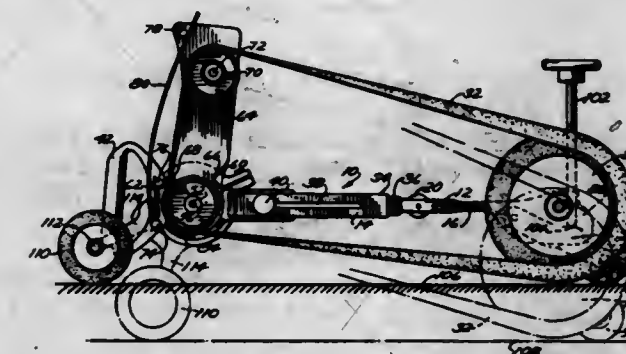
Stephen Bader, Valley Falls, N.Y., assignor to Bader, Stephen & Co. Inc., Valley Falls, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 375,747, June 17, 1964. This application Aug. 3, 1967, Ser. No. 658,277

Int. Cl. B24b 21/00

U.S. Cl. 51—135

17 Claims



A belt sander having an inner and an outer portion and a second mounting member pivotally connected to the inner portion, rollers mounted on each portion for carrying an endless belt; and a tracer wheel mounted on the outer portion for engaging the surface of a work-piece for adjusting and controlling the depth of grinding.

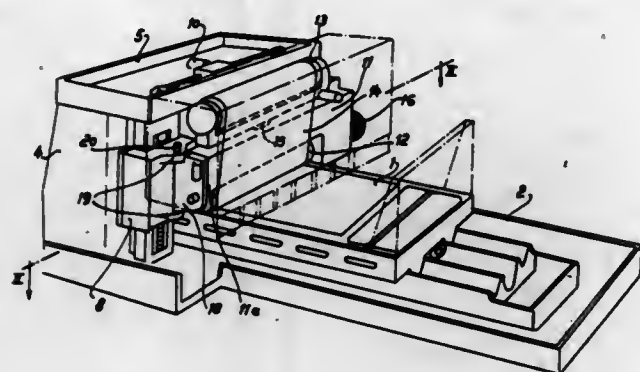
3,516,208 **WIDE-BELT GRINDING MACHINE, MORE PARTICULARLY FOR WORKING SHEET METAL**

Edmund Elch and Heinz Gerner, Coburg, Germany, assignors to Werkzeugmaschinenfabrik Adolf Waldrich Coburg, Coburg, Bavaria, Germany, a corporation of Germany

Filed Nov. 13, 1967, Ser. No. 682,269
 Claims priority, application Germany, Nov. 17, 1966, W 42,811

Int. Cl. B24b 21/10, 21/04
 U.S. Cl. 51—143

5 Claims

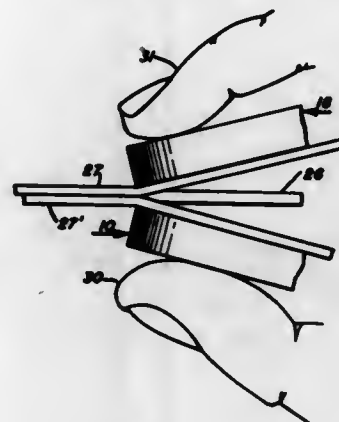


A belt grinding machine having two columns interconnected by a cross head and a pair of slides each guided for vertical movement on each of the columns and interconnected by a crossbeam. A bearing arm is rigidly connected to one of the slides and extends generally parallel to the crossbeam and is spaced outwardly from the crossbeam to define a passageway therebetween. A locking member is fixedly secured to the other of the slides and includes means for releasably coupling the locking member to the free end of the bearing arm to rigidify the bearing arm. A pair of rotatable guide rolls are mounted on the bearing arm and support an endless grinding belt. The belt extends through the passageway, the locking member being releasable from the free end of the bearing arm to permit the removal of the grinding belt from the passageway.

3,516,209
RAZOR BLADE STROPPER
 Valdemar Virtanen, 830 42nd St., Brooklyn, N.Y. 11232
 Filed Mar. 12, 1968, Ser. No. 712,458
 Int. Cl. B24b 21/00

U.S. Cl. 51—153

6 Claims



A stropper passes through passageways formed in two, separable blade-holder members, said members being provided with cooperating means for receiving a razor

blade. In the assembled device, the razor blade is positioned between the two members with the stropper passing along both sides of the blade. An edge of the blade is clamped between the stropper when corresponding sides of the blade-holder members are pressed together by finger pressure.

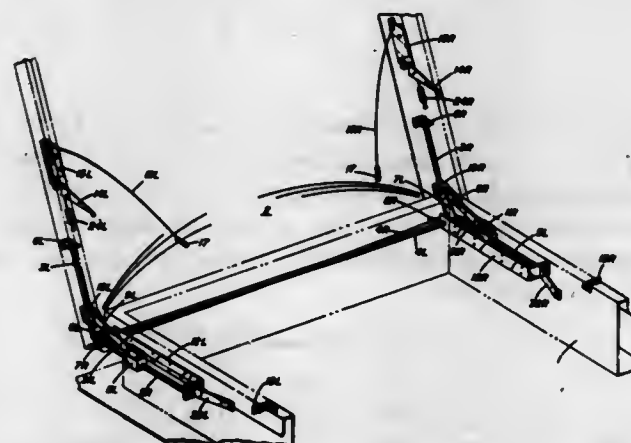
3,516,210 **FIRE AND SMOKE RELIEF VENTILATOR SKY-LIGHT DOME**

Arthur Philip Jentoft, Kennebunkport, and Paul Archille Couture, Emery Mills, Maine, assignors, by mesne assignments, to Wasco Products, Inc., Sanford, Maine, a corporation of Maine
 Continuation-in-part of application Ser. No. 732,743, May 28, 1968. This application Nov. 19, 1968, Ser. No. 784,509

Int. Cl. E05f 15/20

U.S. Cl. 52—1

8 Claims



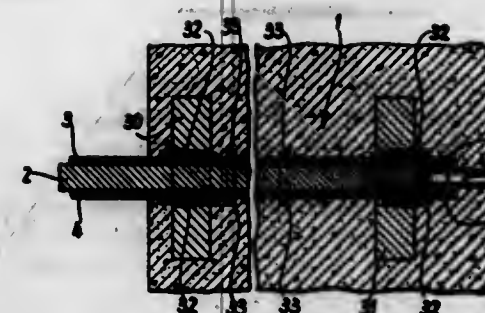
A hinged cover which may either be opaque of metal or provided with a translucent plate or dome of plastic, such as acrylic plastic, is actuated by a torsion and bending bar or bars instead of springs and levers. The torsion bars have two legs and a central torsion portion, one leg being attached to a side of the vent to be opened and the other leg to skylight framing. The central portion of the bar, which is in torsion when the skylight or dome is closed, also acts as a hinge pin. In the loaded position the two end portions of the torsion bar are bent somewhat, and when the cover opens, the shock of opening is partially absorbed by bending of the legs of the bar. In locked holddown position there is a bolt and latch, the latches on each side being connected across the cover by a cable with a fusible link which in case of fire melts and releases the latches. Manual release of the latch without operating the fusible link controlled mechanism can be provided for opening the cover for ventilation, inspection or other purposes and, if desired, this latch can also be operated electrically by remote control through solenoids which are actuated by a manual switch or a signal from a second temperature sensing means. Locking means can also be provided which lock the cover in the open position so that it cannot be blown shut.

3,516,211
INTERNALLY PRESTRESSED REINFORCEMENT ROD
 Johann Jacob Rieve, Dusseldorf, Germany, assignor to Beton- und Monierbau AG, Dusseldorf, Germany, a firm

Filed Jan. 18, 1968, Ser. No. 698,928
 Claims priority, application Germany, Jan. 20, 1967, B 96,818; May 6, 1967, B 92,384

Int. Cl. E04c 3/10, 5/08
 U.S. Cl. 52—230
 This invention provides an internally prestressed reinforcement rod for prestressed concrete consisting of a

core serving as a push rod and peripheral sections. The core may be in the shape of a hexagon, a circle, or a rectangle, and the peripheral sections are shaped to surround and conform to said core leaving only slight gaps between themselves and said core. At least one of the gaps between the peripheral sections may be V-shaped. A clamp unit is provided to act as an anchoring



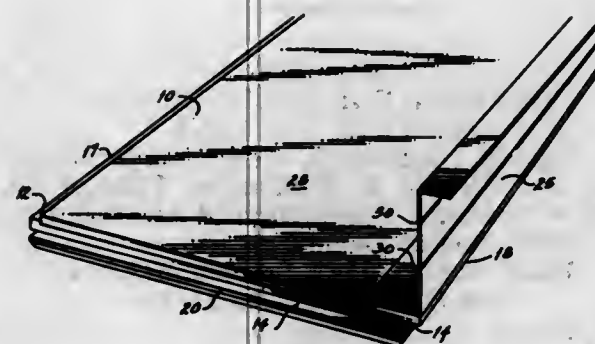
means for the prestressed reinforcement rod after it has been prestressed by a push on the core and a simultaneous pull on the peripheral sections, which clamp unit holds the reinforcement rod in its internally prestressed condition until its removal after the complete installation of this reinforcement rod, whereupon the internal stress becomes a stress in the concrete.

3,516,212
CEILING SUSPENSION SYSTEM AND PANEL
 Charles W. Sawyer, Seminole, Fla., assignor to The Celotex Corporation, Tampa, Fla., a corporation of Delaware

Filed Mar. 26, 1968, Ser. No. 716,004
 Int. Cl. E04c 2/10, 2/38

U.S. Cl. 52—592

2 Claims



An improved ceiling suspension system and panel therefor in which a ceiling panel or tile has an elongated, bendable suspension member secured to and along one edge of the back surface thereof for simple installation of the panel to form a ceiling.

3,516,213
FIREPROOFING OF STEEL COLUMNS
 Gale E. Sauer, Williamsville, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware

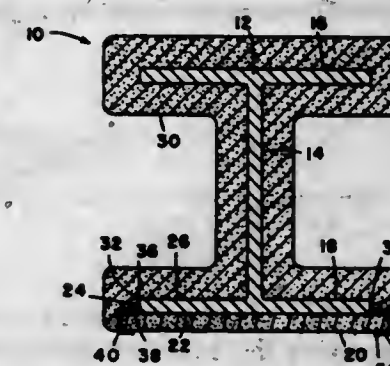
Filed Feb. 28, 1968, Ser. No. 708,996
 Int. Cl. E04c 3/34

U.S. Cl. 52—725

9 Claims

An exterior steel framing member having a protective covering to protect against the damage from high temperatures in case of fire, which covering includes a coat-

ing of cast-in-place fire resistant plaster on the inner side of the member and mineral fiber, ceramic-forming board attached to the outer side of the member by a pair of



cooperative metal clips, one welded to the member and the other snapped around both the board edge and the welded clip.

3,516,214
APPARATUS FOR CONTINUOUSLY COLLECTING ELONGATED ARTICLES

Heinz Focke, Kurt Liedtke, and Horst Friedhoff, Verden (Aller), Germany, assignors to Focke & Pfuhl, Verden (Aller), Germany

Filed Apr. 28, 1966, Ser. No. 546,076
 Claims priority, application Germany, Apr. 28, 1965, F 45,928; Apr. 13, 1966, F 48,931

Int. Cl. B65b 57/20, 19/28

U.S. Cl. 53—62

25 Claims



Cigarettes are positively conveyed by catches or suction to an endless conveyor from their reception in any random rhythm until they pile-up in a storage zone. The storage zone is defined by the endless conveyor and a guide spaced from the conveyor a distance equal to the thickness of a cigarette. When the cigarettes pile up in the storage zone, the guide prevents them from jamming into a second, upper layer and the pile-up force causes the catches or suction to release the cigarettes.

3,516,215
CORNER BRACKET AND STRUCTURES FABRICATED THEREBY

Edward A. Smith, 6641 W. 6th St., Los Angeles, Calif. 90042, and Robert L. Day, 1518 Grier St., Burbank, Calif. 91504

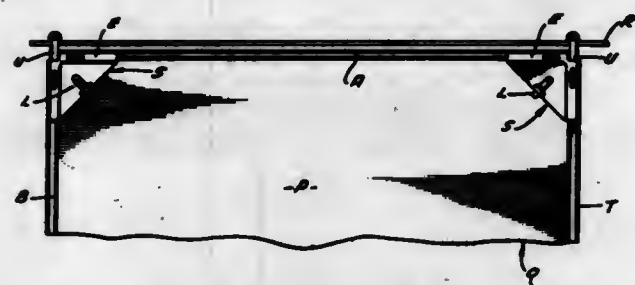
Filed Mar. 31, 1967, Ser. No. 627,535
 Int. Cl. E04c 2/38; F16b 5/06

U.S. Cl. 52—656

9 Claims

Extruded aluminum frame members A and B (FIGS. 1 and 2) are placed against the sides C and D (see also FIGS. 4 and 5) of a corner bracket plate E. The frame members A and B are held tightly against these surfaces by clamp plate F that underlies the bracket plate E. The clamp plate F has hook flanges G and H interlocking corresponding hook flange J of the frame members. Suitable operating means such as a draw screw assembly L (FIG. 2) or a toggle assembly M (FIGS. 10 and 11)

urges the clamp plate F diagonally inwardly of the bracket plate E to produce a rigid corner. Crates, doors, and



other structures are thus readily assembled by providing channels N for receiving the edges of plywood panels P.

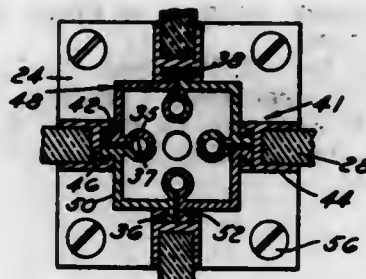
3,516,216

MULTISECTION HOLLOW POST CONSTRUCTION
John J. Galloway, Grand Blanc, Mich., assignor to The Engineered Products Company, Flint, Mich., a corporation of Michigan

Filed May 3, 1968, Ser. No. 726,504
Int. Cl. E04b 2/62; E04c 3/32

U.S. Cl. 52-731

12 Claims



A multiple section hollow column or post for supporting panel members and the like. The longitudinal sections forming the hollow post each have lug means on the exterior of the sections which engage and interlock with channel sections to form a self-supporting column or post. One or more of the channel sections is adapted to engage and support the edge of a panel member.

3,516,217

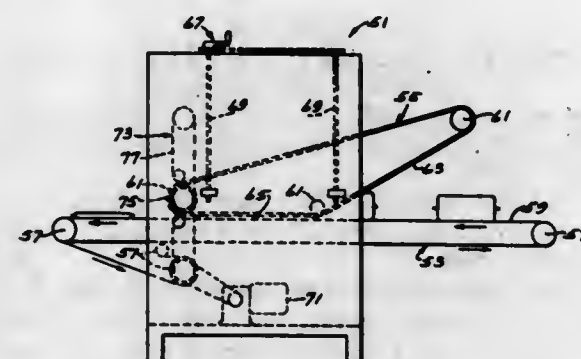
COMPRESSION PACKAGING

John T. Gilderleeve, Minneapolis, Minn., assignor to Bemis Company, Inc., Minneapolis, Minn., a corporation of Missouri

Filed Mar. 7, 1968, Ser. No. 711,356
Int. Cl. B65b 1/24, 61/24; B31b 49/04

U.S. Cl. 53-24

7 Claims



Compression packaging of compressible products, such as foamed plastic articles, pillows, cushions, blankets, towels, etc., by inserting a compressible product or products to be packaged in a plastic bag having a self-sealing

vent for escape of air from the bag, sealing the bag, and squeezing the bag with the product sealed therein to compress the product, with attendant expulsion of air via the vent. The resultant compressed package or a plurality of compressed packages may be bound to prevent expansion such as would otherwise occur on re-entry of air. A bound compressed package may even be deliberately punctured for re-entry of air to cause limited expansion thereof within its binding for a tight fit.

3,516,218

PACKAGING METHOD

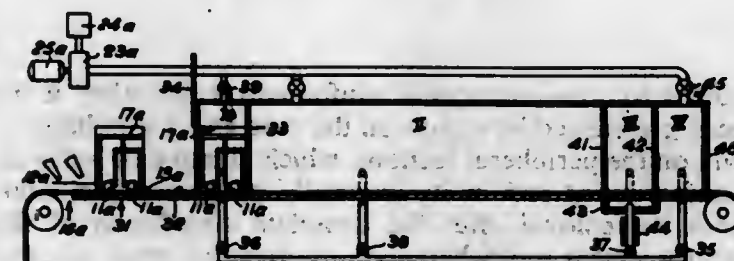
Paul Eisler, 57 Exeter Road,
London NW. 2, England

Filed June 16, 1966, Ser. No. 557,988

Int. Cl. A23l 3/04; B65b 55/14; H05b 3/18

U.S. Cl. 53-25

8 Claims



Goods to be heat-processed and hermetically packed are filled into a container; the container unsealed is processed in a harmless atmosphere, while the pressure is raised to avoid pressure dependent damage, the goods are cooled under pressure reduction to avoid damage and the container hermetically sealed. The pressure medium may be a volatile ingredient, air or steam and may be recirculated. Heating may be by electric heating film. The apparatus includes at least three chambers, a conveyor, air gates, pipes and valves, an air compressor and electrical connections for heaters while the containers are on the conveyor.

3,516,219

MACHINE FOR FOLDING AND SEALING CARTONS

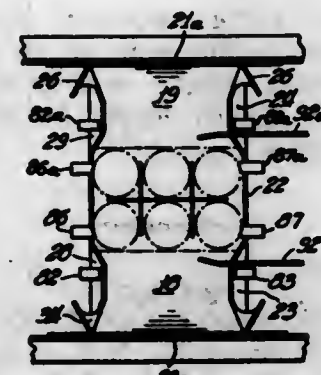
Biagio J. Nigrelli, Northbrook, Wendell E. Standley, Lake Forest, and Richard B. Whitmann, Chicago, Ill., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Filed Mar. 17, 1967, Ser. No. 623,963

Int. Cl. B65b 11/12, 21/24

U.S. Cl. 53-48

10 Claims



A machine for folding a carrier, formed from a pre-scored blank of foldable paperboard, about a group of two rows of containers, such as bottles, the machine including a conveyor for advancing the blank, together with

bottles positioned thereon, through the machine. The blank has flanges on the ends of the panels representing bottom and side walls of the carrier. The machine has means for folding these flanges upwardly and means for swinging the side wall panels upward. Additional means are provided for holding the side wall panels in upraised position and for confining each of the side wall panel flanges between the side wall panels and the respective adjacent end bottles of the rows of bottles positioned on the blank.

3,516,220

CONTAINER FILLING APPARATUS

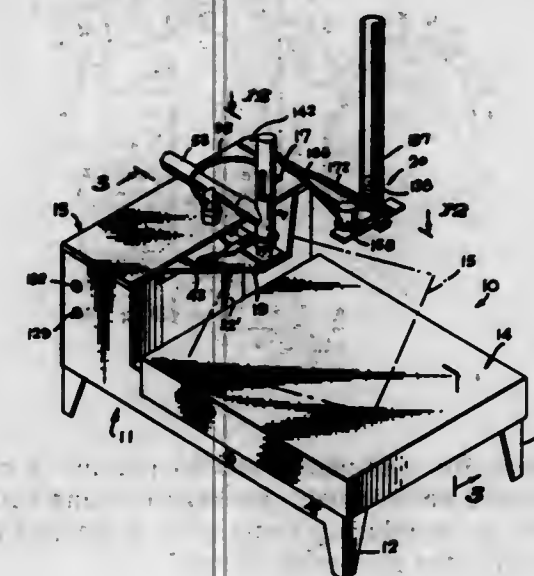
Charles Gilbert Buford, 17727 Laxford Ave., Azusa, Calif. 91702, and Wesley Ellis Buford, 1045 N. Azusa, Covina, Calif. 91722

Original application Jan. 11, 1965, Ser. No. 424,610, now Patent No. 3,403,826, dated Oct. 1, 1968. Divided and this application Aug. 26, 1968, Ser. No. 755,339

Int. Cl. B65b 57/06

U.S. Cl. 53-59

15 Claims



A machine for filling liquid into a flexible bag, including a scale on which the bag is placed and carrying a holder for gripping a filling neck of the bag, with a filling nozzle being movable into engagement with the neck, and being adapted to fill liquid into the bag until the filling operation is automatically halted by the scale when the bag and contained liquid reach a predetermined weight. In moving to its filling position, the filling spout swings generally horizontally about an axis, and also moves downwardly to properly contact a filling neck of the bag.

ERRATUM

For Class 53-62 see:
Patent No. 3,516,214

3,516,221

AUTOMATIC BAGGING MACHINE

Allen D. Paxton, Fresno, Calif., and Stanley K. Paxton and Kenneth P. Paxton, Yakima, Wash., assignors to Paxton Sales Corporation, Yakima, Wash., a corporation of Washington

Filed Oct. 7, 1968, Ser. No. 765,352

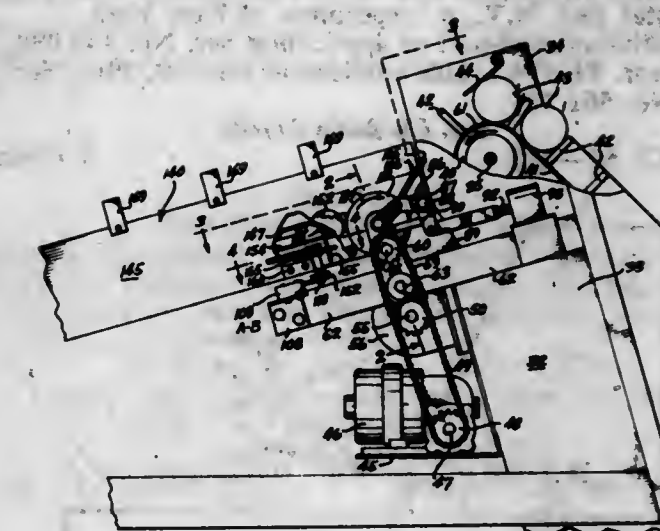
Int. Cl. B65b 57/06, 43/26

U.S. Cl. 53-63

14 Claims

A balanced scale platform comprising a power driven downward sloping endless belt which is automatically disengaged from its power source while accumulating a batch of a given weight delivered thereon from a feed elevator, a weight sensor halting said elevator and re-

connecting said power source to said belt to cause the latter to discharge said weighed batch through a bag holding scoop into said bag, said scoop automatically re-



leasing said loaded bag to be carried away on a discharge conveyor, said scoop then providing itself with an empty bag during the ensuing batch weighing cycle.

3,516,222

APPARATUS FOR VACUUM SEALING CASINGS AND THE LIKE

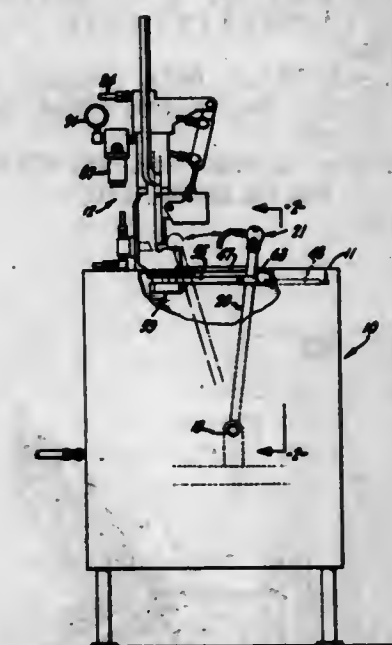
Karl A. Klentz, Oakland, Calif., assignor to Rheem Manufacturing Company, New York, N.Y., a corporation of California

Filed June 26, 1967, Ser. No. 648,670

Int. Cl. B65b 31/06

U.S. Cl. 53-79

8 Claims



Apparatus for evacuating a flexible container such as a food casing and applying an air tight seal thereto. By means of control valves a vacuum is applied to the container upon initiation of the operating cycle and actuation of the sealing device automatically shuts off the vacuum. Control valves are programmed so that gathering means for constricting the mouth of the container, a retractable probe projected into the container to facilitate evacuation of the container, and a cut off knife for severing the container outwardly of the seal are all actuated at predetermined times in the cycle for performing the required steps substantially automatically without intervention of the operator.

3,516,223

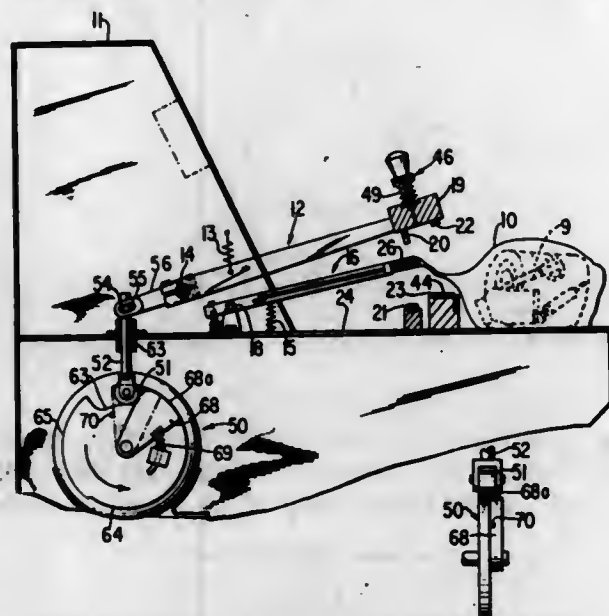
APPARATUS FOR MANAGING AND USING VOLATILE SUBSTANCES

Harold Willis Andersen, Oyster Bay, Harold W. Andersen, Laurel Hollow, and Charles H. Harrison, Oyster Bay, N.Y., assignors to H. W. Andersen Products, Inc., Oyster Bay, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 448,090, Apr. 14, 1965. This application June 30, 1966, Ser. No. 561,777

Int. Cl. B65b 31/06

U.S. Cl. 53-112

9 Claims



An apparatus is provided for sealing a fluid in an enclosure which includes first and second jaws for respectively clamping the enclosure opening and for clamping the enclosure at a position spaced from said first jaws.

3,516,224

DEVICE FOR FILLING AND SEALING PRESSURE CONTAINERS IN PARTICULAR AERO-SOL-BOMBS

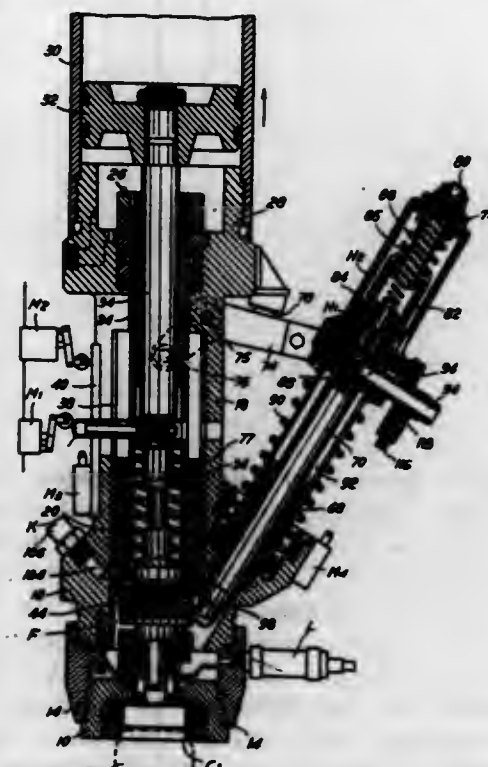
Augusto Caccini, Milan, Italy, assignor to Solfrene Macchine S.p.A., Buccinasco, Milan, Italy, a corporation of Italy

Filed Nov. 1, 1967, Ser. No. 679,853

Int. Cl. B65b 31/02

U.S. Cl. 53-112

13 Claims



The device comprises a chamber into which nozzles are leading, for an inert pressurized gas and for the propellant fluids, as well as for the fluid to distribute, said nozzles

being actuated successively to introduce, into the container, first the inert gas and successively the propellant and the liquid to be pulverized.

3,516,225

STERILE PACKING

Jean Faucheron, Les Clayes-sous-Bois, France, assignor, by mesne assignments, to Societe d'Etudes et d'Exploitation de Procédés pour l'Industrie Alimentaire, Clichy, France, a company of France

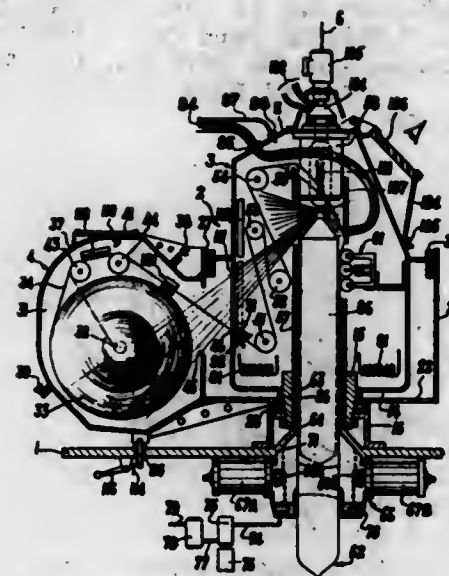
Filed Nov. 22, 1967, Ser. No. 685,163

Claims priority, application France, Nov. 11, 1966, 85,323; June 15, 1967, 111,457

Int. Cl. B65b 9/12

U.S. Cl. 53-180

5 Claims



A machine for continuous, sterile, packaging comprising, in a sterile environment, package forming equipment and means for introducing material to be packed into the package during the formation thereof.

3,516,226

LOADING APPARATUS

Halvor Gråsvoll, Göteborg, Sweden, assignor of one-third each to Gustav G. Magnusson, and Karl I. Welner, both of Göteborg, Sweden

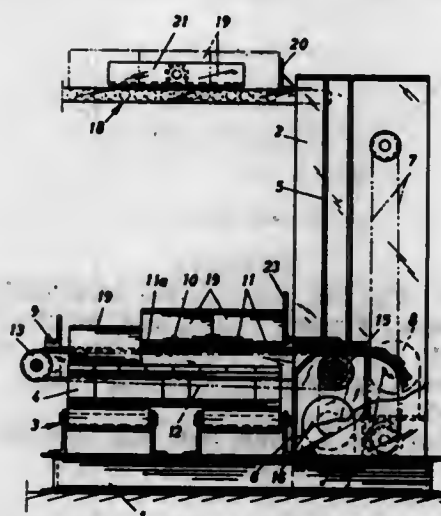
Filed Sept. 17, 1968, Ser. No. 760,247

Claims priority, application Sweden, Sept. 19, 1967, 12,905/67

Int. Cl. B65b 11/16

U.S. Cl. 53-229

4 Claims



The present invention relates to an apparatus for transferring pieces of goods from a conveyor to a support, e.g., a pallet. The main object of the invention is to

render possible a free feeding of objects on the conveyor when pieces of goods are transferred from the conveyor to the support. The object aimed at has been achieved thereby that the apparatus comprises an elevator cage that is vertically displaceable in a stand and that it is provided with a feeder being displaceable back and forth for taking over pieces of goods from the conveyor when the elevator cage is in its upper position, the apparatus further comprising a stripper for transferring the pieces of goods from the feeder onto the support or a layer of pieces of goods on said support when the elevator cage is in its lower position and the feeder is moving away from the stripper.

3,516,227

APPARATUS FOR CONTINUOUSLY PRODUCING PACKAGES OF PRODUCE

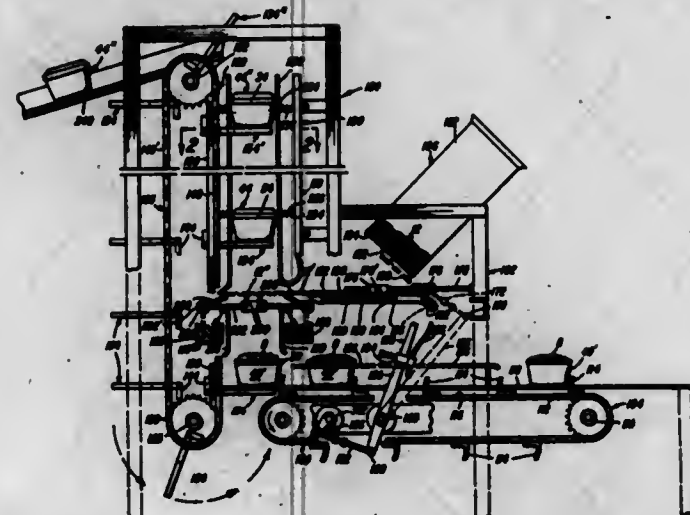
Leroy D. Baker, Morris, Ill., and William S. Peppier, Chappaqua, N.Y., assignors to Diamond International Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 23, 1968, Ser. No. 754,936

Int. Cl. B65b 7/28

U.S. Cl. 53-396

8 Claims



Apparatus for indexing filled baskets of produce in relation to indexed flat, cap blanks, and conveying the baskets through a path of travel orienting the cap blanks onto the baskets and erecting the caps into a prism-like configuration securing the caps to the baskets to form a completed commercial package.

3,516,228

APPARATUS FOR WRAPPING WITH FLEXIBLE HEAT SEALABLE MATERIAL

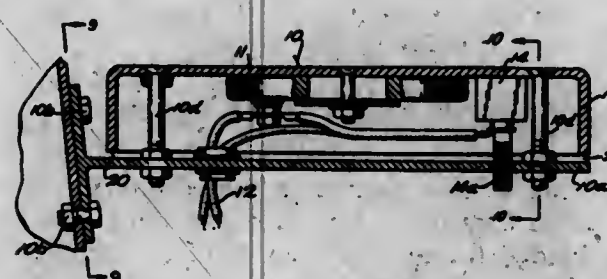
Phillip J. Fellner, Racine, Wis., assignor to Sturtevant Industries, Inc., Sturtevant, Wis., a corporation of Wisconsin

Filed Feb. 26, 1968, Ser. No. 708,226

Int. Cl. B65b 67/08

U.S. Cl. 53-390

1 Claim



Apparatus including a heated support pedestal for and method of wrapping an article to permit the soft, flexible wrapping material to be pulled tightly and completely

around all sides of the article and also underneath the article so as to "band" it with the material with the sides of the band extending laterally outwardly at opposite sides, then the bottom of the band is sealed tightly at the bottom thereof, and the sides then tucked smoothly and tightly across the bottom and the folded sides heat sealed across the bottom of the completed package, all with one general sweeping motion in a matter of a few seconds.

3,516,229

DEAERATING APPARATUS

Chutichi Nakazawa, Hiroshi Hiramami, Takashi Kan, Yoshio Ichikawa, and Hachiro Onishi, Saitama, Japan, assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

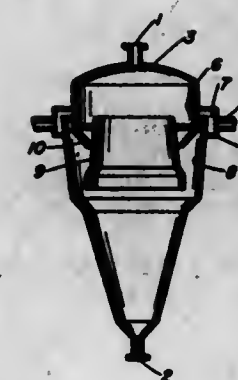
Filed Oct. 31, 1968, Ser. No. 772,097

Claims priority, application Japan, Nov. 15, 1967, 42/96,605

Int. Cl. B01d 19/00

U.S. Cl. 55-193

3 Claims



In deaerating apparatus comprising a tank having a suction port at the top, a viscous liquid discharge port at the bottom, a trough secured to the outer peripheral surface of said tank and having a plurality of small holes for introducing a viscous liquid thereto, distributor means establishing communication between said trough and said tank, and having a cover plate so shaped that when viscous liquid from the trough enters the tank any droplets formed by splashing of said liquid are prevented from traveling upwardly, the improvement comprising (a) a shield plate placed within the tank extending downwardly from a position adjacent the cover plate and (b) a guide plate having its upper end placed closely adjacent the inner tank wall and below the clearance between the inner tank wall and the cover plate and having its lower end placed closely adjacent the shield plate so that part of the flow of viscous liquid along the inner tank wall is transferred to the shield plate.

3,516,230

PAINT PLANTS WITH VENTILATION AND PAINT-PARTICLE RECOVERY SYSTEM

Jean Seabesty, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

Filed Feb. 13, 1967, Ser. No. 615,397

Claims priority, application France, Feb. 18, 1966, 50,270

Int. Cl. B01d 47/00

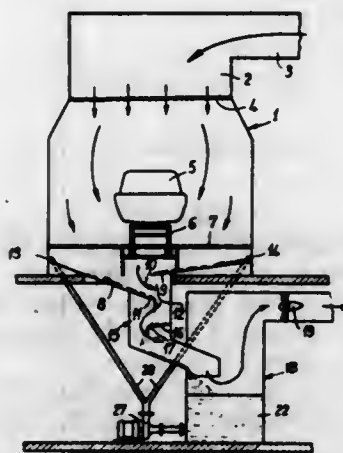
U.S. Cl. 55-228

1 Claim

Paint room equipped with a sedimentation or flotation tank connected on the one hand to an air suction system and on the other hand, through an air duct equipped with means for forming liquid washing sheets, to a single vertical passage elongated in the horizontal direction, formed along the bottom of the paint room between two inclined

bottom walls thereof. A wash-liquid supply system is so disposed along and near the upper end of each inclined bottom wall that the liquid can stream along the greater

An air freshener or deodorizer means may also be placed in the housing to further treat the smoke. One embodiment of the invention utilizes a light-bulb posi-



part of their top surface, the air in the room being sucked by fan means through said vertical passage, said liquid sheets and said sedimentation tank.

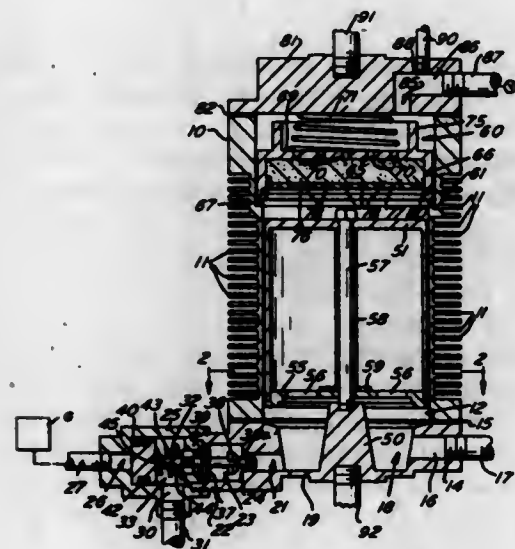
3,516,231 AFTERCOOLER

Robert H. George, Melrose Park, Pa., assignor to Brake-master Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 24, 1968, Ser. No. 731,789
Int. Cl. B01d 35/18

U.S. Cl. 55-267

5 Claims



An aftercooler which is suitable for use in the air supply line between an air compressor and a reservoir having means for filtering out and collecting contaminants, cleaning the filter and unloading between compressor operating cycles.

3,516,232 ASH TRAY DEVICE

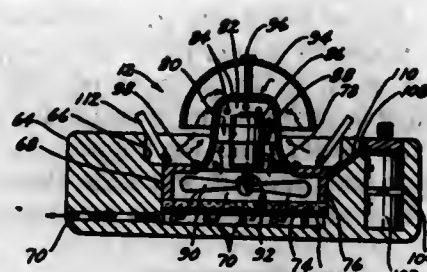
John E. Gilbertson, 3209 Douglas Ave.,
Des Moines, Iowa 50310

Filed Feb. 5, 1968, Ser. No. 703,133
Int. Cl. B01d 46/10

U.S. Cl. 55-385

1 Claim

An ash tray device including means for filtering the smoke produced by cigarettes or cigars which are placed in the ash tray. A housing including a fan means is positioned over or adjacent to the ash tray and is designed to draw the smoke through a filter means to purify the same.



tioned in a housing over the ash tray which causes a draft through the housing thereby inducing the smoke to pass through a filter means in the housing.

3,516,233

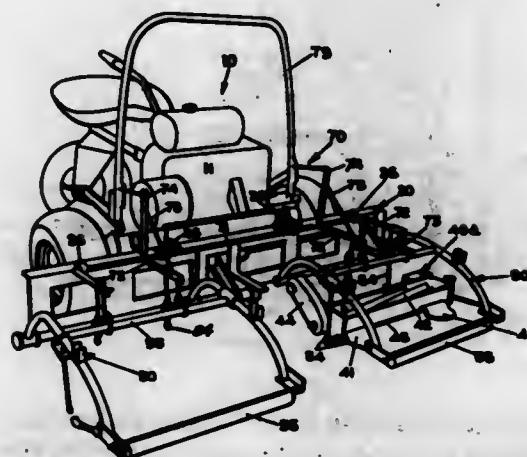
LIGHTWEIGHT RIDEABLE GREEN MOWER

Fay O. Johnson, 1652 MacNider; William L. Johnson, Sr., 5535 Cascade Road; and William L. Johnson, Jr., 7221 Driftwood, all of Grand Rapids, Mich. 49506

Filed May 7, 1969, Ser. No. 822,602
Int. Cl. A01d 75/30

U.S. Cl. 56-6

34 Claims



A rideable green mower with two mowing units pivotally mounted on a front frame and one mowing unit pivotally mounted on a rear frame. Each front mowing unit is connected to levers extending outwardly from a rotatably mounted axle which is rotatable by a hand operated U-shaped lever or by a foot pedal. The rear mowing unit is similarly connected to a foot pedal. A front drive assembly drives the reels of the front mowing units and a rear drive assembly drives the reel of the rear mowing unit.

3,516,234

ROTARY MOWERS

Brooksy Ray Snook, 907 N. State St.,
Westville, Ill. 61832

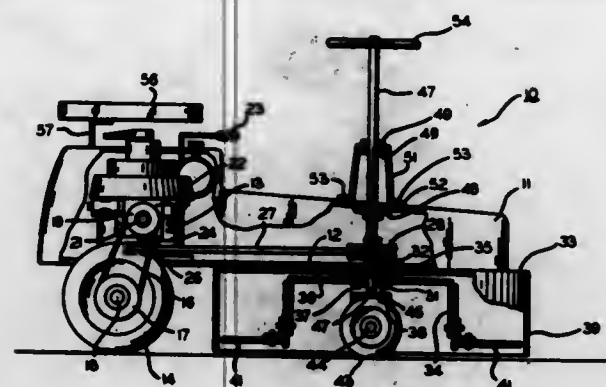
Filed May 27, 1968, Ser. No. 732,172
Int. Cl. A01d 35/26

U.S. Cl. 56-25.4

3 Claims

A rotary mower characterized by a frame and a drive motor, driving wheels secured to said frame for driving said mower in forward and reverse directions as desired, a rotary blade shroud enclosing a blade rotor driven from said drive motor, with at least one ground engaging wheel supported on a swivelable frame having a turning center corresponding to the turning center for the blade rotor, steering mechanism disposed on the turning center of said swivelable frame and connected to said swivelable

frame for steering said ground engaging wheel whereby the blades of the rotor can cut closely to shrubs and the blade for mounting to the lawn mower shaft. The



trees, obstructions, lawn edges or the like, and whereby the mower can be steered readily in any direction.

3,516,235

LAWN MOWER

Tatsuo Tanoue, Hirakata-shi, Osaka, Japan, assignor to Kabushiki Kaisha, Toyosha, Osaka, Japan

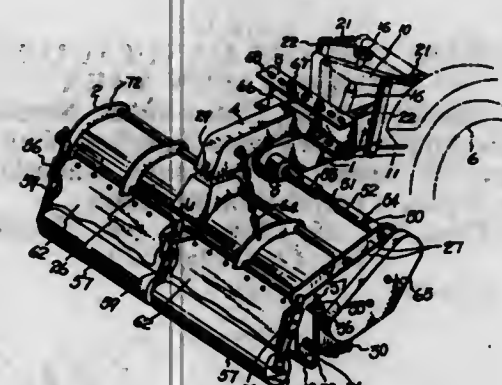
Filed Feb. 29, 1968, Ser. No. 709,436

Claims priority, application Japan, Dec. 12, 1967, 42/80,741

Int. Cl. A01d 35/24

U.S. Cl. 56-26

3 Claims



A lawn mower is coupled to the rear end of a tractor and effects mowing while being hauled by the tractor. The mower comprises a rotary transmission provided in projected form from the rear end of a tractor and arranged so as to be vertically movable. The lawn mower is coupled to the tractor by a drag hitch, and comprises rotating blades and a fixed blade, suspended at the rear end of the tractor body to effect a highly efficient and speedy lawn mowing operation which cannot be attained by conventional mowing devices.

3,516,236

MOWER BLADE

Abraham L. Freedlander, Dayton, Ohio, and Robert E. Matthews and Wayne C. Garrett, Waynesville, N.C., assignors to Dayco Corporation, Dayton, Ohio, a corporation of Delaware

Continuation of application Ser. No. 689,651, Dec. 11, 1967. This application Nov. 25, 1968, Ser. No. 778,866
Int. Cl. A01d 55/18

U.S. Cl. 56-295

5 Claims

A flexible mower blade adaptable for mounting on a power driven rotary lawn mower and designed for improved safety. The blade is primarily formed of an elastomeric material such as urethane but has a rigid

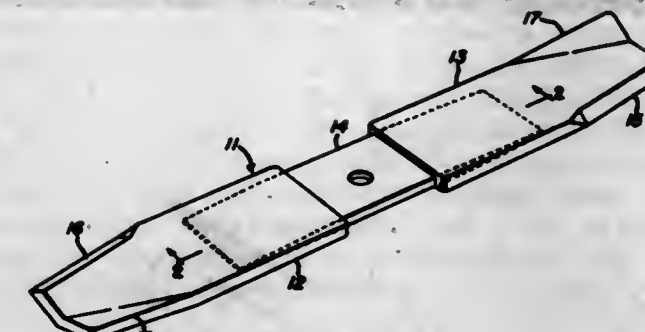


plate has tapered edges to combine rigidity with flexibility.

3,516,237

ADJUSTABLE DRAW BAR FOR SIDE DELIVERY RAKES

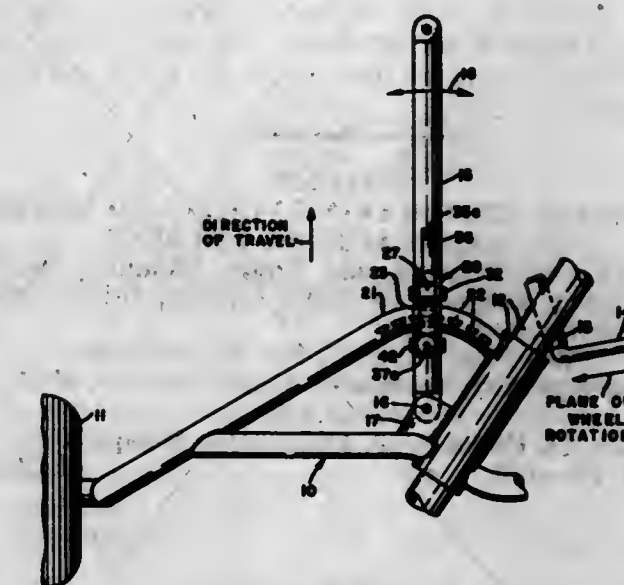
George C. Wood, Edenton, and George W. Giles, Raleigh, N.C., assignors to Patent & Development, Incorporated, Raleigh, N.C.

Filed May 22, 1968, Ser. No. 731,059

Int. Cl. A01d 77/06

U.S. Cl. 56-376

9 Claims



A laterally adjustable draw bar pivoted to an oblique frame member of a side delivery rake so that the angle included between the draw bar and the frame member may be varied. Quick-acting means are provided for releasably locking the draw bar in an adjusted position. The draw bar is movable laterally relative to an arcuate rail on the rake frame, concentric with the draw bar pivot. The quick-acting locking means are provided by a cam-actuated clamping strap which releasably locks the draw bar and rail together. The clamping strap has a screw-threaded adjustment for pre-setting the cam-actuated locking action.

3,516,238

ROTARY SIDE DELIVERY RAKE

George C. Wood, Edenton, and John H. Kirkpatrick, Jr., Clyde, N.C., assignors to Patent & Development, Incorporated, Raleigh, N.C.

Filed Sept. 24, 1968, Ser. No. 762,038

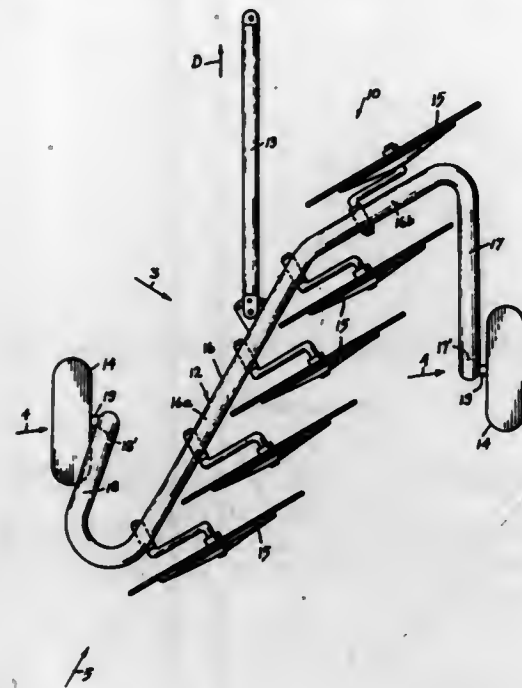
Int. Cl. A01d 77/06

U.S. Cl. 56-377

4 Claims

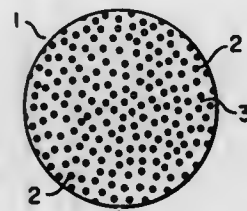
A rotary side delivery rake having a supporting frame equipped with traveling wheels and with a set of raking wheels. The frame has a slender, serpentine form and includes a main frame portion disposed substantially hori-

zonally and obliquely to the direction of travel, and a pair of side frame portions extending respectively rearwardly and forwardly from the front and rear of the main portion, the side portions also being slanted down-



wardly so that the main portion is elevated to eliminate sagging. The main portion carries the raking wheels and the traveling wheels are mounted at the lower end of the side portions.

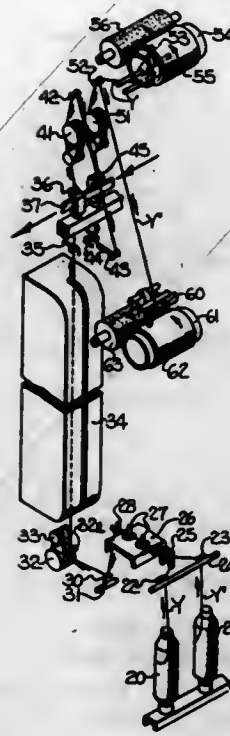
3,516,239
ARTIFICIAL FIBER HAVING VOIDS AND METHOD OF MANUFACTURE THEREOF
Kenji Fukuda, Suita-shi, and Yuiro Okamoto, Ibaraki-shi, Japan, assignors to Teijin Limited, Osaka, Japan, a corporation of Japan
Filed Mar. 13, 1967, Ser. No. 622,636
Claims priority, application Japan, Mar. 15, 1966, 41/16,248
Int. Cl. D06m 9/02; D02g 3/02; D06q 1/02
U.S. Cl. 57—140 11 Claims



Artificial fiber which comprises a linear polymer having voids characterized in that the whole of the fiber or the whole of the fiber excluding the central axial neighborhood of the fiber uniformly contains a plurality of thin voids extending lengthwise axially of the fiber and method of manufacturing the foregoing fiber.

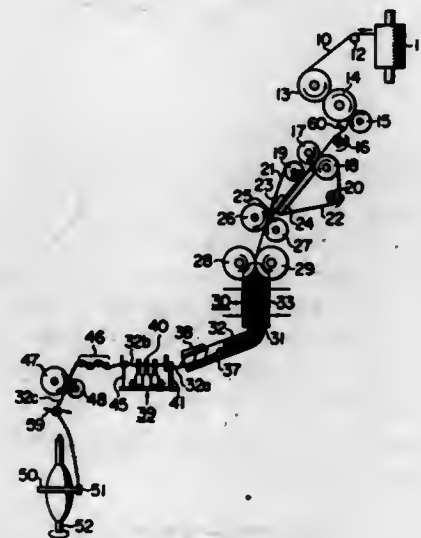
3,516,240
METHOD OF FALSE-TWISTING PLURAL ENDS OF THERMOPLASTIC YARN
Bobby Ray Fain, Burlington, N.C., assignor to Alamance Industries, Inc., Burlington, N.C., a corporation of North Carolina
Filed Oct. 21, 1968, Ser. No. 769,219
Int. Cl. D02g 1/02 10 Claims
U.S. Cl. 57—157
Plural ends of thermoplastic yarn are joined together and first false-twisted in one direction while being heat-set, then subsequently false-twisted in the opposite direc-

tion with the same number of turns but without heat-setting, and then the yarns are separated and taken up on separate bobbins. Torsional stresses are imparted to the



yarn by this process so that periodically reversing small closely spaced substantially uniform spring-like coils are formed along the length of the yarn.

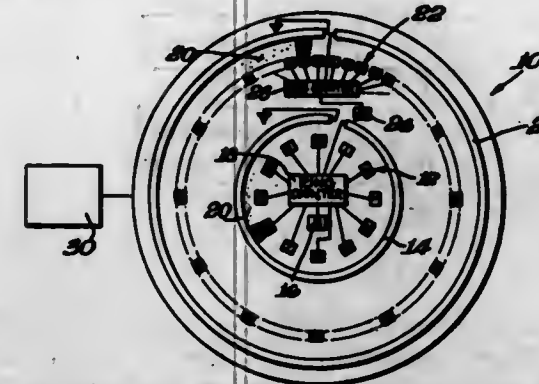
3,516,241
PROCESS FOR THE MANUFACTURE OF CRIMPED SPUN YARN
Hiroshi Nakano, Fuji-shi, Hideo Takai, Numazu-shi, and Yoshiaki Muromoto and Fumio Nakajima, Fuji-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan
Filed Oct. 25, 1968, Ser. No. 770,687
Int. Cl. D02g 1/12 5 Claims
U.S. Cl. 57—157



Multifilaments are introduced into a draft zone spinning stage, thereby draft cutting the filaments into cut fibers consisting of a substantially parallel fibers assembly. Alternately, a roving of staple fibers is introduced into a spinning frame stage for providing cut fibers of a substantially parallel fiber assembly, and then the latter is fed forcibly into a stuffingly crimping zone for providing crimps and heat setting the latter, and the thus crimped fibrous material is wound up while being twisted.

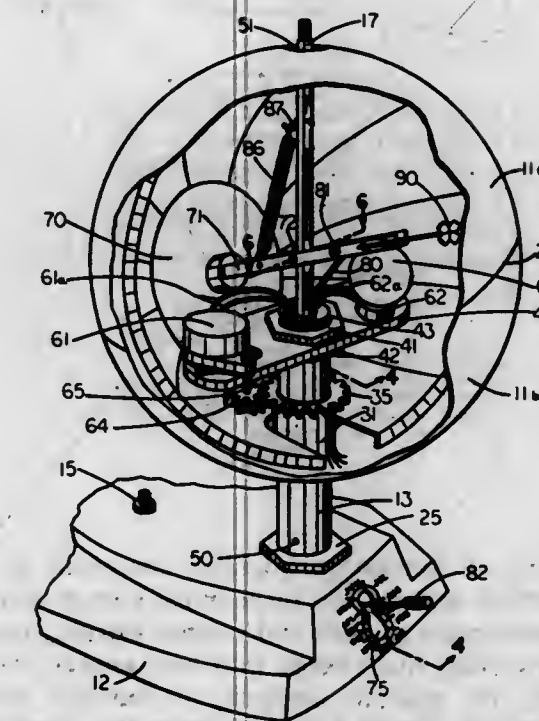
By this process, crimped spun yarn is obtained which is characterized by superior bulkiness and crimp ten-sional resiliency.

3,516,242
VISUAL DISPLAY OF TIME VARIABLE ELECTRIC INFORMATION
Kurt Lehovec, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Feb. 23, 1968, Ser. No. 707,499
Int. Cl. G04c 3/00 10 Claims
U.S. Cl. 58—23



A visual display of time variable electric information comprising a source of information in the form of electric signals and a series of specially arranged electrodes forming a plurality of electrode pairs. Circuitry is constructed and arranged to transmit the signals from the source to the electrode pairs in sequence so that a sequential pattern of electric fields is produced. A mass of randomly disposed particles adjacent the electrode pairs is adapted to accumulate in the electric fields thus produced whereby a visual display corresponding to the sequential pattern of electric fields is provided.

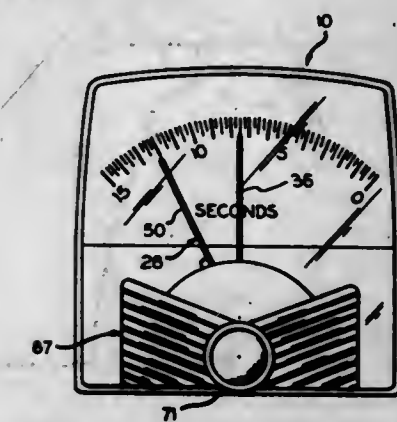
3,516,243
GLOBE-CLOCK WITH SINGLE BEARING
Allyn B. Hazard, 330 Camino Del Sol, South Pasadena, Calif. 91030
Filed July 17, 1969, Ser. No. 842,578
Int. Cl. G04b 19/22 8 Claims
U.S. Cl. 58—44



A globe-clock of the type which is comprised of a translucent globe rotatably mounted on a base, illuminated from the interior, and slowly rotated by a clock motor; an internal hemispherical shadow shield gives the globe the appearance of the continuously changing night and day hemispheres of the terrestrial day. In the globe-clock of the present invention, the globe rotates on a single, elongated sleeve-bearing, which extends into the interior of the globe from its lower polar opening. The sleeve-bearing rotates on a stationary support tube extending upwardly from

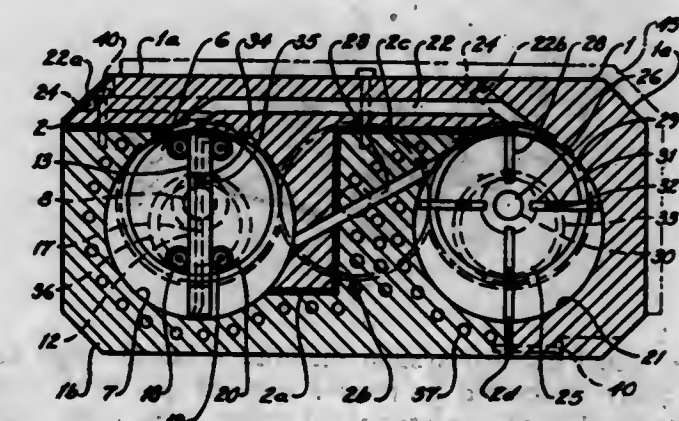
the base of the globe-clock, through said sleeve-bearing, into the lower interior of the globe. The support tube supports a stationary platform in the interior of the globe, upon which both illumination means and clock motor are mounted; this construction makes it possible to impart the necessarily slow clock movement to the globe through the medium of a relatively large diameter ring gear disposed on the outer surface of the aforementioned sleeve-bearing. The interior of the support tube accommodates a polar column, which in turn carries a stationary upper polar cap, and a light shield internal of said globe, as well as means for adjusting the latter, without in any way interfering with the continuous rotation of the globe.

3,516,244
FRONT CHASSIS ASSEMBLY FOR TIME DELAY OR INTERVAL TIMERS
Frank J. Papa, Jr., Montville, N.J., assignor to Industrial Timer Corporation, Parsippany, N.J., a corporation of Delaware
Filed June 17, 1968, Ser. No. 737,495
Int. Cl. G04t 3/04, 3/08; G04b 37/00 14 Claims
U.S. Cl. 58—22.9



Front chassis assembly for a time delay or interval timer including a chassis plate having a bushing therein protruding from the front side of the plate, a dial mounted on the front side of the plate coacting with an indicator carried on an indicator shaft rotatably mounted in the bushing, a time period selector rotatably mounted on the bushing having a pointer portion and stop coacting with the timing pointer to set the timer, and a frictionally mounted knob adjusting assembly drivingly connected to the selector pointer to adjust its position on the dial.

3,516,245
CLOSED CYCLE TANGENTIAL FLOW TURBINE
Donald A. Kelly, 58-06 69th Place, Maspeth, N.Y. 11378
Filed Mar. 11, 1969, Ser. No. 806,183
Int. Cl. F03g 7/06; F25b 9/00 7 Claims
U.S. Cl. 60—24



The closed cycle tangential flow turbine is advocated as a compact, low-cost power source employing a minimum of simplified operating parts.

The tangential flow turbine is a Brayton cycle machine wherein a fixed volume of gas is cycled twice through a flow loop that enters and leaves the operating bores tangentially.

The modular construction greatly facilitates the economical forming of the flow loop through the isolated, alternate thermal sections.

3,516,246

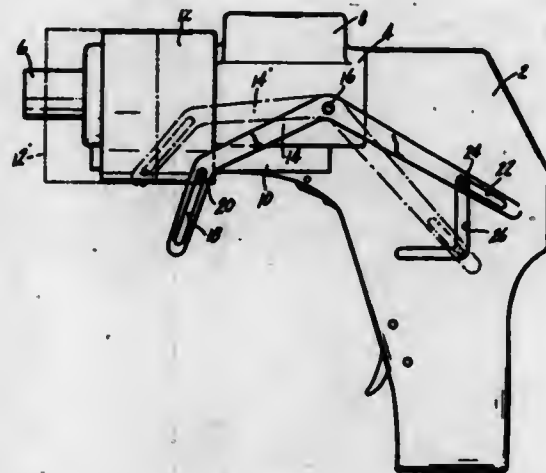
REPEATING CASELESS TOOL

David F. Butler, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Nov. 1, 1968, Ser. No. 785,837
Int. Cl. F01b 29/08; E25c 1/14, 1/16

U.S. Cl. 60-26.11

11 Claims



A power actuated tool utilizing caseless ammunition and having an ammunition magazine for automated feeding of the individual caseless pellets into a firing chamber contained in the receiver of the tool.

3,516,247

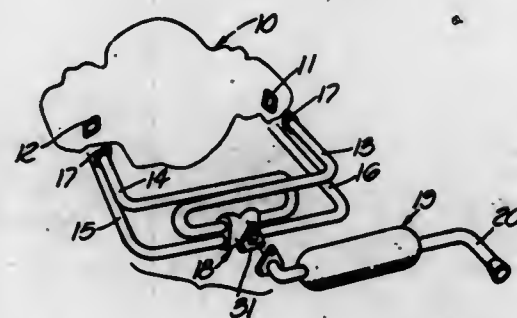
COLLECTOR FOR AUTOMOBILE EXHAUST SYSTEM

Leon J. Knox, Jr., Los Angeles County, Calif., assignor to California Tube Products, Inc., Burbank, Calif.

Filed June 24, 1968, Ser. No. 739,515
Int. Cl. F02b 27/04

U.S. Cl. 60-32

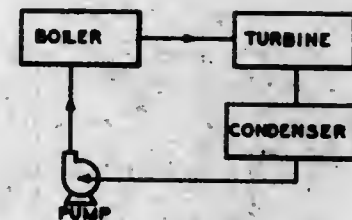
2 Claims



The tuned exhaust system includes a header pipe appropriately connected to receive exhaust gas from each cylinder and is of predetermined length. The outer ends of each header are received within a one piece collector having internal conduiting means to conduct exhaust gases via a single outlet opening to a muffler and tail pipe assembly.

3,516,248
THERMODYNAMIC FLUIDS
Malcolm McEwen, Glendale, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed July 2, 1968, Ser. No. 742,893
Int. Cl. F01k 25/00; C09k 3/18
U.S. Cl. 60-36

24 Claims



The present invention relates to Rankine cycle working fluids. More specifically, it relates to certain organic compounds which have been found outstanding for use in Rankine cycle equipment.

3,516,249

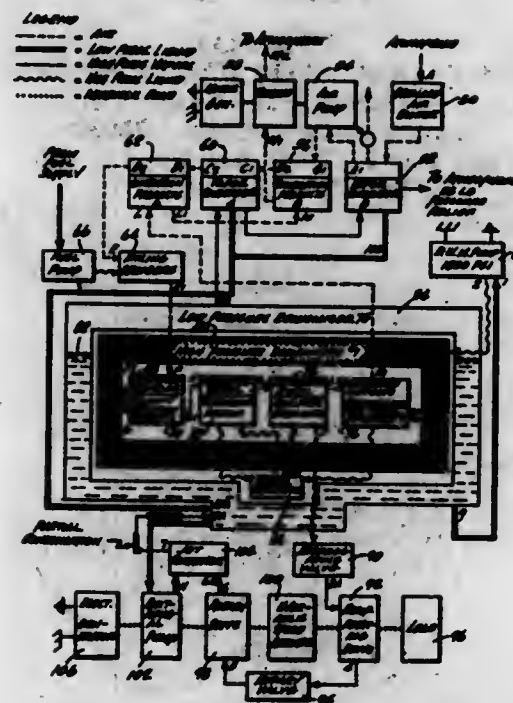
PAXTON VAPOR ENGINE CYCLE

Douglas R. Paxton, Box AZ, Main Post Office, Ventura, Calif. 93001

Filed June 7, 1968, Ser. No. 735,223
Int. Cl. F01k 25/06; F01b 21/00

U.S. Cl. 60-38

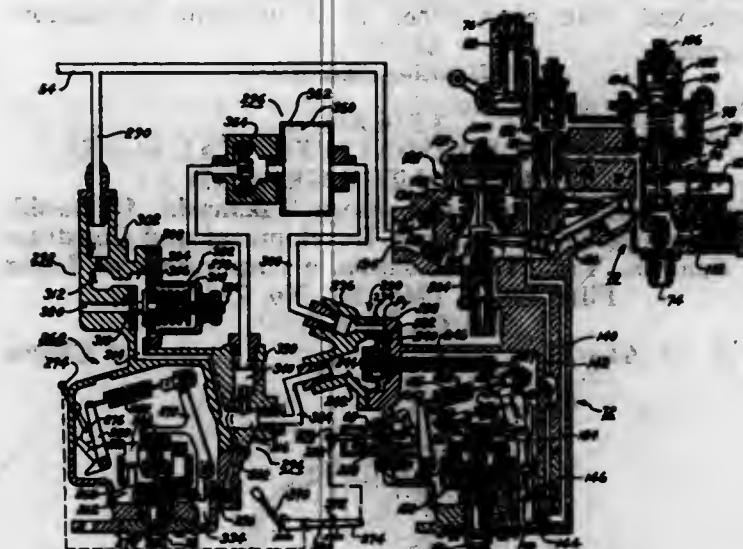
5 Claims



A method of converting internal, chemical, or other heat-convertible energy into mechanical energy using two working mediums, a gaseous and a dense working medium, by first converting fuel energy into heat energy, which is absorbed by the gaseous medium, at constant pressure, then transferring the heat energy from the gaseous medium to the dense medium at constant volume, thus converting the heat energy into internal molecular energy or potential energy by reason of distortion; converting a portion of the potential energy by reason of distortion into mechanical energy in a reciprocating drive and converting the kinetic energy in the exhaust from the reciprocating drive into mechanical energy in a rotary drive which is added to the mechanical energy of the reciprocating drive, and recycling any remaining heat energy back through the system via the gaseous working medium.

3,516,250
FUEL CONTROL SYSTEM FOR TURBO-SHAFT ENGINES
Robert G. Moore, Jr., South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Aug. 28, 1968, Ser. No. 754,081
Int. Cl. F02c 3/10, 9/08
U.S. Cl. 60-39.16

10 Claims



A fuel control system for a free turbine engine having a fuel valve governor responsive to compressor pressure for controlling a fuel control valve, a governor responsive to compressor speed for controlling the fuel valve, the latter governor responsive to the free turbine for resetting the first governor in response to changes in load, and a collective reset linkage interconnecting the two governors so that any change in the setting of the load on the second governor immediately changes the setting on the first governor, whereby immediate response to any change in load on the second governor is translated into a corresponding setting on the first governor.

3,516,251

ROCKET ENGINE

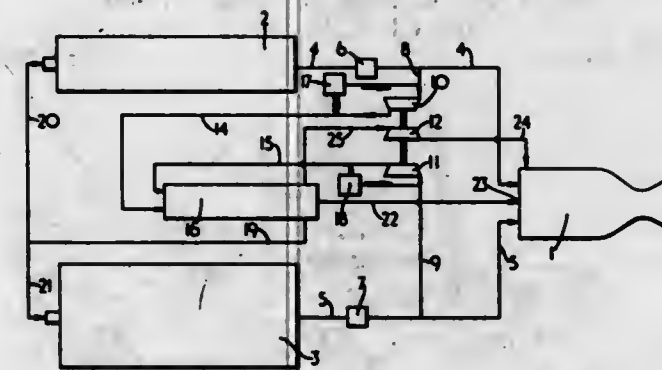
Edward George David Andrews, Cawston, near Rugby, Harry Oldfield, Coventry, and Gordon Terry Healey, Staverton, near Daventry, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed June 3, 1968, Ser. No. 734,134
Claims priority, application Great Britain, June 3, 1967, 25,754/67

Int. Cl. F02k 9/02

U.S. Cl. 60-39.48

4 Claims

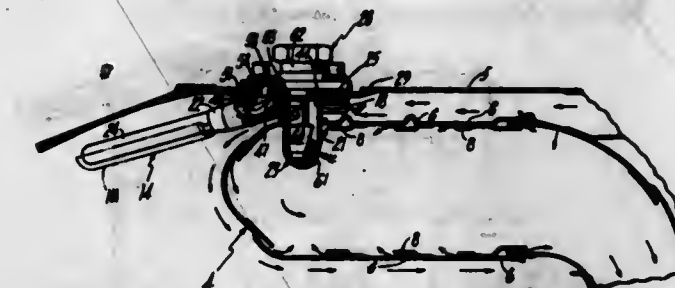


Rocket engine in which a propellant is supplied from a pressurized container to a combustion chamber. The container is pressurized by diverting a part of the propellant through a pump to a gas generator in which the propellant is used to produce a gas which is then supplied to the propellant container. The pump may be driven by a turbine supplied with gas from the gas generator. The turbine

exhaust may be used to cool a wall of the combustion chamber. The gas generator may also be used to effect blast atomization of the propellant admitted to the combustion chamber. The engine may have a monopropellant or a multipropellant system.

3,516,252
FUEL MANIFOLD SYSTEM
Robert F. Udell and David J. Borne, North Palm Beach, and Stanley Krieger, Riviera Beach, Fla., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 26, 1969, Ser. No. 802,428
Int. Cl. F02c 7/22
U.S. Cl. 60-39.74

10 Claims



A gas turbine engine having a fuel manifold located around the interior of the engine casing, said manifold being made up of a plurality of short sections of tubing with mounting means connecting the adjacent ends of each tubing to the casing. Fuel nozzles cooperate with the mounting means so that each nozzle can be installed or removed without disturbing the fuel manifold. Fuel inlet means cooperate with a mounting means at a bottom location to provide for directing fuel into the manifold. Said sections of tubing being in U-section to provide for any changes in size due to thermal gradients. A nozzle shield is provided for each nozzle and this shield protects the nozzle from the combustion chamber heat and also serves to support the combustion chamber. A shield may also be provided around the short sections of tubing in the event of needed protection from the combustion chamber.

3,516,253
COMBUSTION SYSTEM FOR PRODUCING HIGH TEMPERATURE AND HIGH PRESSURE GAS
Davies Allport, 966 Mulrind Vista Way, La Jolla, Calif. 92037, and Henry J. Kraft, 6600 S. Birmingham, Tulsa, Okla. 74105
Filed July 31, 1967, Ser. No. 657,171
Int. Cl. F02c 5/10
U.S. Cl. 60-39.77

2 Claims



A new and novel combustion system which produces high temperature, high speed and high pressure gas by introducing a combustible gaseous mixture into the system through a series of laminated narrow spaces known as interstices into a first segmented cell for ignition, the first segmented cell being complemented with adjacent cells,

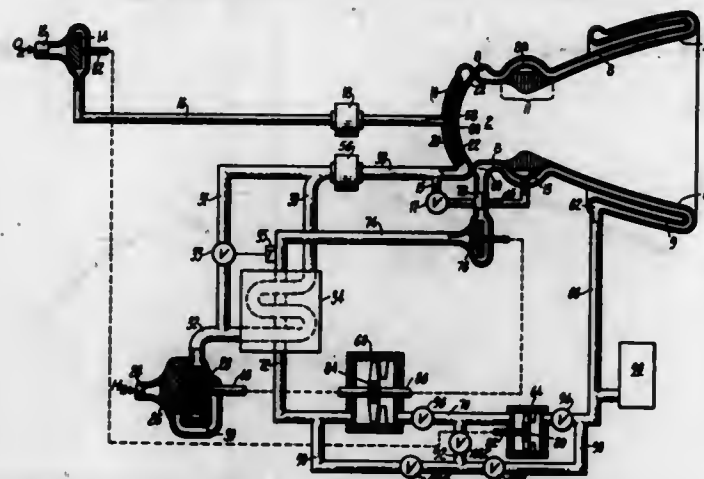
each of the combustion cells being separated by a wall with an orifice opening centered approximately in each wall section.

3,516,254

CLOSED-LOOP ROCKET PROPELLANT CYCLE
Robert M. Hammond, Palm Beach Gardens, Fla., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 11, 1967, Ser. No. 666,628
Int. Cl. F02k 9/02

U.S. Cl. 60-260

6 Claims



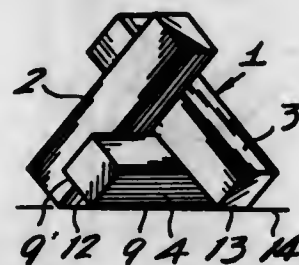
A rocket engine having a two-propellant injector has two propellant supply systems for directing propellants to the injector and a separate closed-loop system for cooling the combustion chamber and nozzle and providing system power requirements. In the closed-loop cooling system, a heat exchanger is connected between the system and the flow of one propellant to the injector. Means are also provided to bypass this heat exchanger when desired. Means are also provided to direct a portion of the flow of propellant to the injector away therefrom and use it for film cooling at the throat of the nozzle, if necessary. The closed-loop system shown in the figure includes two turbines, one which drives a pump to direct one propellant and the recirculating pump for the closed-loop system. The other turbine drives the pump for the other propellant. A valving system is provided for dividing recirculating coolant flow through the turbines in any manner desired. An accumulator is attached to the system to maintain it full of cooling fluid.

3,516,255

CONCRETE COMPONENT OR BLOCK FOR A PROTECTIVE COVERING STRUCTURE
Tatsuo Akamatsu, Wakayama, Japan, assignor of one-half each to Tatsuo Akamatsu, Wakayama, Japan, and Mitsui Real Estate Co., Ltd., Tokyo, Japan, a corporation of Japan, jointly
Filed July 23, 1968, Ser. No. 746,938
Int. Cl. E02b 3/12

U.S. Cl. 61-37

10 Claims



A concrete component or block for a protective covering structure which is adapted to protect breakwaters, harbour or river walls and other marine constructions

and beaches which are subjected to wave action, comprising a molded concrete mass including three integrally molded elongated pillar members having substantially the same dimensions and cross-section and disposed substantially in the same angular relation to one another each having the length to width or diameter ratio of substantially 4 to 1. A protective covering structure comprising a plurality of such concrete components interlocked with each other in a uniform or random manner.

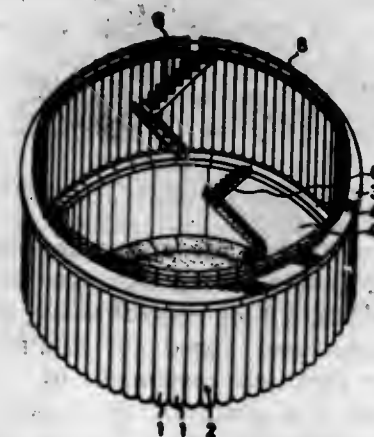
3,516,256

METHOD OF FORMING VERTICAL BORES THROUGH THE GROUND

Yasuo Itami, Tokyo, and Akira Takahashi, Odate-shi, Japan, assignors to Japan Development and Construction Co., Ltd., Tokyo, Japan, a corporation of Japan
Filed Jan. 2, 1969, Ser. No. 788,589
Int. Cl. E21d 5/00

U.S. Cl. 61-41

4 Claims



A vertical bore of a relatively large diameter is formed through the ground by a method comprising the steps of successively forming a plurality of closely adjacent vertical piles of reinforced concrete until a cylindrical peripheral wall structure is obtained, removing the soil inside the peripheral wall structure to a depth smaller than that thereof, fabricating a first inside ring around the inner periphery of the peripheral wall structure at said predetermined depth and alternately effecting digging and fabrication of succeeding inner rings to the bottom of the peripheral wall structure.

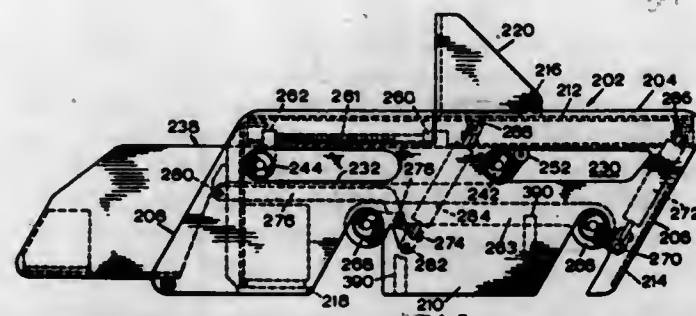
3,516,257

WORK PLATFORM

John Van de Vegte, Islington, Ontario, Canada, assignor to Boland Development Company Limited, Toronto, Ontario, Canada
Filed Sept. 6, 1968, Ser. No. 757,980
Int. Cl. E21d 19/02

U.S. Cl. 61-45

12 Claims



A work platform supported between the walls of a mine tunnel and having a main frame having an upper platform to carry men and tools. An upper jack frame, powered by a screw motor, slides forwardly and rearwardly in the main frame below the platform. Four horizontal jacks of the upper jack frame project through horizontal

slots in the sides of the main frame to grip the tunnel walls. A lower jack frame, below the upper jack frame, also has four horizontal jacks to grip the tunnel walls. The lower jack frame horizontal jacks project through generally vertical slots in the main frame walls, and the lower jack frame connects to the main frame by vertical jacks for relative vertical movement therebetween.

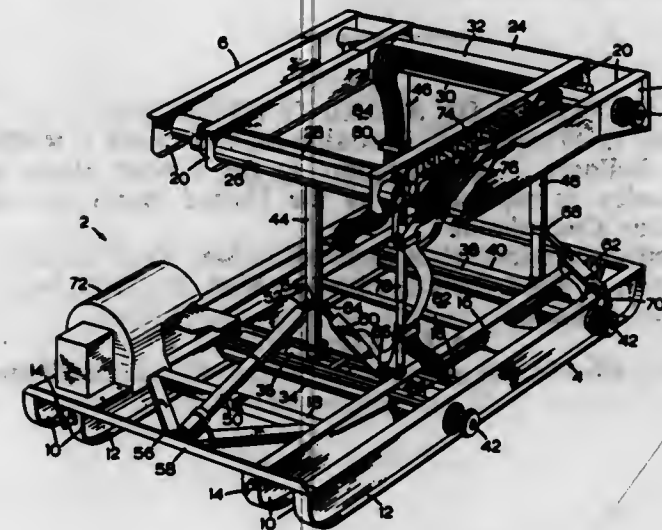
3,516,258

WORK PLATFORM

Calvin S. Boland, Toronto, Ontario, Canada, assignor to Boland Development Company Limited, Toronto, Ontario, Canada
Filed Sept. 6, 1968, Ser. No. 758,033
Int. Cl. E21d 19/02

U.S. Cl. 61-45

12 Claims



A work platform which suspends itself between tunnel walls by horizontal jacks projecting from upper and lower jack frames. The jack frames are connected so that each can be moved horizontally back and forth, and vertically up and down relative to the other. The machine can thus be "walked" in a tunnel by extending the horizontal jacks of one jack frame against the walls, retracting those of the other jack frame, moving the other jack frame, extending its horizontal jacks against the tunnel walls, retracting those of the first jack frame, moving the first jack frame, and repeating the steps.

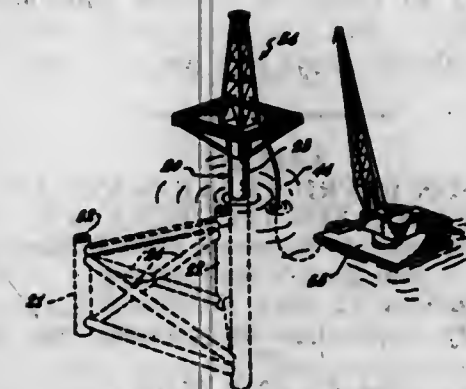
3,516,259

OFFSHORE STRUCTURE METHOD AND APPARATUS

Alpo J. Tokola, Lafayette, Calif., assignor to Kaiser Steel Corporation, Oakland, Calif., a corporation of Nevada
Filed Sept. 12, 1966, Ser. No. 578,681
Int. Cl. E02d 21/00

U.S. Cl. 61-46.5

6 Claims



Method of constructing and installing an offshore supporting structure and the resulting structure wherein the structure is initially provided with a plurality of legs disposed in a polygonal arrangement and in a spaced relationship to one another and wherein at a preselected time

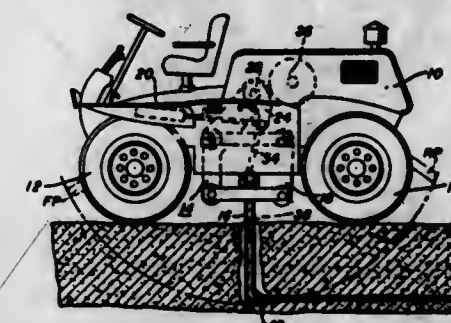
3,516,260

VIBRATING CABLE-LAYING FLOW

William W. Wood, Jr., Denville, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Sept. 11, 1967, Ser. No. 666,661
Int. Cl. F16l 1/00; B66g 9/00; B66k 17/00

U.S. Cl. 61-72.6

20 Claims



A plow digs a slit trench and lays cable from the base of one structure directly to the base of another structure by using a longitudinally-vibrating plowshare whose end is suspended from the plow's center for pivotal fore and aft swinging movement. When the plow backs up to the starting structure, the share is swung back. As the plow moves forward, the share is swung down and held vertically. The share is swung forward when the front of the plow reaches the structure. Hydraulic means steer both the front and rear wheels to allow turning the vehicle about the share. Hydraulic means distribute power to the wheels to prevent slippage.

3,516,261

GAS MIXTURE SEPARATION BY DISTILLATION WITH FEED-COLUMN HEAT EXCHANGE AND INTERMEDIATE PLURAL STAGE WORK EXPANSION OF THE FEED

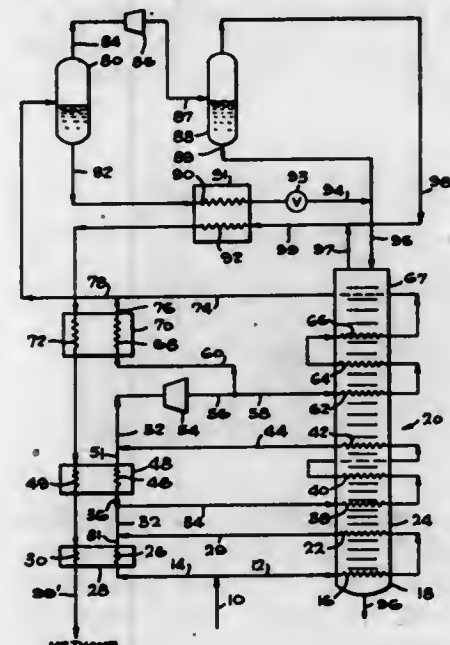
Michael L. Hoffman, Los Angeles, Calif., assignor to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
Filed Apr. 21, 1969, Ser. No. 817,903
Int. Cl. F25j 3/02

U.S. Cl. 62-24

16 Claims

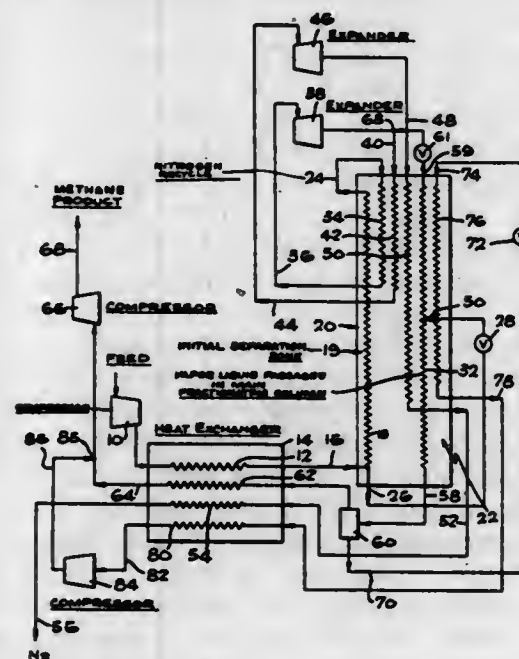
Method and system for separating components of gas mixtures such as mixtures of hydrocarbons containing from 1 to about 4 carbon atoms, and particularly designed for recovery of at least 80% of the ethane present in a high pressure stream of natural gas containing chiefly methane and minor amounts of ethane and higher hydrocarbons such as propane, without requiring an external refrigeration system, which involves, according to one embodiment, passing a major first portion of the high pressure feed mixture in heat exchange relation with the contents of the lower portion of a distillation column at a plurality of different temperature levels to cool the first portion of the feed mixture, cooling a second portion of the feed mixture by means of cold overhead methane withdrawn from the column, combining the cooled first and second portions of the feed mixture and subjecting the resulting combined feed mixture to a first work expansion to an intermediate pressure and to further reduce the temperature of the feed mixture. A major portion of the thus work expanded feed mixture is passed in heat exchange relation with the contents of the upper portion of the distillation column at a plurality of different temperature levels to further cool the last mentioned portion of feed mixture, and the remaining portion of work expanded feed mixture is additionally cooled by cold

methane gas withdrawn from the top of the column, and is combined with the additionally cooled first major portion of feed mixture withdrawn from heat exchange relation with the upper portion of the column. At least a portion of the resulting additionally cooled partially liquefied combined feed mixture is subjected to a second work expansion to a lower pressure and further reduction of temperature, and is fed to the top of the distillation



column. A non-adiabatic distillation of the gas mixture in the column occurs, and a liquid bottoms product is withdrawn consisting essentially of ethane and higher hydrocarbon, and an overhead consisting essentially of methane is withdrawn from the top of the column and is used for cooling portions of the high pressure feed mixture and of the initially expanded feed mixture, as noted above.

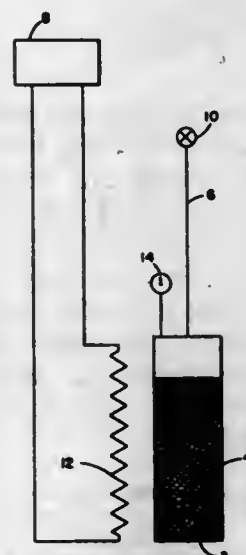
3,516,262
SEPARATION OF GAS MIXTURES SUCH AS METHANE AND NITROGEN MIXTURES
Joseph T. Bernstein, Westport, Conn., assignor, by means assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
Filed May 1, 1967, Ser. No. 634,917
Int. Cl. F25j 3/02, 3/08
U.S. Cl. 62—28 21 Claims



This invention is directed to an efficient system particularly designed for separating methane from mixtures of

nitrogen and methane, which involves, according to one embodiment, separating a mixture of methane and nitrogen in an initial separation stage to produce cold nitrogen vapor and a methane-rich liquid, feeding the methane-rich liquid to a fractionating column in heat exchange relation with the initial separation stage, recycling the cold nitrogen at reduced temperature, preferably in several passes in series, in heat exchange relation along the upper portion of the fractionating column and the initial separation zone, the vapor-liquid mixture in the lower portion of the initial separation zone providing heat and reboiling duty along the lower portion of the main column, and withdrawing methane in substantially pure form from the bottom of the main fractionating column, the associated initial separation zone and main column being operated under conditions to effect a "differential" distillation in the column.

3,516,263
METHOD OF STORING HYDROGEN
Richard H. Wiswall, Jr., Brookhaven, and James J. Reilly, Jr., Bellport, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission
Continuation-in-part of application Ser. No. 710,663, Mar. 5, 1968. This application Mar. 25, 1969, Ser. No. 810,281
U.S. Cl. 62—48 Int. Cl. F17c 11/00 3 Claims

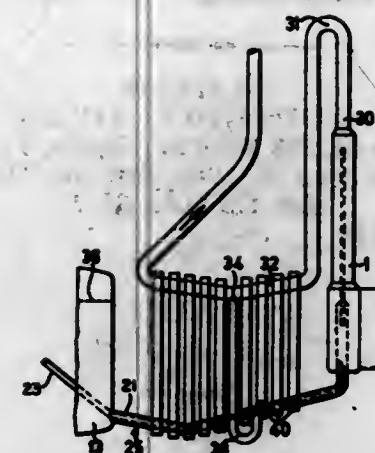


A method for storing hydrogen whereby gaseous hydrogen is adsorbed by titanium-iron alloys at temperatures above 10° C. and pressures above 14 pounds per square inch including an apparatus whereby ultra-high purity and high pressure source of hydrogen is obtained upon heating the hydrided alloys in a pressure vessel.

3,516,264
ABSORPTION REFRIGERATION SYSTEM AND METHOD FOR ITS OPERATION
Hans Silerlin, 15 Rahnweg, 8952 Schlieren, near Zurich, Switzerland
Filed May 22, 1968, Ser. No. 731,218
Claims priority, application Switzerland, May 26, 1967, 7,497/67
Int. Cl. F25b 15/00
U.S. Cl. 62—101 36 Claims

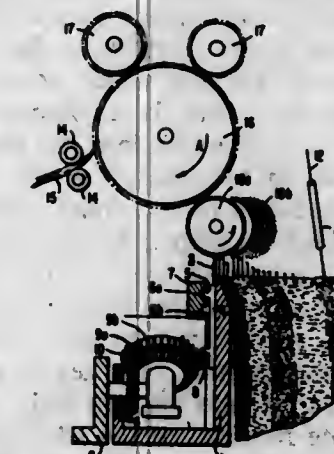
An absorption refrigeration system and a method for operating the same, in which the system includes a generator, a condenser, an evaporator, an absorber, and a reservoir in circuit with each other and in which some of the heat from the refrigerant vapor produced by the

generator is withdrawn before the refrigerant vapor passes into the condenser and in which the withdrawn heat is



transferred to the cold solution returned into the generator to thus improve the heat efficiency of the system.

3,516,265
METHOD OF PRODUCING ARTIFICIAL FURS OF NONUNIFORM FIBER DENSITY
Louis Collez, 80 Rue d'Alsace, Saint-Die, Vosges, France
Continuation-in-part of application Ser. No. 480,005, Aug. 16, 1965. This application Dec. 1, 1966, Ser. No. 598,402
U.S. Cl. 66—9 Int. Cl. D04b 9/14 1 Claim



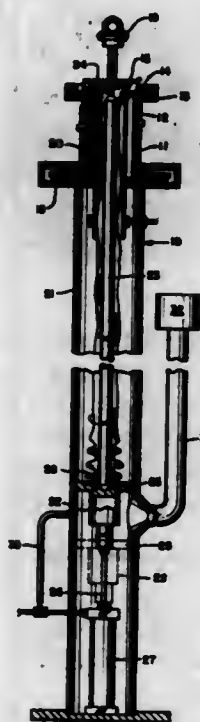
3,516,268 DEVICE FOR MINIMIZING TWISTING OF CIRCULAR KNIT FABRIC

Caley A. Foreman, Grenada, Miss., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 12, 1968, Ser. No. 759,299
Int. Cl. D04b 15/88

U.S. Cl. 66—149

6 Claims



A device for minimizing the twisting of fabric produced on circular knitting machines, which device is particularly useful when the fabric is of considerable length as for example waist length stockings or panty hose, especially those of stretch yarn which are loosely knitted in order to permit later development of crimp or stretch characteristics.

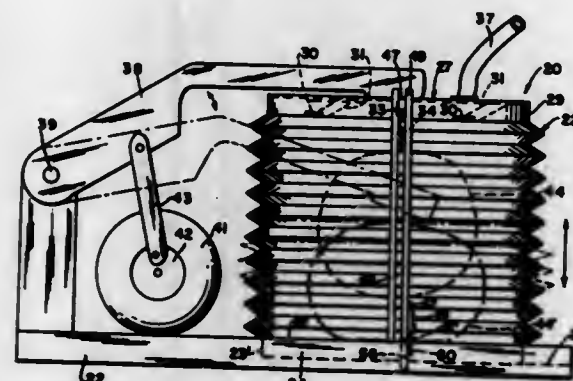
3,516,269 AUTOMATIC WIG CLEANING DEVICE

Ramona K. MacKenzie, 1249 10th Ave. SE.,
Jamestown, N. Dak. 58401

Filed Apr. 26, 1968, Ser. No. 724,576
Int. Cl. D06f 27/00

U.S. Cl. 68—96

3 Claims



The invention comprises an automatic wig cleaning device having a resilient bellows-like chamber, said chamber having cleaning fluid therein, a reciprocating lever compressing said chamber at intervals, said chamber being detachably mounted to said device for removal and replacement and exchange of wigs and cleaning fluid for the

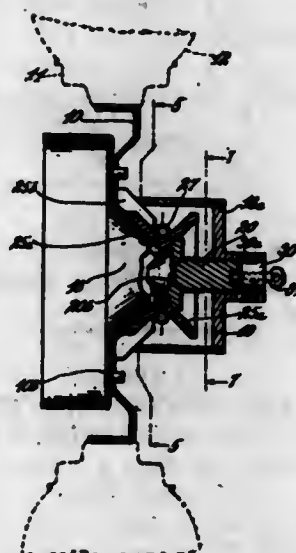
cleaning operation, a cover for said chamber for suspending the wig in the fluid in the chamber, a motor powering said lever for compressing the bellows and immersing the wig in said fluid for cleaning.

3,516,270 AUTO WHEEL LOCKS

Calvin Dowell, 298 Boyd St., Ripley, Tenn. 38063
Filed June 20, 1968, Ser. No. 738,504
Int. Cl. E05b 65/12

U.S. Cl. 70—259

8 Claims



A lock to prevent the unauthorized removal of an automobile wheel. The brake drum of the wheel carries locating pins for mounting a conventional wheel, and is extended with a cylindrical housing through the large central opening of the wheel. The brake drum also extends with a cone into the housing which serves to expand a split chuck when the latter is advanced on the cone. When the wheel is located against the brake drum and the chuck is advanced as stated, a set of radial lugs extended from the sections of the chuck overlap the inner portion of the wheel to keep it against the brake drum. A screw from the center of the housing uses a plunger to advance the chuck when the screw is turned toward it by a wrench. Now room develops behind the screw in a housing hub for the insertion of a key-lock cylinder with tumbler pins projecting into the hub wall when the key is turned to lock. The removal of the key leaves the locked cylinder as a bar against access to or removal of the screw, so that the radial lugs remain in locking engagement with the wheel.

3,516,271 MAGNETICALLY CONVERTED PIN-TYPE LOCK CONSTRUCTION

Gladwyn D. Nelson, Southgate, and Lowell B. Pluegar, Buena Park, Calif., assignors to Tool Research & Engineering Corporation, Beverly Hills, Calif., a corporation of Delaware

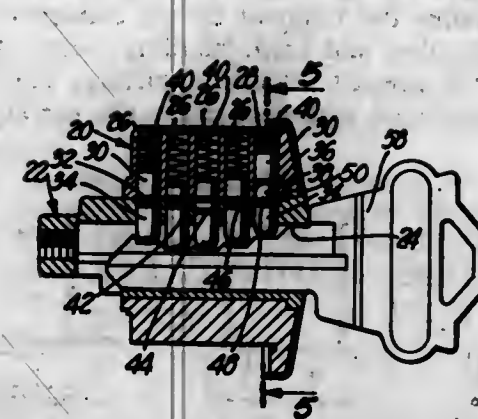
Filed Sept. 26, 1968, Ser. No. 762,704
Int. Cl. E05b 25/00, 37/00

U.S. Cl. 70—383

20 Claims

A usual cylinder body and rotatable cylinder core having a series of pin holes containing body driven and core bottom pin parts has a preferably spherical temporary pin part in one of the pin holes between the driven and bottom pin thereof. A storage chamber is formed in the body, preferably in an upper part of the body, opening radially against the core, said storage chamber having a magnet associated therewith and being circumferentially aligned with but spaced from the one pin hole. The temporary pin part is formed of magnetically attractive material so that when the core is rotated with the temporary pin part in the core, and the core

one pin hole is radially aligned with the storage chamber, the magnet will displace the temporary pin part into the storage chamber and retain the same therein. Certain of the pin holes other than said one pin hole may have



master pin parts between the driven and bottom pin parts thereof adapting the lock cylinder to a unique system of temporary, change, master and permanent keys, each operable under certain conditions of the cylinder.

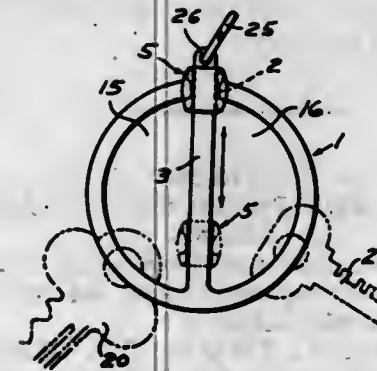
3,516,272 KEY RING

Henry J. Modrey, Eagle Drive, Stamford, Conn. 06903
Continuation-in-part of application Ser. No. 706,247,
Feb. 19, 1968. This application July 29, 1969, Ser.
No. 845,764

Int. Cl. A44b 15/00

U.S. Cl. 70—459

20 Claims



A key ring can be opened or locked by applying only a very slight force and manipulation of which requires a minimum dexterity. The key ring comprises a ring or similarly shaped member which is made of springy metal and has a gap in its periphery. A stem extends from the ring across the diameter thereof into and preferably through the gap to divide the area within the ring into two sections for accommodating different categories of keys or other small items having an eye or a ring attached thereto. The two sections of the ring can be closed by sliding a slide on the stem into a position blocking the gap and are uncovered by displacing the slide inwardly on the stem.

3,516,273

STRIP THICKNESS MEASURING DEVICE FOR USE
IN A ROLLING MILL AND LIKE APPARATUS
Morris Denor Stone, Pittsburgh, Pa., assignor to United
Engineering and Foundry Company, Pittsburgh, Pa., a
corporation of Pennsylvania

Filed Aug. 2, 1967, Ser. No. 657,870
Claims priority, application Great Britain, Aug. 16, 1966,
36,664/66

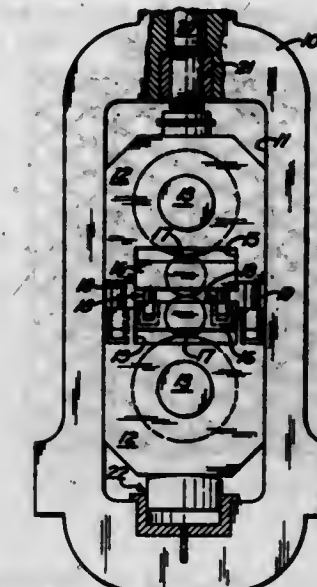
Int. Cl. B21b 37/10

U.S. Cl. 72—21

6 Claims

A strip thickness measuring device for use in a rolling mill which is provided with customary roll balance cylinder assemblies that urge the rolls apart. The measuring device is built into the roll balance cylinder assemblies

and measures the displacement of the plungers of the roll balance cylinder assemblies, which displacement corre-



sponds to the actual separation of the rolls which defines the thickness of the strip.

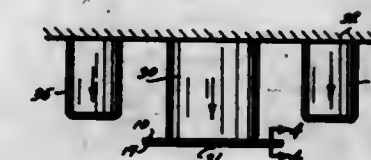
3,516,274

METHOD AND DEVICE FOR SHAPING METAL
Stanley Lewis Graham, 4530 W. 134th St., Hawthorne,
Calif.; Marvin Rosenberg, 1540 9th St., Manhattan
Beach, Calif.; Gilbert Edward Le Vasseur, Sr., 8924
Earhart Ave., Los Angeles, Calif.; William Lewis
Jones, 1830 W. El Segundo, Apt. 1, Gardena, Calif.;
and Jem Yin Lew, 523 W. 126th St.; and John Van
Hoesen Challias, 323 S. Irving Blvd., both of Los
Angeles, Calif.

Filed Feb. 15, 1967, Ser. No. 616,216
Int. Cl. B21d 26/04

U.S. Cl. 72—57

15 Claims



Metal workpieces, such as titanium alloys, are formed at elevated temperatures by pressing the workpiece between a bed of semi-molten glass and a die. Such forming apparatus may have a container to house semi-molten glass, means for heating the glass, a die disposed above the container, and means for die pressing the metal into flowing contact with the glass.

3,516,275

METHOD OF MANUFACTURING BATTERY
PLATE GRIDS

Donald H. Morrell, Sutton Coldfield, and Alan Williams,
Solihull, England, assignors to Joseph Lucas (Indus-
tries) Limited, Birmingham, England, a British company

Filed Feb. 2, 1968, Ser. No. 702,670
Claims priority, application Great Britain, May 18, 1967,
23,161/67

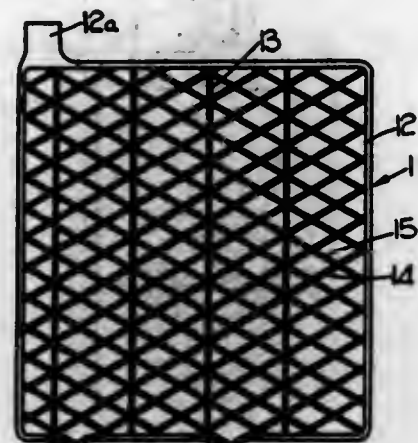
Int. Cl. B21h 8/00

U.S. Cl. 72—198

3 Claims

A method of manufacturing battery plate grids comprises starting with a strip of material from which the grid is to be formed, the strip having thickened side portions and a plurality of longitudinal ribs parallel with the side portions. The strip is passed between rollers

which contain an impression of the required grid, and material is caused to flow by the rollers from the thick-



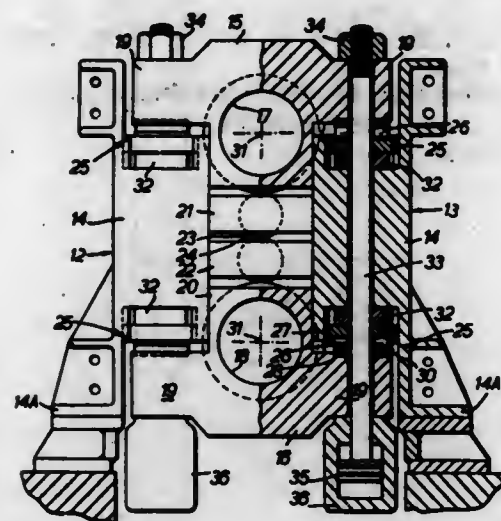
ened side portions and the ribs to enhance the formation of the peripheral frame of the grid.

3,516,276 ROLLING MILLS

Harry Laurence Fred Bond, Hathersage, near Sheffield, England, assignor to Davy and Unkelt Engineering Company Limited, Sheffield, England
Filed June 6, 1967, Ser. No. 643,866
Int. Cl. B21b 31/04

U.S. Cl. 72-237

12 Claims



A rolling mill stand having supports which include fixed spacer blocks interposed between the bearing chocks at each end of two load transferring rolls such as the two rolls of a 2-high mill or the back-up rolls of a 4-high mill. Bolts are provided for clamping the chocks onto the spacer blocks and the spacer blocks may be varied in length by adjustable wedges to adjust the spacing of the load transferring rolls.

3,516,277 WORKPIECE FEED AND DIE CHANGE DEVICE

Cesare Bracco and Sergio Taverna, both of 200 Corso Giovanni Agnelli, Turin, Italy
Filed June 5, 1967, Ser. No. 643,669
Claims priority, application Italy, June 7, 1966, 13,222/66

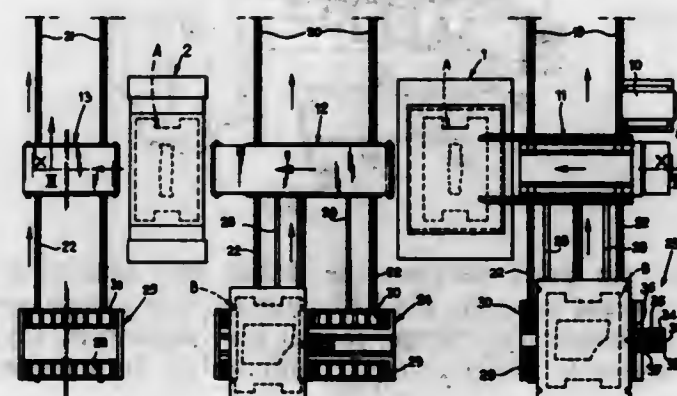
Int. Cl. B21j 13/10

U.S. Cl. 72-446

8 Claims

The present disclosure is concerned with facilitating the removal and replacement of dies in presses. General-

ly, sheet metal and other presses are arranged in a sequence with roller conveyors therebetween for the conduction of workpieces to and from the presses along an axis. Usually also replacing or changing the dies in the presses requires the removal of the conveyors to make room for the dies and their handling means. In accordance with the present disclosure carriage pairs are provided in association with each press, one carriage of each



pair being provided with a roller conveyor arrangement and hydraulic pusher for carrying a die and the other carriage of each pair being provided with a conveyor arrangement for the workpieces. The hydraulic pusher arrangement is provided for moving the carriage pair transversely to the axis along which the presses lie so that a chosen carriage of the carriage pair may be aligned with the presses in accordance with the requirement to provide a workpiece or a die to a press.

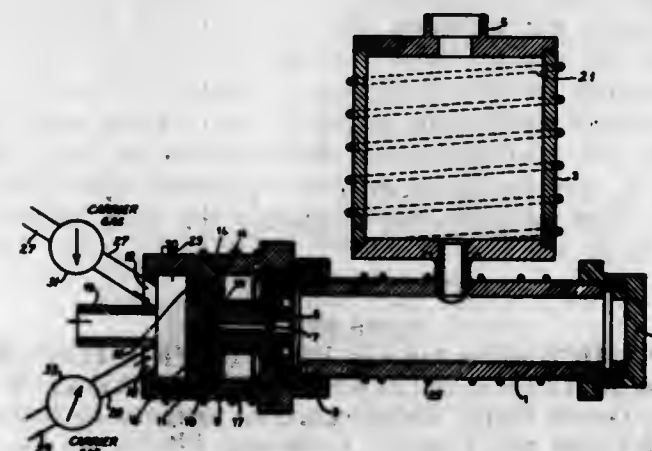
3,516,278 APPARATUS FOR PRODUCING CALIBRATED LEAKS

Klaus Klein, Taino, and Luc Verheyden, Ispra, Italy, assignors to The European Atomic Energy Community (Euratom), Brussels, Belgium
Filed Apr. 11, 1968, Ser. No. 720,532
Claims priority, application Italy, Apr. 17, 1967, 36,173/67

Int. Cl. G01d 21/00

U.S. Cl. 73-1

3 Claims



Apparatus for providing a standard for use in the calibration of a quantitative leak detector comprises a pressurized tank containing the substance to be detected, a tank outlet having a filter connected thereto, a receptacle for the filtered substance, a receptacle outlet having a calibrated orifice, a collecting chamber connected to

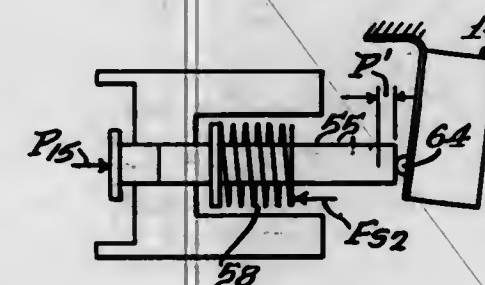
the outlet of the orifice and means connecting the chamber outlet to a leak detector.

3,516,279 METHOD FOR ADJUSTING A PRESSURE OPERATED SWITCH UTILIZING THE NONLINEAR PROPERTIES OF A BIASING MEANS

Robert J. Mazlarka, Niles, Ill., assignor to Alphamatic Corporation, a corporation of Illinois
Filed Feb. 23, 1967, Ser. No. 617,961
Int. Cl. C011 27/00; H01h 35/34, 35/38

U.S. Cl. 73-4

5 Claims



A fluid pressure electric switch having means for varying the pressure at which the switch closes and the pressure at which it opens with a variably biased pressure sensing plunger providing adjustable closing pressure and an adjustable support for an electric switch activated by the plunger to provide adjustable opening pressure.

3,516,280 FLUID MASS GYROSCOPE

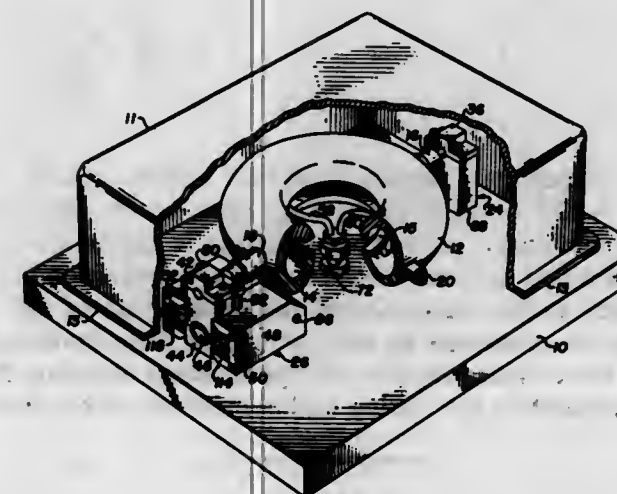
Julius Friedrich Vandrey, Perry Hall, and William L. Bryant, Bel Air, Md., assignors to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland

Filed May 4, 1967, Ser. No. 636,162

Int. Cl. G01c 19/12

U.S. Cl. 74-5.7

11 Claims



A gyroscopic device utilizing a spinning fluid mass. The fluid is caused to rotate within a submerged hollow, neutrally buoyant torus having its inside periphery slotted so as to allow for input and output fluid flow. Fluid jet nozzles, supported independently of the torus, are located such that their fluid output flow is directed tangentially along the annular interior cavity of the torus to create the spinning fluid mass and requisite angular momentum.

875 O.G.-18

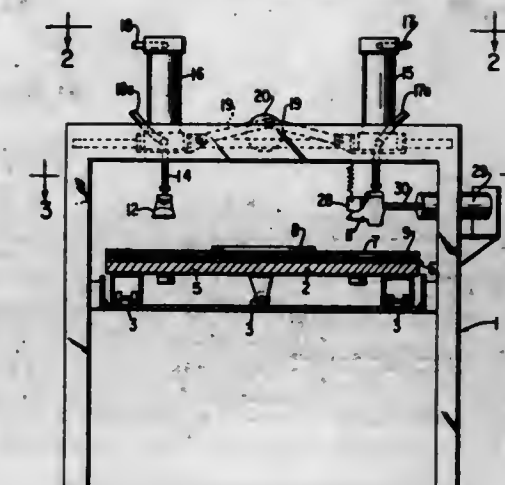
3,516,281 WEAR-TESTING METHOD

Stephen E. Tash, Brooklyn, N.Y., assignor to Institutional Research Council Inc., New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 633,852, Apr. 26, 1967. This application Dec. 6, 1968, Ser. No. 781,779

U.S. Cl. 73-7

Int. Cl. G01n 3/56

4 Claims



A method for wear-testing floor covering which simulates wear induced by normal walking. The heel of a shoe and a fulcrum means are first brought into contact with a floor covering disposed on a rotatable table. The shoe is then rotated about the fulcrum means to bring the sole thereof in contact with the floor covering and to also effect rotation of the table so that on the succeeding descent of the shoe, the shoe will contact a different portion of the floor covering. Twisting action is induced while the shoe is in contact with the floor covering to simulate action of a person changing direction on the floor covering.

3,516,282 DEWPOINT DETECTION APPARATUS

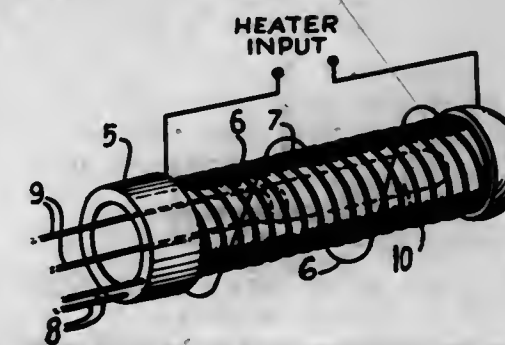
Ian Campbell Leach, Warrandyte, Victoria, and Kevin Howard Sack, Mount Waverley, Victoria, Australia, assignors to Fielden Electronics (Australia) Proprietary Limited, Vermont, Victoria, Australia, a corporation of Australia

Filed Apr. 10, 1967, Ser. No. 629,648
Claims priority, application Australia, Apr. 19, 1966, 4,413/66

U.S. Cl. 73-17

Int. Cl. G01n 27/12

4 Claims



Dewpoint detection apparatus of the type in which a pair of electrodes is placed in contact with a compound capable of dissociation in the presence of moisture and with the compound placed within the gas whose dewpoint is to be measured. The electrodes are energized with alternating current energy at a frequency greater than 60 Hz., and a means is provided for blocking the flow of direct current through the compound. A further means which is responsive to the temperature of the compound provides a measure of the dewpoint of the gas.

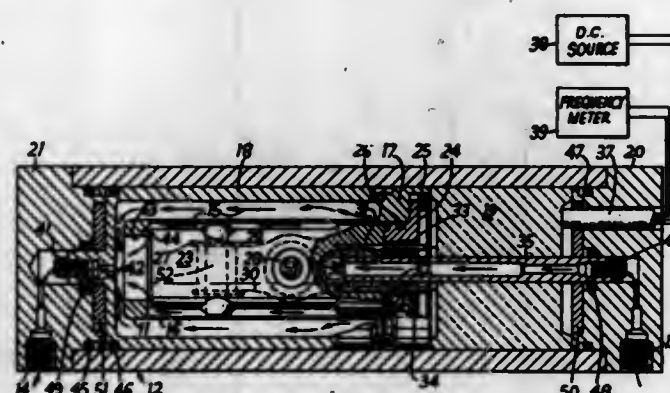
3,516,283

METHODS AND APPARATUS FOR MEASURING THE DENSITIES OF FLUIDS BY VIBRATING A HOLLOW BODY SURROUNDED BY THE FLUID
William Edward Abbott, Farnborough, England, assignor to The Solartron Electronic Group Limited, Farnborough, England, a corporation of the United Kingdom
Filed Jan. 25, 1967, Ser. No. 611,632

Claims priority, application Great Britain, Jan. 28, 1966, 4,042/66
Int. Cl. G01n 9/00

U.S. Cl. 73-30

12 Claims



A density meter for measuring the density of a gas, having a hollow cylinder which is set into bell-like vibration when the gas is in contact with the cylinder both internally and externally to avoid differential pressure, or the cylinder walls are so thick that a gas or liquid can be applied to an internal or external surface alone, in each case the predominant frequency being measured.

3,516,284

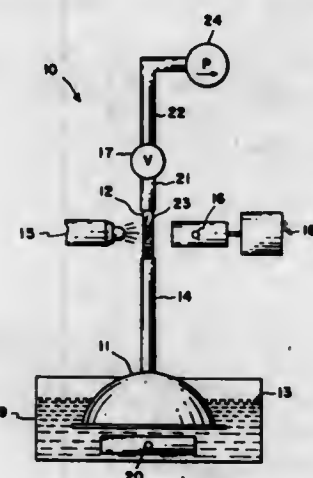
LEAK DETECTOR

Miles L. Lockard, Newport News, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed June 19, 1968, Ser. No. 738,314

Int. Cl. G01m 3/06

U.S. Cl. 73-45.5

7 Claims



Apparatus for detecting fluid leaks in a sealed fluid receptacle comprising a container of liquid with a hood partly submerged in the liquid, having a tube extending up from the hood, formed with a transparent section therein, and supplied with a vacuum source to draw the liquid up into the hood and tube. By placing the specimen fluid receptacle into the liquid and under the hood, bubbles from leaks are collected in the hood, pass into the tube and through the transparent section which is monitored by a light source and photocell arrangement to automatically detect the bubble and thus ascertain the existence of the leak.

3,516,285

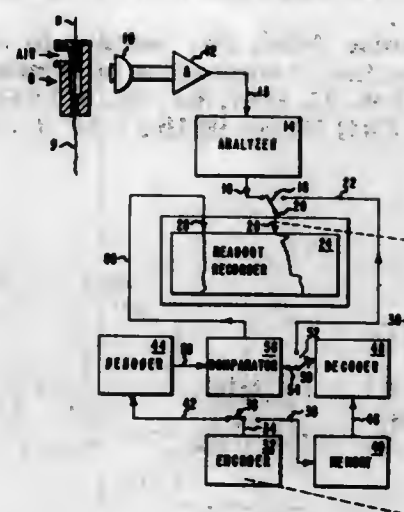
PERFORMANCE ANALYZER AND COMPARATOR FOR A PNEUMATIC JET

John Seymour Seney, Sanford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 24, 1967, Ser. No. 661,735

Int. Cl. G01n 29/00

U.S. Cl. 73-69

5 Claims



An apparatus for the automatic comparison of sonic characterization spectrums wherein is provided a device for synchronizing the output spectrum of a sonic analyzer with a similarly recorded spectrum.

3,516,286

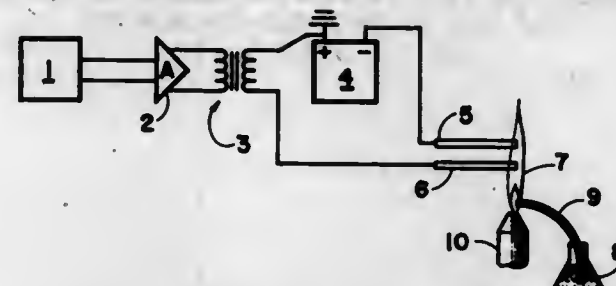
METHOD AND APPARATUS FOR GENERATING AN ACOUSTIC OUTPUT FROM AN IONIZED GAS STREAM

Wayne R. Babcock and Alfredo G. Cattaneo, Los Altos Hills, Calif., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 16, 1967, Ser. No. 675,487

Int. Cl. G01m 15/00

U.S. Cl. 73-116

15 Claims



An ionized gas stream is passed across spaced electrodes. A D.C. bias is maintained between the electrodes, and the intensity of the bias current is modulated in a predetermined manner. Acoustic waves corresponding in frequency to the frequency of the modulation of the bias current are generated by the gas stream. The invention is useful in a wide variety of applications ranging from entertainment to the testing and control of rocket motors.

3,516,287

DEVICE FOR PROGRAMMED OPERATION OF AN AUTOMOBILE ON A TEST PLATFORM

Tadashi Masuda and Tadashi Hashimoto, Yokohama, Japan, assignors to Nissan Jidosha Kabushiki Kaisha, Yokohama, Japan
Filed May 27, 1968, Ser. No. 732,435

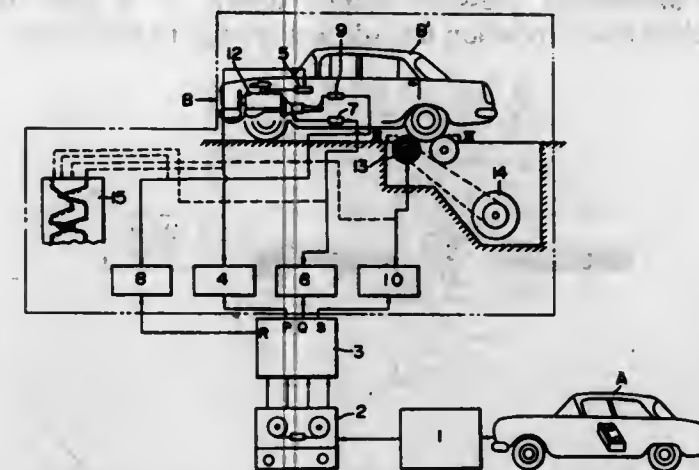
Claims priority, application Japan, June 28, 1967, 42/41,118
Int. Cl. G01m 15/00

U.S. Cl. 73-117

4 Claims

A device for programmed operation of an automobile on a test platform, which is controlled by electric signals

collected and recorded by running an automobile through actual streets. The electric signals represent information on at least the carburetor throttle valve opening and auto-



mobile speed. The revolving speed and output from the driving machine of the automobile being tested are controlled and measured by a dynamometer.

3,516,288

PROCESS AND APPARATUS FOR TESTING ON THE GROUND THE ORBITAL OPERATION OF THE APPARATUS CONTROLLING THE SETTING OF A SPACE VEHICLE

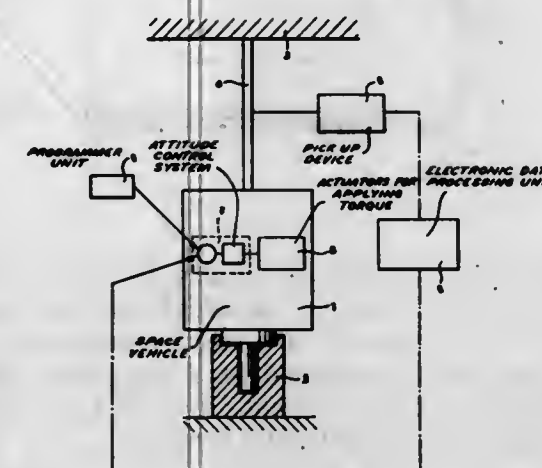
Francesco Gnani, Turin, Italy, assignor to Fiat Societa per Azioni, Turin, Italy, a joint-stock company of Italy
Filed May 16, 1968, Ser. No. 731,361

Claims priority, application Italy, May 18, 1967, 51,769/67, Patent 803,952

Int. Cl. G01l 5/13

U.S. Cl. 73-117.1

15 Claims



The attitude control system of a space vehicle is ground-tested by measuring the torque in a resilient link connecting the vehicle to the ground in response to command signals supplied to the vehicle actuators, and deriving from said torque the angular displacement which would result in flight without said link.

3,516,289

PRESS INKOMETER

William D. MacGeorge, Doylestown, and Robert J. Beavers, Plymouth Township, Montgomery County, Pa., assignors to Tawing-Albert Instrument Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1968, Ser. No. 771,563

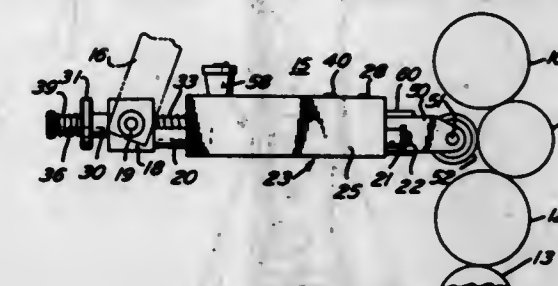
Int. Cl. G01n 19/04, 33/32

U.S. Cl. 73-150

8 Claims

A press inkometer having a sensing roll for engagement with an inked roll of a printing press to determine

the tack or adhesion of the ink. The sensing roll is carried on a hinged mounting on a swivel plate in a housing. A motion transmitting arm movable with displacement of the roll about its hinge is connected to a signal source



and dashpot. A zero adjustment is provided for the roll mounting. The housing is slidably mounted and adjustably resiliently urged to apply the desired force on the sensing roll and a stop is provided for presetting the force and permitting quick resetting after cleaning.

3,516,290

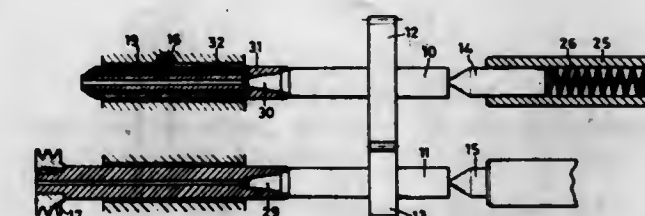
MACHINES FOR THE NOISE TESTING OF GEARS
Giampiero Matteucci, Forrester Terme, Bologna, Italy, assignor to S.p.A. Officine Meccaniche F.M. Daidi & Matteucci, Milan, Italy, a company of Italy
Filed Oct. 31, 1968, Ser. No. 772,200

Claims priority, application Italy, May 22, 1968, 16,833/68

Int. Cl. G01m 13/00

U.S. Cl. 73-162

5 Claims



A device for testing gears for the noise they produce during operation comprises first and second spindles supporting respective gears being tested such that the gears are in mesh, the first spindle being externally driven in rotation and driving the second spindle through the gears. The second spindle is coupled to a mechanism which drives the second spindle in reciprocation along a line such that the entire width of the face of the gear on the second spindle will mesh with the gear on the first spindle during the testing.

3,516,291

DIRECTION AND RATE OF FLOW MEASURING INSTRUMENT

Gilbert Jaffe, District Heights, and Joseph A. Kuhn, Jr., Kensington, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 24, 1968, Ser. No. 732,001

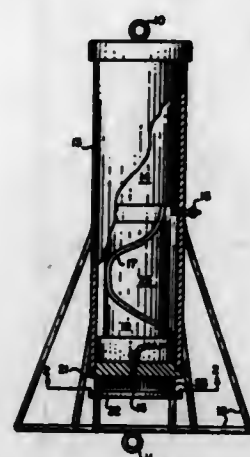
Int. Cl. G01d 21/02

U.S. Cl. 73-189

9 Claims

A method and apparatus for measuring the direction and rate of flow of a moving fluid, such as ocean currents. A fluid dispenser ejects a small quantity of tracer fluid having an electrical conductivity which differs from the conductivity of the fluid being studied. The flow rate is determined from the time required for the tracer fluid to be carried from the dispenser to one of a plurality of

detectors which are equidistant from the dispenser. The direction of the flow is determined from the location



of the particular detector which senses an abrupt change of conductivity as the tracer passes.

3,516,292 FLOWMETER FOR USE IN MONITORING OXYGEN UPTAKE

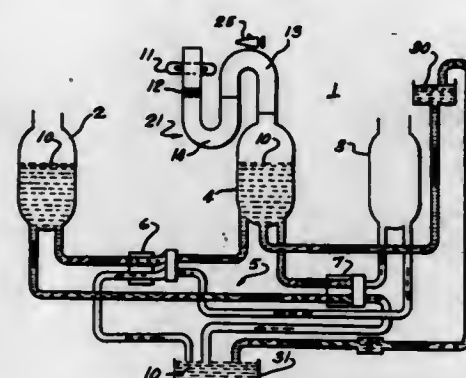
Anthony J. Barak, Harriet C. Beckenhauer, Richard A. Myers, and Roy N. Wilger, Omaha, Nebr., assignors to the United States of America as represented by the Administrator of Veterans Affairs and/or the Secretary of the Army

Filed Oct. 10, 1967, Ser. No. 674,352

Int. Cl. G01f 3/36

U.S. Cl. 73-221

7 Claims



This invention relates to an automatic, continuous flow, flowmeter for accurately measuring liquid flow rate. Specifically, the flowmeter includes the use of alternate filling channels having a predetermined, equal volume, and electro-optically actuated switching valves designed so that one channel empties while another fills. The flow rate is then measured by counting over a measured length of time the number of switches made which is the number of times the channels fill and empty. It will be obvious from the following discussion that the inherent accuracy of the flowmeter hereinafter disclosed will also promote a wide variety of other uses in laboratory and clinical testing.

3,516,293 FLUIDIC POSITION TRANSDUCER

Horace B. Welt, Jr., Churchville, Pa., and Robert W. Young, Cheshire, Conn., assignors to the United States of America as represented by the Secretary of the Navy

Original application Sept. 19, 1967, Ser. No. 668,971.

Divided and this application Aug. 26, 1969, Ser. No. 853,159

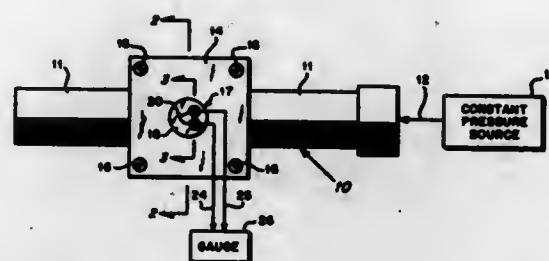
Int. Cl. G01b 13/19

U.S. Cl. 73-432

9 Claims

A fluidic position transducer including a tube connected at one end to a constant pressure source and a rotatable

probe which extends transversely across the tube and has a pair of longitudinal chambers each communicating with the tube interior through a respective one of parallel longitudinal slots and each connected to utilization apparatus. The differential pressure output signals of a pair of matched fluidic position transducers are fed to fluidic con-



trol elements including a fluoric analog summing amplifier, a fluoric shaping network, a fluoric amplifier and a servo control valve for enabling a mechanical control stick input signal applied to one of the transducers to cause a hydraulic actuator which is connected to the other transducer to correspondingly position an aircraft control surface.

3,516,294 ACCELERATION SENSITIVE DEVICE

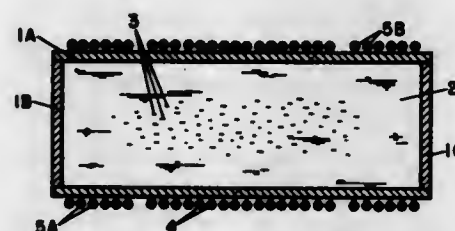
Robert W. Schmieder, New York, N.Y.
(4295 Walnut Blvd., Walnut Creek, Calif. 94596)

Filed Apr. 12, 1966, Ser. No. 542,017

Int. Cl. G01p 15/08

U.S. Cl. 73-516

8 Claims



This invention relates to various forms of a device for measuring acceleration, in which electric current is induced in a conductor by the relative motion of minute magnetic particles, suspended in a fluid-filled container and aligned by a magnetic field produced by a current in a second conductor, and the first conductor.

ERRATUM

For Class 74-5.7 see:
Patent No. 3,516,280

3,516,295 V-BELT PULLEY

Manfred Benz, Gerlingen, Kreis Leonberg, and Ernst Klein, Ditzingen, Kreis Leonberg, Germany, assignors to Ernst Heinkel Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany

Filed Aug. 29, 1968, Ser. No. 756,145

Claims priority, application Germany, Sept. 9, 1968, H 60,212

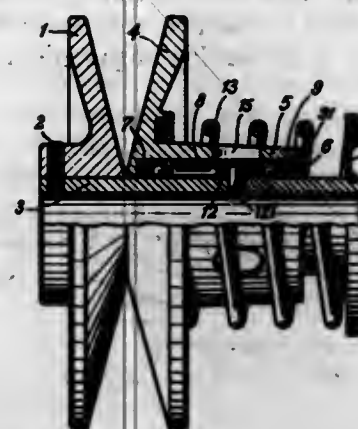
Int. Cl. F16h 55/56

U.S. Cl. 74-230.17

12 Claims

A V-belt pulley for a steplessly adjustable V-belt change-speed transmission which comprises a fixed V-belt pulley and an axially displaceable V-belt pulley whereby a drive

bush arranged between two ball or roller bearings within the displaceable V-belt pulley is drivingly connected with



the drive shaft by way of spline blocks and the drive bush acts simultaneously as spacer sleeve for the ball or roller bearings.

3,516,296 ADJUSTMENT MECHANISM FOR VARIABLE RATIO TRANSMISSION

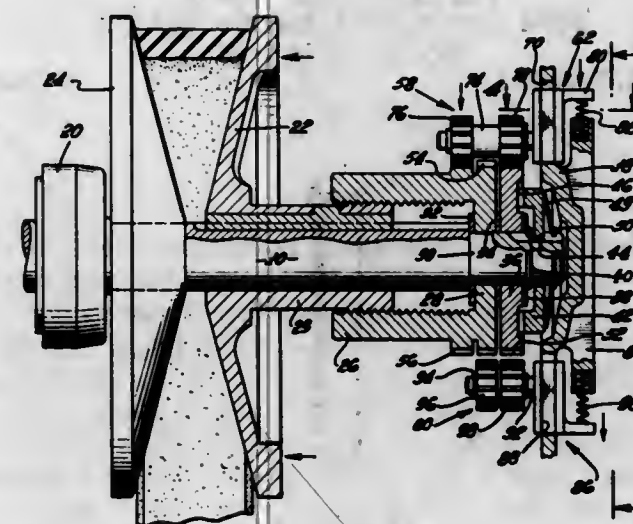
Willard R. Detwiler, Lawndale, Calif., assignor to Emerson Electric Co., St. Louis, Mo.

Filed May 21, 1968, Ser. No. 730,798

Int. Cl. F16h 55/52

U.S. Cl. 74-230.17

34 Claims



A slidable pulley section of a variable ratio transmission is adjusted on its shaft to change the transmission ratio by the aid of an auxiliary reversible transmission. The auxiliary transmission connects the shaft itself to the slidable pulley section, and includes parts physically movable into and out of engagement with companion elements of the auxiliary transmission for selectively operating the auxiliary transmission in a selected direction. The auxiliary transmission is idle and deactivated when the movable parts are retracted.

3,516,297 DRIVE FOR LABELING DEVICE

Karl Dullinger, Neutraubling, Germany, assignor to Hermann Kronseder, Neutraubling, Germany

Filed Oct. 23, 1968, Ser. No. 769,851

Claims priority, application Germany, Dec. 2, 1967, 1,586,373

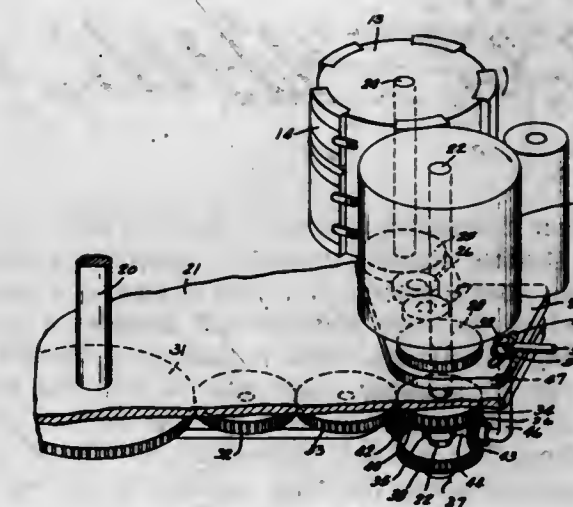
Int. Cl. B65c 9/06; F16h 35/06

U.S. Cl. 74-395

6 Claims

A container labeling machine adapted to selectively label series of containers of different sizes. A rotary labeling turret adjacent the container turntable conveyor is powered

through a power drive train from the conveyor to turn in timed relation to the advance of the containers thereon. The turret is swung toward and away from the conveyor to accommodate a particular size of container thereon. Because of the interaction of the gears in the power train, such swinging movement is accompanied by a slight rotation of the labeling turret which, in



turn, results in misregistration or mistiming of the turret with respect to the containers on the conveyor. The disclosure provides mechanism to rotate the turret on its own axis independently of the drive train to selectively advance and retard the timed relation between the conveyor and the turret, and thus restore proper timing and registration of the turret with the containers, regardless of container size.

3,516,298 WORM GEARINGS

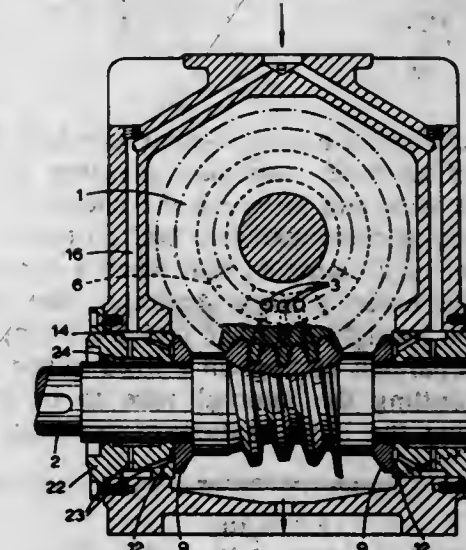
Frans Martin Arndt, Iserlohn, Germany, assignor to Gewerkschaft Eisenhütte Westfalen, a body corporate of Germany

Filed Aug. 22, 1968, Ser. No. 754,556

Int. Cl. F16h 1/16, 55/18, 57/04

U.S. Cl. 74-427

9 Claims



A worm gearing with chambers formed between the gear wheel teeth and the worm thread, which chambers are filled with pressure fluid to form hydrostatic pressure fluid cushions which prevent physical contact between the gear wheel teeth and worm thread.

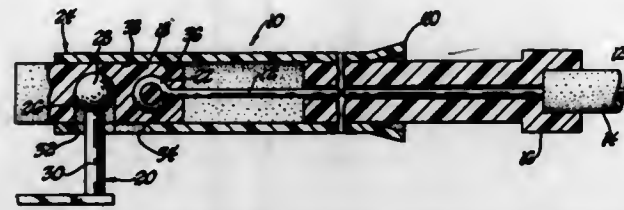
3,516,299

MOTION TRANSMITTING CONTROL ASSEMBLY
Winthrop B. Conrad, Franklin, Mich., assignor to Teleflex, Incorporated, North Wales, Pa., a corporation of Delaware

Filed June 24, 1968, Ser. No. 739,404
Int. Cl. F16c 1/14, 11/10

U.S. Cl. 74-501

12 Claims



A motion transmitting remote control assembly including a flexible conduit movably supporting a motion transmitting core element. A terminal means is secured to one end of the core element and includes a pocket for receiving an enlarged head portion of a control element. A tubular member surrounds the terminal means and has an opening therein with a large portion and a small portion. The tubular member is movable to a receiving position where the large portion of the opening is disposed over the pocket so that the head of the control element may be disposed in the pocket of the terminal means. The tubular member is also movable to a retaining position where the small portion of the opening is disposed over the pocket for retaining the head of the control element in the pocket. A tubular fitting is attached to the end of the conduit and the tubular member extends from the terminal means and is in telescoping relationship with the fitting.

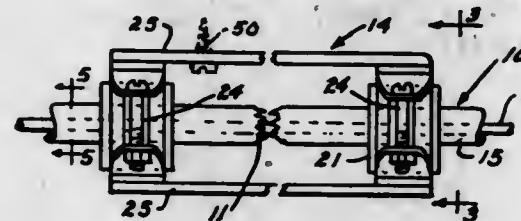
3,516,300

CONTROL CABLE HOLDING CLAMP
Robert J. Muckinaupt, 35 Port Monmouth Road, Port Monmouth, N.J. 07758

Filed Oct. 5, 1967, Ser. No. 673,215
Int. Cl. F16c 1/08; F16g 11/06

U.S. Cl. 74-501

1 Claim



A portable clamp for a control cable in which the cable is comprised of an outer stationary covering with an internal movable wire and in which the clamp is provided as a single body portion with two end portions each being in the form of a clamp so that when a control cable breaks and the outer portion separates, the separated portions can be brought together and the clamp applied to retain the separated sections in a fixed joined relationship thus permitting the internal wire to be moveable without affecting the outer stationary covering.

3,516,301

REMOTE CONTROL ASSEMBLY
Peter Anton Stahr, Pontiac Township, Mich., assignor to Teleflex, Inc., North Wales, Pa., a corporation of Delaware

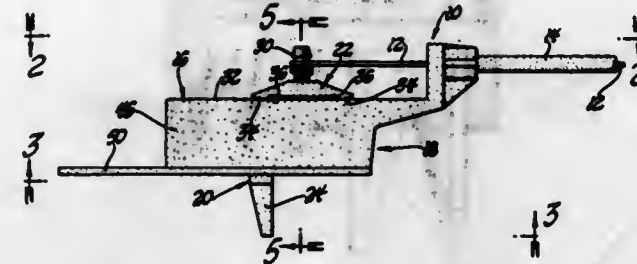
Filed Mar. 18, 1968, Ser. No. 713,963
Int. Cl. F16c 1/10

U.S. Cl. 74-501

16 Claims

A motion transmitting remote control assembly of the type which is operated to control a device by transmitting tension or compression in a curved path by a flexible core

element and including a control body having a wall with an elongated slot therein and a slider member slidably supported by the control body for bearing engagement with one face of the wall and extending through the slot. An elongated member is snapped onto and retained on the slider member and is in bearing engagement with the op-



posite face of the wall for providing a predetermined resistance to the sliding movement of the slider member. The elongated member has spaced pads at each end thereof and in sliding engagement with the control body for attenuating the mechanical advantage and the resulting excessive forces which resist sliding movement as forces are applied to the slider member.

3,516,302

EJECTOR PIN RETRACTION MECHANISM FOR MOLDING OPERATION

Vincent H. Muttart, 902 Rockaway Drive, Placentia, Calif. 92670

Filed July 15, 1968, Ser. No. 747,772
Int. Cl. G05g 5/08

U.S. Cl. 74-527

9 Claims



In a mechanism comprising first, second and third elongated, substantially cylindrical members, the first member being adapted to reciprocate within a bore in the second member and the second member being adapted to reciprocate within a bore in the third member and a pair of cam members, which are laterally, slideably mounted in the second member intermediate the ends thereof and which are operative to reciprocate between a first position extending internally of the bore in the second member to prevent movement of the first member therethrough and a second position extending externally of the second member to prevent movement of

the second member through the bore in the third member the improvement wherein the third member has a second, larger bore therein, the first mentioned bore and the second bore being connected by a tapered surface, wherein one end of the first member has a tapered surface, and wherein each of the cam members has tapered surfaces on the innermost and outermost portions of one side thereof, the tapered surfaces on the cam members having the same shape and the same angular orientation as the tapered surfaces on the first member and on the third member to permit high impact strength and high accuracy.

3,516,303

LOCK MECHANISM

Heinrich Imgrund, Geneva, Switzerland, assignor to Tarex S.A., Petit-Lancy, Canton of Geneva, Switzerland, a firm

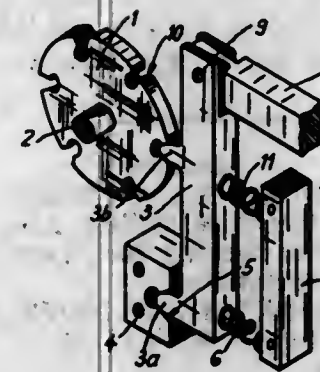
Filed May 27, 1968, Ser. No. 732,314

Claims priority, application Switzerland, June 30, 1967, 9,356/67

Int. Cl. G05g 5/06; B23q 17/00

U.S. Cl. 74-527

1 Claim



In a detent mechanism comprising an oscillating latch co-operating with a movable element, in which one of the components (latch and movable component) has a projection engaging in a V-shaped recess in the other component in order to hold the movable component in a predetermined position, the feature that the latch is articulated with a supporting member through the medium of a projection formed on one of the components (latch and supporting member) and engaging in a V-shaped recess in the other component under the action of an elastic device acting upon the latch, in such a manner that the pivot between latch and its supporting member is totally free of backlash, thus increasing the positional precision with which the movable element is held.

3,516,304

SAFETY CATCH MECHANISM

Howard H. Vermette, 7 143rd St., Hammond Lake, Ind. 46320

Filed Sept. 12, 1968, Ser. No. 759,456
Int. Cl. G05g 5/00; B66b 5/16

U.S. Cl. 74-527

8 Claims

A housing secured to a platform holds an insert, and the housing and insert both slidably engage an upright. The housing and platform are moved vertically on the upright by means of a cable having one end secured to the housing adjacent the front of the housing. The insert has an inner wall surface that is inclined inwardly from its lower edge portion. A vertically disposed retainer, positioned between the inner wall surface of the insert and the upright, holds a plurality of balls in a nonrestraining position that permits free vertical movement of the housing relative to the upright. In its normal position, the retainer is supported with its lower end adjacent the lower end of a pivoted lever. A spring urges the lever to move

the retainer upwardly relative to the insert, but under normal conditions the cable engages the upper end portion of the lever to hold it against the force of the spring. If the cable breaks, the force holding the lever against the spring action is released, and the lever moves the retainer upwardly within the insert. The inclined inner surface of the insert forces the balls toward the outer surface of the upright as the retainer is moved upwardly



relative to the insert and the upright, and the balls are engaged with the inner wall surface of the insert and the outer surface of the upright. Movement of the housing downwardly relative to the upright then causes the balls to become wedged between the upright and the insert to prevent downward movement of the housing relative to the upright member.

3,516,305

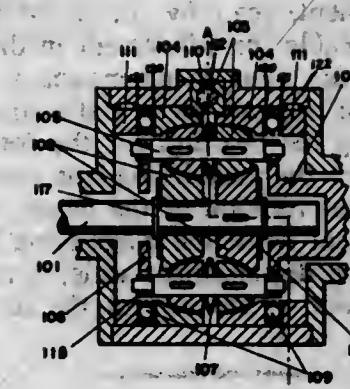
TORQUE CONVERTER

Walter Valdemar Cherry, 744 Alden St., Mendocino, Pa. 16335

Filed May 9, 1968, Ser. No. 727,937
Int. Cl. F16h 15/50, 15/04

U.S. Cl. 74-796

15 Claims



A planetary friction type torque converter which provides a variable drive and speed reducer. The torque converter uses preloaded planetary rolling elements with ball or roller elements as part of the reactive members. The reactive members are in the form of rings having an internal surface contoured about a radius slightly larger than the radius of contour of the planet rollers. The outside lateral edges of the reactive members have cam surfaces on them, cam members having cam surfaces facing the reactive members. Ball cams are disposed between the reactive members and the cam surfaces. When a force is exerted on the input shaft, it is transmitted through

the balls to the torque converter frame. Thus, the reactive members tend to be rotated relative to the frame. Relative rotation between the reactive members and the frame results in the balls moving to higher points on the cam surfaces, thus forcing the two reactive members toward each other. This force is opposed by the springs between the planet rollers. This reaction brings the planet rolls into engagement with a smaller radius part of the sun rolls and likewise a smaller radius portion of the reactive members. A limit stop is provided to limit the extent of rotation of the reactive members.

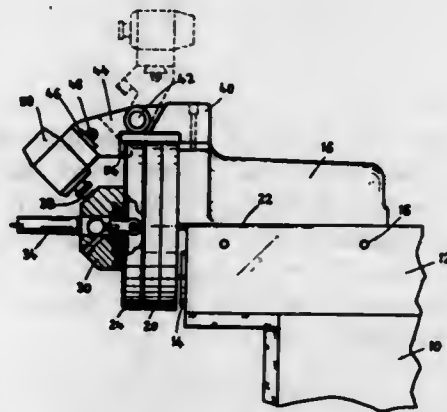
3,516,306

BORING HEAD FOR MACHINE TOOLS

Johann Müller, Unterhaching, Germany, assignor to Friedrich Deckel Präzisions Mechanik und Maschinenbau, Munich, Germany, a German firm
Filed Aug. 12, 1968, Ser. No. 751,847
Claims priority, application Austria, Aug. 31, 1967, A 8,008/67
Int. Cl. B23b 49/00

U.S. Cl. 77—1

9 Claims



A boring head for application to a machine tool such as a milling machine, has a rotatable flange on which a tool holder is displaceable in a diametrical direction perpendicular to the axis of rotation of the flange. To enable precise reading of the extent to which the tool holder is displaced radially from a given position, the displaceable tool holder is provided with a scale parallel to the direction of displacement, read by means of a magnifying glass also displaceable for adjustment in the same direction, the magnifying glass being mounted on a bracket arm swingable on a pivot on a stationary part of the housing containing the bearings for the rotatable flange. The pivot on which the magnifying lens swings is at right angle to the axis of rotation of the flange, and the parts are so arranged that when the magnifying lens is not in use for reading the displacement scale, it may be swung up to a position out of the way of the coolant and the chips.

3,516,307

WIRE AND CABLE STRIPPING DEVICE

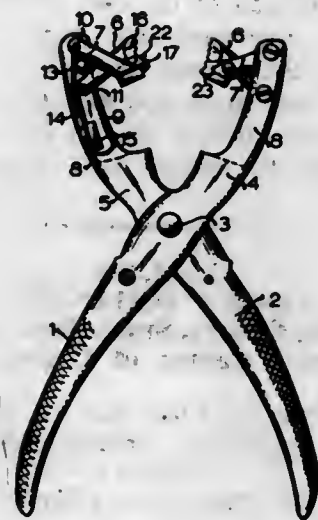
Josef Krampe, 4 Werner Strasse, 4711 Herbern, Germany
Filed Mar. 17, 1969, Ser. No. 807,565
Claims priority, application Austria, Dec. 20, 1968, A 12,448/68
Int. Cl. H02g 1/12

U.S. Cl. 81—9.5

10 Claims

A plier carries at its respective jaws a set of two levers each. Both levers are pivoted to a respective jaw with their connected ends and project towards the other jaw with their free ends. The two levers of each set cross one another and one lever is guided for sliding movement relative to the other by and on the other

lever. One lever of each set grips a wire located intermediate the jaws when the pliers are operated in a sense moving the jaws closer together, and subsequent



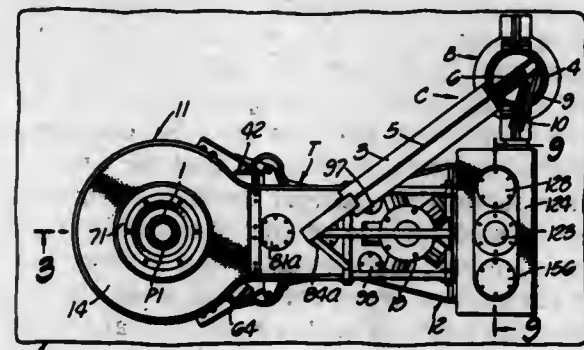
3,516,308

POWER PIPE TONG TRANSMISSION ASSEMBLY

John E. Ham and Merrill K. Willsey, Long Beach, Calif., assignors to Byron Jackson Inc., Long Beach, Calif., a corporation of Delaware
Filed Dec. 4, 1967, Ser. No. 687,815
Int. Cl. B25b 17/00

U.S. Cl. 81—57.16

14 Claims



A power pipe tong having a pipe gripping head adapted to be driven in opposite pipe-gripping and rotating directions by a power transmission mechanism which is adapted to drive the head at high speed and low torque for spinning pipe joints, and at low speed and high torque for making up and initially breaking out the pipe joints, the drive means including a slip clutch for absorbing shock loads when the pipe joints are initially shouldered at high speed.

3,516,309

TRACER CONTROLLED FEED MECHANISM FOR MACHINE TOOLS

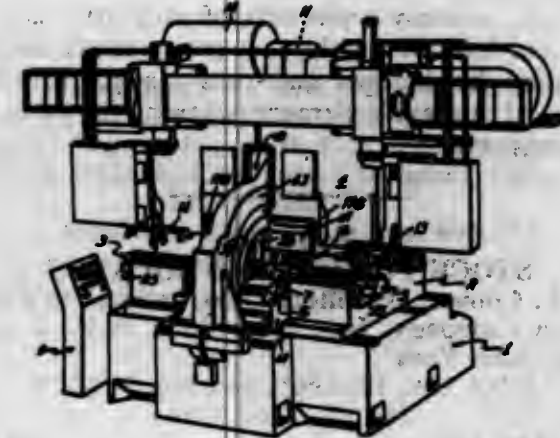
Otto Hermann, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Delaware
Filed Nov. 27, 1967, Ser. No. 685,864
Int. Cl. B23b 3/28

U.S. Cl. 82—14

9 Claims

The disclosure is directed to an apparatus for feeding the cutting tools of a machine tool relative to a workpiece in an automatic manner, utilizing a hydraulic

tracer valve having a stylus which traces the profile of a moving template to generate the tool feed motion. The tool feed mechanism, which includes tool slides having opposed cutting tools, is actuated by a hydraulic cylinder interconnected with the tracer valve. The cyl-



inder is mechanically connected to the tool slides and arranged to shift the tool slides and cutting tools, by servo action, along lines at right angles to the axis of work rotation in response to the deflections of the valve stylus as it traces the profile of the moving template.

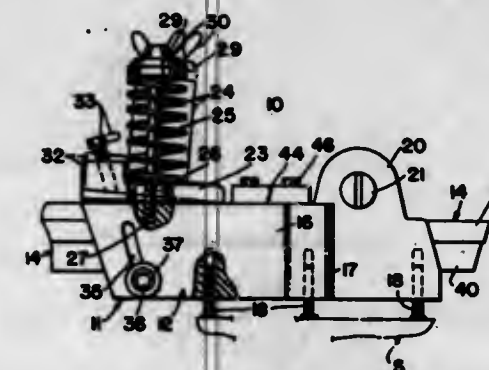
3,516,310

TOOL MOUNT AND ACCESSORY

Savarian F. Lemanski, 109 Taylor Ave., Detroit, Mich. 48202
Filed May 24, 1967, Ser. No. 640,921
Int. Cl. B23b 29/00

U.S. Cl. 82—36

10 Claims



An improved mount for metal cutting tools is disclosed, in particular tools for cut-off, grooving, threading, boring and like rotary turning operations. However, the mount may receive a cutter used in non-rotary machine tool work, for example, in planing, shaping, etc.; and knurling is also contemplated.

Provision is made to afford a slight resilient yielding movement of the cutter in the direction of relative rotation or linear advance of the workpiece past the workpiece, under a suddenly increased or shock work load. This may occur in the event of a tendency of the cutter to snag, for example upon an unduly hasty or irregular advance of the cutter toward the workpiece, upon the cutter's encountering a local hard spot in the workpiece, or the like.

An improved lubricating unit is also disclosed, by which oil is gravitationally fed along a "duckbill" type blade onto the exact zone of the workpiece at which a cut is being made, as in a lathe or cut-off operation.

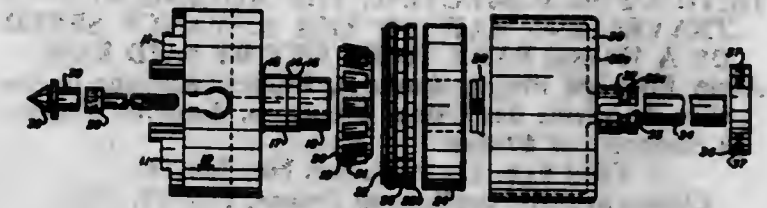
3,516,311

LATHE TOOL

John La Marca, 1312 Dormont Ave., Pittsburgh, Pa. 15216
Filed June 11, 1968, Ser. No. 736,100
Int. Cl. B23b 25/00

U.S. Cl. 82—38

3 Claims



The invention disclosed relates to a lathe tool which combines the advantages of a chuck and a live center in one tool at the tail stock end of an engine lathe.

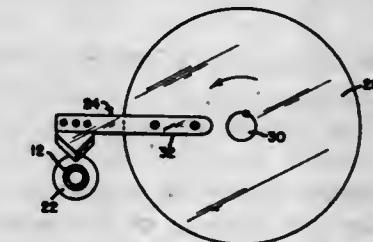
3,516,312

ROTATABLE CUTTING APPARATUS

Calvin T. Nordberg, South Haven, John A. Merboth, Hopkins, and Robert D. Siverson, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Mar. 7, 1968, Ser. No. 711,358
Int. Cl. B26d 3/16

U.S. Cl. 83—42

11 Claims



An apparatus for cutting a rope of material into slices or segments of predetermined thickness or length without deforming the rope or the slice during the cutting operation. A pointed cutting blade, having a pair of beveled cutting edges which meet to form the point, intersects with the rope in such a manner that the point pierces the surface of the rope and the two cutting edges provide a double slicing action.

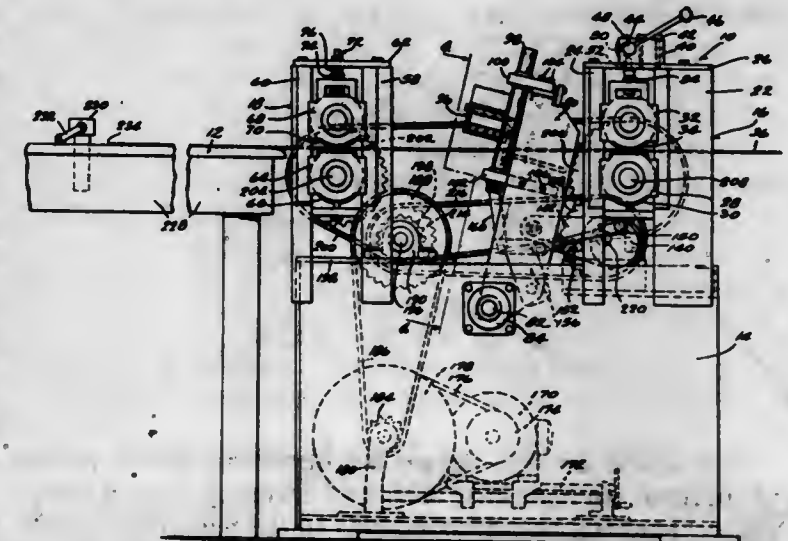
3,516,313

CUT-OFF DEVICE FOR STRIP MATERIAL

Ragnar Gudmestad, West Allis, Wis., assignor to Artos Engineering Company, New Berlin, Wis., a corporation of Wisconsin
Filed Apr. 16, 1968, Ser. No. 721,863
Int. Cl. B23d 25/06, 25/16, 1/56

U.S. Cl. 83—110

15 Claims



A cut-off device or flying shear for severing successive sections of predetermined length from a continuously advancing workpiece.

vancing strip of material wherein the strip advancement means and the cut-off mechanism are driven by a common power source and are accurately synchronized.

3,516,314

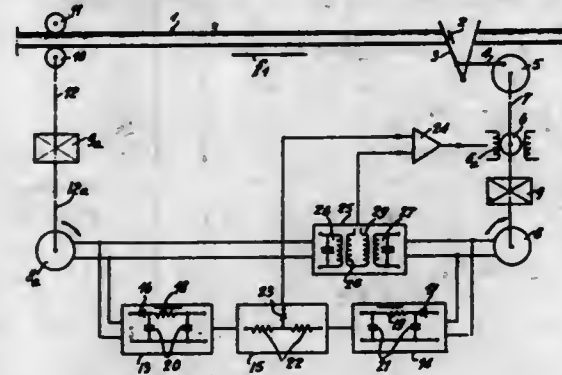
DEVICE FOR SUBJECTING THE MOVEMENT OF A TRAVELLING SAW TO THE ADVANCE SPEED OF A WORK PART TO BE CUT BY SAID SAW
Alain Edouard Flegat, Amieres, France, assignor to Societe Anonyme des Usines Chausson, Amieres, France, a company of France

Filed Feb. 12, 1968, Ser. No. 704,735
Claims priority, application France, Feb. 17, 1967, 95,441

Int. Cl. B23d 25/16, 1/56

U.S. Cl. 83—295

3 Claims



The device for subjecting the movement of a travelling saw to the advancing speed of a work part to be cut by said saw comprises two alternators, one being driven by a member for reading the speed of the work part to be cut, the other being driven by a variable speed electric motor controlling the working of the travelling saw, an analysis circuit at least of the voltages coming from the two alternators being provided for producing a signal ensuring the regulating of the speed of said motor driving the travelling saw.

3,516,315

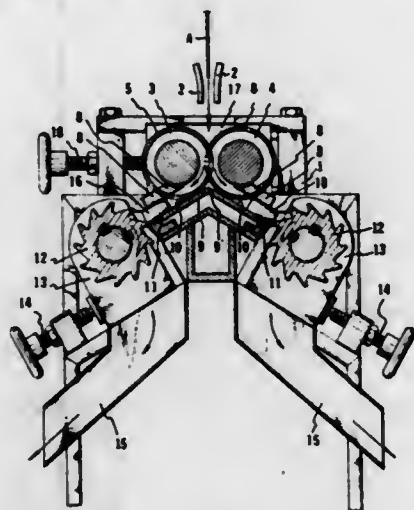
VERTICAL-HORIZONTAL CUTTING DEVICE FOR A SHEET MATERIAL
Hirofumi Suzuki, Osaka-shi, Japan, assignor to Horai Tekko Sho Co., Ltd., Osaka-shi, Japan

Filed Sept. 10, 1968, Ser. No. 758,912
Claims priority, application Japan, June 6, 1968, 43/39,159

Int. Cl. B65h 35/02

U.S. Cl. 83—408

7 Claims



This invention is a device for obtaining plastic pellets of uniform configuration with and accuracy from a sheet-shaped material by improvements in the pelletizing mechanism whereby the lengthwise as well as crosswise cutting is effected; comprising a pair of juxtaposed rotary longitudinal roll cutters each having a plurality of spaced an-

nular cutting edges arranged around the periphery so that said annular cutting edges of one roll cutter are dovetailed with the counterparts of the other roll cutter, whereby a sheet material is longitudinally cut into a plurality of strips of a suitable width; pectinate members fitted in the spaces between said cutting edges and provided at the bottom peripheries of said both roll cutters, and a guide element provided as close as possible to the underside of said cutters, whereby a plurality of said strips are parted to right and left alternately, and cross cutters comprising cross-cutting fixed edges and rotary edges provided at both exits of said guide element, whereby the parted strips are cut crosswise.

3,516,316

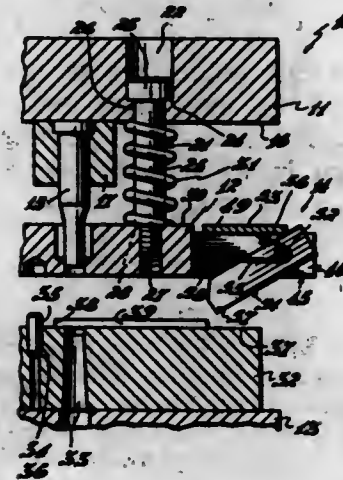
STOCK PUSHER AND LOCATOR
Donald L. Cooper, Hamilton, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Apr. 10, 1968, Ser. No. 720,217

Int. Cl. B26d 7/16

U.S. Cl. 83—419

11 Claims



A pivotally mounted stock pusher fixedly secured to a punch press stripper plate by a mounting bracket. The bracket is positioned so that lowering of the upper movable die shoe of the press causes the pusher to come into contact with, and slide upon the top surface of the lower stationary die block. In so doing, the pusher engages, pushes, and positively locates the stock or workpiece within the punch press.

3,516,317

CORNER ROUNDING PUNCH AND DIE ASSEMBLY

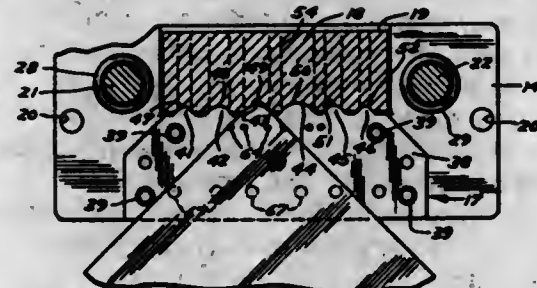
Nils E. Sundquist and Clinton E. Patterson, Minneapolis, Minn., assignors to Mate Punch and Die Co., Minneapolis, Minn., a corporation of Minnesota

Filed May 31, 1968, Ser. No. 733,686

Int. Cl. B26d 7/16, 3/10

U.S. Cl. 83—467

14 Claims



A punch and die assembly for rounding the corners of a sheet metal work piece. The assembly has a plurality of cutting positions so that the corners of a work piece be cut to different size radii through the use of a single punch and die. The die has a plurality of aligned arcuate cutting projections of different size radii. The punch has

complementary recesses which cooperate with the die projections on movement of the punch toward the die to effect a shearing operation. A guide bar adjustably mounted in selective positions on the die aligns the corner of the work piece with a selected projection so that the corner of the work piece is rounded on movement of the punch toward the die.

3,516,318

FREQUENCY CHANGER EMPLOYING OPTO-ELECTRONICS

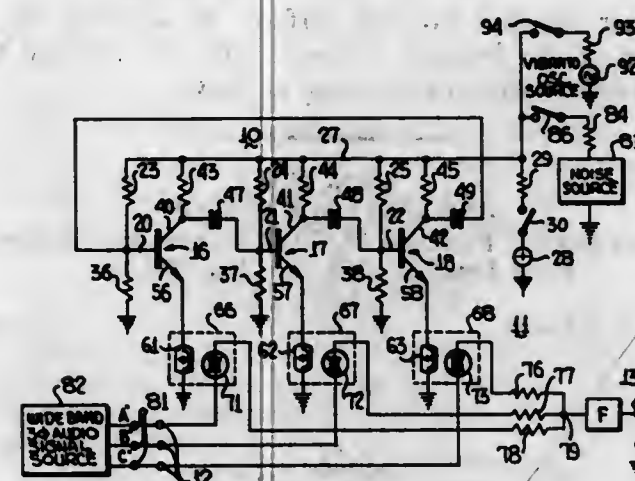
William C. Wayne, Jr., South Fort Mitchell, Ky., assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio

Filed Jan. 2, 1968, Ser. No. 695,173

Int. Cl. G10h 1/00, 3/06

U.S. Cl. 84—1.01

27 Claims



A frequency changer including a transistorized ring sub-audio oscillator section and a modulator section, the oscillator having n stages and each stage arranged to drive a lamp. Optically coupled to each lamp is a photocell, each photocell having applied thereto a phased band of wide band audio signals from an n phase source of wide band audio signals. As the stages are energized to drive the lamps in sequence at the sub-audio frequency of the oscillator, the resistances of the corresponding photocells vary in accordance with the light emitted by the corresponding lamps to amplitude modulate the corresponding bands of signals applied thereto; the frequencies of the composite signal produced at a summing point being shifted by an amount equal to the sub-audio frequency of the oscillator. The ring oscillator is provided with a power supply which provides both DC and a choice of noise or periodic variation, whereby the oscillators are frequency modulated. Separate sub-bands (of the audio band) derived from bandpass filters either on an octave basis or on some other basis of division, may be shifted to different extents and in diverse random or periodic modes, so that the separate sub-bands are not only shifted in frequency by different constant amounts but are also randomly or periodically modulated in frequency. The character of the random modulation may be controlled by a simple RC voicing filter.

3,516,319

SIMULATED BRUSHED CYMBAL TONE GENERATING SYSTEM FOR ELECTRONIC ORGANS
Walter Munch, Jr., Park Hills, Ky., assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio

Filed Oct. 22, 1965, Ser. No. 592,011

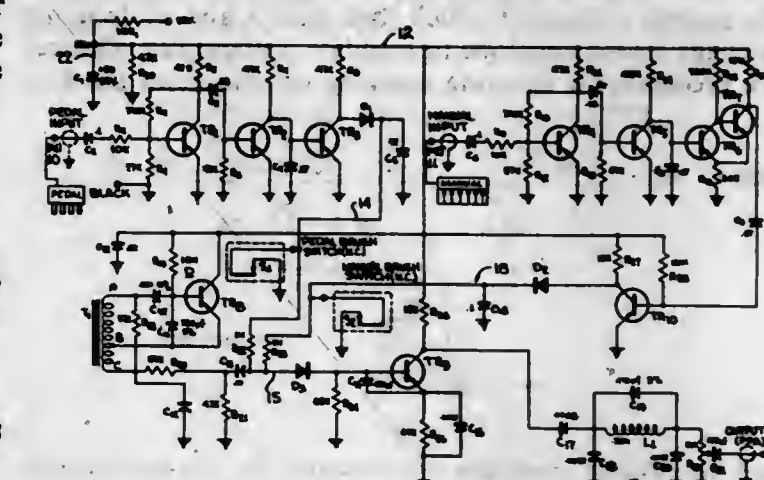
Int. Cl. G10h 1/02, 5/12

U.S. Cl. 84—1.05

21 Claims

Simulated sustained and/or muted brushed cymbal sound generating system for electronic organs wherein the sounds are initiated with pedal keys and/or a manual

keyboard. Transistorized circuitry controlled by each keyboard or pedal key biases a diode gate between a self-



quenched superregenerative oscillating detector (thermal noise generator) and an amplifier and filter.

3,516,320

ELECTRONIC HARMONICA WITH INDIVIDUAL REED PICKUPS AND TONE GENERATOR SYSTEM

Claude A. Hillairet, 42 Rue de Reims, Sartrouville, Yvelines, France, and Jean H. M. Lecadre, 88 Boulevard Richard Wallace, Puteaux, Hauts-de-Seine, France

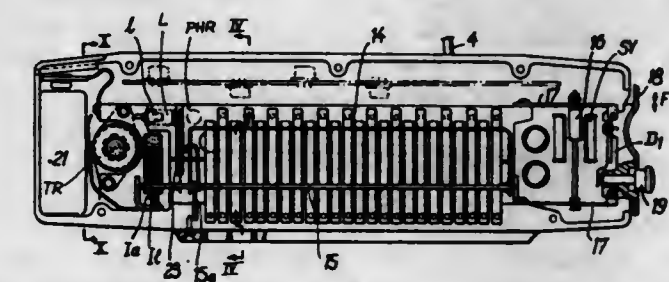
Filed Apr. 1, 1968, Ser. No. 728,099

Claims priority, application France, Mar. 31, 1967, 100,973

Int. Cl. G10d 7/12, 9/00; G10h 5/04

U.S. Cl. 84—1.06

12 Claims



An electronic harmonica incorporating an air pressure sensitive device, e.g., bellows or pistons, and an electronic circuit and tone generator containing a variable value resistor string, the effective value of which is modified by movements of leaves disposed at the inner ends of the playing holes. These movements are produced by the pressure sensitive device as a result of pressure changes produced in the holes during playing and the pressure changes are transformed by an oscillator in said circuit into electrical oscillations which depend on the effective value of said resistor string and thus correspond to the desired note. The circuitry includes voltage dividers and a lamp-shutter-photoreistor arrangement. Manual vibrato control is provided, and various buttons may be used to select attack, filters, and octaves.

3,516,321

ELECTRONIC PIANO

Michael R. Harris, Cincinnati, Ohio, assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio

Filed Jan. 19, 1967, Ser. No. 610,423

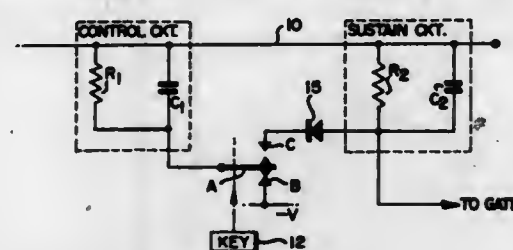
Int. Cl. G10h 1/02

U.S. Cl. 84—1.13

12 Claims

An electronic piano in which a control voltage proportional to impact on or velocity of a key is produced in terms of decay of control voltage across a control or timing capacitor while a key operated switch arm

moves from a first to a second contact, and in which the voltage is sampled via an isolating diode or transistor at the second contact and stored in an RC sustain circuit, the sustain voltage of which then decays and in decaying controls a tone envelope to simulate a piano key. Devices are provided for effecting damping on release of the key,

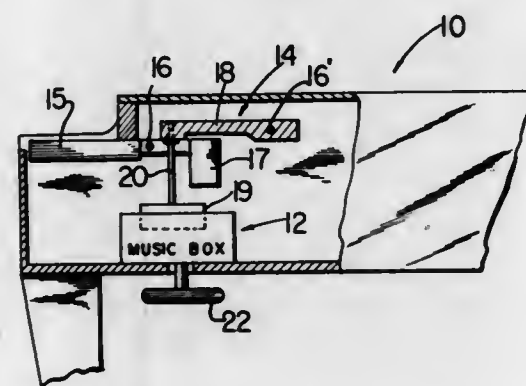


and to disable damping in response to a pedal operation, and to provide double rate decay of voltage of the control or timing capacitor and of the sustain circuit voltage. The fact that the decay time of sustain voltage is slow and that decay of control voltage is rapid enables the diode or transistor to perform its isolating function.

3,516,322
MUSIC BOX OPERATED MUSICAL TOY
Benjamin Kinberg, 425 Riverside Drive,
New York, N.Y. 10025
Filed Sept. 11, 1968, Ser. No. 759,120
Int. Cl. G10f 1/06

U.S. Cl. 84-95

3 Claims



A musical toy in the form of a piano having movable keys, a music box within the piano, an arrangement for playing the music box intermittently upon playing any of the keys so that a child believes that he is playing a tune on a piano. The music box has a series of selectively playable tune cylinders.

ERRATUM

For Class 84-243 see:
Patent No. 3,516,325

3,516,323
FASTENER AND GUIDING ATTACHMENT THEREFOR

John J. O'Brien, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

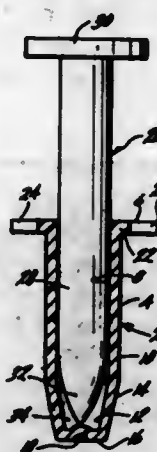
Filed Sept. 23, 1968, Ser. No. 761,550
Int. Cl. F16b 15/00

U.S. Cl. 85-10

6 Claims

The combination of a fastener and a one-piece resilient aligning attachment. The aligning attachment includes a body portion having a bore therein with one end being open and the other end closed. The attachment is mounted on the fastener with the end of the tip of the fastener being positioned adjacent the closed end and the cylindrical wall of the bore in frictional engagement with

the shank portion of the fastener. The attachment includes specially designed flange means and also includes

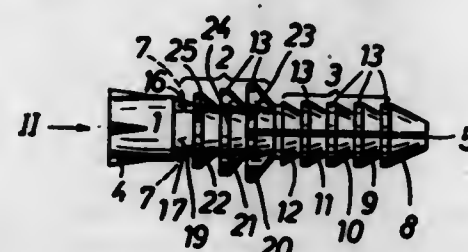


a planar forward external surface. In addition, the tip portion of the fastener is spaced from the internal wall of the attachment to provide an air space.

3,516,324
EXPANDABLE PLUGS
Albert Berner, Postfach 65, 7118 Kunzelsau, Germany
Filed Jan. 25, 1968, Ser. No. 700,482
Int. Cl. F16b 13/12

U.S. Cl. 85-83

3 Claims



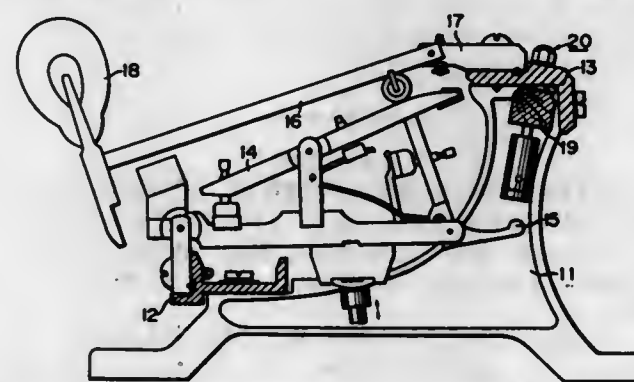
The invention relates to an expandable plug having integral front, intermediate and rear portions and includes on the front and intermediate portions a first set of off-standing teeth of substantially equal radial extent with spaced groups of teeth of decreasing length carried by the intermediate portion and interposed between the first set of teeth. The body of the plug has an axial perforation which communicates with orthogonally related slotted areas in both the front and intermediate portions.

3,516,325
ACTION RAIL ASSEMBLY
Eizi Harada and Kazutoshi Matsumoto, Hamamatsu-shi, Japan, assignors to Nippon Gakki Seizo Kabushiki Kaisha, Hamamatsu-shi, Japan, a corporation of Japan
Filed Apr. 3, 1968, Ser. No. 718,408

Claims priority, application Japan, Apr. 7, 1967, 42/22,221; May 8, 1967 (utility model), 42/37,694
Int. Cl. G10c 3/18

U.S. Cl. 84-243

8 Claims



An action rail assembly consists of a metal hammer flange rail having an L-shaped cross section, a regulating wooden rail with a plurality of regulating buttons, and

means to connect the wooden rail to the metal rail so as to allow for a slight lengthwise expansion or contraction of the former relative to the latter.

3,516,326
MORTAR BARREL
Arno Sten Donner, P.O. Box 10032, Helsinki, Finland
Filed Apr. 12, 1968, Ser. No. 720,838
Claims priority, application France, Apr. 27, 1967, 104,372
Int. Cl. F41f 1/06, 17/10

U.S. Cl. 89-14

10 Claims

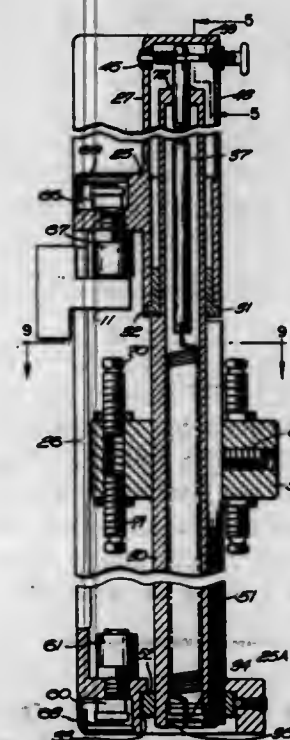


Either the interior of the barrel of a mortar or the exterior of a mortar projectile is provided with longitudinally extending ribs which guide the projectile as it is discharged from the barrel or during the phase at which combustion gases are blown out of the barrel.

3,516,327
AUTOMATIC FEED AND DEPTH CONTROLLER
Ronald Arthur Wilson, West Medway, Mass., assignor to Microwave Development Laboratories, Inc., a corporation of Massachusetts
Filed Sept. 24, 1968, Ser. No. 762,031
Int. Cl. B23c 7/00; B23b 47/18; B23q 5/20

U.S. Cl. 90-11

5 Claims

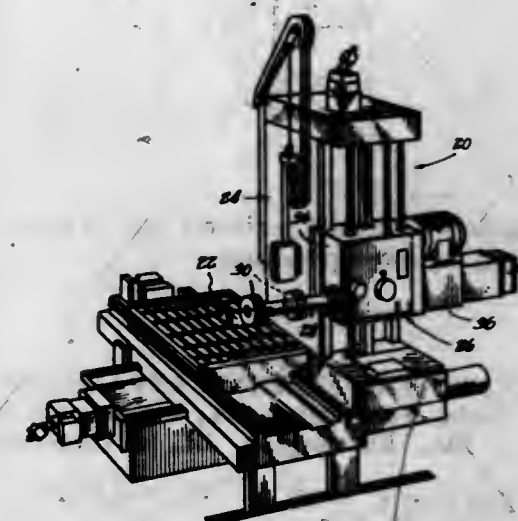


An attachment has a frame that is rigidly attached to a machine tool of the type having a movable lug indicating the position of the spindle. The frame carries an axially sliding hollow shaft which can be moved downwardly against the force of a spring. A detenting mechanism holds the shaft in one of a number of angularly spaced stations. Secured to the shaft is a turret carrying adjustable bolts. A different bolt is positioned in the path of the lug at each different station. Switches are arranged to sense the axial positions of the shaft and a stop is secured on the frame to intercept the bolt and halt further movement of the spindle. The shaft and turret are arranged to facilitate the easy removal of the turret.

3,516,328
MACHINE TOOL WITH LONGITUDINALLY ADJUSTABLE AND HYDRAULICALLY CLAMPED ROTARY MACHINING SPINDLE
Gordon H. Jones, Van Dyne, and Steven E. Klabunde, Fond du Lac, Wis., assignors to Giddings & Lewis, Inc., Fond du Lac, Wis., a corporation of Wisconsin
Filed July 12, 1968, Ser. No. 744,572
Int. Cl. B23c 1/12; F16l 27/12

U.S. Cl. 90-11

14 Claims



A machine tool comprising a machining spindle adjustably extensible longitudinally within a rotary support sleeve and releasably clamped to the sleeve by a clamping bushing applied by high pressure hydraulic energizing means positioned on the spindle sleeve in such manner that application of the clamping bushing does not change the load on precision bearing means used to support and precisely locate the sleeve radially and axially and does not apply significant axial stress to the structure that functions to determine the axial position of the spindle to the end that the spindle is clamped for rotation precisely in the exact axial position desired. The clamping bushing has an axial position proximate a precision bearing that locates the sleeve and spindle axially with precision and the high fluid pressure clamp energizing structure that rotates with the sleeve and energizes the clamp hydraulically is situated on the sleeve so that the portion of the sleeve that determines axially location of the spindle is effectively isolated from significant axial stresses incident to clamping of the spindle. High pressure clamp energizing means rotatable with the sleeve is energized by fluid under relatively low pressure fed to the rotary sleeve assembly by a fluid supply collar which permits high speed rotation of the sleeve without wear or deterioration of the structure.

3,516,329
CUTTING TOOL FOR VALVE SEATS
Phillip R. Rendahl, P.O. Box 1114,
Central Valley, Calif. 96019
Filed July 3, 1968, Ser. No. 742,368
Int. Cl. B23c 1/20

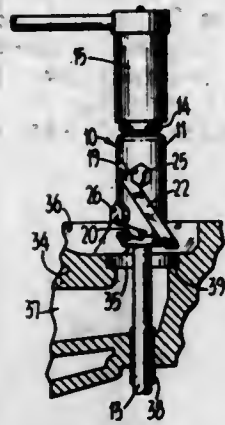
U.S. Cl. 90-12.5

6 Claims

A tool selectively operative to resurface the valve seat of an engine, to narrow the valve seat by top-cutting and bottom-cutting therealong and to cut a groove or channel for receipt of a replaceable valve seat ring there-within. The tool includes an axially extending body adapted to be rotated by a wrench attached thereto, and the body is equipped with a stem-like pilot receivable within the engine-provided valve guide associated with any such seat to enforce a condition of concentricity upon the tool body relative thereto. The tool body is adjustably supported by the pilot, and it is provided with a plurality

of slots each having a cutting blade disposed therewithin. Each blade is selectively movable along its slot into opera-

to an actuator piston in a fluctuating manner such that the output electrical signal is hydraulically converted



tive positions from which it performs one or more of the aforementioned cutting operations.

3,516,330

INCREMENTAL FEEDING APPARATUS

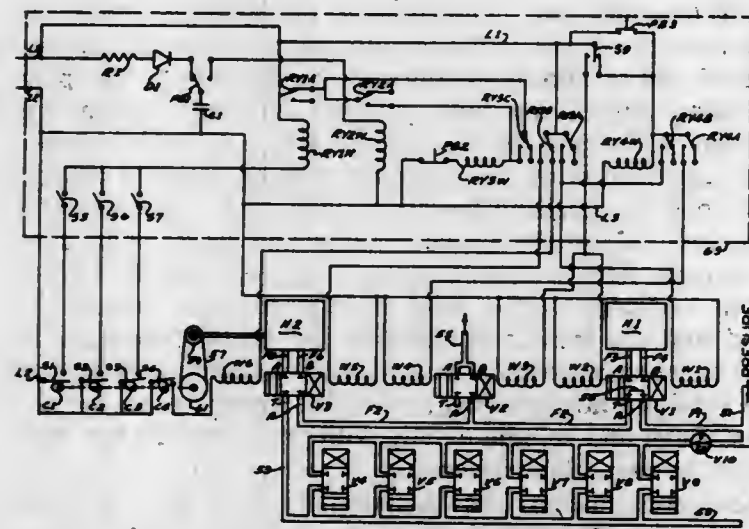
Delbert V. Helle, Farmington, Ill., assignor to Sawmill Hydraulics, Inc., Farmington, Ill., a corporation of Illinois

Filed Oct. 8, 1968, Ser. No. 765,774

Int. Cl. F15b 11/16, 21/02

U.S. Cl. 91-36

12 Claims



An automatic networks apparatus for repetitively advancing or feeding a workpiece in predetermined equal increments, comprising a pair of positive displacement hydraulic motors which are connected in series across a fluid pressure source. One of the motors advances the workpiece and the other controls the extent of operation, the operation of the second motor being directly proportional to the operation of the first by virtue of the series hydraulic connection.

3,516,331

TIME MODULATED HYDRAULICALLY ACTUATED CONTROL MECHANISM

John A. Oelrich, Granby, and Joseph J. Andersen, Bristol, Conn., assignors to Chandler Evans Inc., West Hartford, Conn., a corporation of Delaware

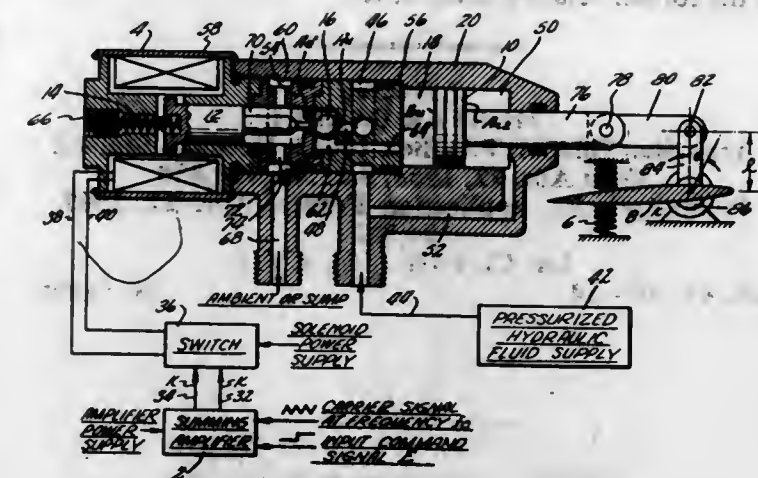
Filed Mar. 21, 1967, Ser. No. 624,902

Int. Cl. F15l 13/044, 15/17

U.S. Cl. 91-47

10 Claims

Control apparatus having a time referenced electrical carrier signal combined with a variable analogue electrical input signal to produce a time modulated electrical output signal. A solenoid operated valve in which the solenoid receives the electrical output signal and positions the valve such that high pressure hydraulic fluid is intermittently transferred from its source and applied



into a substantially continuous steady state control force that positions a compliant load.

3,516,332

HYDRAULIC SYSTEM

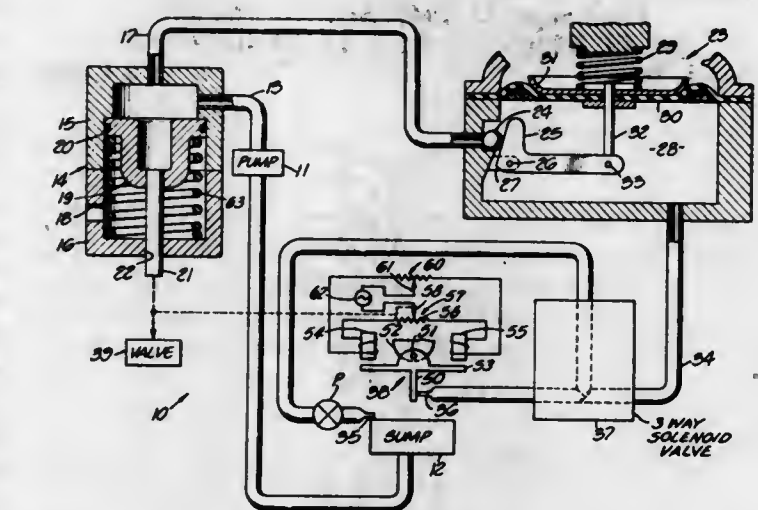
William Alton Ray, North Hollywood, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware

Filed June 17, 1968, Ser. No. 737,773

Int. Cl. F15b 9/03, 9/09, 13/043

U.S. Cl. 91-48

3 Claims



A solenoid valve-operated, restricted orifice for a hydraulic system, including a hydraulic amplifier to cause slow de-actuation of the controlled device. The orifice at the output of the hydraulic amplifier may, thus, control an enormously larger force, and a very small solenoid valve may turn the system on and off.

3,516,333

HYDRAULIC TORQUE AMPLIFIERS

Joseph F. Jackson, Halifax, England, assignor to Pratt Precision Hydraulics Limited, Halifax, England, a British company

Filed Mar. 11, 1968, Ser. No. 711,962

Claims priority, application Great Britain, Apr. 7, 1967, 15,982/67

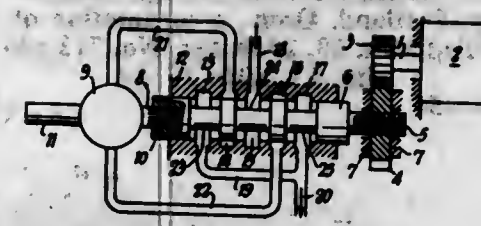
Int. Cl. F15b 9/10; F01b 3/00, 13/04

U.S. Cl. 91-388

4 Claims

The hydraulic torque amplifier includes a control valve having a spool which is axially movable from a neutral position by an input displacement which rotates a gear member mounted for rotation on a screw-threaded extension of the valve spool. Sideways movement of the gear member on the screw-threaded member is prevented with the result that the applied input displacement is caused to move the valve spool axially without any rotation of the valve spool and so to pass pressurized fluid to drive

the motor of the hydraulic torque amplifier. The hydraulic motor itself rotates the valve spool in such a direction



that the valve spool tends to be restored to the neutral position.

3,516,334

RADIAL PISTON PUMPS

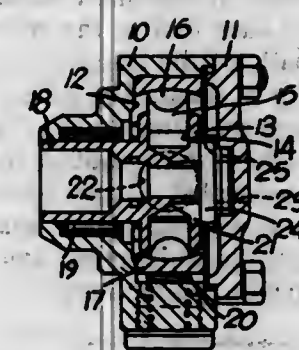
Frank George Freeman, Southall, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

Continuation-in-part of application Ser. No. 699,679, Jan. 22, 1968. This application Feb. 24, 1969, Ser. No. 801,479

Int. Cl. F04b 1/10, 49/00, 49/08

U.S. Cl. 91-475

1 Claim



A pump comprising a body part containing a rotor with radially reciprocable pistons in bores thereof, a ring against an interior surface of which the pistons bear, an inlet and an outlet for liquid to be pumped and two parallel spaced flat surface portions on the body part on at least one of which the ring rolls, with the surfaces being inclined to the direction of action of a force which is the resultant of the forces of the pistons upon the ring.

3,516,335

PISTON WITH HEAT DAM

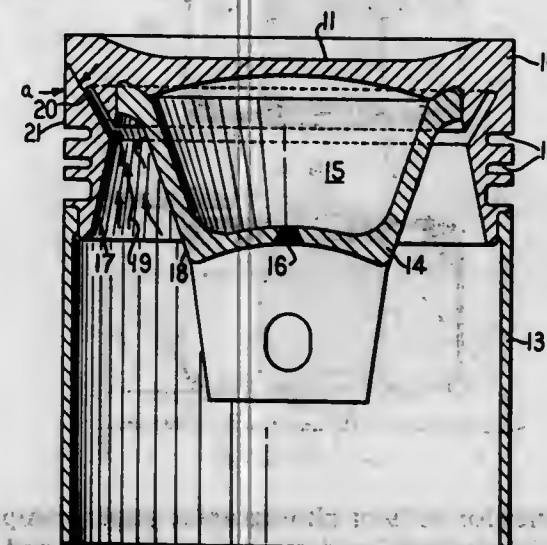
Charles N. Farnham, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed July 3, 1968, Ser. No. 742,421

Int. Cl. F01b 31/08

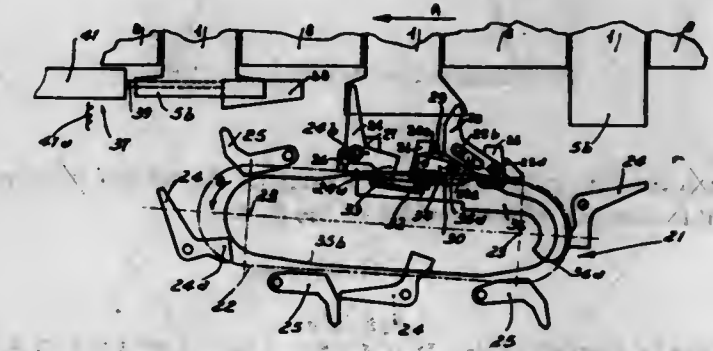
U.S. Cl. 92-176

5 Claims



A piston comprises an annular groove formed in the head thereof, adjacent to an upper compression ring, to provide a heat dam impeding conduction of heat to the ring.

3,516,336
AUTOMATIC PACKAGING MACHINE
Maurizio Masini and Franco Alisola, Milan, Italy (both % A.C.M.A. Azionaria Costruzioni Macchine Automatiche S.p.A., Via Fioravanti 27, Bologna, Italy)
Filed Nov. 13, 1967, Ser. No. 682,003
Claims priority, application Italy, Dec. 3, 1966, 24,762/66
Int. Cl. B31b 11/74, 1/36; B65b 43/26
U.S. Cl. 93-36.01 5 Claims



An automatic apparatus for closing one end of box-like packets or cartons provided with an inner flexible envelope and an external stiffening envelope and foldable end flaps in said external envelope, wherein a feeding path along which said packets are transferred and along which are successively arranged a number of processing units designed to seal said inner envelope and to fold up said end flaps of said external envelope.

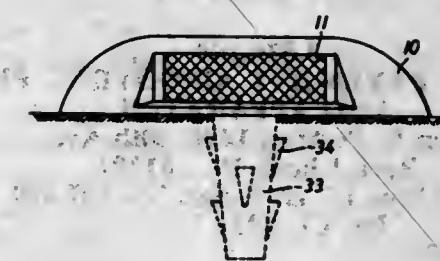
3,516,337

TRAFFIC BUTTON OR ROAD MARKER

Günther Gubela, 160a Poll-Vingster St., Cologne-Kalk, Germany
Filed Mar. 18, 1968, Ser. No. 713,566
Claims priority, application Germany, Mar. 18, 1967, G 36,741
Int. Cl. E01c 23/16

U.S. Cl. 94-1.5

5 Claims



A traffic button or road marker in which a reflector defined by a plastic plate having reflecting elements die-cast with optical accuracy is mounted in the body of the button and is readily visible through a window provided in the body.

3,516,338

LOAD TRANSFER JOINT SUPPORTS FOR PAVEMENTS

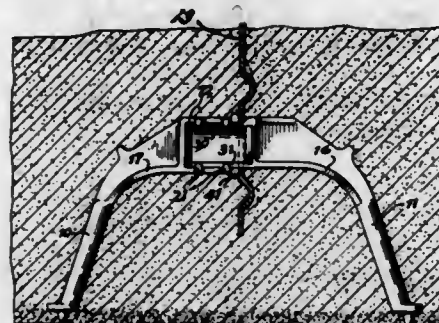
Alfred F. Crone, Williamsville, N.Y., assignor to Acme Highway Products Corporation, Buffalo, N.Y.
Filed Apr. 1, 1968, Ser. No. 717,689
Int. Cl. E01c 11/10

U.S. Cl. 94-8

2 Claims

The disclosure shows the firm securing of two parts of load transfer members together, one of which has a

dowel and the other of which has an open-sided socket into which the dowel extends. The dowel is secured in

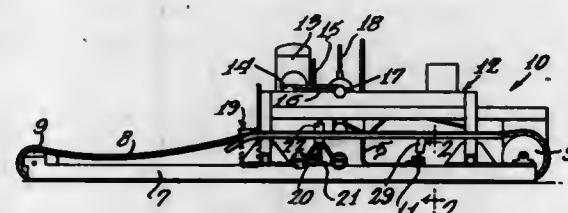


the socket by pressing the two sides of the socket into intimate contact with two sides of the dowel.

3,516,339
ROAD GROOVING PROCESS AND APPARATUS
Glen E. Perkins, 1428 40th Ave.,
Rock Island, Ill. 61201
Filed May 16, 1968, Ser. No. 729,724
Int. Cl. E01c 23/16

U.S. Cl. 94-45

6 Claims

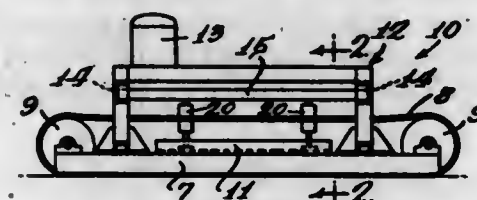


Method and apparatus for forming longitudinally extending grooves in a concrete road by drawing over and pressing onto a newly laid concrete road a molding bar extending transversely of the road, the bar carrying a plurality of spaced downwardly projecting ribs disposed longitudinally of the road.

3,516,340
CONCRETE PAVEMENT GROOVING PROCESS AND APPARATUS
Glen E. Perkins, 1428 40th Ave.,
Rock Island, Ill. 61201
Filed June 17, 1968, Ser. No. 737,430
Int. Cl. E01c 19/22

U.S. Cl. 94-45

3 Claims

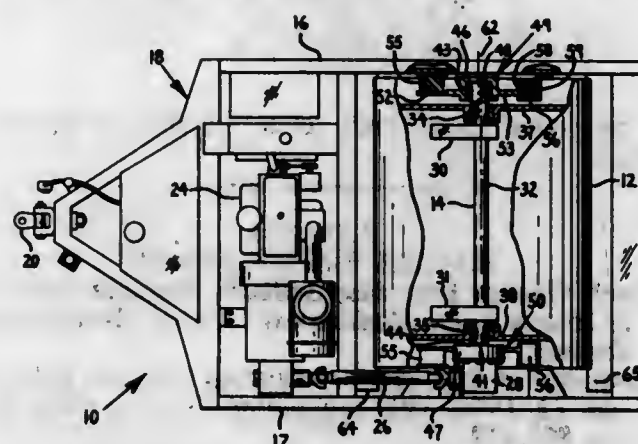


Method and apparatus for forming transversely extending grooves in concrete pavement, such as an airport runway, by drawing transversely over and pressing onto newly laid concrete a molding bar carrying a plurality of spaced downwardly projecting ribs disposed transversely of the pavement.

3,516,341
VIBRATORY COMPACTOR
Lawrence O. Olsen, Portland, Oreg., assignor to Hyster Company, Portland, Oreg., a corporation of Nevada
Filed Mar. 18, 1968, Ser. No. 713,646
Int. Cl. E01c 19/24

U.S. Cl. 94-50

16 Claims

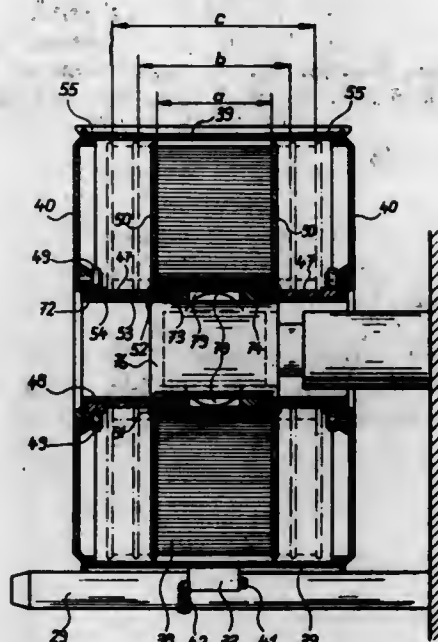


A vibratory compactor in which a roller is connected to the compactor frame by vibration isolator elements at least one of which at each end of the roller resists roller vibrations longitudinally of the frame in tension and compression and vertically in shear. The roller is journaled on a shaft which connects the drum to the frame and which carries eccentric weights which induce the roller vibrations. The shaft is journaled to the frame for rotation about an axis which is eccentric with respect to the axis of rotation of the drum in a direction limiting the amplitude of vibration forced upon the frame by the drum.

3,516,342
ROLL-TYPE MAGAZINE FOR PHOTOGRAPHIC PRINTING PAPER TO BE USED IN AUTOMATIC COPIERS
René Luescher, Regensdorf, Zurich, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland
Filed Nov. 27, 1967, Ser. No. 685,915
Claims priority, application Switzerland, Dec. 14, 1966, 17,827/66
Int. Cl. G03b 19/04; B65h 75/18

U.S. Cl. 95-31

5 Claims

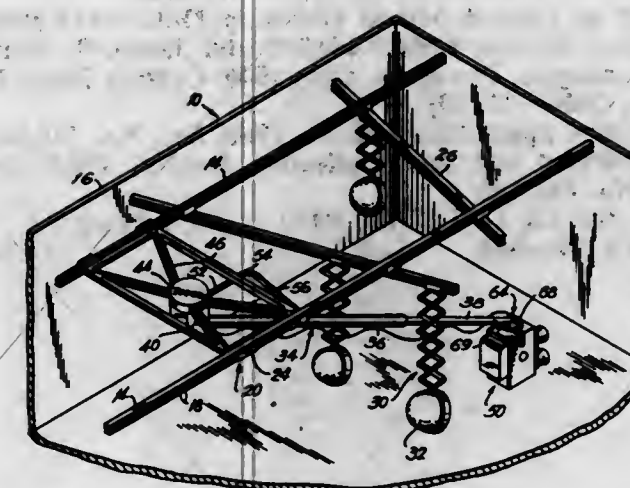


A magazine for rolls of photographic paper comprising a cylindrical housing closed at each end by an end wall. Each end wall has a hub rotatably mounted thereon and each hub has a flange which can be located in a number of positions on the hub. The two end walls are releasably fixed to the cylinder so that the hubs extend towards each other along the axis of the cylinder.

3,516,343
CAMERA-POSITIONING APPARATUS
Gilbert H. Tunney, Hallam, Pa.
(107 E. Market St., York, Pa. 17401)
Filed July 26, 1967, Ser. No. 656,091
Int. Cl. G03b 15/06

U.S. Cl. 95-82

10 Claims

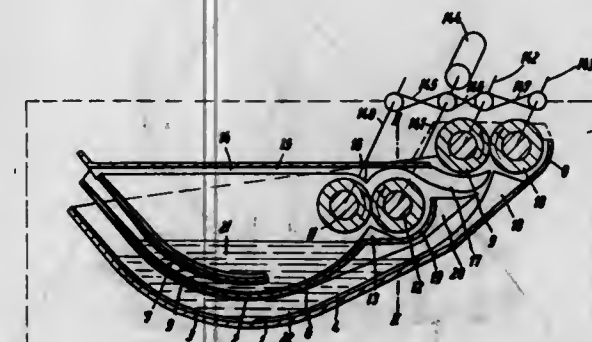


A camera-positioning apparatus for locating a camera at a selected position in a studio with respect to a subject which is to be photographed. An overhead guide member is situated over the operator of the camera and a carriage element is guided by the guide member for movement therealong. A support device is operatively connected to the carriage element for movement with the latter with respect to the guide member and movement with respect to the carriage element. The support device is operatively connected to a camera to carry the latter and is movable with respect to the carriage element to provide for the camera a position selected from a range of positions extending through an area greater than that occupied by the guide member. Thus, with this construction it becomes possible to situate the camera not only beneath the overhead guide member but also laterally beyond the latter.

3,516,344
SILVER SALT DIFFUSION APPARATUS FOR CARRYING OUT THE TRANSFER PROCESS
Walter Limberger, Hamburg-Poppenbottel, Germany, assignor to Lumoprint Zhdler KG, Hamburg, Germany
Filed Nov. 22, 1966, Ser. No. 596,221
Claims priority, application Germany, Nov. 25, 1965, L 52,227
Int. Cl. G03d 9/00

U.S. Cl. 95-89

17 Claims



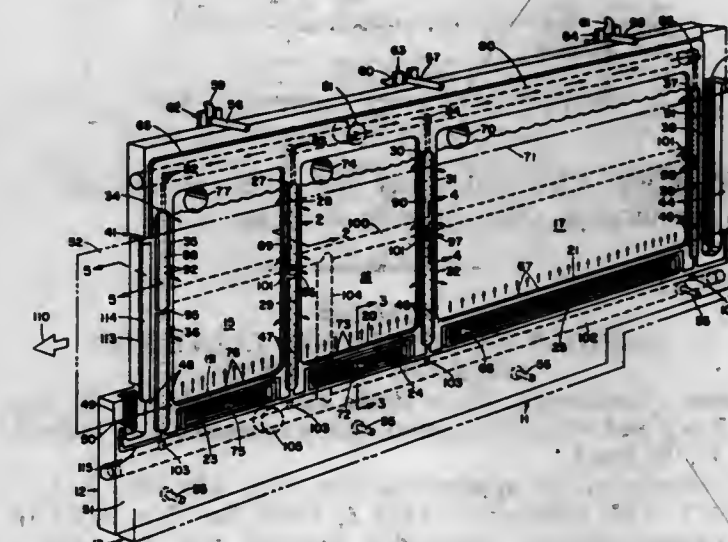
Silver salt diffusion transfer method in which the receiving material prior to contact with the negative material is moistened with a liquid and squeezed. A second squeezing takes place while the receiving material and the negative are in contact with each other.

Apparatus for carrying out the procedure is also disclosed.

3,516,345
STRIP PROCESSING SYSTEM
Robert E. Meyer, Glendale, Ariz., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 19, 1967, Ser. No. 668,972
Int. Cl. G03d 3/00

U.S. Cl. 95-89

2 Claims



A compact processing head used for developing, fixing and rinsing photographic films successively in adjacent chambers of a structure. The film or other strip material is continuously moved through the structure and traverses successively each of three chambers each containing processing fluid. Each chamber receives fluid through orifices along the bottom surface thereof and is sealed along the narrow vertical sides by barriers formed of high pressure air directed against opposing surfaces of the film. Movement of processing fluid thus is transverse to the direction of film movement and this, together with barrier air movement, provides desirable turbulence of the fluids.

3,516,346
PHOTOLYTIC ETCHING OF NICKEL-CHROMIUM ALLOY
Donald L. Schaefer and James F. Burgess, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Filed Dec. 27, 1966, Ser. No. 604,602
Int. Cl. G03c 5/00

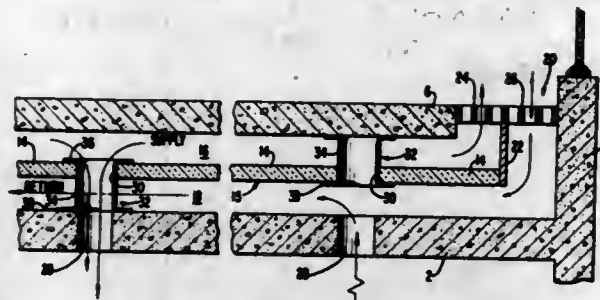
U.S. Cl. 96-36
A process is disclosed whereby nickel-chromium alloy surfaces and particularly thin supported films of the alloy may be selectively etched by exposing an interface between the alloy surface and an overlying photodecomposable reagent to activating radiation which produces chemically reactive species which attacks and preferentially etches the nickel-chromium alloy surface.

3,516,347
DOUBLE PLENUM AIR DISTRIBUTION SYSTEM
Douglas H. May, Ho-Ho-Kus, N.J.
(25 Canterbury Drive, Ramsey, N.J. 07446)
Filed Dec. 26, 1967, Ser. No. 693,391
Int. Cl. F24f 7/02

U.S. Cl. 98-31
Space between a structural slab and the floor or roof thereabove of a building is divided by a horizontal partition into upper and lower plenums, to one of which plenums supply air is fed and from the other of which return air is withdrawn. The supply air can be hot, cold or neutral. Inlets and outlets connect the plenums through the structural slab to the room below or through the

floor to the room above. The relative amounts of air so conducted are adjustably controlled by valving the inlets

not under 50%; or a liquid obtained by separation of the hydrolyzed from the non-hydrolyzed protein by mechanical means.



and outlets. Electrical, water and other service lines can be run through either or both plenums.

3,516,348 RAPIDLY CLOSING STOP VALVE FOR AIR RAID SHELTERS

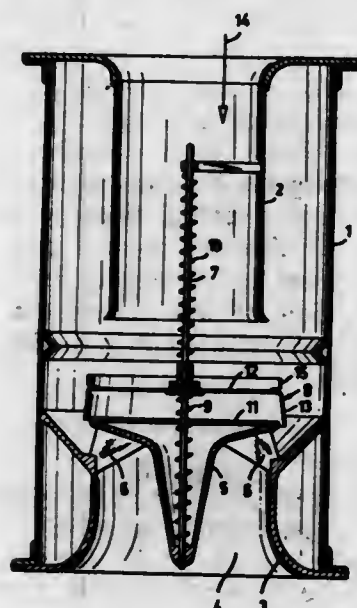
Launo Laakkonen, Risto Rytin tie 18, Helsinki 57, Finland, and Matti Purhonen, Rikstuvorenkujan 8, Helsinki 32, Finland

Continuation of application Ser. No. 614,228, Feb. 6 1967. This application May 1, 1969, Ser. No. 822,101 Claims priority, application Finland, Feb. 14, 1966, 358/66

Int. Cl. F16k 17/18, 21/04

U.S. Cl. 98—119

6 Claims



A rapidly closing stop valve having a valve disc mounted in a channel to move to and from a position where an axially extending edge portion of the disc closes a plurality of air flow openings. A support member is provided for stopping the valve disc in its closing position, which support member has a continuous surface of the same configuration as the adjacent surface of the valve disc.

3,516,349 PROTEIN HYDROLYSIS

Victor H. Bertallo and Celso Rivada Pereira, both of Sarmiento 487, Buenos Aires, Argentina

No Drawing. Filed Dec. 6, 1966, Ser. No. 599,356

Int. Cl. A23j 1/18

U.S. Cl. 99—14

5 Claims

The present invention relates to a novel method for the production of protein hydrolyzates by means of a proteolytic yeast, the hydrolyzates serving as a food for human consumption. The form of the product may vary considerably. It may be a dehydrated and degreased powder, a paste, resulting from concentration of the hydrolyzed, unattacked protein, up to a total of solids

The apparatus for making briquettes of dried grass or other fibrous raw material comprises at least one compression cylinder which through a lateral aperture receives a precompressed batch of material when the compression piston is near the end of its return stroke. Said aperture is open towards a precompression chamber having an inlet for the raw material and enclosing a rotary

3,516,350 COOKING APPARATUS HAVING ELECTROSTATIC MEANS

Robert R. Candor, Miami Township, Ohio (5940 Munger Road, Dayton, Ohio 45459), and James T. Candor, Washington Township, Ohio (544 Cynthia Lane, Dayton, Ohio 45429)

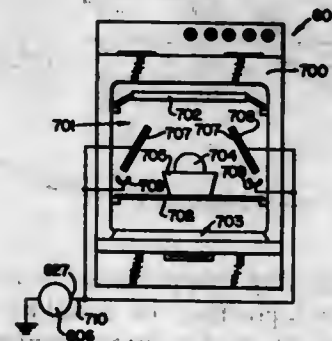
Original application Jan. 31, 1968, Ser. No. 701,946.

Divided and this application June 6, 1969 Ser. No. 841,180

Int. Cl. A47j 27/00; F27d 11/00; A21b 1/22

U.S. Cl. 99—444

6 Claims



A cooking apparatus having heating means and support means to support article means to be effected by the output of the heating means. Electrode means are carried by the apparatus to be disposed in electrically spaced relation to the article means. A potential differential is imposed between the article means and the electrode means to tend to cause soiling particles of the article means to move toward the electrode means during the heating thereof by the heating means to tend to prevent soiling of the cooking apparatus.

3,516,351 APPARATUS FOR BRIQUETTING LOOSE, FIBROUS, OR TANGLED MATERIAL, PARTICULARLY DRIED GREEN CROPS

Alfred Thygesen Nielsen, Lyngbakkevej 8, Søllerød pr., Holte, Denmark

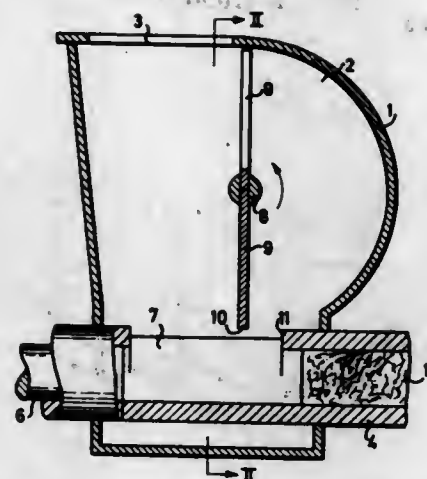
Filed May 27, 1968, Ser. No. 732,157

Claims priority, application Denmark, June 1, 1967, 2,884/67

Int. Cl. B30b 7/00

U.S. Cl. 100—139

3 Claims



vane or baffle sweeping through the chamber and promoting the movement of the material from said inlet towards said aperture while at the same time causing the material to be precompressed without destroying its original structure.

3,516,352 CAM ACTUATED LOCKING DEVICE

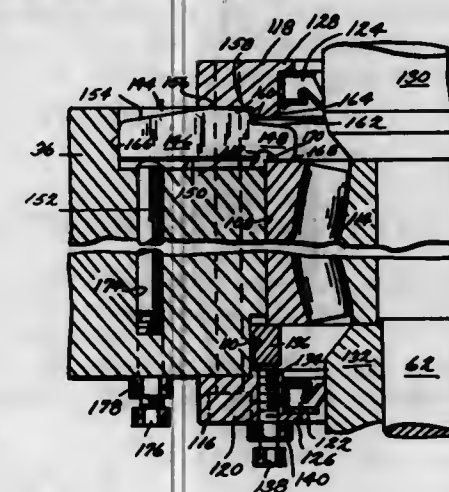
Harry M. Lewis, Springfield, N.J., assignor to Modern Engraving and Machine Corporation, Hillsdale, N.J., a corporation of New Jersey

Filed Oct. 31, 1967, Ser. No. 679,360

Int. Cl. B44b 5/00

U.S. Cl. 101—23

8 Claims



Each axle of a pair of complementary embossing rolls has one end mounted in a floating bearing and the other end mounted in a fixed bearing. One of the fixed bearings is adjustable with the bearing being adjusted and held in place by means of cam actuated locking elements which engage the inner and outer surface of the bearing. Both the inner and outer locking elements can be adjusted from the outer side of the bearing box assembly thereby enabling one of the embossing rolls to be aligned with the other embossing roll after the embossing rolls have been mounted on the embossing machine.

3,516,353 SHEET HANDLING APPARATUS

Albert George Ronald Gates, London, England, assignor to Gestetner Limited, London, England, a British company

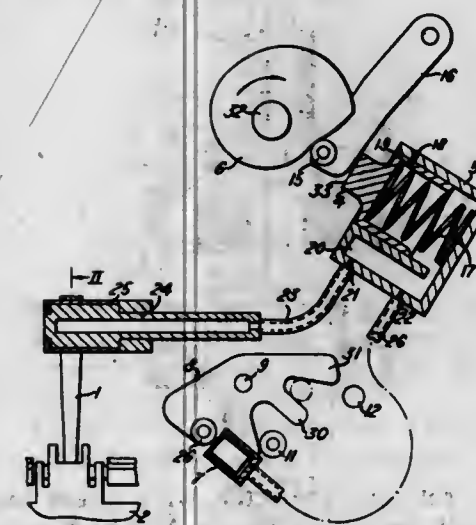
Filed June 5, 1967, Ser. No. 643,499

Claims priority, application Great Britain, June 15, 1966, 26,719/66

Int. Cl. B41f 13/06; B41f 13/24

U.S. Cl. 101—118

6 Claims



Printing apparatus in the form of a stencil duplicator in which the movement of the pressure roller towards and

away from the printing roller is controlled by a pneumatic system comprising a pulse pump communicated with a pneumatic motor by way of a rotary vent valve. The valve is operated by a pivotable sheet-sensing lever and the pneumatic motor is engageable with a control lever to connect it operably with a reciprocating member only when a sheet is present. The control lever is mounted on a swinging support for the pressure roller to thus control movement of the pressure roller.

3,516,354 DISPLACEABLE INK AND DAMPENER ROLLS FOR REVERSIBLE PRINTING UNIT

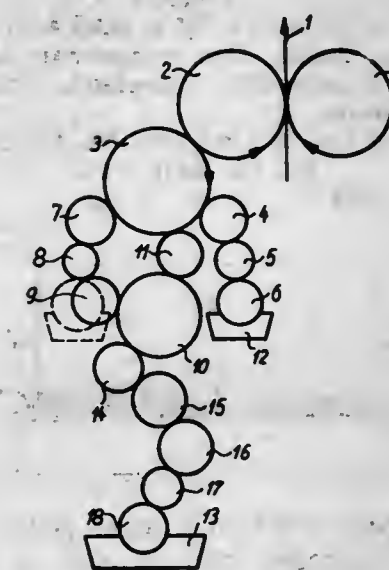
Paul Helmlicher, Bolligen, Switzerland, assignor to Winkler, Fallert & Co. Ltd., Berne, Switzerland

Filed Jan. 2, 1966, Ser. No. 694,614

Int. Cl. B41f 7/02, 7/24

U.S. Cl. 101—142

1 Claim



A reversible printing unit for offset rotary machines includes a plate cylinder in contact with a rubber cylinder which, in turn, contacts the web to be printed. In a first arrangement of the press unit, ink is supplied to the plate cylinder through a series of applicator rollers which include an ink applicator roller in contact with the plate cylinder. In addition, wetting rollers are arranged so that one of the wetting rollers applies a wiping fluid to the plate cylinder on the side thereof opposite to the direction of rotation of the plate cylinder so that it contacts the plate cylinder first. In addition, a secondary supply of ink is supplied from an ink applicator roller and a series of inking rollers one of which contacts the plate cylinder on a side of the first inking roller which is opposite to the location of the wetting rollers or at a spaced location from the first ink roller in the direction of rotation of the plate cylinder.

3,516,355 MULTICOLOR SHEET PRINTING MACHINE DRIVE

Pietro Ghisuzza, 55 Via Piana, Milan, Italy

Filed May 23, 1967, Ser. No. 640,619

Claims priority, application Italy, May 28, 1966, 18,426/66

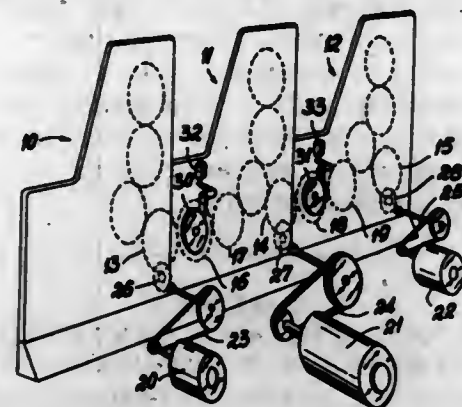
Int. Cl. B41f 5/16

U.S. Cl. 101—183

3 Claims

A multicolor printing machine composed of several printing units rigidly coupled to each other for phased driving thereof and each adapted for individual actuation in view of independent setting, the coupling of adjacent units being provided by gear means associated to disen-

gageable coupling means, said gear means being positioned between and in meshing relationship with the gears



coaxial to and connected with the take-off cylinder and respectively the feed cylinder of the adjacent units.

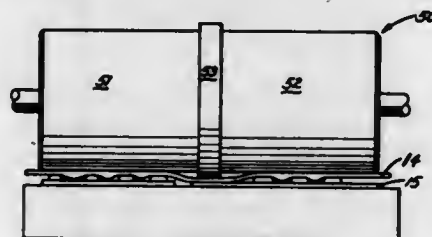
3,516,356

PLATEN FOR A SOURCE DATA MACHINE
Jack G. Nantz, Euclid, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Jan. 9, 1968, Ser. No. 696,557
Int. Cl. B41f 3/04

U.S. Cl. 101-269

2 Claims



A data encoder in which a roller platen is caused to roll across an embossed printing plate in a fixed space relationship by a spacer means such as a spacing rim carried by the platen.

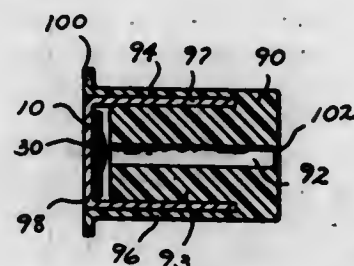
3,516,357

AMMUNITION CARTRIDGE
Grover E. Hendricks, 2241 Lake St., Niles, Mich. 49120

Filed Jan. 25, 1968, Ser. No. 700,596
Int. Cl. F42b 5/30, 7/06

U.S. Cl. 102-45

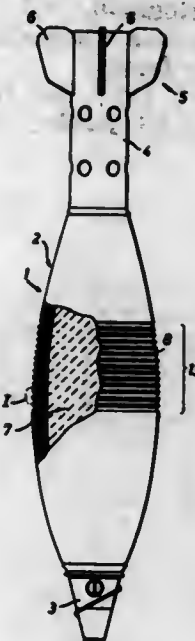
2 Claims



An ammunition cartridge, including a cartridge casing having a base, a projectile and a powder charge contained within the casing. A primer is positioned within the base of the casing and includes an anvil, primer cover, and a preformed primer powder unit. The anvil includes a substantially cylindrical core and an integral concentric cylindrical wall spaced from the core to define a longitudinal annular groove. The anvil core has a longitudinal bore therein. The primer cover has an end wall and a substantially cylindrical wall. The preformed primer unit includes a thin walled envelope confining a powder charge and is positioned within the primer cover adjacent the end wall thereof. The primer cover encircles part of the anvil core and is seated within the annular groove in the anvil with its end wall spaced from the anvil.

3,516,358
FIN STABILIZED PROJECTILE
Paavo Manninen and Nillo Asikainen, Tampere, Finland, assignors to Oy Tampella AB, Tampere, Finland
Filed Mar. 4, 1968, Ser. No. 710,263
Claims priority, application Germany, Mar. 8, 1967, O 12,353
Int. Cl. F42b 13/22
U.S. Cl. 102-49.1

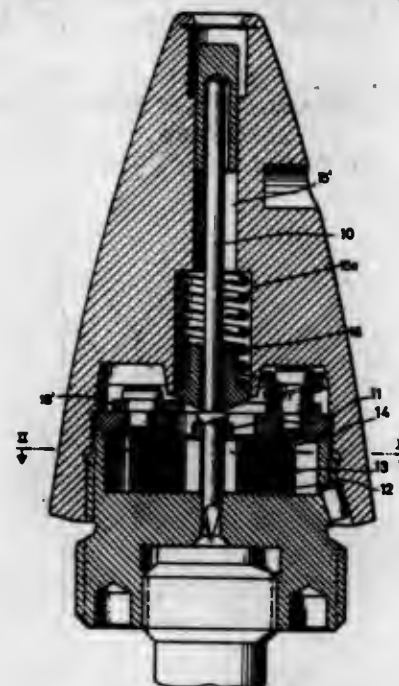
9 Claims



This non-gyrating fin stabilized projectile has an elliptical shaped body and a tail unit rim. The projectile includes circumferential grooves located in the region of the largest diameter of the body.

3,516,359
CENTRIFUGAL SPIRAL BAND LOCKING DEVICE, ESPECIALLY FOR SELF-DESTROYING FUZES
Rudolf Weber, Schramberg, and Walter Winterhalter, Lauterbach, Wurttemberg, Germany, assignors to Gebrüder Junghans G.m.b.H., Schramberg, Wurttemberg, Germany
Continuation-in-part of application Ser. No. 418,216, Oct. 14, 1964. This application Jan. 25, 1968, Ser. No. 700,472
Int. Cl. F42c 15/22, 15/04, 15/20
U.S. Cl. 102-79

2 Claims



A fuze for rotating projectile with direct impact ignition and a self-destroying device, in which a fuze body has a firing pin and various elements including a locking device with a core sleeve of a plurality of connected elements within a centrifugal spiral member.

3,516,360
SHOT CONTAINER
Gerald A. Lathrop, Cheshire, Renel E. Thompson, East Haven, and Wayne S. Ives, Guilford, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Mar. 27, 1968, Ser. No. 716,530
Int. Cl. F42b 7/08
U.S. Cl. 102-95

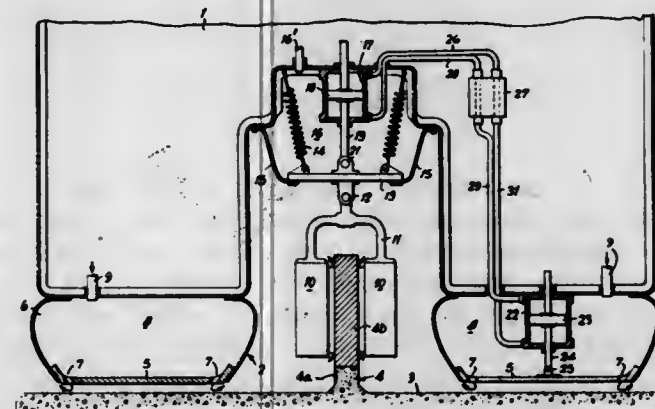
6 Claims



A shot container for use in a shotshell, or the like, adapted to provide for controlled release of the shot at a predetermined distance from a gun muzzle to control the range and pattern of the shot.

3,516,361
ELECTROMAGNETICALLY-PROPELLED VEHICLE
William Barrie Hart, Southampton, England, assignor to Hovercraft Development Limited, London, England, a British company
Filed Sept. 5, 1967, Ser. No. 665,323
Claims priority, application Great Britain, Sept. 6, 1966, 39,891/66
Int. Cl. B60v 3/04
U.S. Cl. 104-23

12 Claims



An air-cushion supported vehicle for operation on a prepared track is propelled along the track by a linear motor propulsion unit comprising a linear motor rail attached to the track so as to provide the "rotor" of the unit and "stator" windings carried by the vehicle body. At high speeds the vehicle tends not to follow small changes in direction of the track. In order, therefore, to avoid unwanted variations in vehicle-propelling force and to avoid the need to provide excess linear motor rail material, which would otherwise be required, by reason of relative movement between the motor rail and the stator, the vehicle is provided with automatic means for adjusting the position of the stator relative to the rail.

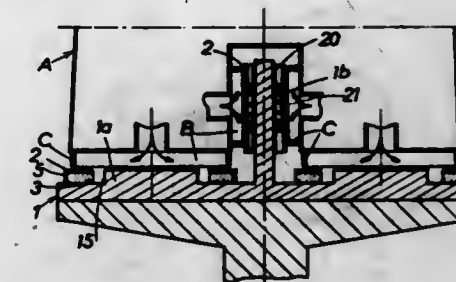
The adjusting means may comprise an air-cushion formed between the stator and the rail or track or it may comprise an actuator responsive to changes in the vehicle-supporting cushion.

3,516,362
GUIDE TRACK FOR GROUND EFFECT MACHINE
Francis Gilbert Paris, Bayonne, and Francis L. Girard, Plaisir, France, assignors to Societe de l'Aerotraine, Paris, France, a company of France
Filed July 1, 1968, Ser. No. 741,446
Claims priority, application France, Dec. 12, 1967, 131,917
Int. Cl. B61b 13/08
U.S. Cl. 104-23

8 Claims

A track for a ground effect machine, said machine having a wall arrangement bounding cushions of pressurized fluid formed against the track, said track comprising a

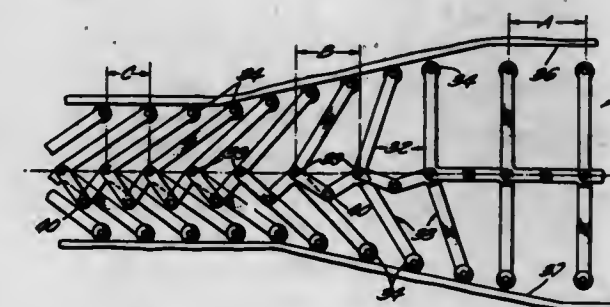
flexible strip along portions of the track at which direct engagement with the wall arrangement may occur in use,



said strip yielding upon such engagement to minimize wear of said wall arrangement.

3,516,363
CONVEYOR SYSTEM WITH PORTIONS OPERABLE AT DIFFERENT SPEEDS
Jurjen van der Wal, 12722 Collina Road, La Mirada, Calif. 90638
Continuation-in-part of application Ser. No. 561,457, June 29, 1966. This application Jan. 24, 1968, Ser. No. 703,224
Int. Cl. B61k 1/00
U.S. Cl. 104-25

34 Claims



A transportation system having a single driving source operating at uniform speed and characterized by the fact that different portions of the system operate at substantially different speeds as, for example, a speed ratio of six to one. Loads may be transferred with complete safety at the slow speed portions and then delivered at high speed to a slow speed destination portion of the system.

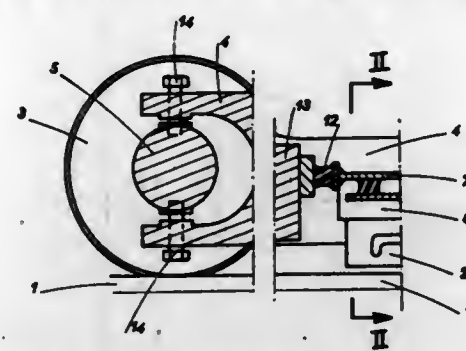
The load bearing surface of the system is designed to avoid gaps and relatively sliding overlapping members by resort to a unique expedient for skewing the long narrow load-carrying members. This system utilizes either a single link or two or more link chains of standard construction supplemented by simple additional components. All portions of the linkage assemblies are maintained under tension while being driven and speed variation is achieved through the use of rigid arms bearing against fixed cam surfaces arranged along the path of travel. A fixed loading platform preferably closely overlies the slow moving portions of the conveyor and includes comb means for expediting the transfer of loads onto and off from the slow moving portion.

3,516,364
RESILIENT SUPPORTING DEVICE FOR A RAILWAY LINEAR MOTOR
Yves Machefert-Tassin, Saint-Cloud, France, assignor to Societe MTE, Paris, France, a company of France
Filed Nov. 18, 1968, Ser. No. 776,699
Claims priority, application France, Dec. 28, 1967, 134,146
Int. Cl. B61c 11/00, 15/00
U.S. Cl. 105-49

9 Claims

This invention relates to an elastomeric means for at-

taching to a rail vehicle a linear motor comprising a series of inductors for each rail, carried by a supporting



member which is itself resiliently carried by a longitudinal member resting on the vehicle axles.

3,516,365

MOTORIZED RAILWAY CAR TRUCK

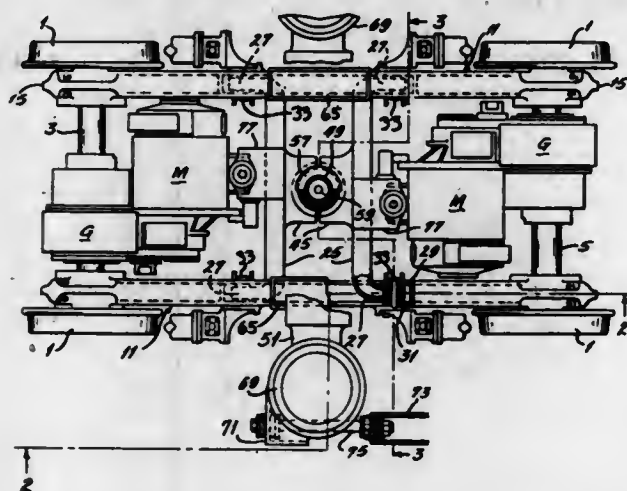
Richard L. Lich, Town and Country, Mo., assignor to General Steel Industries, Inc., Granite City, Ill., a corporation of Delaware

Filed Mar. 27, 1968, Ser. No. 716,404

Int. Cl. B61c 9/50; B61f 3/04

U.S. Cl. 105-133

23 Claims



A railway vehicle two-axle truck having separate side frames supported at their ends on the axles and a pair of vertically unloaded transverse members each resiliently supported from both side frames and cooperating to pivotally receive a depending central vertical pivot boss on a transverse load-supporting bolster supported directly on the side frames, the bolster pivot boss and the transverse members cooperating with each other to maintain the side frames in tramp while freely permitting longitudinal vertical tilting movements of the side frames with respect to each other.

3,516,366

RAILWAY BOXCAR HAVING END DOORS

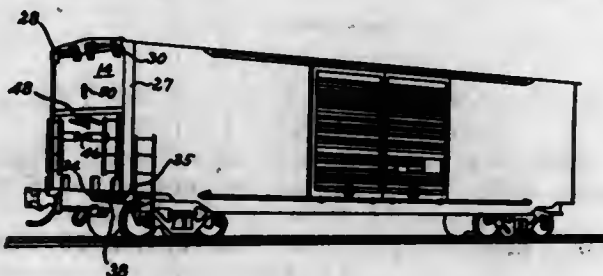
Dudley M. Bradford, Ballwin, Mo., and Aurion M. Proctor, Blauvelt, N.Y., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Aug. 30, 1967, Ser. No. 664,495

Int. Cl. B61d 17/06, 19/00

U.S. Cl. 105-378

5 Claims



A railway boxcar, particularly of the type having a long travel cushion and having the usual side doors, is

provided with end doors which open upwardly and downwardly so that the lower end door forms a loading platform. The lower doors, when dropped, rest on the end sills or have pivoted braces or legs adapted to extend downward to support the lower doors in their horizontal position. Mechanical drive means for easily raising the doors are provided, and the hinges of the lower doors may have springs or torsion bars for the same purposes.

3,516,367

ADJUSTABLE DOLLY-TYPE VEHICLE

Warren L. Holtzman, Christiansburg, Va.

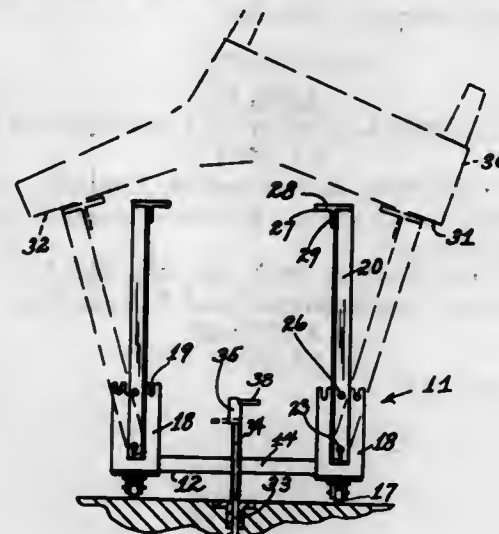
(1821 Grandin Ave., Roanoke, Va. 24015)

Filed June 20, 1968, Ser. No. 738,527

Int. Cl. B61d 17/08; B62b 3/02; B60p 3/00

U.S. Cl. 105-381

5 Claims



A dolly having opposed upstanding pivoted supporting racks having horizontal top arms, the racks being angularly adjustable so that their top arms can be oriented to supportingly underlie respective spaced surfaces of a piece of furniture or similar article while it is being transported or while it is being worked on. The vehicle has vertical guide pins at its opposite ends slidably engaged through vertical tubular guides. The pins may be retained in elevated inoperative positions or may be allowed to descend to engage in a guide track in the floor.

3,516,368

SELF-LOADING AND UNLOADING RAILROAD CAR

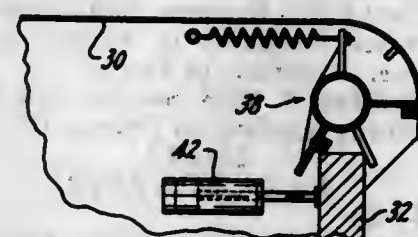
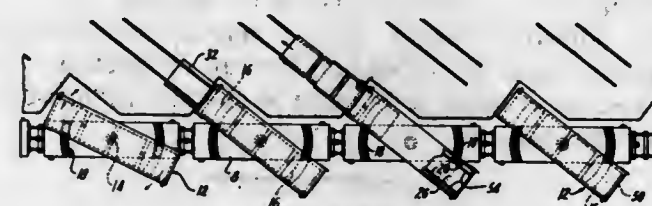
Edward S. Wright, Mount Lebanon, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Filed Sept. 27, 1967, Ser. No. 670,949

Int. Cl. B61d 3/04

U.S. Cl. 105-455

4 Claims



Railway apparatus and system whereby the car bodies are rotatable so as to facilitate loading and unloading.

3,516,369

VERTICALLY ADJUSTABLE SHELF

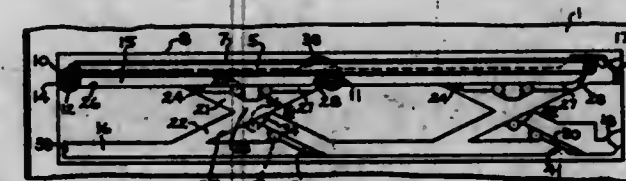
John Bisk, Bloomington, Ind., and Henry A. Toloczko, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Filed Sept. 27, 1968, Ser. No. 763,071

Int. Cl. A47b 11/00

U.S. Cl. 108-138

5 Claims



A combination shelf and shelf support for vertical adjustment of the shelf relative to the support comprises a support structure having spaced parallel channels for receiving guide members on the shelf and intersecting inclined transfer channels for transferring the guide members from one parallel channel to the other.

3,516,370

FURNACES

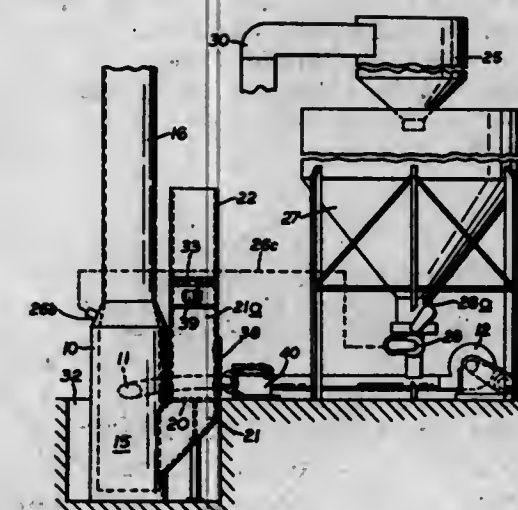
John Brian Stribling, Sutton Coldfield, England, assignor to Caval Developments Limited, Wednesbury, England, a British company

Filed Apr. 18, 1968, Ser. No. 722,324

Int. Cl. F23g 7/00

U.S. Cl. 110-7

1 Claim



The invention provides a furnace for burning waste material and arranged to be fed from two separate sources with different kinds of material.

3,516,371

SANITARY NAPKIN INCINERATOR

James G. Zippy, R.R. 3, Box 233,

Crown Point, Ind. 46307

Filed Feb. 26, 1968, Ser. No. 708,285

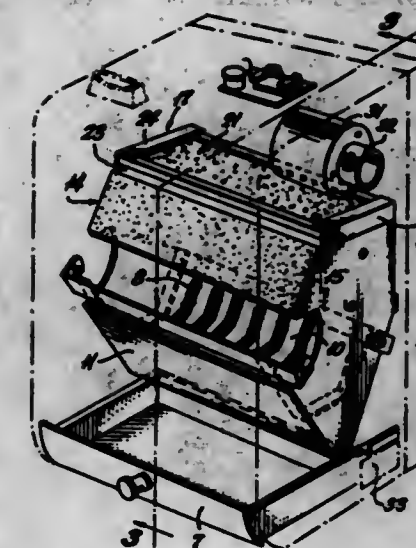
Int. Cl. F23g 3/04

U.S. Cl. 110-8

10 Claims

A portable sanitary napkin incinerator comprising a heating chamber having reflecting surfaces for reflecting and concentrating heat to burn the sanitary napkin. There

is further provided a removable tray for removing debris and a hood assembly with cooperative filter elements for



eliminating undesirable odors and fumes emanating from the chamber.

3,516,372

INCINERATOR

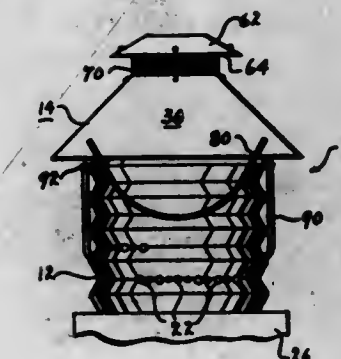
Wilfred M. Fisher, 745 N. Lawndale, South Bend, Ind. 46628

Filed Sept. 19, 1968, Ser. No. 760,951

Int. Cl. F23g 9/00

U.S. Cl. 110-18

10 Claims



An outdoor incinerator having a generally cylindrical container for the burning of refuse, and a cover of a generally pyramidal shape resting on the container. An air draft passage is formed beneath the four corners of the cover for directing air over the upper edge and into the container for combustion. The cover contains a center hole over which a cap and a spark arrester are mounted.

3,516,373

SEWING MACHINE ATTACHMENT FOR PRODUCING MONOGRAMS

Ryota Maeda, Ann Arbor, Mich., assignor to Maruman

Sewing Machine Co. Ltd., Osaka, Japan

Filed Oct. 16, 1968, Ser. No. 779,250

Claims priority, application Japan, Oct. 19, 1967,

42/67,368, 42/67,369

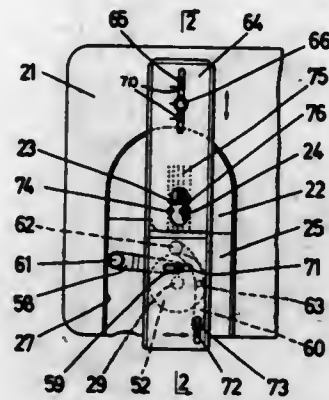
Int. Cl. D05c 3/02

U.S. Cl. 112-102

9 Claims

A sewing machine attachment for producing monograms and other designs including a fabric feed plate attached to the bed of the machine for radial and lateral

arcuate movement and having an opening defining a work area in registration with the needle hole in the bed. Movement of the feed plate is controlled by a double track cam which is intermittently driven by a ratchet



wheel and pawl arrangement actuated by an oscillating member connected to the drive means of the machine. The feed plate moves in synchronism with the needle bar so that the feed plate and the fabric being operated on are arrested when the needle penetrates the fabric.

3,516,374

ZIGZAG SEWING MECHANISM

Tatsuo Kozaki, Kariya-shi, Japan, assignor to Aisin Seiki Company Limited, Kariya-shi, Japan, a corporation of Japan

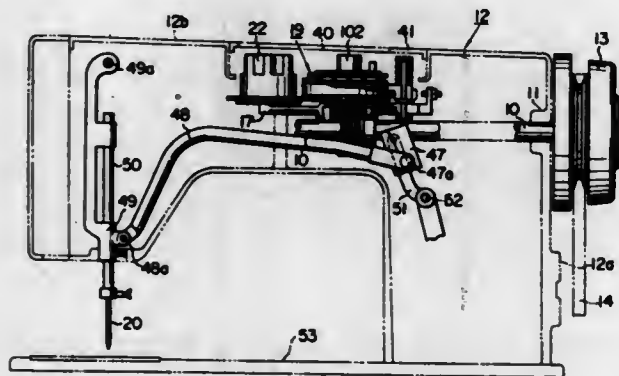
Filed June 21, 1968, Ser. No. 739,043

Claims priority, application Japan, June 24, 1967, 42/54,604

Int. Cl. D05f 3/02

U.S. Cl. 112-158

3 Claims



A zigzag sewing mechanism which is provided with a stitch cam packet and a manually turnable stitch selection dial, said dial being formed rigidly with a concentric first cam and a concentric first gear, while said cam packet is provided with a second cam and a second gear concentrically and freely rotatably arranged relative to said cam packet, said second cam and gear being unitedly combined with each other and said first gear and said second gear being kept in permanent engagement with each other, said first cam having a first follower which is linkedly connected with a conventional stitch cam follower adapted for cooperation with said cam packet, while said second cam cooperates with a second follower which is rigidly united with said stitch cam follower. By manipulating said dial, the stitch cam follower is disengaged from the cam packet and shifted to a level in registration with a newly selected stitch cam belonging to said cam packet and then brought into engagement therewith, without manipulating any other manipulating means.

3,516,375
**HORIZON INDICATORS FOR ASSISTING
HELICOPTER LANDINGS ON SHIPS**

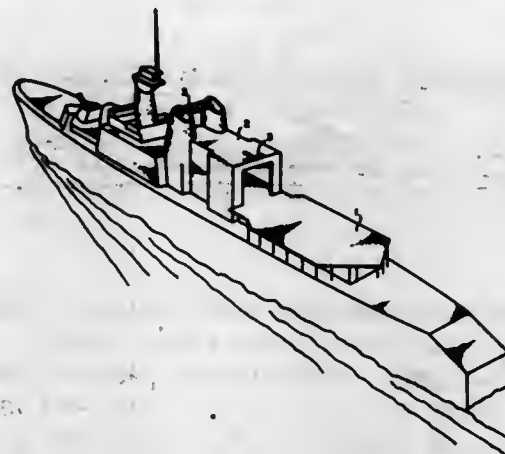
Peter Charlton, Ottawa, Ontario, Canada, assignor to Her Majesty the Queen of Canada, as represented by the Minister of National Defence

Filed Oct. 21, 1968, Ser. No. 769,273

Int. Cl. B63h 35/50

U.S. Cl. 114-43.5

9 Claims



This invention relates to a device for assisting pilots of helicopters to land safely on the decks of ships. An indicator bar is utilized to display the true horizon to the pilots. The indicator is mounted on the ship transversely thereof for pivotal movement about an axis parallel to the axis of the ship and may be maintained in the horizontal plane independently of the ship's movements by a servo-mechanism coupled to the ship's gyro.

3,516,376

**STRUCTURE FOR REDUCING THE DRAG
BETWEEN A FLUID AND A SOLID BODY**

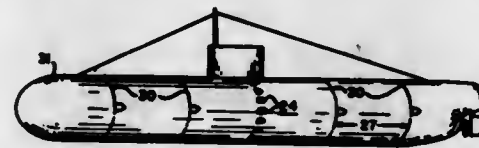
Tadeusz Kowalski, 451 Parkwood Court,
Waterloo, Ontario, Canada

Filed Aug. 16, 1968, Ser. No. 753,208

Int. Cl. B63h 1/34

U.S. Cl. 114-67

13 Claims



This invention is directed to a structure and process for reducing the drag between a fluid and a body where there is relative flow between the fluid and the body. A dilute solution of a high molecular weight polymer is periodically injected into a fluid flow through a container or into a fluid through which a device moves. The polymer is injected through a plurality of nozzles at a small angle relative to the surface such that the ejection of the polymer through a nozzle is substantially tangential with the surface.

3,516,377

**VARIABLY DAMPED PASSIVE TANK
STABILIZER**

Sheldon B. Field, Floral Park, N.Y., Frans V. Pangalla, Matawan Township, N.J., and Richard Lawrence Miller, Hempstead, and Nicholas Mark Grigoraki, Westbury, N.Y., assignors to Flame Stabilization Systems, Inc., Hoboken, N.J., a corporation of New Jersey

Filed July 3, 1968, Ser. No. 742,398

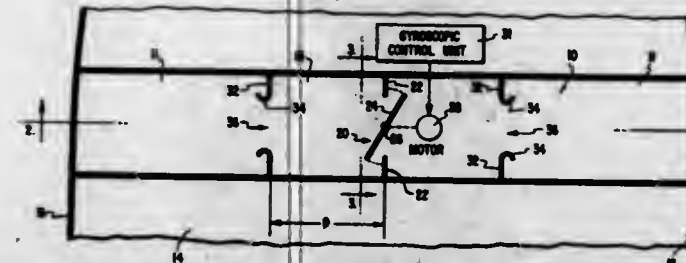
Int. Cl. B63h 43/06

U.S. Cl. 114-125

4 Claims

A passive tank stabilizer for ships including an elongated tank partially filled with a body of liquid in a free surface condition, and an automatically controlled door operative between open, closed and intermediate positions

so as to variably and selectively control the amount of damping imparted to transferring liquid, said door operatively permitting maximum liquid passage when the vessel rolls near natural frequency and closing by degrees as the



3,516,378
**RUDDER ATTACHMENT FOR OUTBOARD
MARINE DRIVES**

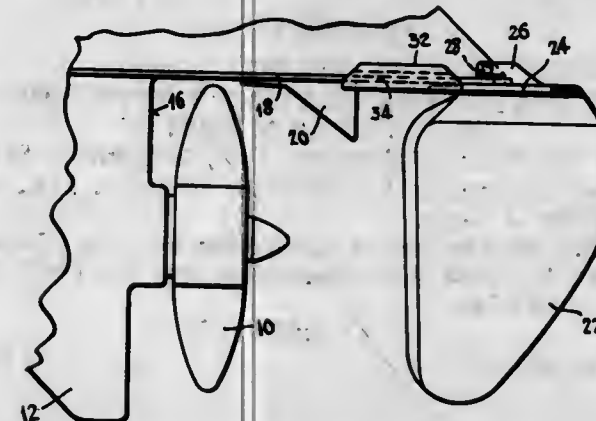
Douglas F. Linaley, Box 324,
Westport, Conn. 06880

Filed Aug. 26, 1968, Ser. No. 755,412

Int. Cl. B63h 21/26, 25/42

U.S. Cl. 114-165

9 Claims



A rudder attachment for outboard marine drives of either outboard or inboard engines, comprising a cast rudder blade having an upper flat-surfaced base portion disposed at right angles to the blade and adapted to fit flat against the horizontal cavitation plate of the marine drive. The base portion has clamp fingers spaced from its flat surface and provided with set screws for clamping the rear edge portion of the cavitation plate, and additionally has side ledges and set screws therein, for clamping side edge portions of the cavitation plate whereby the rudder blade is rigidly clamped and affixed thereto.

3,516,379

BOAT ANCHOR

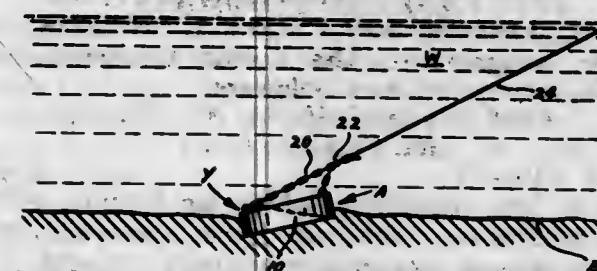
Harold A. Skoog, 322 Kent Road,
Hoyt Lakes, Minn. 55750

Filed Aug. 29, 1968, Ser. No. 756,150

Int. Cl. B63h 21/30

U.S. Cl. 114-206

4 Claims



A ring-like body having a flexible elongated retainer connected at each end to said body on a diameter thereof together with a connector slidably mounted on the re-

tainer for connection with an anchor line, the inner surface of said ring converging inwardly from one edge to the other.

3,516,380

EXTERNAL IMPULSE LAUNCHER

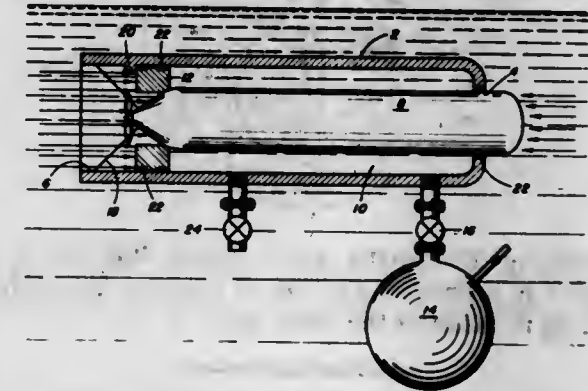
James H. Johnston, Rehoboth, Mass., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 25, 1968, Ser. No. 703,227

Int. Cl. B63g 5/00, 9/00, 13/00

U.S. Cl. 114-238

8 Claims



Apparatus for launching an elongate cylindrical body in a fluid environment having a cylindrical tube with an open breech end and a reduced diameter muzzle opening, a piston carriage slidably mounted within the tube, initially positioned at the breech thereof and bearing against the body to be launched; and a valve-controlled fluid receiver tank for evacuating the tube.

3,516,381

WATER SPORT DEVICE

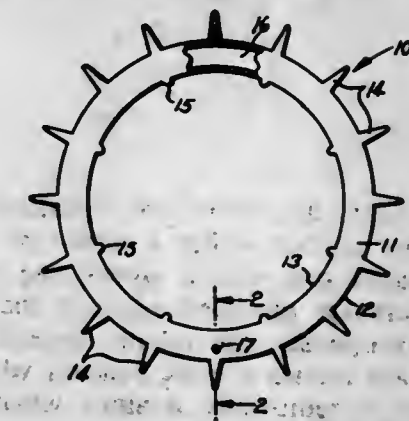
Randall Edgar Bobbitt, 2812 Fortin St.,
New Orleans, La. 70119

Filed May 16, 1968, Ser. No. 729,711

Int. Cl. B63h 1/38

U.S. Cl. 115-20

2 Claims



A sporting device for use upon calm water. This device is of sufficient size to accommodate one, two or more individuals when they are standing upright and their walking motion causes the device to propel itself on top of the surface of water. The device is made of an inflatable rubber or plastic material in order that it may be light in weight and maintain its buoyancy.

3,516,382

**BLADE SUPPLY INDICATOR FOR RIBBON
RAZOR MAGAZINE**

Frank A. Ferraro, Monroe, Conn., assignor to Eversharp, Inc., Millford, Conn., a corporation of Delaware

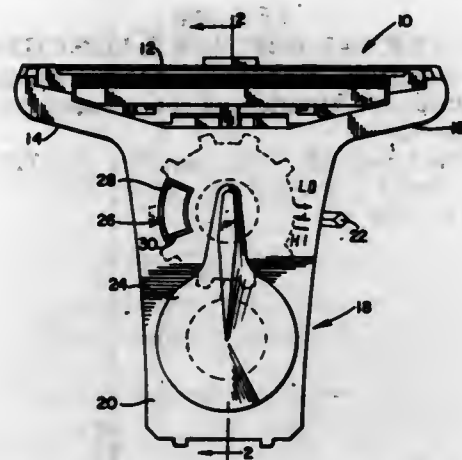
Filed June 16, 1969, Ser. No. 833,586

Int. Cl. B26b 21/26

U.S. Cl. 116-124

An indicator mechanism for a ribbon-type razor blade having a toothed indicator wheel driven by an associated drive member. The indicator unit contains a plurality of

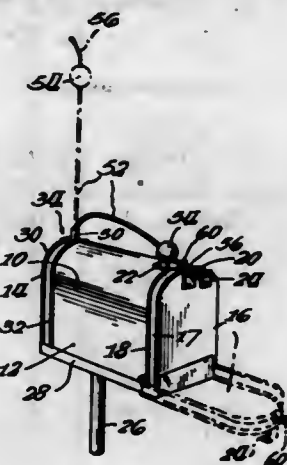
teeth, and an inwardly extending resilient tongue, the drive member contains a single tooth, and the indicator unit is mounted for rotation by means which define detents



for receiving the tongue and insuring that the indicator will index to a desired position of rotation for each blade-advancing rotation of the lever unit.

3,516,383
MAILBOX SIGNAL FLAG
Louis Goodman, Chicago, Ill.
(3903 Emerson St., Palatine, Ill. 60067)
Filed Mar. 25, 1969, Ser. No. 810,128
Int. Cl. G08c 5/00

U.S. Cl. 116-132



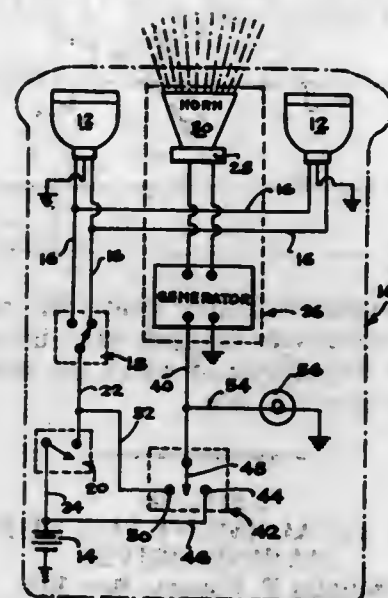
A mailbox signal flag device for signaling the deposit of mail or other parcels within a rural-type mailbox. A resilient elongated rod with a signal flag extremity is secured to a bracket mounted adjacent the closed end of the mailbox opposite the mouth thereof. The cover or lid of the box carries a hook beneath which the free end of the rod is removably retained when the box is empty. Upon opening of the box to deposit mail therein, the free end of the rod is released from the hook to permit the rod to return automatically to vertical position raising the signal flag above the mailbox to signal the delivery of mail, said signal flag being readily discernible at a substantial distance from the mailbox.

3,516,384
ULTRASONIC WARNING SYSTEM
George A. Will, 514 Cheyenne Trail,
Carol Stream, Wheaton, Ill. 60187
Filed Dec. 7, 1966, Ser. No. 599,750
Int. Cl. B06b 3/00

U.S. Cl. 116-137

A warning system in combination with a vehicle in which ultrasonic sound is beamed in advance of the moving vehicle on a thoroughfare so that said sound may be heard by an animal ahead of the moving vehicle to induce the animal to leave the road before it is struck by the vehicle. The emission of the ultrasonic sounds may

be actuated by the turning on of the headlights of the vehicle or by independent switch means accessible to the operator of the vehicle. The ultrasonic sound beam is

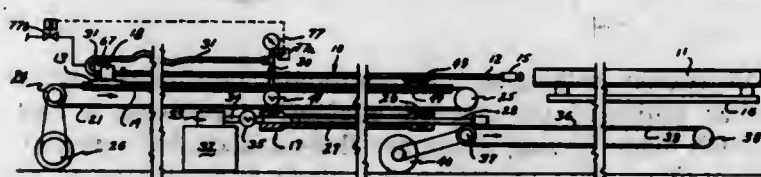


emitted in a controlled directional pattern so that the beam is not substantially wider than the width of the thoroughfare on which the vehicle is moving.

3,516,385
APPARATUS FOR COATING THE INTERIOR OF TUBULAR MEMBERS
Walter W. Walling, Houston, Tex., assignor to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Continuation-in-part of application Ser. No. 404,645, Oct. 19, 1964. This application July 14, 1967, Ser. No. 653,546
Int. Cl. B05c 5/00

U.S. Cl. 118-7

6 Claims



A centrifugal coating applicator mounted on the distal end of an elongated probe is arranged for traversal at a constant speed within a tubular member to be coated. To supply coating materials to the applicator at a constant volume, a piston is arranged to be advanced at a constant rate of travel into a cylinder containing the coating materials and connected to the applicator. By sizing the piston to displace at least a volume of coating material sufficient to completely coat a tubular member in a single stroke of the piston, a constant, unvarying rate of delivery will be obtained.

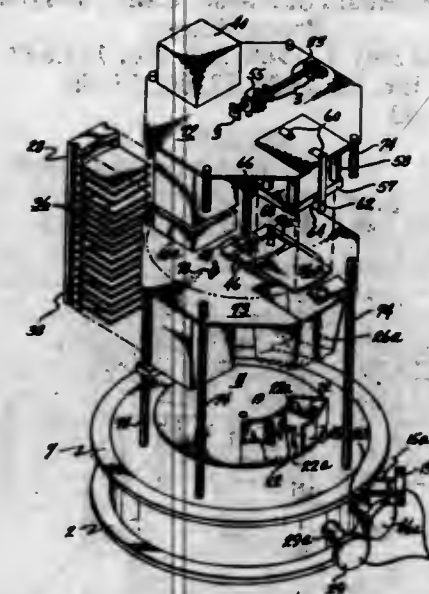
3,516,386
THIN FILM DEPOSITION FIXTURE
Gilbert L. Landwehr and Charles A. Schindler, Seattle, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed July 16, 1965, Ser. No. 472,473
Int. Cl. C23c 13/08

U.S. Cl. 118-49

3 Claims

A thin film deposition fixture for forming electrical circuit patterns on a substrate within a vacuum chamber having a storage magazine retaining a plurality of substrates and masks between the storage magazine and the anism for holding a substrate and mask in registration against the heater; a rotating clamp for transferring substrates and masks between the storage magazine and the

substrate heater; and a turntable containing a plurality of evaporant materials and provided with means for se-

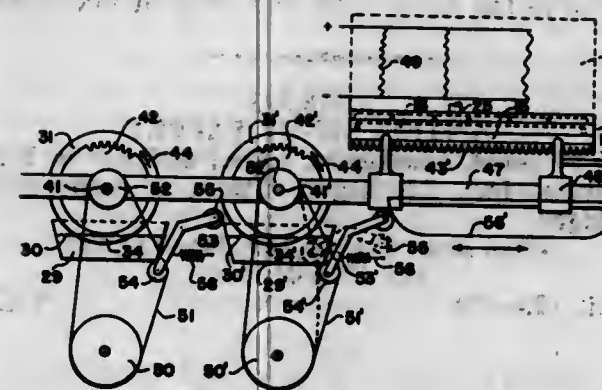


lecting an evaporant for deposition of a thin film circuit on the substrate.

3,516,387
APPARATUS FOR MANUFACTURING FROST SHIELDS
Lynne E. Windsor, Winnipeg, Manitoba, Canada, assignor to James B. Carter Ltd., Winnipeg, Manitoba, Canada
Filed Aug. 21, 1967, Ser. No. 667,314
Int. Cl. B05c 1/08

U.S. Cl. 118-238

4 Claims



The invention consists of a vacuum operated platen mould upon which a sheet of plastic is placed and is then heated so that the vacuum forms the frost shield. The vacuum holds the plastic frost shield in its position while the perimetrical edges of the frost shield move relative to an adhesive carrying roller. Rack and gear connection between the roller and the platen carrying the frost shield is such that the rotational speed of the roller equals the lineal speed of the frost shield thus preventing skipping.

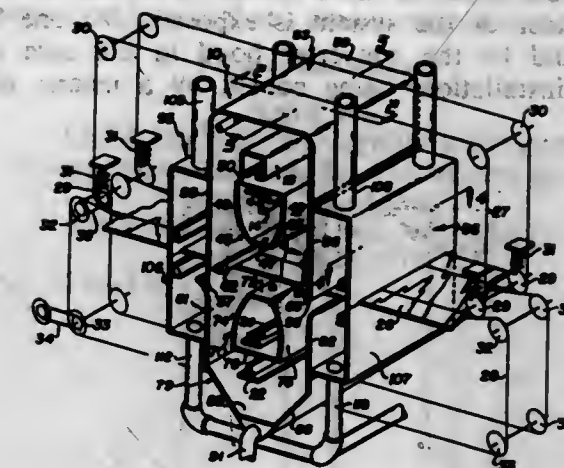
3,516,388
APPARATUS FOR SPRAYING LIQUID ON MOVING ARTICLES
Derek Barnes, Vancouver, British Columbia, Canada, assignor to MacMillan Bloedel Limited, Vancouver, British Columbia, Canada, a corporation of Canada
Continuation-in-part of application Ser. No. 460,214, June 1, 1965. This application Mar. 18, 1968, Ser. No. 713,966
Int. Cl. B05c 11/16

U.S. Cl. 118-316

21 Claims

Apparatus for spraying liquid, and particularly glue, on one or two surfaces of articles, such as plywood core veneers, moving through the apparatus including spray guns on one or both sides of a path along which the

articles are moved, shield means for protecting the guns from atomized liquid and to confine liquid overspray rebounding from the articles, and means for retaining the

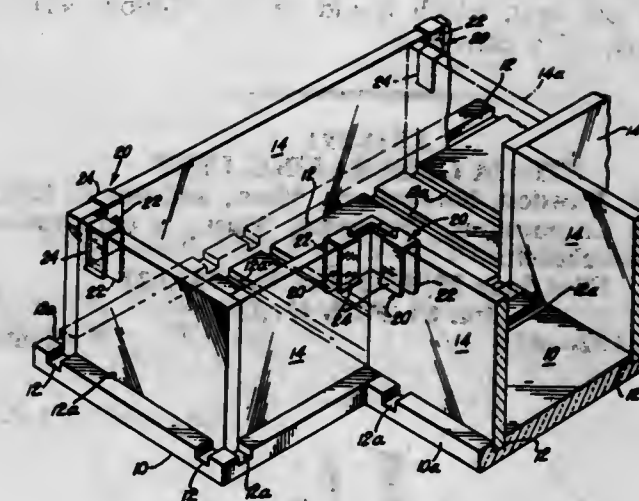


articles in proper position relative to the spray guns without interfering with the application of the liquid to said articles.

3,516,389
EXPERIMENTAL MODULAR ANIMAL MAZE
Arthur Brackett Meyer, 380 S. Winoski Ave., Burlington, Vt. 05401
Filed Feb. 12, 1968, Ser. No. 704,758
Int. Cl. A01k 15/00

U.S. Cl. 119-1

6 Claims



An experimental maze apparatus having modular units for base and walls and, if desired, for roof and ceiling, the base units being slotted accurately to a width equal to the thickness of the wall units so that the wall units can be pushed into the slots and will be held thereby in proper position. The top edges may be secured by spring clips. Likewise, the ceiling or roof units may be secured to and advantageously hinged on similar clips which engage by friction and spring pressure at the top of the vertical wall units. Automatic doors and other auxiliary equipment for the animal behavior experiments can also be provided.

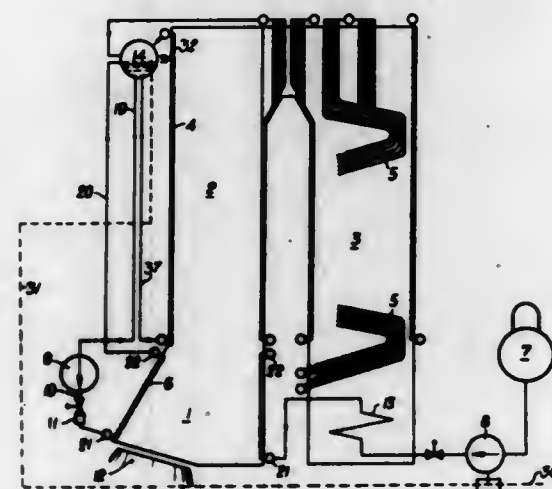
3,516,390
COOLING SYSTEM
Franz Lambrecht, Hossensmattstrasse 89, Austria
Continuation-in-part of application Ser. No. 701,968, Jan. 31, 1968. This application Apr. 25, 1968, Ser. No. 724,158
Claims priority, application Austria, Feb. 1, 1967, A 946/67

U.S. Cl. 122-7

Int. Cl. F22d 1/00, 7/00

A cooling system for a waste-heat boiler which is intermittently heated, such as, for example, for the waste-heat

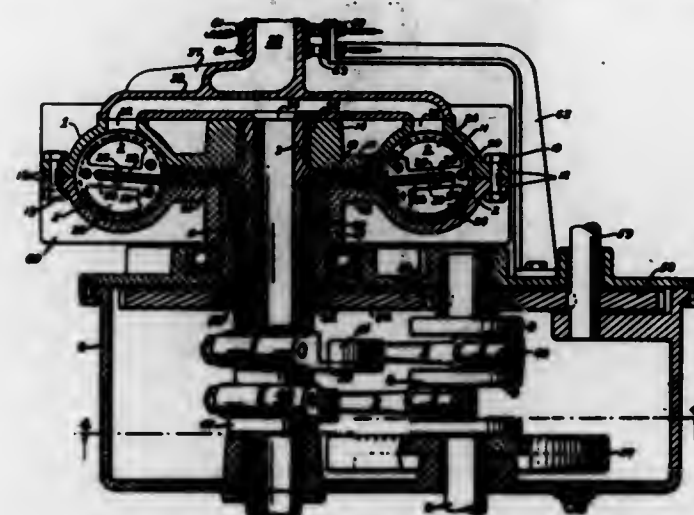
boiler of a converter where the boiler is exposed to intense heating during the blow periods, and to relatively low heat during the off-blow periods. The cooling system is composed of a plurality of units one of which is subjected to heat which is more intense than that to which the remainder of the system is exposed, this one unit, which would be the converter hood in the case of a converter installation, being cooled by a means which



provides a forced through-flow of a cooling fluid during the periods of intense heat, such as the blow periods in

3,516,392
OSCILLATING PISTON INTERNAL COMBUSTION ENGINE
Paul E. Morgan, San Jose, Calif., assignor to Bruce Wiley
Filed July 1, 1968, Ser. No. 741,647
Int. Cl. F02b 57/00, 53/00
U.S. Cl. 123—43

8 Claims



In an internal combustion engine, a rotating annular cylinder is rotated in a predetermined ratio to oscillation of a plurality of pairs of oscillating pistons in the cylinder, the pistons being so oscillated so that adjacent pistons are moved alternately apart from one another and toward

portion seated in the normal groove in the inside of the tappet body and a downwardly extending central portion which restricts the upward movement of the plunger. The purpose of this design is to minimize tappet pump-up.

means and electronically controlled valve means are provided for supplying the precisely measured charge of fuel to said small cylinder whereby, the length of stroke of the large and small pistons is controlled so as to inject the measured charge of fuel at a predetermined time.

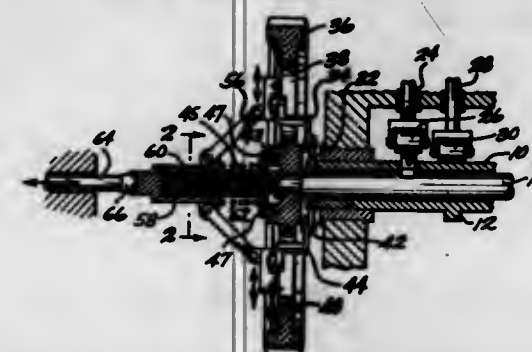
3,516,394
DEVICE FOR SIMULTANEOUSLY ADVANCING INTAKE CAM LOBES AND RETARDING EXHAUST CAM LOBES OF AN INTERNAL COMBUSTION ENGINE WHILE THE ENGINE IS RUNNING

Roy G. Nichols, 5043 Elder Road, Ferndale, Wash. 98248

Filed July 16, 1968, Ser. No. 745,257
Int. Cl. F01k 54/04; F01l 1/34

U.S. Cl. 123—90

4 Claims

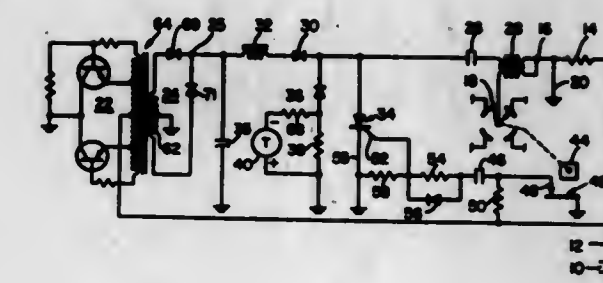


This invention relates to a two part camshaft

3,516,396
ELECTRONIC IGNITION SYSTEM
Harry Wilbur Lawson, Jr., 906 Middle Road, Rush, N.Y. 14543
Filed Oct. 29, 1963, Ser. No. 319,883
Int. Cl. F02p 3/06

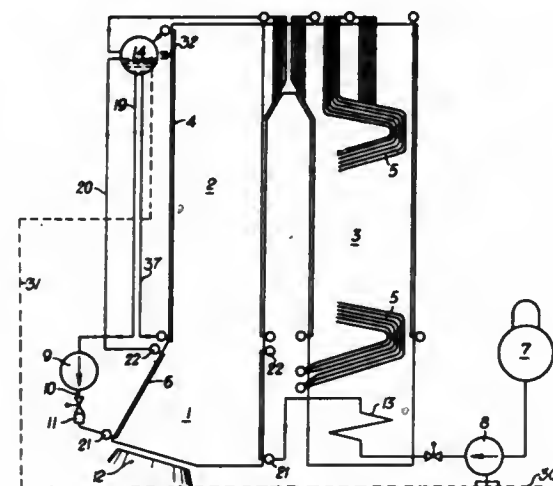
U.S. Cl. 123—148

2 Claims



A capacitor discharges type of ignition system is pro-

boiler of a converter where the boiler is exposed to intense heating during the blow periods, and to relatively low heat during the off-blow periods. The cooling system is composed of a plurality of units one of which is subjected to heat which is more intense than that to which the remainder of the system is exposed, this one unit, which would be the converter hood in the case of a converter installation, being cooled by a means which



provides a forced through-flow of a cooling fluid during the periods of intense heat, such as the blow periods in the case of a converter, and which provides a forced circulation of the cooling fluid during the alternating periods of low heat, which would be the off-blow periods in the case of a converter.

3,516,391

STEAM GENERATING UNIT

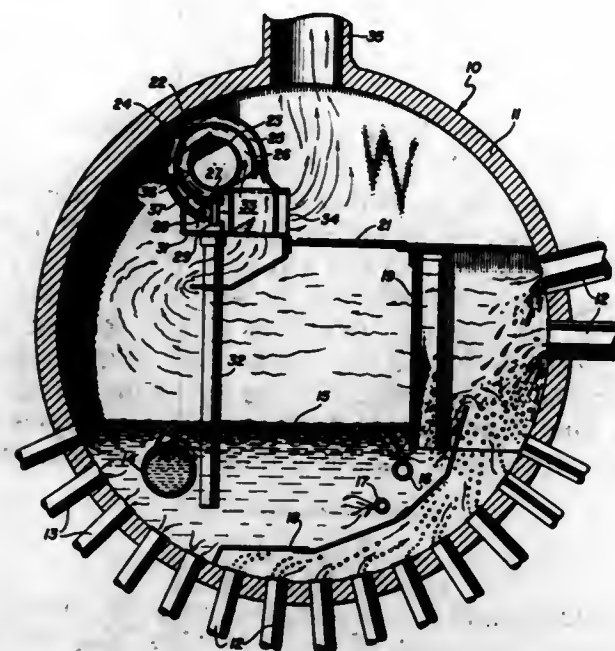
Albert H. Rawdon, Shrewsbury, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts

Filed June 20, 1968, Ser. No. 738,631

Int. Cl. F22b 37/32

U.S. Cl. 122-491

7 Claims



A steam-and-water drum employing a scroll-type separator having scroll wall means defining plural parallel flow paths and slot defining means such as peel-off plates adjacent the outer wall of each path to separate the liquids thrown against the outer wall.

This disclosure relates to a hydraulic tappet having a retainer ring and a groove in the upper portion of the tappet body to restrict the upward movement of the tappet plunger relative to the tappet body to less than that normally permitted by the conventional groove and retainer ring. For example, a retainer ring has an outer

3,516,392
OSCILLATING PISTON INTERNAL COMBUSTION ENGINE

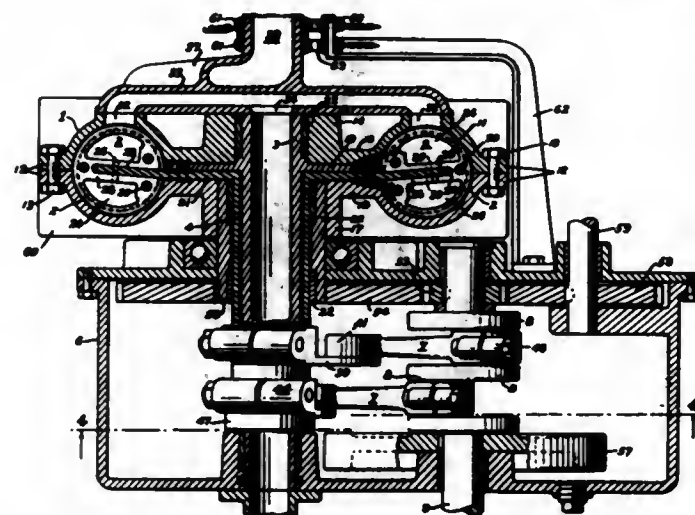
Paul E. Morgan, San Jose, Calif., assignor to Bruce Wiley

Filed July 1, 1968, Ser. No. 741,647

Int. Cl. F02b 57/00, 53/00

U.S. Cl. 123-43

8 Claims



In an internal combustion engine, a rotating annular cylinder is rotated in a predetermined ratio to oscillation of a plurality of pairs of oscillating pistons in the cylinder, the pistons being so oscillated so that adjacent pistons are moved alternately apart from one another and toward one another for the respective strokes of the internal combustion engine. Intake port, exhaust ports and ignition means on said rotating annular cylinder are located by the rotation of the cylinder between adjacent pistons according to the firing order and cycle of said engine.

3,516,393

ANTI-PUMP-UP TAPPET

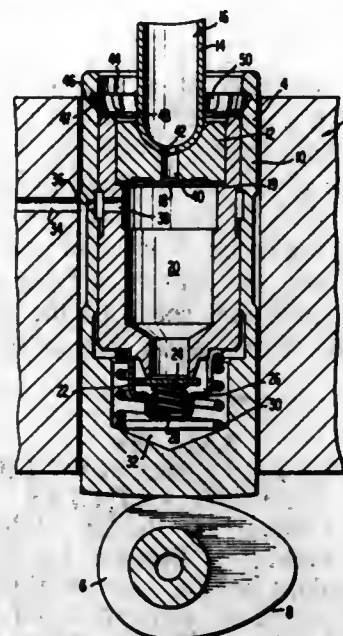
Morris V. Dadd, Muskegon, Mich., assignor to Johnson Products, Inc., Muskegon, Mich., a corporation of Michigan

Filed June 4, 1968, Ser. No. 734,367

Int. Cl. F01I 1/00

U.S. Cl. 123-90

9 Claims



portion seated in the normal groove in the inside of the tappet body and a downwardly extending central portion which restricts the upward movement of the plunger. The purpose of this design is to minimize tappet pump-up.

3,516,394

DEVICE FOR SIMULTANEOUSLY ADVANCING INTAKE CAM LOBES AND RETARDING EXHAUST CAM LOBES OF AN INTERNAL COMBUSTION ENGINE WHILE THE ENGINE IS RUNNING

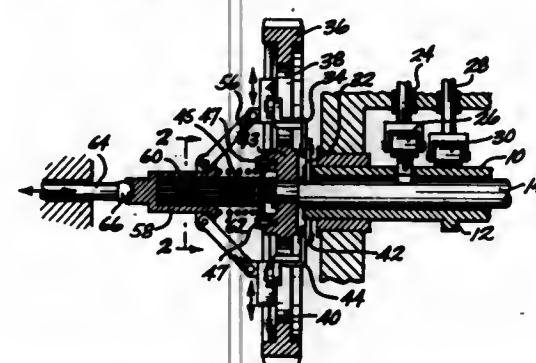
Roy G. Nichols, 5043 Elder Road, Ferndale, Wash. 98248

Filed July 16, 1968, Ser. No. 745,257

Int. Cl. F01k 54/04; F01I 1/34

U.S. Cl. 123-90

4 Claims



This invention relates to a two-part camshaft mechanism for an internal combustion engine wherein one part carries the lobes for operating the intake valves of the engine and the other part carries the lobes for operating the exhaust valves and relative angular positions of the two parts may be changed during running of the engine. The intake valves may be advanced and simultaneously the exhaust valves may be retarded, during running of the engine, so that a selected and desired relation between them may be obtained for a particular engine speed. The two-part camshaft mechanism includes an outer, tubular camshaft having lobes and an inner camshaft having lobes projecting through slots in the outer camshaft.

3,516,395

FUEL INJECTION SYSTEM FOR INTERNAL COMBUSTION ENGINES

Jacques Bassot, Paris, and Louis Monpetit, l'Etang-la-Ville, France, assignors to Societe des Procédés Modernes d'Injection Sopromi, Les Mureaux, Yvelines, France

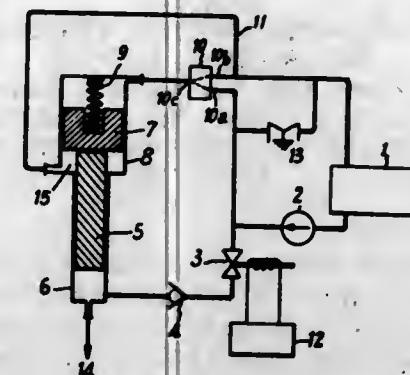
Filed Feb. 8, 1968, Ser. No. 704,158

Claims priority, application France, Feb. 22, 1967, 95,926

Int. Cl. F02d 5/02

U.S. Cl. 123-139

4 Claims



An improved fuel Injection System wherein the injection unit comprises a cylinder and piston of relatively large diameter disposed coaxially with and above a cylinder and piston of relatively small diameter. Hydraulic

means and electronically controlled valve means are provided for supplying the precisely measured charge of fuel to said small cylinder whereby, the length of stroke of the large and small pistons is controlled so as to inject the measured charge of fuel at a predetermined time.

3,516,396

ELECTRONIC IGNITION SYSTEM

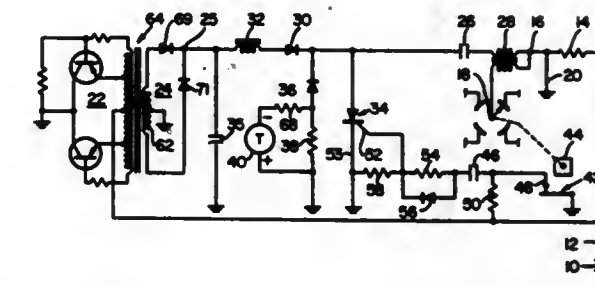
Harry Wilbur Lawson, Jr., 986 Middle Road, Rush, N.Y. 14543

Filed Oct. 29, 1963, Ser. No. 319,883

Int. Cl. F02p 3/06

U.S. Cl. 123-148

2 Claims



A capacitor discharge type of ignition system is provided with means to charge the capacitor from a source through a power pack and an electronic switch to discharge the capacitor through the coil primary. The switch is triggered by pulses in timed relation with the engine transmitted through an RC circuit determining the on time of the switch.

3,516,397

FURNACE AND COMBUSTION CHAMBER THEREFOR

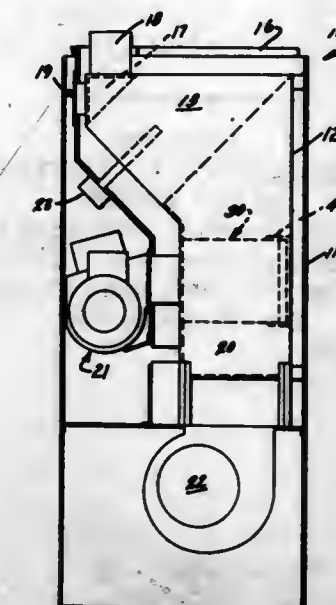
Walter R. Kimberley, Holland, Mich., assignor to Lear Siegler, Inc., Holland, Mich., a corporation of Delaware

Filed Apr. 23, 1968, Ser. No. 725,234

Int. Cl. F24h 3/06

U.S. Cl. 126-110

14 Claims



A combustion chamber for utilization in a furnace, either horizontal or vertical, embodying a heat exchanger having a series of side-by-side paths, alternate of the paths carrying flue gases and the other paths carrying the air to be warmed. The combustion chamber is of generally tubular configuration and has front and rear end walls. The rear end wall is substantially impermeate and the

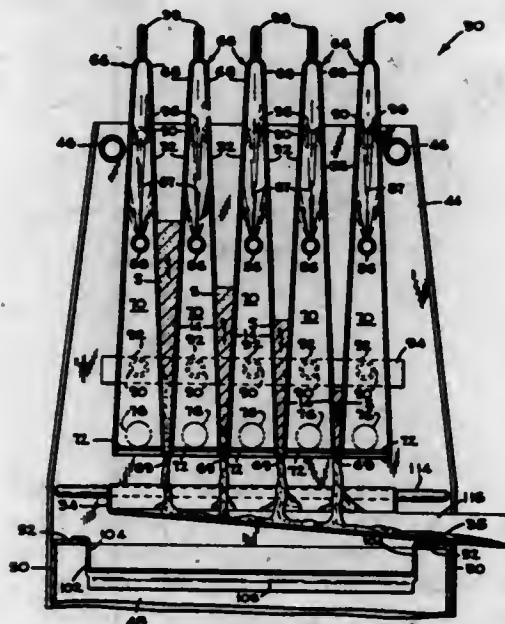
front end wall has an aperture therein for the reception of a burner such as an oil gun or gas gun. The chamber is provided with a series of apertures about the periphery thereof for escape of gases from its interior during operation of the burner.

3,516,398 APPARATUS FOR MELTING A FROZEN FOOD PRODUCT

Katsufi Hirahara, San Jose, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Apr. 1, 1968, Ser. No. 717,551
Int. Cl. F28H 3/08

U.S. Cl. 126-343.5

5 Claims



A process including a quick freezing step for preparing, storing and handling liquid food products such as shelled fresh eggs, and apparatus for rapidly melting the product to restore it to its initial liquid condition. The process eliminates the usually required tin containers for egg products by molding egg mixtures into slabs which are then wrapped and stored. The apparatus utilizes pairs of heated, downwardly converging heat conductive plates to support the frozen slabs. The slabs are tapered top to bottom so that the sides of the slab have total surface contact with the plates, thus effecting a relatively rapid melting operation with a relatively low heat input.

3,516,399 ELECTROMAGNETIC CATHETER BLOOD FLOW PROBE

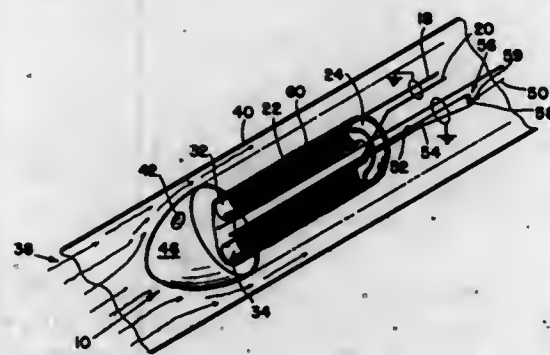
Charles A. Barefoot, 3800 Cash Drive,
Winston-Salem, N.C. 27107

Filed Apr. 18, 1967, Ser. No. 631,700

Int. Cl. A61B 5/02

U.S. Cl. 128-2.05

6 Claims



A miniaturized electromagnetic catheter blood flow probe having a U-shaped magnetic means at the leading

tip of the probe for establishing a flux field, electrodes positioned within the field, to sense a voltage induced when conductive blood flows through the field, a housing for insulating and maintaining these components in a fixed relationship and external indicating means, including potential balancing, means connected to the probe.

3,516,400 METHODS AND APPARATUS FOR DETERMINING BODY COMPOSITIONS

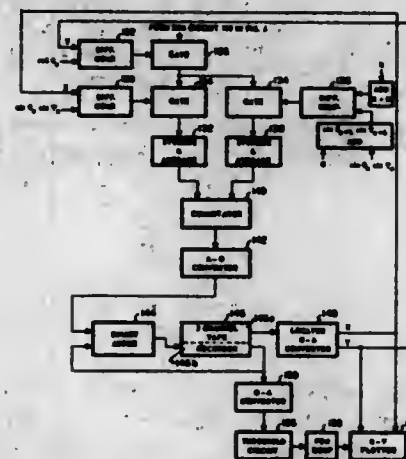
Lawrence H. Krohn, Detroit, and Charles D. Stout, Livonia, Mich., assignors to The Bendix Corporation, a corporation of Delaware

Filed June 6, 1966, Ser. No. 562,992
(Filed under Rule 47(a) and 35 U.S.C. 116)

Int. Cl. A61B 5/04, 5/05

U.S. Cl. 128-2.06

25 Claims



A method and apparatus for measuring signals on the surface of a body and relating the measured signals to electrical activity at any point within that body. In the preferred embodiment, pulsating electrical signals emitted by an internal member of the human body are measured at a plurality of points on a surface of that body and a number of times during each pulse. These measured signals are processed to determine a solution to an equation expressing the potential distribution for the geometry of the body involved, said equation also being a solution to Laplace's equation. Then the electrical activity at various points in a selected area, such as through one particular cross section of the heart, is calculated using the solution obtained. The pattern of this activity is displayed on a screen. Since it is known that scar tissue behaves differently electrically than does healthy tissue, a pattern of the electrical activity observed at the heart, and the way in which this pattern changes during a pulse indicates the composition of that heart.

3,516,401 MULTIPLE-SPIROMETER RESPIRATION MEASURING DEVICE

Michele Dell'Alma, Via Sacchi 9, Rome, Italy

Filed May 1, 1967, Ser. No. 635,020

Claims priority, application Italy, May 10, 1966,
10,617/66

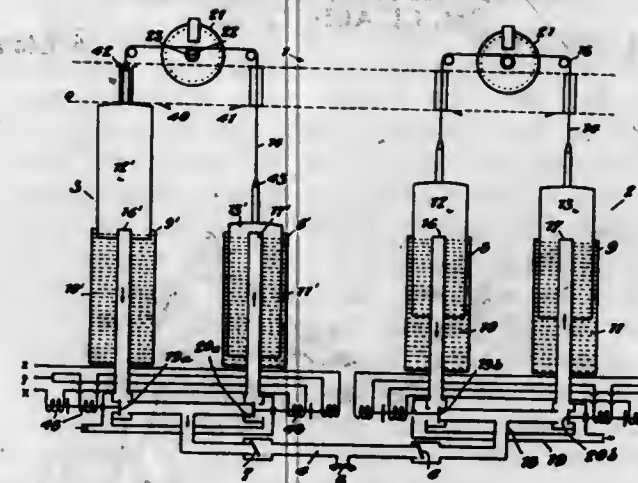
Int. Cl. A61B 5/08

U.S. Cl. 128-2.08

6 Claims

An open type spirometer is disclosed having an inspiration circuit and an expiration circuit both connected to the respiration of the patient, whereby this open type spirometer yields one closed circuit type spirogram. Each circuit has a pair of spirometers or variable capacity containers. The containers of the expiration circuit cooperate with the measuring system whose information induces, in the recording unit, a proportional movement in one direction, while the containers of the inspiration circuit

cooperate with the measuring system inducing in the same recording unit a proportional movement in the opposite



direction, whereby, on a moving chart, the desired closed circuit type spirogram is traced.

3,516,402 DENTAL GUM STIMULATOR

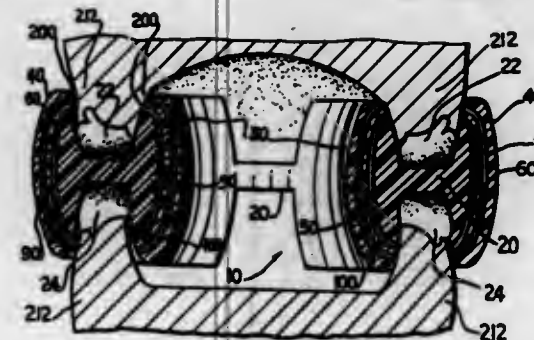
Alexander Toth, 80 Somerset St.,
New Brunswick, N.J. 08901

Continuation-in-part of application Ser. No. 614,071,
Feb. 6, 1967. This application Oct. 18, 1967, Ser.
No. 685,223

Int. Cl. A61H 13/00

U.S. Cl. 128-66

14 Claims



An insulating mouthpiece which is adapted to be inserted in the mouth and contains two sets of water pipes, one connected to a hot water source and one connected to a cold water source. The pipes have small orifices which emit water through similar orifices in the mouthpiece. The orifices are positioned to direct alternate sprays of warm and cold water against the gums, particularly between the teeth. The mouthpiece may be a single tube, a full mouth structure, or a half-mouth structure.

3,516,403 INTRAUTERINE CONTRACEPTION DEVICE AND INSTRUMENT FOR PLACING THIS DEVICE IN POSITION

Rene Cournot, Bordeaux-Cauderan, France, assignor to Apamed Etablissement, Vaduz, Liechtenstein, a body corporate of Liechtenstein

Filed July 5, 1968, Ser. No. 742,903

Claims priority, application Switzerland, July 14, 1967,
10,103/67

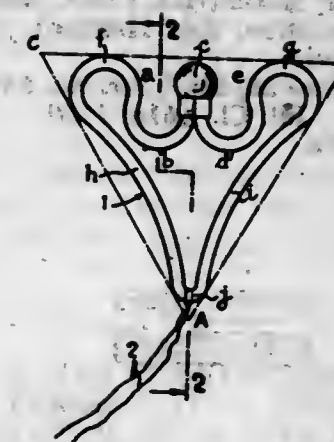
Int. Cl. A61H 5/46

U.S. Cl. 128-130

10 Claims

Intrauterine contraception device comprising a moulded element of plastics material having a high elastic memory

and a flat shape inscribed in an inverted isosceles triangle. The portion of the element adjacent the base of the triangle has the shape of a minute omega spread out inside the triangle. Two adjacent lateral portions, connected to the omega portion by open outwardly convex loop por-



tions, unite at the corner of the triangle opposed to the omega portion and carry a flexible tie connected thereto. A bulge is provided on the outwardly facing point of the omega portion. An instrument is provided for fitting the device.

3,516,404

BIOLOGICAL ISOLATION GARMENT
Fred R. Spross, Pasadena, Tex., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Sept. 9, 1969, Ser. No. 856,258

Int. Cl. A62B 7/00

U.S. Cl. 128-142.5

10 Claims



A completely enclosable, one piece human garment fabricated primarily from a tightly woven, permeable cotton fabric with all fabrication seams being internally sealed. Medical rubber gloves are sealed to the ends of the arms for hand coverings and the headpiece includes a full width visor for wearer vision and an integral oronasal respirator for filtering the wearer's inspired and expired breath. Sizing adjustments are provided on the legs and torso for adaptation of the garment to different size wearers and a pressure-sealing closure zipper extends diagonally from

the crotch across the chest and curves over one ear to the top of the headpiece for donning and removing the garment.

3,516,405

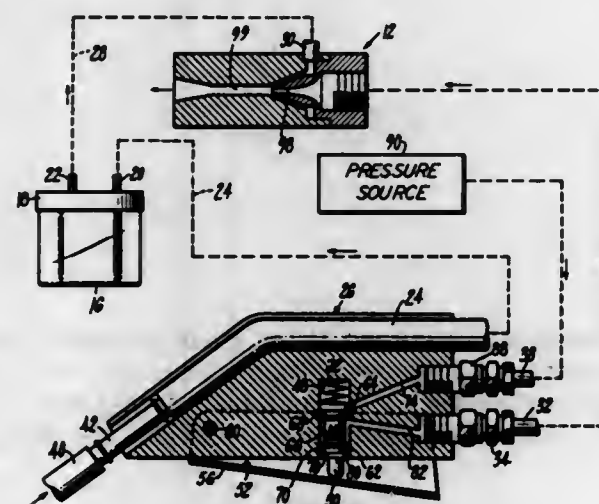
ASPIRATOR AND CONTROL THEREFOR
James H. Hopper, Hazardville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 20, 1967, Ser. No. 647,410

Int. Cl. A61m 1/00

U.S. Cl. 128—276

7 Claims



A flexible tube having one end adapted to receive a catheter to be inserted into a patient for removal of fluids and the other end connected to a container is discretely mounted on a handle containing the pumping controls. Flow lines to a pressure source and an aspirator are connected to a valve mounted in the handle and a retractable trigger member operatively connected to the handle allows an operator to conveniently operate the aspirator. Another valve mounted in the handle with a releaseably mounted plunger valve connects a water line to the tube for purging the tube as desired.

3,516,406

APPARATUS AND METHOD FOR REPLACING A PROLAPSED UTERUS

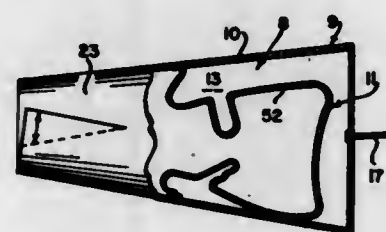
Leland D. Jensen, 225 Main St., Saco, Maine 64072

Filed Oct. 9, 1967, Ser. No. 673,670

Int. Cl. A61d 1/08; A61b 17/42

U.S. Cl. 128—303

12 Claims



An apparatus and method for facilitating the reorientation and replacement of a prolapsed uterus in mammals, for example a cow or the like; said apparatus comprising a flexible and inflatable bag member for reception of a prolapsed uterus, an outer casing for holding said bag and having attached to said outer casing a fluid pressurizing means. By applying controlled fluid pressure to said inflatable bag member, a prolapsed uterus may be progressively reduced in size and pressured back into the abdominal cavity.

An arterial bypass useful in vascular surgery is provided by means of a length of flexible tubing, the ends of which have fixed around the outside thereof an inflatable balloon or cuff. Means are provided for inflating each of the balloons or cuffs at the end of the tubing. In use, an incision is made in the artery sufficiently large to permit the introduction of one end of the tubing. Another incision is made in the artery to permit the insertion of the other end of the tubing. As each end of the tubing is properly inserted in the artery

3,516,407

INFLATABLE INTRANASAL TAMPON

Santo L. Ruggero, 7404 Hancock Drive,

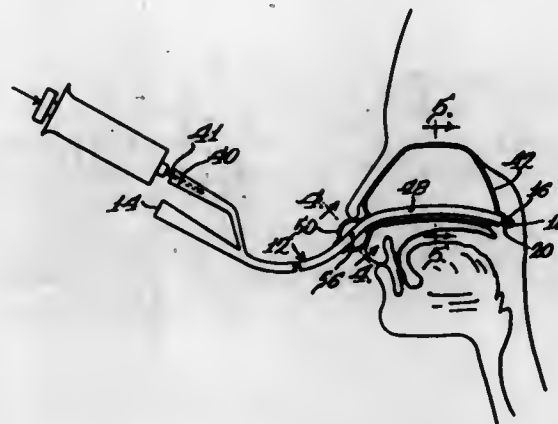
Wonder Lake, Ill. 60097

Filed Apr. 25, 1968, Ser. No. 724,104

Int. Cl. A61b 17/12

U.S. Cl. 128—325

4 Claims



An inflatable intranasal tampon consisting of a flexible breathing tube having internal and external inflatable annular balloons thereabout in communication with each other and an external valve passage for inflating both of the balloons.

3,516,408

ARTERIAL BYPASS

Vincent L. Montanti, 71 Roderick Ave.,

Staten Island, N.Y. 10305

Filed Sept. 21, 1967, Ser. No. 669,503

Int. Cl. A61m 1/03

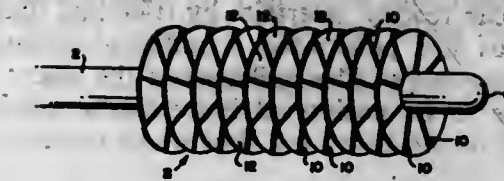
U.S. Cl. 128—334

1 Claim



the balloon or cuff is immediately inflated. Upon inflation the balloons serve to block off that portion of the artery between the inserted ends of the tubing and at the same time to fix the ends of the tubing to the arterial walls. In this condition blood flowing through the artery is bypassed by flowing through the tubing between the respective ends thereof thereby permitting a desired surgical procedure to be carried out upon the portion of the artery between the respective ends of the tubing. Upon completion of the surgical procedure the respective balloons or cuffs at the ends of the tubing are deflated and the tubing removed and the incisions closed. The bypass may be disposed completely within the patient during the surgical procedure or a portion of the bypass tubing may, if desired, extend without the body of the patient. If desired, other conduit connections may be incorporated in the bypass for the removal and/or testing of fluids flowing therethrough or for the introduction of drugs or other suitable medication into the fluid flowing through the bypass.

from the wall of the tube. The flexibility is such that the lightest contact with attached tissue will bend the membrane and protect the underlying hole. The membrane may be radially slit to facilitate collapsing upon



passing of the catheter through tissue. The membranes are long enough, so that when the catheter is inserted in tissue, they cover the apertures to prevent scraping of tissue thereby.

3,516,411

APPARATUS FOR THE THERAPEUTIC TREATMENT OF THE SKIN

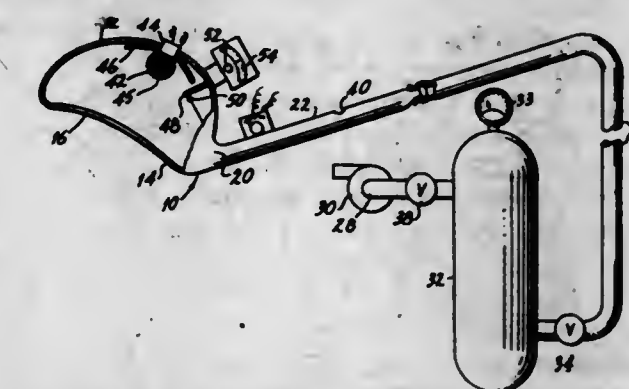
Estelle Adler, 405 E. 56th St., New York, N.Y. 10022

Filed May 13, 1968, Ser. No. 728,643

Int. Cl. A61n 1/00

U.S. Cl. 128—404

6 Claims



In suction applying apparatus for the therapeutic treatment of the skin, including a hollow suction head adapted to be applied against the skin and connected to a controllable source of subatmospheric pressure, an infrared ray heat producing device mounted within the head and means within the head, responsive to the temperature therewithin and adjustable from without of the head, for controlling said infra-red heat ray radiating device.

3,516,409

SLIDE FASTENER EMPLOYING SKIN CLOSURE APPLIANCES AND TECHNIQUES

Robert B. Howell, 2115 Madrona Point Drive,

Bremerton, Wash. 98310

Continuation-in-part of application Ser. No. 478,675,

Aug. 10, 1965. This application Feb. 28, 1968, Ser.

No. 712,329

Int. Cl. A61b 17/04

U.S. Cl. 128—335

27 Claims



A seam type slide fastener having adhesive on the seam side thereof. A slider situated entirely forwardly of the adhesive backing and including a slot for receiving a scalpel blade. Moving the slider by a scalpel inserted in the slot to both make an incision and open the slide fastener. Closing the incision by reverse movement of the slider to bring the skin back to substantially its original position.

ERRATUM

For Class 128—345 sec:
Patent No. 3,517,128

3,516,410

CEREBRO-VENTRICULAR CATHETER

Salomon Hakim, Carrera 13, 48-26, Bogota, Colombia

Filed Jan. 3, 1968, Ser. No. 695,477

Int. Cl. A61m 27/00

U.S. Cl. 128—350

5 Claims

The invention is a ventricular catheter for use with ventriculo-atrial shunting devices, and consists of a tubing of soft, tissue-compatible material with intake apertures positioned in the wall of the tubing at one end thereof, the end of the tubing preferably being closed.

Thin membranes of flexible, tissue-compatible material are attached between the holes and extend outward

3,516,412

BIPOLAR ELECTRODE HAVING IRREGULARITY AT INSERTING END THEREOF AND METHOD OF INSERTION

Bernard Ackerman, Metuchen, N.J., assignor to Electro-Catheter Corporation, Rahway, N.J., a corporation of New Jersey

Continuation-in-part of application Ser. No. 480,820,

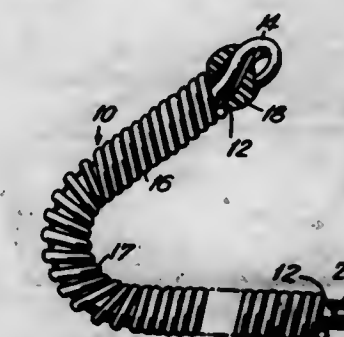
Aug. 16, 1965. This application Mar. 5, 1969, Ser.

No. 804,449

Int. Cl. A61m 1/04

U.S. Cl. 128—418

5 Claims



A bipolar electrode apparatus comprising a flexible inner conductive element and a flexible outer conductive element fabricated from an extremely flexible and resilient coil spring. An insulating element is disposed between said flexible inner and outer conductors. The outer

conductive element is formed having a bend in the form of an elbow at one end thereof. The bipolar electrode apparatus is adapted for insertion through the chest wall into the ventricular cavity in cases of cardiac arrest. The elbow provides an irregularity in the apparatus such that a physician can readily ascertain, by frictional drag, when the apparatus has penetrated a sufficient distance into the ventricular cavity. The resiliency of the elbow permits the electrode to be positioned immediately adjacent the interior wall of the heart and thus make positive contact therewith.

3,516,413

CIRCUIT ARRANGEMENT FOR AN ELECTRIC MUSCLE STIMULATOR

Michael McDonald, 69 Clifford Road, Barnet, Hertfordshire, England, and Herman F. Schaefer, 22 Highbury Place, Highbury, London N. 5, England

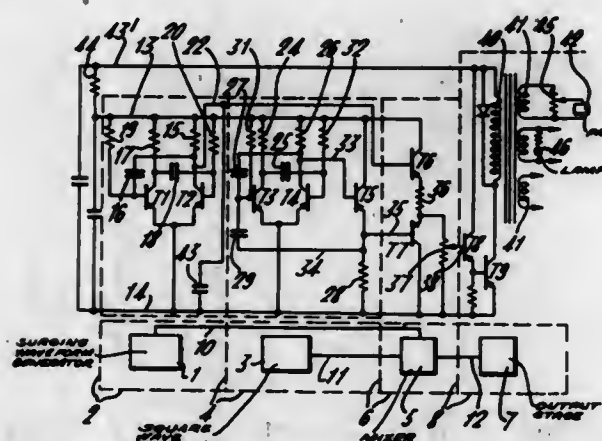
Filed May 24, 1966, Ser. No. 552,531

Claims priority, application Great Britain, May 25, 1965, 22,444/65

Int. Cl. A61n 1/36

U.S. Cl. 128-422

9 Claims



A circuit for an electric muscle stimulator including a surging waveform generator, a square waveform generator, a mixer, and an output stage, in which the outputs from the surging waveform generator and the square waveform generator are applied to the mixer stage in such a way that the output from the square waveform generator provides 100% modulation of the signal output, from the mixing stage.

3,516,414

VARIABLE VOLUME BREAST PAD

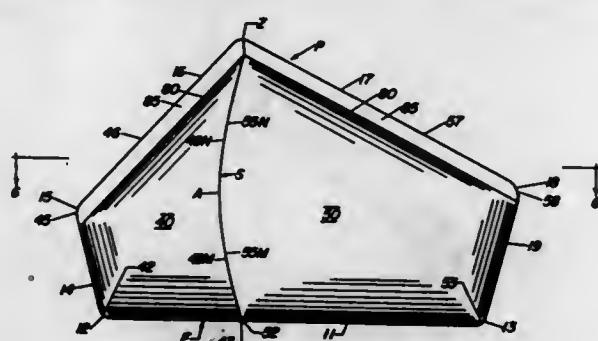
June B. Greenough, 1523 N. 52nd St., Omaha, Nebr. 68104

Filed June 20, 1968, Ser. No. 738,512

Int. Cl. A61f 5/14

U.S. Cl. 128-481

3 Claims



A variable volume breast pad suitable alternatively for cosmetic and for prosthetic use and that assimilates several characteristics of a natural breast, and in particular this invention provides a variable volume breast pad

that is exceedingly comfortable to wear, that maintains the desired characteristics even when laundered, and that is adaptable to the physical requirements of a wide range of female human subjects.

3,516,415

BRASSIERE

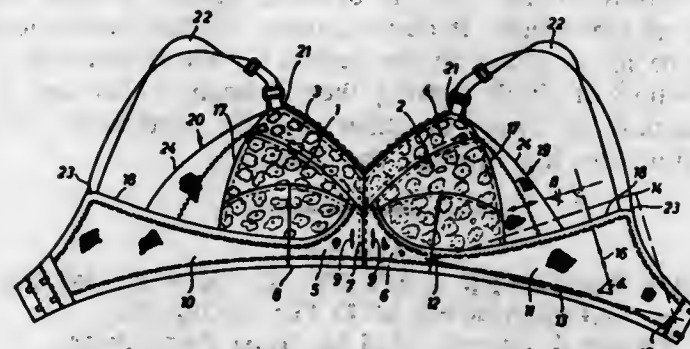
Michelle Hadley-Webb, Heubach, Germany, assignor to Triumph Universa G.m.b.H., Bern, Switzerland, a firm

Filed Aug. 12, 1968, Ser. No. 751,997

Int. Cl. A41c 3/00

U.S. Cl. 128-489

8 Claims



Brassiere where the breast cups are made of non-elastic material, which has lateral back portions made at least partly of elastic material and which are generally triangular with one corner of the triangle disposed proximate the lower border of the brassiere approximately below the point of the breast, another corner disposed at the back closure and a further corner at the rear shoulder strap connection, which portions are of greater elasticity in one of two directions perpendicular to one another, which direction is along a line that is inclined forwardly toward the lower border at an angle of about 60°.

3,516,416

METHOD OF PREPARING A SMOKABLE MATERIAL

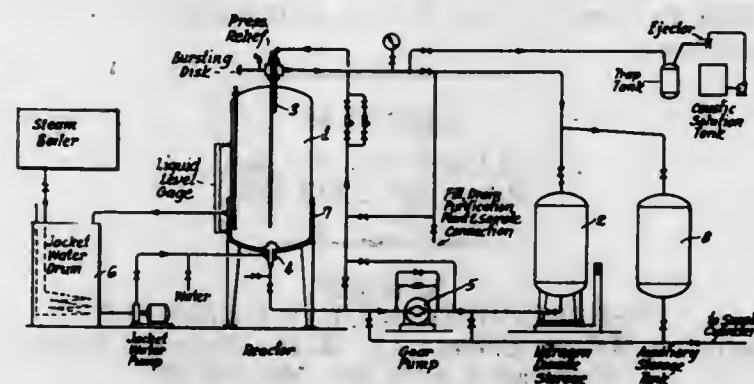
Theodore S. Briskin and Geoffrey R. Ward, Beverly Hills, Calif., assignors to Sutton Research Corporation, Los Angeles, Calif., a corporation of Delaware

Continuation-in-part of applications Ser. No. 595,622, Nov. 21, 1966, and Ser. No. 674,994, Oct. 12, 1967. This application July 16, 1968, Ser. No. 745,221

Int. Cl. A24b 15/00; C08b 15/02

U.S. Cl. 131-2

3 Claims



A method of forming a smoking product formed of cellulosic materials is disclosed in which one of the preliminary steps includes the selective oxidation of the cellulosic material with liquid nitrogen dioxide under conditions to effect substantial conversion of the C₂ methylol groups. The nitrogen dioxide used in the oxidation is present in a ratio of 5 to 1000 parts by weight to one part of

the cellulosic material and the reaction is carried out at a temperature of between 15° and 65° C. Preferably, the moist nitrogen dioxide is first rinsed out of the cellulose material with dry nitrogen dioxide.

3,516,417

METHOD OF SMOKING AND MEANS THEREFOR

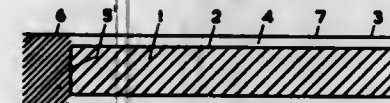
Clayton Small Moses, Transvaal Province, Republic of South Africa (8 Manor Garden, Lynnwood Manor, Pretoria, Transvaal, Republic of South Africa)

Filed Apr. 5, 1968, Ser. No. 719,276

Int. Cl. A24d 1/02, 1/04; A24f 13/02

U.S. Cl. 131-8

2 Claims



This invention relates to a device for simulating smoking. Air is drawn via an outer surrounding air passage into the mouth of the smoker, the air being warmed along the way by being drawn past an inner burning charge of tobacco. The tobacco is contained in a holder which is sealed off from communication with the mouth of the smoker and the air passage so that the air drawn into the mouth is not contaminated with smoke. The air passage is formed by an outer tubular member spaced from the holder and made of combustible material having a faster burning rate than that of the combustible material from which the inner holder is made.

3,516,418

DEVICE FOR THE DIRECT REINTRODUCTION OF CUT END TRIMMINGS FROM CIGAR BUNCHES AND CIGARS IN A CIGAR MAKING MACHINE

Lucien Péchard, Paris, France, assignor to Service d'Exploitation Industrielle des Tabacs et des Allumettes, Paris, France, a public establishment of France

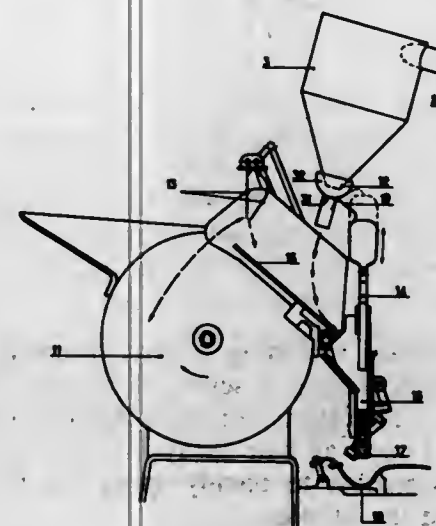
Filed June 23, 1967, Ser. No. 648,303

Claims priority, application France, June 24, 1966, 66,858

Int. Cl. A24c 1/02, 1/24

U.S. Cl. 131-23

4 Claims



Device for the re-use of rejects in a cigarmaking machine, wherein the trimming rejects from a cigar and cigar bunch are collected and re-grouped progressively in a collecting device as they are recovered. The rejects are reintroduced in the re-grouped state directly and immediately in the cigar production cycle into the means for pressing and forming the cigar fillers and in synchronism therewith.

3,516,419

CIGARETTE FILTER ELEMENT

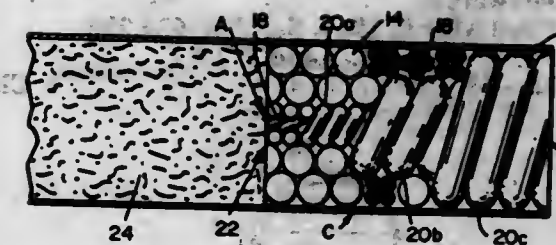
John Kasey, 402 Laurel Ave., Menlo Park, Calif. 94025

Continuation-in-part of abandoned application Ser. No. 632,654, Apr. 21, 1967. This application Feb. 27, 1969, Ser. No. 885,992

Int. Cl. A24d 1/04, 1/06; A24f 7/04

U.S. Cl. 131-267

4 Claims



A smoke filter element comprising yarn helically wound about a central longitudinal axis centrally of the filter element. A first yarn winding or central core is formed or provided to which successive helically wound layers of yarn are wound circumferentially thereabout. These successive windings are coextensive in length with the first winding or core and are adjoined longitudinally along all segments of their respective helical winds by adjacent yarn also helically wound. This winding provides a firm and porous filter mass capable of absorbing substantial portions of tars, nicotine and other compounds produced by the combustion of tobacco. The disclosed filter element can be saturated with a viscous liquid adhesive which is non-toxic, neutral tasting and has the properties of chemical base. The element is provided with a non-porous, encircling boundary having openings at either end of the core or first winding thereby confining smoke interior of the element to a circumfluous interpenetrating path traversing the saturated fibers of the helically wound yarn with a minimum of resistance and a maximum of filtration. The fibrous filter mass preferably is impregnated with an adhesive material which comprises cow's milk and which manifests the properties of a base neutralizing acid impurities in the smoke.

3,516,420

COMBINATION HAIR CURLING AND STRAIGHTENING IRON

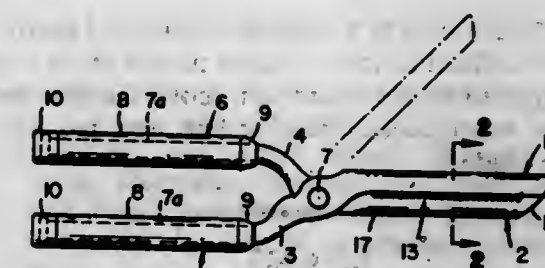
Myra L. Porter, 629 Valley Road, Reno, Nev. 89502

Filed Feb. 20, 1967, Ser. No. 617,253

Int. Cl. A45d 7/00

U.S. Cl. 132-7

1 Claim



A pair of elongated jaws and handles connected at one of their ends by crossed, pivotally connected connectors for moving the jaws toward and away from each other upon corresponding movement of the handles, plier fashion. One jaw is round, in transverse contour, and is formed with a row of closely adjacent flat-sided parallel slots on the side facing the other jaw to receive hair positioned between the jaws and the other jaw is of

concave-convex cross contour with the concave side complementary to and in engagement with the portion of the bar in which the slots are formed, when the jaws are in closed position.

3,516,421

HAIR ROLLERS

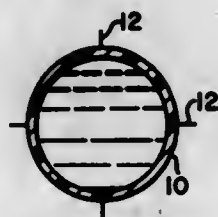
Philip F. Rosmarin, New York, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware

Filed May 5, 1967, Ser. No. 636,296

Int. Cl. A45d 4/14

U.S. Cl. 132—33

9 Claims



The described hair rollers have the desirable property of remaining hot over a long enough period for setting of hair wound thereon. A hollow plastic-walled roller is charged with an aqueous gel that is largely of water and containing hydrophilic high polymers especially 1.2 to 2.4% of carboxypolyethylene. The gel consistency is maintained both at normal temperatures and at temperatures approaching the boiling point of water, and therefore there is no hazard of the hot contents of the rollers leaking out even if the hollow plastic-walled roller should crack.

3,516,422

MAGNETIC FALSE EYELASHES AND METHOD OF AFFIXING TO THE EYELIDS

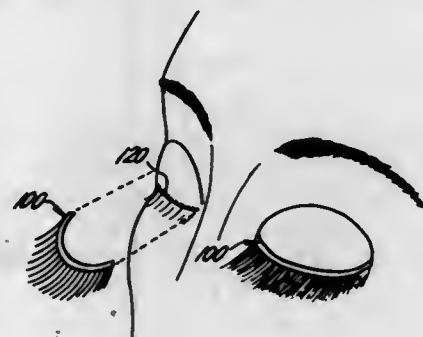
Arthur W. Bechtold, Boonton, and Kathleen M. Alworth, Parsippany, N.J., assignors to Chemway Corporation, Wayne, N.J., a corporation of Delaware

Filed June 26, 1967, Ser. No. 648,745

Int. Cl. A41g 5/00

U.S. Cl. 132—53

3 Claims



A false eyelash having a flexible magnetized plastic base which can be affixed to the eyelid by means of an adhesive substance applied to the eyelid just above the real eyelash, the adhesive substance containing fine iron particles and an adhesive binder.

3,516,423

COSMETIC ARTICLE APPLICATOR

David Seidler, 69—10 108th St.,

Forest Hills, N.Y. 11375

Filed Dec. 8, 1967, Ser. No. 689,101

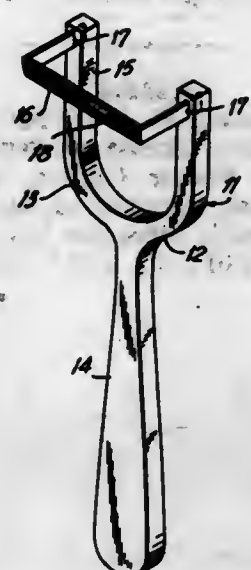
Int. Cl. A45d 40/26

U.S. Cl. 132—88.7

11 Claims

A cosmetic article applicator especially suited for applying false eyelashes in which the applicator includes a support surface to which the cosmetic article may be temporarily adhered for manipulation of the article into adhering engagement with the skin of the wearer. The surface to which the cosmetic article is temporarily adhered includes

an adhering medium which is preferably a silicone base adhesive which is washable to remove contaminants and renew the tackiness of the adhesive. In applying the cos-



3,516,424

HAIR-CARE DEVICE

Martin A. Eagle, 164 N. Ledoux Road,

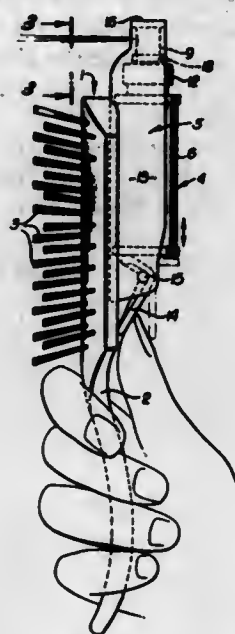
Beverly Hills, Calif. 90211

Filed Aug. 6, 1968, Ser. No. 750,525

Int. Cl. A45d 24/28

U.S. Cl. 132—148

9 Claims



Hair-care device including a hand oriented implement such as a brush having a series of bristles for hair arranging and a miniature aerosol dispenser of hair conditioning fluid such as hair spray lacquer carried by the brush to be operable to openly spray the fluid adjacent to and beyond the bristles.

3,516,425

FOLDING WALKER ASSEMBLY

Waldo A. Rigal, 408 E. Jefferson St.,

Mount Pulaski, Ill. 62548

Filed Nov. 12, 1968, Ser. No. 775,026

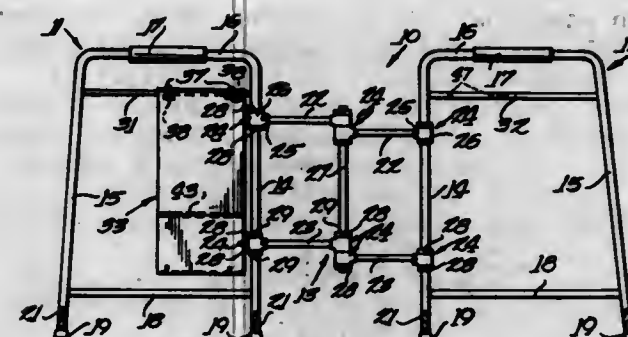
Int. Cl. A61h 3/00

U.S. Cl. 135—45

7 Claims

A folding walker assembly for use by an invalid requiring assistance in walking which can be easily and quickly folded or opened for use forming a generally

U-shaped enclosure to support the invalid in a stable manner. The walker includes two inverted U-shaped frame members providing the sides of the walker and the four supporting feet, the frames being joined by a collapsible connecting bar assembly pivotally mounted at each end on each frame member. A folding table hav-



ing a generally rectangular shape may be secured along one edge to a connecting strip on one frame member, and the opposite edge is supported upon a connecting strip in the opposite frame member; the table being hinged intermediate the adjacent edges to collapse upon the folding of the walker unit.

3,516,426

METHOD FOR INSTALLING A THERMOPLASTIC PIPE BRANCHING SADDLE ON AN OPERATING THERMOPLASTIC MAIN

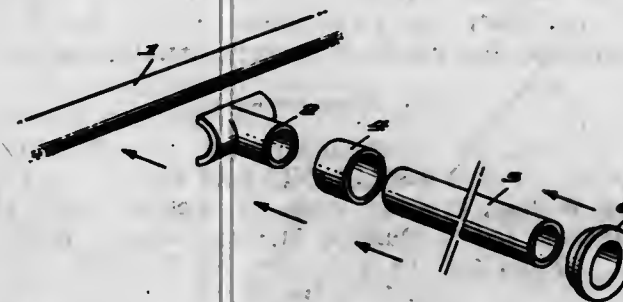
Karel Greenle Toll, Tulsa, Okla., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 11, 1967, Ser. No. 689,693

Int. Cl. F16b 13/00; B23b 41/08

U.S. Cl. 137—15

5 Claims



A thermoplastic pipe branching saddle assembly is connected to an operating thermoplastic main by thermally fusing the saddle assembly to the main, using a cutting element to form an opening in the main, removing the cutting element from the saddle assembly, forcing the walls of a tubular portion of the saddle assembly together to block the flow of gas from the main, joining a section of plastic pipe to the saddle assembly and then removing the force applied to the walls of the tubular portion of the saddle assembly to permit the flow of gas through the newly joined section of the plastic pipe.

3,516,427

FLUID GOVERNOR

Philip Earle Barnes, North Granby, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 13, 1968, Ser. No. 712,673

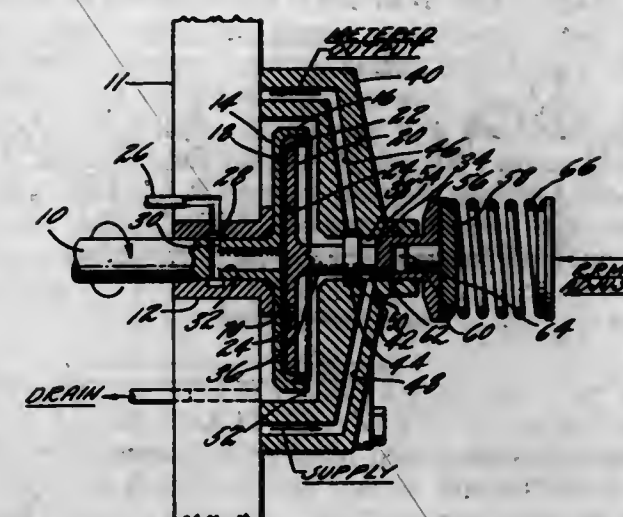
Int. Cl. G05d 13/00

U.S. Cl. 137—47

7 Claims

A fluid reaction chamber having one wall formed by the end of a control valve is coupled to a rotating device whose speed is intended to be measured and develops an axial force on the wall in proportion to the speed thereof.

An adjustable spring acting on the opposite end of the control valve develops a force proportional to the height



3,516,428

FLUIDIC RECTIFIER DEVICE

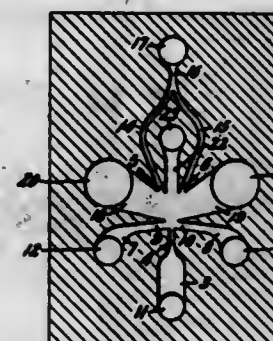
Donald L. Rexford, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Sept. 21, 1966, Ser. No. 581,085

Int. Cl. F15c 4/00

U.S. Cl. 137—81.5

7 Claims



An analog-type fluid amplifier having the fluid receivers interconnected in a downstream direction provides a rectification action wherein a single polarity output is produced in phase with a bipolarity differentially pressurized input signal and varies proportionally therewith. The fluid receivers are spaced apart by a center vent and this separation dimension is critical for obtaining the most desirable input-output wave form characteristics.

3,516,429

SYSTEM FOR AUTOMATIC CONTROL OF GAS PRESSURE

Gerd Sandstede and Erich Maria Robens, Frankfurt am Main, Germany, assignors to Sartorius Werke, G.m.b.H. (und vormals Gottlinger Präzisionswaagenfabrik, GmbH), Gottlingen, Germany, a corporation of Germany

Filed Apr. 11, 1968, Ser. No. 720,735

Claims priority, application Germany, Apr. 12, 1967, S 109,298

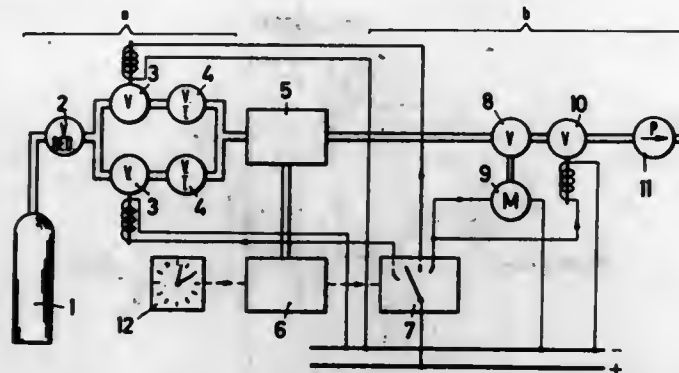
Int. Cl. G05d 16/20

U.S. Cl. 137—87

7 Claims

A receiver is connected by an inlet section to a source of gas under high pressure and by an outlet section to a gas-withdrawing means. One of said sections comprises a solenoid valve and in series therewith a throttle valve. The other of said sections comprises a solenoid valve and in series therewith a variable-area throttle valve. A motor

is provided, which is energizable to adjust the area of said variable-area throttle valve. A measuring means is arranged to produce an electric output signal in response



to the gas pressure in said receiver. An electric controller is connected to said measuring means and arranged to control the energization of said solenoids and said motor in response to said output signal.

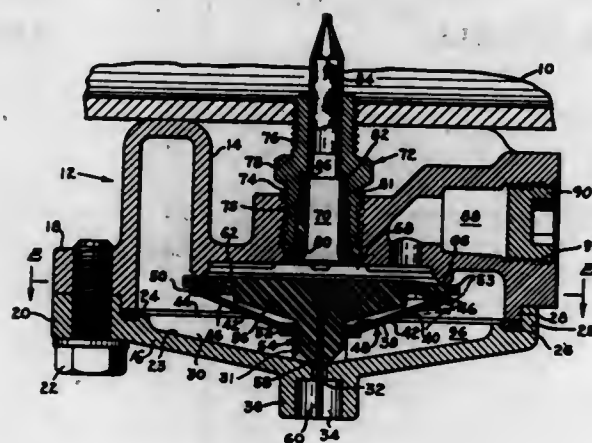
3,516,430

AUTOMATIC DRAIN VALVE

Harry M. Valentine, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Dec. 8, 1967, Ser. No. 689,152
Int. Cl. F16f 1/14

U.S. Cl. 137—204

6 Claims



An automatic drain valve for a fluid pressure reservoir the body thereof being adapted for either bottom or end mounting to the reservoir with a changeable strainer being selectively positioned in the body depending upon the type of mounting; including also an annular supply and exhaust type valve which is operable in response to fluid pressure to drain liquid automatically from the tank, a unique plastic spring having similarity in configuration to a Belleville spring cooperating with the drain valve element, the valve element being also manually operable to effect draining.

3,516,431

DIRECT DIGITAL SYSTEM FOR THE ACCURATE VOLUMETRIC BATCHING OF LIQUID SOLUTIONS OVER A WIDE RANGE OF REQUIRED AMOUNTS

Maurice Eugene Sundt and Walter K. Wagner, Albuquerque, N. Mex., assignors to Albuquerque Gravel Products Co., Albuquerque, N. Mex., a corporation of New Mexico

Filed Mar. 28, 1968, Ser. No. 716,886

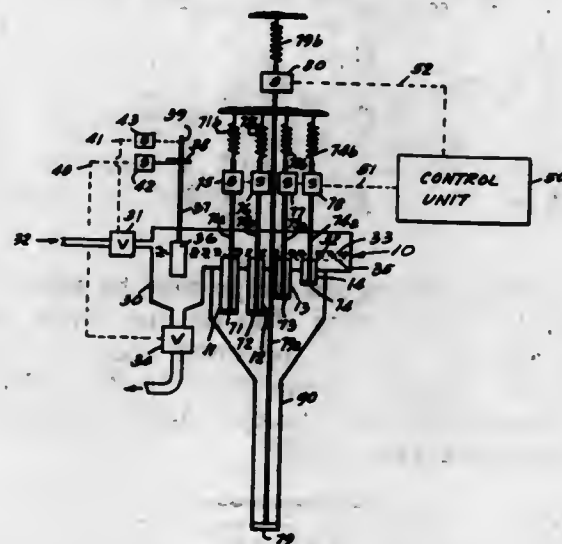
Int. Cl. B67d 3/00; B65d 47/24

U.S. Cl. 137—266

10 Claims

Accurate volumetric batching of liquid solutions over a theoretically unlimited range of required amounts is accomplished quickly and conveniently by a direct digital

system which comprises basically a one or more digit metering unit calibrated either in decimal or binary units, a verification unit which permits a visual and electrical check on the batched quantity and a control unit of either a manual, semi-automatic or automatic type. Each digit comprises a number of calibrated chambers of varying contents which may be combined to provide any measured quantity of liquid. The measuring chambers have an upper end with an opening therein mounted in a floodable pan so that when the pan is flooded the cham-



bers are rapidly filled. Each chamber is closed at the bottom with a solenoid actuated valve that is set to allow complete emptying into the verification tank. In the manual control version the amount of liquid required for the batch is calculated and manually set while in the semi-automatic version an analog type system calculates the liquid required for a set admixture. In the automatic version the admixture quantity is automatically measured and the necessary liquid calculated. This system is especially adapted for use in a concrete batching operation.

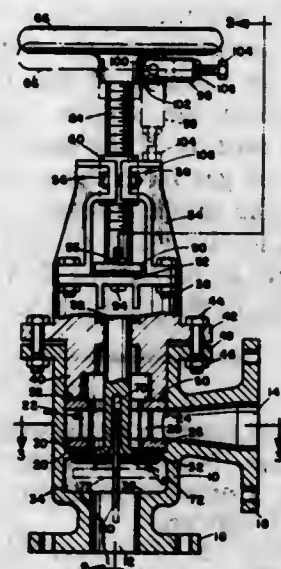
3,516,432

SELF-SEALING VALVE

Richard William Preising, Bldg. 17, Apt. A, 31820 Dolly Madison Drive, Madison Heights, Mich. 48071
Filed Apr. 10, 1968, Ser. No. 720,153
Int. Cl. F16k 43/00

U.S. Cl. 137—329.02

3 Claims



The valve has a reversible floating valve element which can be sealed in two positions, either by fluid pressure in the valve or by screw clamp means. The valve element

has sealing portions of novel configuration which prevent knocking or hammering at the instant of cut-off or starting of the fluid flow, and means is provided to hold the valve element at any selected open position for control of flow rate.

3,516,433

DEVICE FOR WINDING FLEXIBLE TUBING CARRYING FLUID UNDER PRESSURE

Gabriel L. Guinet, Le Plessis-Belleville, Oise, France, assignor to Societe Anonyme Pochain, Le Plessis-Belleville, Oise, France, a society of France

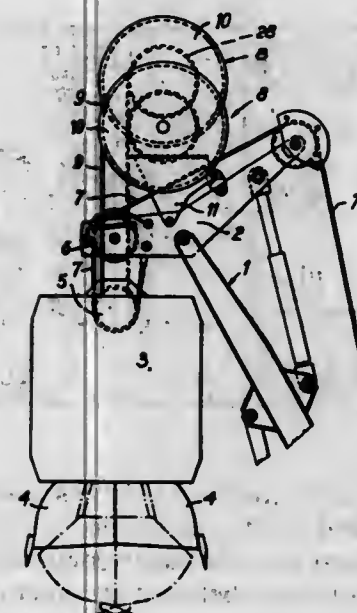
Filed June 25, 1968, Ser. No. 739,858

Claims priority, application France, June 26, 1967, 112,213

Int. Cl. B65h 75/34

U.S. Cl. 137—355.26

2 Claims



A method of winding and unwinding a flexible fluid line on a drum rotatably mounted on a fixed support with respect to which a fluid actuated means supplied by the tubing is movable, the drum being operatively associated with rotary driving and braking means, in which method said driving and braking means apply a constant tension to the fluid line between the drum and movable receiver. Also included is a device for carrying out the method of the invention.

3,516,434

LOCK TYPE EXCESS FLOW VALVE

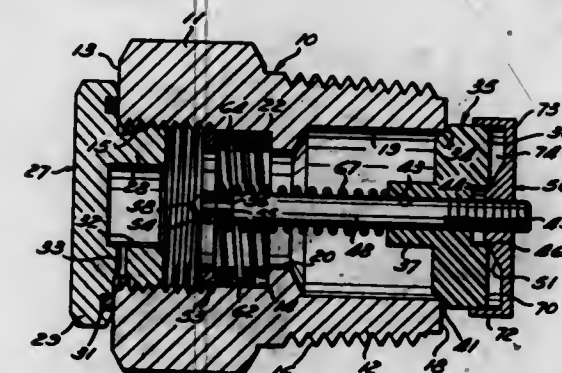
Jeffrey S. Noss, South Euclid, Ohio, assignor to Textron Inc., Providence, R.I., a corporation of Delaware

Filed Aug. 9, 1968, Ser. No. 751,508

Int. Cl. F16k 21/06

U.S. Cl. 137—514.5

13 Claims



A combination liquid eduction valve and excess flow check valve, including a body having a bore therethrough and a valve seat adjacent one end of the bore. A poppet is adapted to make sealing engagement with the valve

seat, and a valve stem located in the body bore is slidably carried by a bore through the poppet. A stop member is secured on the outer end of the valve stem to make sealing engagement with the poppet to prevent fluid leakage through the poppet bore. A helical spring urges the stop member into sealing engagement with the poppet and the poppet into sealing engagement with the valve seat. Another helical spring carried by the stem urges the poppet against the stop. The stop member forms a closed-end cylinder within which the poppet moves as a piston to form a dashpot to dampen oscillations of the poppet along the stem.

3,516,435

ACTUATING MECHANISM OF FLAP AND SLIDE VALVES, PARTICULARLY FOR TANKERS

Hans Schumacher, Werder, Westphalia, Germany, assignor to Kracht Pumpen- und Motorenfabrik K.G., Werder, Westphalia, Germany

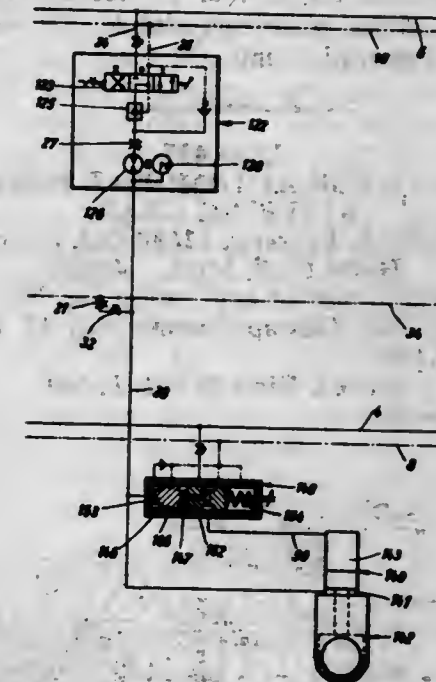
Filed May 31, 1968, Ser. No. 733,589

Claims priority, application Germany, June 1, 1967, 1,690,835; Jan. 19, 1968, 1,675,439

Int. Cl. B63h 25/08; F16k 3/02, 11/10

U.S. Cl. 137—553

21 Claims



An improved actuating mechanism for flap and slide valves, more particularly for tankers, with a central oil delivery and return pipeline to which the actuating mechanism is connected by a hydraulically biased three-way valve with counter-pressure spring, biasing the control slide in the sense of connecting the delivery socket with the working socket, and with means indicating the position of the actuating mechanism, wherein the improvement comprises a construction in which less than two lines are required between the operating stand and each actuating mechanism; and wherein the position of the cutoff mechanism is reliably displayed on the operating stand.

3,516,436

ARRANGEMENT FOR INTERCONNECTING LOGICAL OPERATIONAL UNITS FOR PNEUMATIC CONTROLS

Rolf Klaus, Harald Tittel, and Renate Wagner, Karl-Marx-Stadt, Germany, assignors to Institut für Werkzeugmaschinen, Karl-Marx-Stadt, Germany

Filed Mar. 14, 1967, Ser. No. 622,982

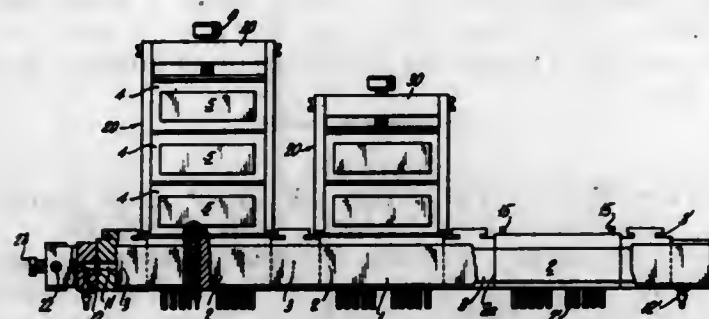
Int. Cl. F15c 3/00

U.S. Cl. 137—561

7 Claims

In an assembly of a plurality of logic elements the operational logic elements are arranged on base plates. Several of such base plates can be arranged in a vertical

column and secured by a vertical guide rail. Several of such vertically arranged operational units are interconnected by means of a distributor carrier plate arranged under each column. Such distributor carrier plate is provided with channels on several levels and in a rectangular coordinate system to provide a large number of connections between the columns of operational elements.



Between adjoining distributor carrier plates an intermediate spacing member is provided which is similarly channelled as the carrier plate. The distributor carrier plates and the intermediate members are supported in a guide rail. Outlets for further connections open on the side of the carrier plate opposite to the side carrying the column of operation units.

3,516,437 VALVE FOR AUTOMOBILE POWER STEERING GEAR

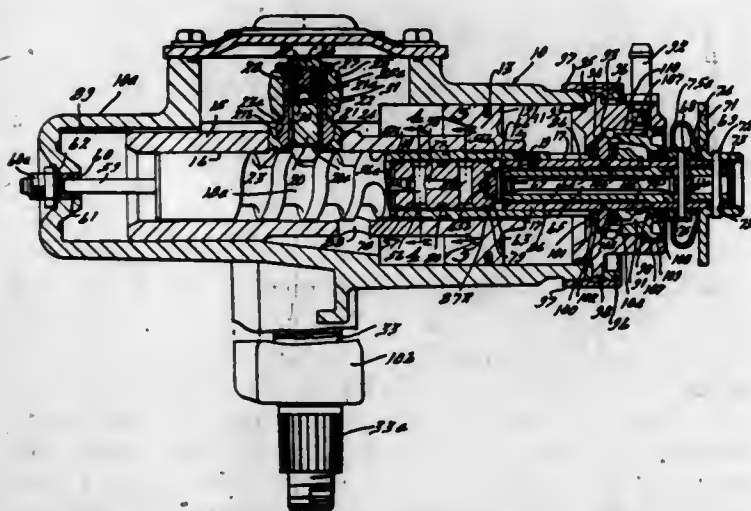
Walter E. Folkerts, 22680 Oak Court,
Hazel Park, Mich. 48030

Continuation-in-part of application Ser. No. 516,990,
Dec. 28, 1965. This application May 17, 1968, Ser.
No. 730,149

Int. Cl. F16k 31/12, 11/00

U.S. Cl. 137—596

17 Claims



Relatively rotatable coaxial inner and outer valve members have confronting outer and inner sealing surfaces respectively in sealing relationship. A pair of diametrically opposed workports extend radially completely through the walls of the outer member, each workport being associated with and partially overlapped by circumferentially spaced supply and return ports in the inner member to provide a pair of axially elongated supply and return passages having accurately defined circumferentially extending short ends spaced axially by accurately defined circumferentially spaced elongated porting edges. One porting edge of each passage is provided by the workport and is slightly oblique to the other porting edge of the same passage, whereas the porting edges provided by the associated supply and return ports are parallel to each other. Each supply and return port comprises a separate recess extending axially in the outer sealing surface between a pair of annular sealing

lands provided by said outer sealing surface and having one edge defining the porting edge of that port. Each supply port also comprises a pressure balancing recess extending axially in said outer sealing surface between said annular sealing lands and terminating circumferentially away from the associated return port and short of the next adjacent return port to provide an axially extending sealing land spacing said latter port from the pressure balancing recess.

3,516,438 MULTI-WAY FLUID CONTROL VALVE

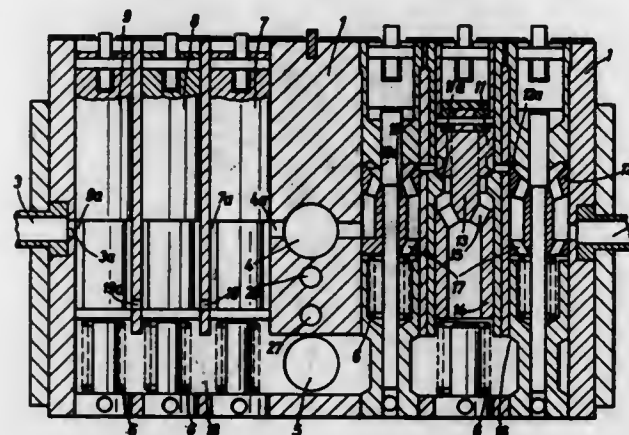
Maurus Glas, am Pflaum, Landshut, Germany

Filed Jan. 19, 1967, Ser. No. 610,384

Int. Cl. F16k 11/10, 11/07

U.S. Cl. 137—596

8 Claims



A multi-way fluid control valve has a valve body provided with a fluid inlet connection, a fluid return connection and at least one consumer connection, and defines a fluid flow path therein between the inlet connection and each consumer connection, each said fluid flow path to a consumer connection being controlled by two or three valve members arranged in separate valve chambers connected in series, and being independently movable between three respectively two operative positions said valve members being independently operable by means of an interchangeable cam arrangement disposed outside said valve body and arranged to operate said valve members against the action of an opposing force.

3,516,439 LOW FLUID PRESSURE ACTUATED FLUID JET INTERRUPTER MEANS

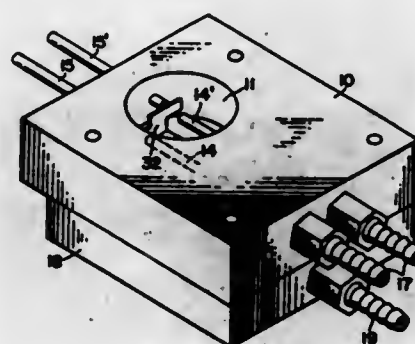
Morris R. Hicks, Brook Park, and Joseph C. Le Veque,
Cleveland, Ohio, assignors to Bardons & Oliver, Inc.,
Cleveland, Ohio, a corporation of Ohio

Filed Aug. 24, 1967, Ser. No. 663,036

Int. Cl. F15c 3/14

U.S. Cl. 137—610

11 Claims



A fluidic jet interrupter device wherein the flow of a fluid stream of substantially constant pressure between axially aligned and spaced apart inlet and outlet conduits is responsive to a controlled very low pressure input signal of the order of about 2" water column, or less,

to selectively delay, disrupt, block, or restore the fluid jet stream between the spaced apart inlet and outlet conduits, whereby the device may be utilized as a time delay means controlling the movement of selected members of an organized machine or the like, or be utilized as a fluid relay for normally "open," or normally "closed" operation.

3,516,440 CONTROL VALVE FOR DIRECTING THE FLOW OF GASES

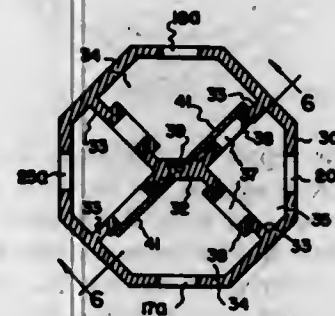
Huber M. Whitlock, Rochester, Douglas M. Bartley,
Detroit, and Richard E. Torongo, Livonia, Mich.,
assignors to C.H.W. Inc., Oak Park, Mich., a cor-
poration of Michigan

Filed Feb. 14, 1968, Ser. No. 705,452

Int. Cl. F16k 11/02

U.S. Cl. 137—625.44

2 Claims



A control valve for directing the flow of gases, such as hot air, comprising a unitary, relatively rough surfaced, cast body, having a thin wall octagonal shaped, a central spline, approximately radially directed walls connecting the spline to the body wall, and with the ends of the body closed off. An opening is formed in each wall and through the body wall into each chamber formed by the adjacent walls. A shaft rotatably extends through the spline and carries a pair of radially extending flaps which extend into two opposite chambers for rotating towards one or the other of their chamber walls to cover the openings therein. The openings have resilient surrounding gaskets, surface contacted and compressed by the flaps. The shaft, with the flaps, are constantly driven by a reversible, constantly rotating, stallable electric motor which constantly forces the flaps in one or the other direction to compress and seal against one pair of gaskets, but with the compressed gaskets resiliently expanding and pushing the flaps, and the motor, in the opposite direction when the motor is reversed.

3,516,441 SUSPENSION ASSEMBLY FOR BOBBIN IN SERVO-VALVE

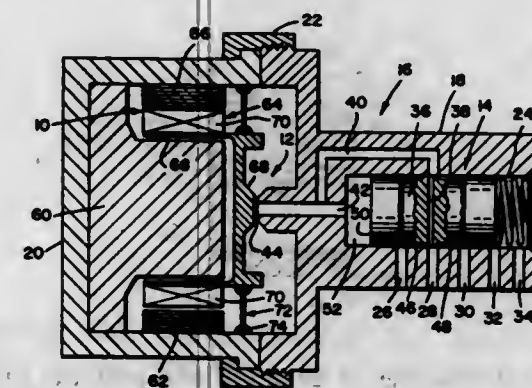
Joseph F. McCormick, Hingham, Mass., assignor to Delta
Hydraulics Company, Braintree, Mass., a corporation
of Massachusetts

Filed Oct. 12, 1967, Ser. No. 674,919

Int. Cl. F16k 11/02, 11/24

U.S. Cl. 137—625.61

6 Claims



A servo-valve with a spool controlled by a pilot in turn controlled by a dynamic force motor having a moveable

coil which carries the flapper valve of the pilot. A mechanical spring having a constant spring rate biases the flapper valve and coil to a neutral position.

3,516,442 MODULAR VALVE AND OPERATOR FOR FLUID LOGIC AND CONTROL SYSTEM

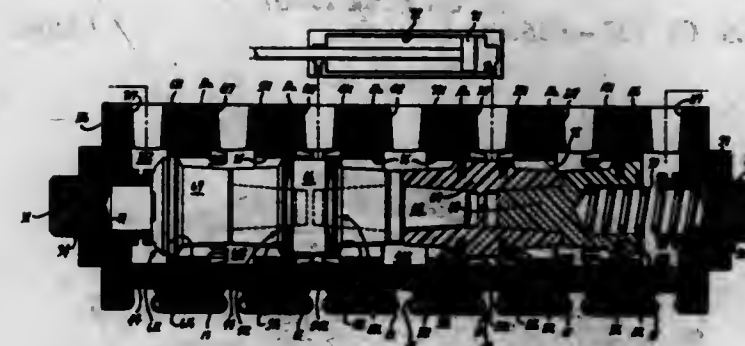
William O. Munroe, Rodeo, Calif., assignor to Amot
Controls Corporation, a corporation of California

Filed Feb. 21, 1968, Ser. No. 707,271

Int. Cl. F16k 11/02, 31/143, 51/00

U.S. Cl. 137—625.66

7 Claims



A sectionalized modular valve system having a minimum number of component parts including a series of end and end stacked housing sections with individual valving and control mechanisms, each including a hollow annulus, mounted between each pair of sections and providing both the sealing means therebetween and an internal working cylinder for slidably receiving and co-functioning with an internally positioned valve and/or control. Additional features include rectangular cross section valve sealing rings providing a minimum valving stroke; tapered annular members providing for easy attachment and detachment of fluid coupling or plug fittings, and spring clip fasteners engaging and securing adjacent sections into an assembled modular valve unit wherein each individual section is removable without disassembly of the entire valve.

3,516,443 PILOT OPERATED VALVE

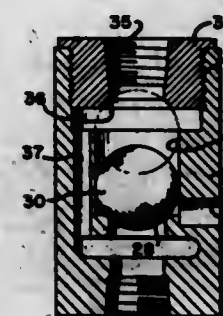
Robert W. Hughes, Easton, Pa., assignor to Ingersoll-
Rand Company, New York, N.Y., a corporation of
New Jersey

Filed Nov. 13, 1967, Ser. No. 682,141

Int. Cl. F16k 11/02, 11/10

U.S. Cl. 137—625.66

5 Claims



A valve which includes a casing defining a cylindrical chamber in which there is an elastomeric ball having a diameter larger than the diameter of the chamber. A pair of passages communicate with the chamber and there is a seat positioned between the two passages. The elastomeric ball fits against this seat to prevent communication between these two passages. In one embodiment a pilot passage communicates with the chamber and permits pilot fluid to force the ball against the seat.

In a second embodiment there is a passage which permits communication between a third passage and the first passage when the ball is seated. The valve of the second embodiment may be used with a consumer such as an air motor to prevent back pressure build up at the consumer exhaust.

3,516,444

HYDRAULIC CONTROL VALVE

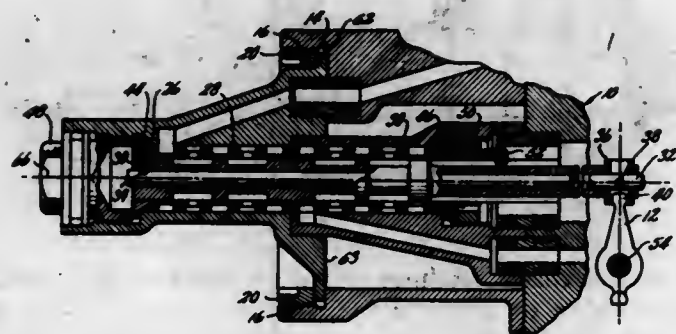
Daniel A. Peck, Wapping, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 6, 1968, Ser. No. 781,736

Int. Cl. F16k 11/07

U.S. Cl. 137—625.69

4 Claims



A hydraulic control system including a spool valve adapted for use in a multiple control system carries on the valve housing a mounting surface that is uniquely located and dimensioned with respect to the spool valve input lever so as to be replaceable by a like spool valve without calibration procedures.

3,516,445

HYDRAULIC ACTUATING SYSTEMS

Ronald E. J. Skeates, Ilford, England, assignor to The Plessey Company Limited, Ilford, England, a British company

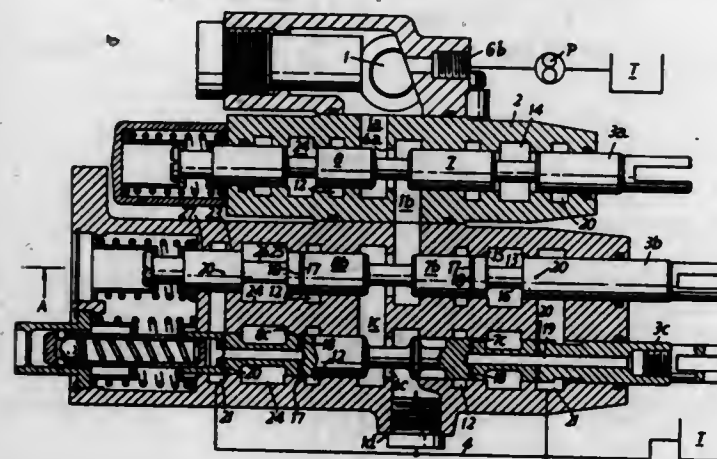
Filed Feb. 4, 1969, Ser. No. 796,345

Claims priority, application Great Britain, Feb. 7, 1968, 6,024/68

Int. Cl. F16k 11/07, 11/10, 23/00

U.S. Cl. 137—625.67

3 Claims



A hydraulic actuating arrangement in which a spool valve comprises a spool slidable in a bore in the body of the actuator, the spool being provided with a peripheral groove which, at least in the neutral position of the spool is trained so that leakage between the spool and said bore is intercepted by said groove and prevented from reaching the associated actuator (not shown). Such an arrangement may be conveniently used in digger or loading equipment to prevent creepage of the associated actuator members.

3,516,446

INSIDE REPAIR CLAMP

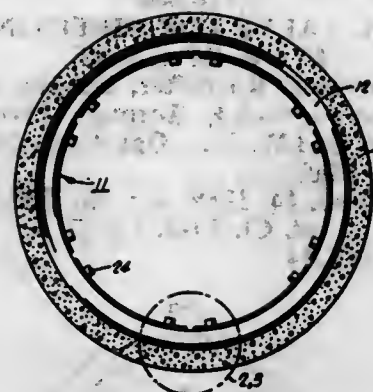
Thomas J. O'Hargan, Michael P. Yoke, and James J. Van Houtte, Bradford, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Jan. 26, 1968, Ser. No. 700,957

Int. Cl. F16l 55/18

U.S. Cl. 138—97

10 Claims



A clamp for the repair of pipe leaks having an annular gasket seal supported against the internal pipe surface axially spanning the area of leak. A circumferential backing ring extending about the gasket maintains a predetermined circumferential compression against the gasket which receives additional sealing compression from the pressurized line contents in the pipe.

3,516,447

CEMENT-LINED PIPE HAVING END INSERTS ASSOCIATED THEREWITH

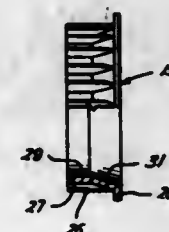
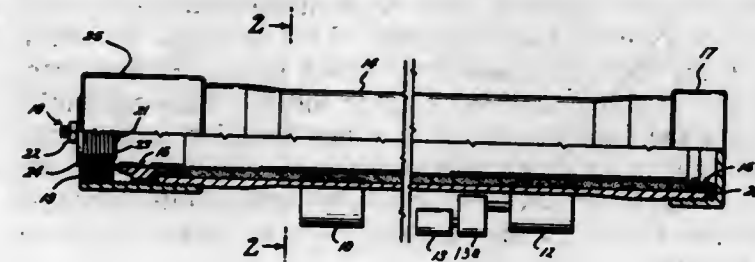
James H. Pittman, Jr., Midland, Tex., assignor to Permian Enterprises, Inc., Midland, Tex., a corporation of Texas

Filed Nov. 1, 1967, Ser. No. 679,780

Int. Cl. F16l 9/00, 9/14; B65d 59/00

U.S. Cl. 138—109

4 Claims



This patent discloses a cement-lined metallic pipe and method of lining the pipe in which plastic inserts are provided at each end of the pipe and engage other inserts in like sections of pipe when they are made up in a string.

The inserts plus a suitable seal therebetween insulate the pipe joint from fluids flowing through the pipe, and maintain an alkaline atmosphere between the inserts and the pipe to neutralize any corrosive fluids which may find their way behind the inserts upon cracking of the lining.

3,516,448

BORE HOLE TYPE WELLS

William Andrew Baker, Bristol, England, assignor to Rolls Royce (Composite Materials) Limited, a British company

Filed Aug. 20, 1965, Ser. No. 481,271

Claims priority, application Great Britain, Aug. 21, 1964, 34,397/64

Int. Cl. F16l 11/02, 9/16

U.S. Cl. 138—144

8 Claims



A pipe for lining a bore hole, the wall of the pipe being of fibre reinforced resin, reinforcing fibres of which extend in two opposite helical directions and are inclined so as to contribute respectively to the hoop strength and the longitudinal strength of the pipe, the wall having slots either moulded or cut into the wall, the slots being aligned in relation to the two said helical directions to maintain the two said strengths of the pipe, even though the slots would appear to be adverse to that maintenance.

3,516,449

FRINGE FORMING MECHANISM FOR LOOMS

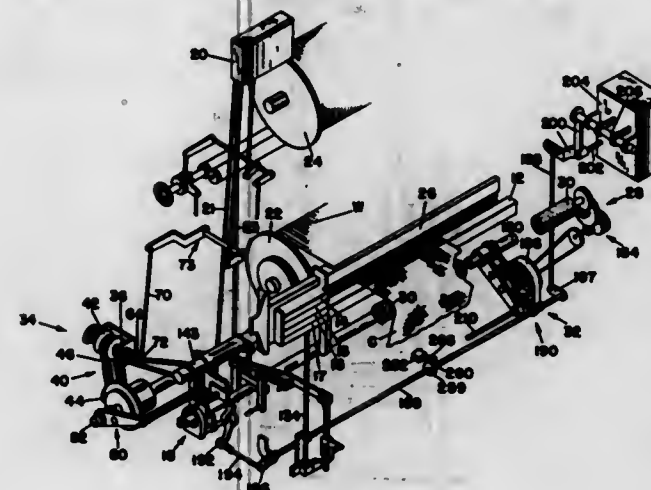
Clifford Darwin, Paxton, and Howard I. Nelson, Grafton, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Filed Aug. 27, 1968, Ser. No. 755,569

Int. Cl. D03c 19/00, 49/06

U.S. Cl. 139—24

11 Claims



A fringe forming mechanism for looms operating with a positive type warp let-off in which the output and input of the let-off is disconnected during the formation of fringe. The fringe is formed by engaging a normally inactive auxiliary cloth take-up which when engaged, takes up cloth at a faster than normal rate.

3,516,450

HELPER FOR THE OUTER CURVED END OF A PICKER STICK CHECK STRAP

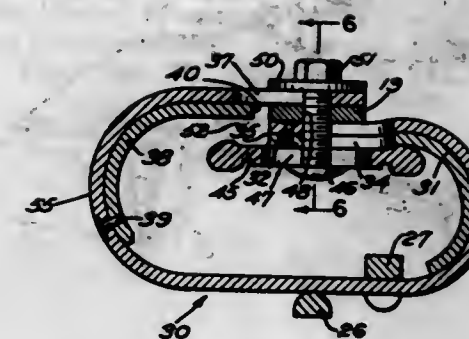
George D. Laflamme, Pawtucket, R.I., assignor to Matthews Equipment Company, a corporation of Rhode Island

Filed Sept. 4, 1968, Ser. No. 757,364

Int. Cl. D03d 49/40

U.S. Cl. 139—165

2 Claims



A helper for the outer curved portion of a picker stick check strap providing a wear surface with one end secured to the picker stick check strap and a free end located in the space between a check strap back plate and a portion of the check strap adjacent the check strap holder so as to be free to move in the space between them.

3,516,451

MACHINES FOR MANUFACTURING SPRING INTERIORS

Walter Spühl, St. Gall, Switzerland, assignor to Spühl A.-G., St. Gall, Switzerland

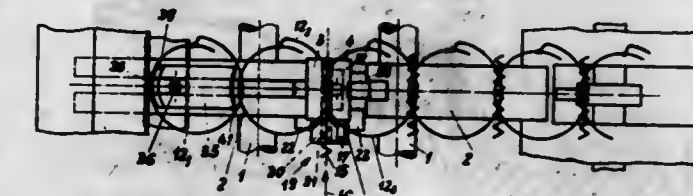
Filed Mar. 3, 1967, Ser. No. 620,369

Claims priority, application Germany, July 12, 1966, S 104,755

Int. Cl. F21f 21/00, 45/00

U.S. Cl. 140—92.8

2 Claims



A machine for manufacturing spring interiors comprises a loading device which feeds adjacent rows of coil springs to symmetrical rows of pairs of tongs where the end convolutions of adjacent springs are joined together by a wire spiral, the feed stroke of the loading device being adjustable to the diameter of the spring end convolutions.

3,516,452

DISPENSING CONTAINER

William R. Scholle, Long Beach, Calif., assignor to Scholle Container Corporation, Northlake, Ill., a corporation of Illinois

Original application Feb. 5, 1965, Ser. No. 430,588, now Patent No. 3,427,646, dated Feb. 11, 1969. Divided and this application June 20, 1968, Ser. No. 738,488

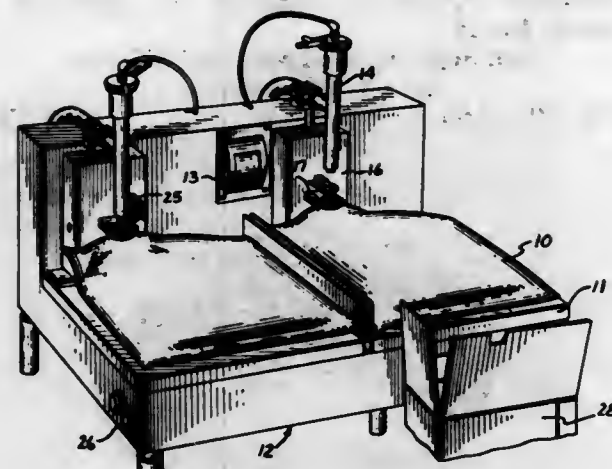
Int. Cl. B65b 1/04, 3/04

U.S. Cl. 141—18

3 Claims

Relates to a dispensing spigot secured to a flexible container, the spigot comprising an outer sleeve component and an inner telescopically engaged tube having a lateral opening through which the contents may be dispensed

when the inner tube is withdrawn to expose the lateral opening. The outer end of the tube is further provided



with a frictionally engaged separable cap by means of which the container may be filled.

3,516,453

EXPANDING APPARATUS FOR ASSEMBLING AND INSERTING INSULATION INTO A ROCKET MOTOR CASE

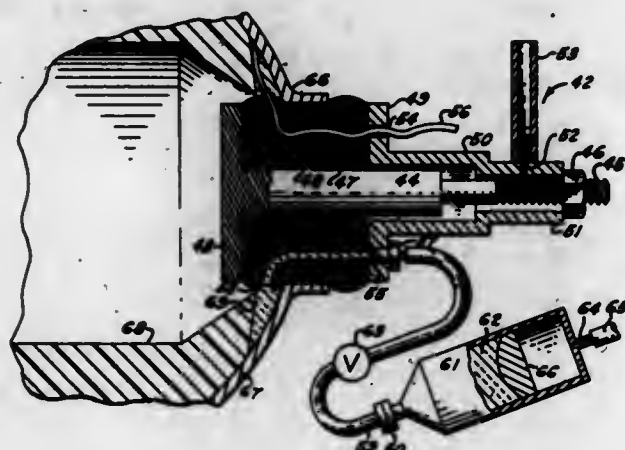
Thomas J. Manning, Jr., Huntsville, and Alfred H. Glover, Somerville, Ala., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed Jan. 15, 1968, Ser. No. 697,675

Int. Cl. B65b 31/00

U.S. Cl. 141—59

2 Claims



An expanding apparatus including, an expanding medium sandwiched between a pair of compression members, a mechanical arrangement associated with the compression members, to actuate the compression members, to dilate the expanding medium, and injection and evacuation systems, cooperating with the expanding medium and the compression members, to insert insulation into a rocket motor case.

3,516,454

PACKING APPARATUS

Bart A. Smith, San Jose, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Feb. 28, 1966, Ser. No. 530,552

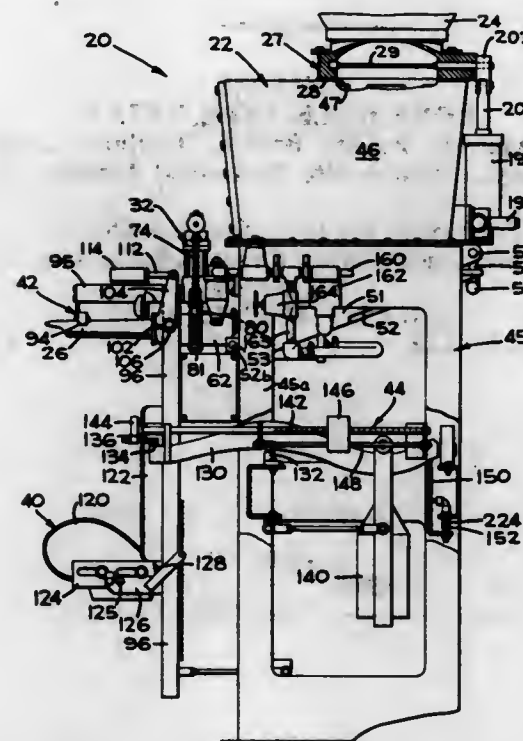
Int. Cl. B65b 1/16

U.S. Cl. 141—68

3 Claims

A pressurized chamber is used to fill dry, fluidizable material into a bag which has been placed upon a filling nozzle projecting from the bottom of the chamber. When the bag is being filled, both fluidizing and pressurizing

air is conducted into the chamber while the material inlet at the top of the chamber is sealed. When the bag is filled, control means closes the filling nozzle and the pressurizing air inlet and opens the material inlet to allow material to enter the chamber from an overhead



hopper while the air in the chamber exhausts through said material inlet. At the end of a predetermined and regulatable period of time, the material inlet is again sealed and the chamber is repressurized to await the operator's initiation of another bag filling cycle.

3,516,455

CONTAINER-FILLING APPARATUS

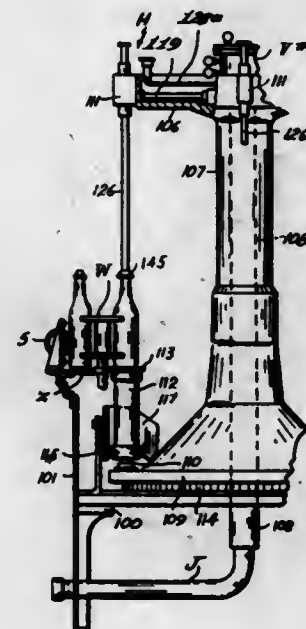
Sidney T. Carter, Shrewsbury, Mass., assignor, by mesne assignments, to "Automatic" Sprinkler Corporation of America, Cleveland, Ohio, a corporation of Ohio

Filed May 1, 1967, Ser. No. 635,040

Int. Cl. B65b 3/26; B67c 3/02

U.S. Cl. 141—90

49 Claims



A container-filling machine of the rotary type having a circular series of filling heads which revolve about the axis of the machine, each filling head comprising a vertical filling tube, each tube having a normally closed filling valve at its lower end, and a pressure-fluid motor operative to open and close the valve, a differential pressure

valve for controlling the supply of pressure fluid to the motor, and means for supplying liquid to each filling tube, characterized in having a plurality of nozzles from each of which a jet of air normally issues but with provision whereby one or another of said jets may be diverted from its normal course, fluid logic means, comprising a series of fluid logic modules, each of which is sensitively responsive to the diversion of one or another of said jets, as the filling head revolves about the axis of the machine, and which, in so responding, activates the differential valve, thereby to initiate a corresponding one of certain specific operations such as may be included in the filling cycle, for example the opening or closing of the filling valve; the removal of drip from the end of the filling tube when the valve is closed; or the delivery of an inert gas into the empty container while the valve is closed before filling commences.

3,516,456

POWER LATHE

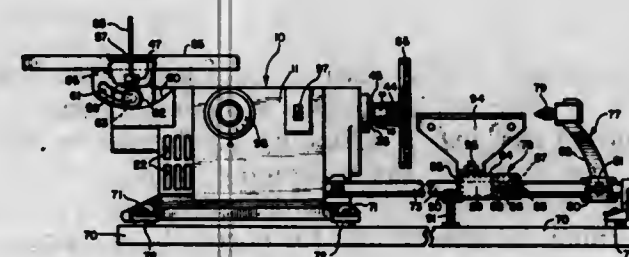
John F. Roods and Jerome A. Buschman, Jefferson City, Mo., assignors to McGraw-Edition Company, Elgin, Ill., a corporation of Delaware

Continuation of application Ser. No. 637,284, May 9, 1967. This application July 14, 1969, Ser. No. 841,311

Int. Cl. B23b 3/28

U.S. Cl. 142—1

7 Claims



A wood lathe having a power housing and frame mounted on a base and lathe ways therebetween, and tool holding and tailstock carriages on the lathe ways at least one having a foot means extendable therefrom against the base for laterally stabilizing the lathe ways.

position of the guide plate can be varied with respect to the base member so that different angular cuts can be made on a workpiece. Two apertures in the guide plate are arranged so that a workpiece may be hand held against the base member thereby preventing movement of the workpiece while it is being cut.

3,516,458

GUIDES FOR TWIN BLADE SAWS

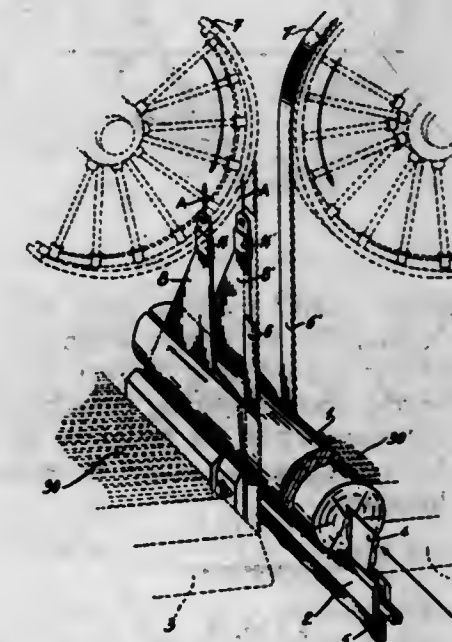
Constantin Hedrel, Montreal, Quebec, Canada, assignor to Forano Limited, Plaisanceville, Quebec, Canada

Filed Apr. 22, 1968, Ser. No. 722,837

Int. Cl. B27b 15/04, 15/08

U.S. Cl. 143—22

9 Claims



A solid plate is mounted behind each saw of twin blade saws so as to follow in the kerf thereof, the said plates being under a stretchable tension in a plane perpendicular to the plane of the kerf.

3,516,459

SHARPENERS FOR CHAIN SAWS

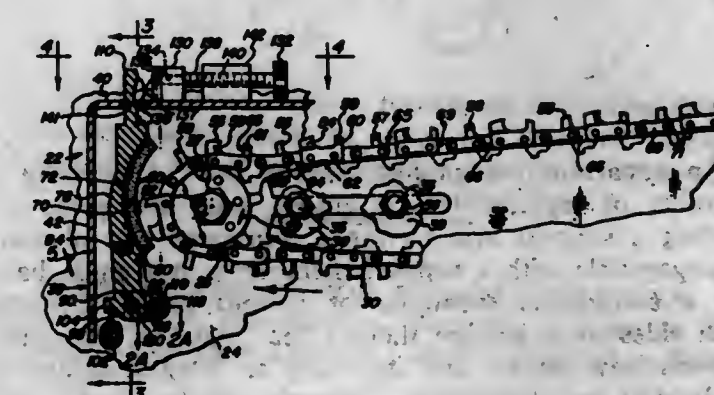
Kay Silvon, Portland, Ore., Horace J. Buttner, New Canaan, Conn., and Russell E. Carter, Portland, Ore., assignors to Omark Industries, Inc., Portland, Ore., a corporation of Oregon

Filed May 21, 1965, Ser. No. 457,552

Int. Cl. B27b 13/00

U.S. Cl. 143—32

16 Claims



An arcuate abrasive member is mounted on a carrier detachable from a sprocket cover, and is of a length sufficient to always engage at least one tooth. The carrier is movable to dress the abrasive member over the full width of the abrasive member.

3,516,457

HAND HELD MITER GUIDE FOR USE WITH A POWER SAW

Samuel Winters, 1801 Randolph Drive,

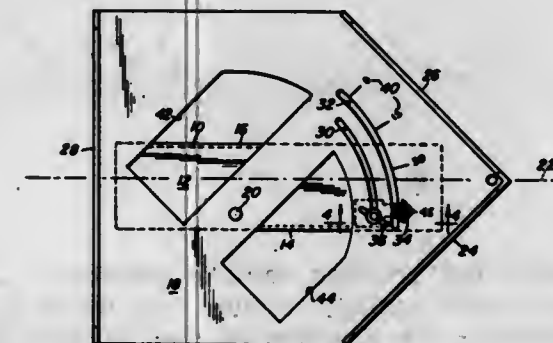
Pocahontas, Ark. 72455

Filed May 27, 1969, Ser. No. 828,169

Int. Cl. B27b 27/06

U.S. Cl. 143—6

6 Claims

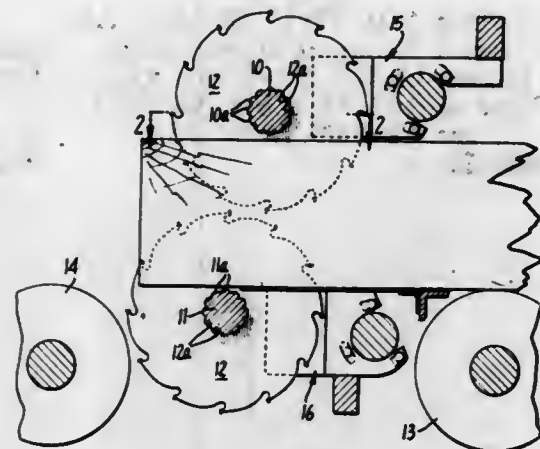


This disclosure relates to a miter guide having a U-shaped base member which is pivotally mounted on a guide plate. The guide plate has two forward guiding edges which intersect to form a right angle with each other and a single rearward guiding edge, all of which are turned up to provide shoulders or flanges for engaging the shoe plate of an electric power saw. The

3,516,460
MOUNTING FOR GUIDED CIRCULAR SAWS
 Elbridge W. Thrasher, Ukiah, Calif., assignor to
 Masonite Corporation, a corporation of Delaware
 Filed Mar. 27, 1968, Ser. No. 716,528
 Int. Cl. B27b 5/30

U.S. Cl. 143-155

4 Claims

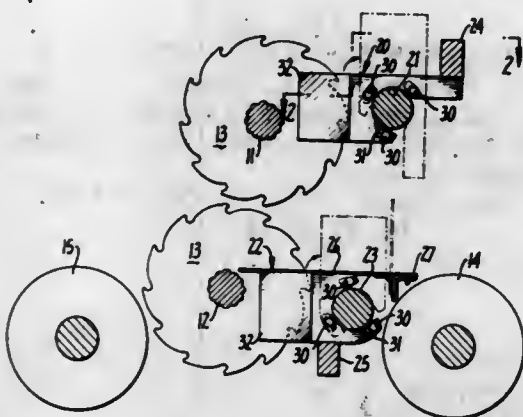


A mounting for guided circular saws comprising an arbor having a plurality of splines arranged in a symmetrical pattern and one or more circular saws, each saw being formed with a central opening including a plurality of recesses complementary to the periphery of said arbor and adapted for receiving the arbor therethrough with axial floating looseness.

3,516,461
SAW GUIDE APPARATUS
 Elbridge W. Thrasher, Ukiah, Calif., assignor to
 Masonite Corporation, a corporation of Delaware
 Filed Mar. 27, 1968, Ser. No. 716,527
 Int. Cl. B27b 11/02

U.S. Cl. 143-160

14 Claims



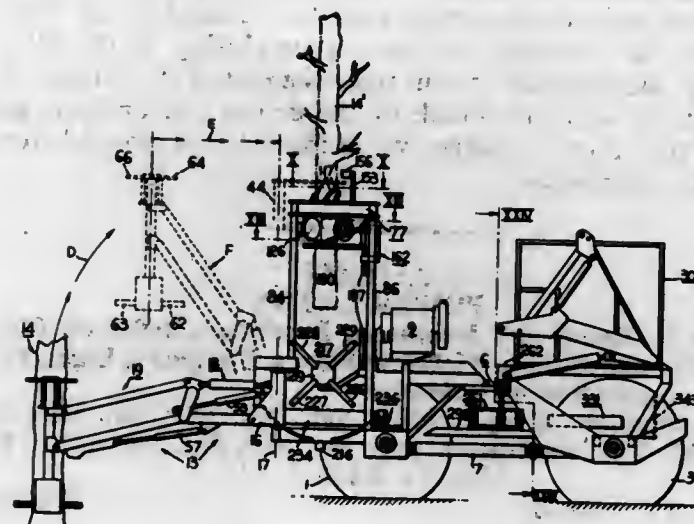
An apparatus for guiding circular saws comprising a plurality of replaceable saw guides, each saw guide including a support arm having a bifurcated end pivotally engageable with a support member; a saw guide having a continuous sheathing of babbitt metal covering both sides or a portion thereof that may be positioned between saw blades, and including an integral gridwork of babbitt metal extending through the saw guide; and methods for forming saw guides of the kind described by initially providing a plurality of contacts on the saw guides, using those contacts to position the saw guide within a mold cavity, and forming a sheathing with prescribed clearances relative to saw blades which are to be guided therewith.

3,516,462
APPARATUS FOR HARVESTING TREES
 Edwin O. Martinson, Milwaukee, Wis., and Phillip A. Huffaker, Brantford, Ontario, Canada, assignors to
 Koehring-Waterous, Ltd., Brantford, Ontario, Canada,
 a corporation of Canada
 Filed May 4, 1967, Ser. No. 636,215
 Claims priority, application Canada, Feb. 20, 1967,
 983,325

Int. Cl. B27b 29/00

U.S. Cl. 144-3

7 Claims



A pulpwood tree is processed into logs by cutting the tree at its base while holding it against falling, lifting the upright tree into a delimbing head, lowering the upright tree through the delimbing head, successively severing upright logs from the delimbed trunk of the tree and turning the severed logs for horizontal stacking.

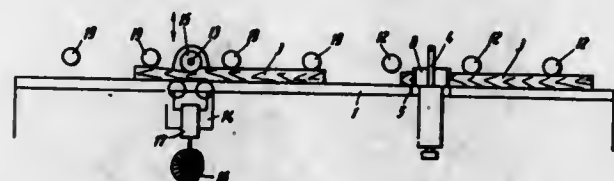
A mobile machine which performs the mentioned delimbing, log severing, log turning and log stacking operations without interrupting the steady lowering of the tree through the delimbing head.

3,516,463
MACHINE FOR COPYING AND LONGITUDINALLY MACHINING WORKPIECES
 Otto Betzler, Tauberbischofsheim, Germany, assignor to
 Michael Weing KG., Tauberbischofsheim, Germany
 Filed Apr. 29, 1968, Ser. No. 725,077
 Claims priority, application Germany, Apr. 28, 1967,
 W 43,866

Int. Cl. B27c 5/04

U.S. Cl. 144-144

21 Claims

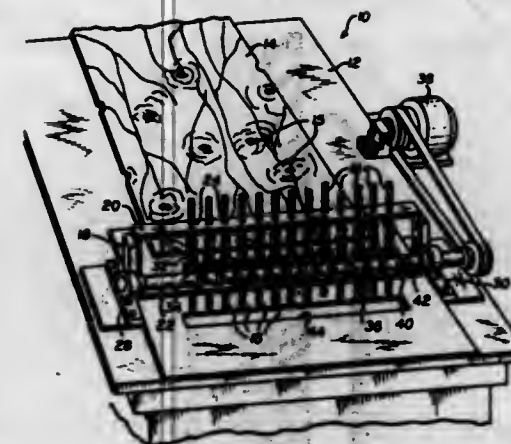


Apparatus for profiling rail-like members, such as wood rails, which includes a table over which the rails are advanced in the direction of their length. At least one headstock with a spindle is positioned adjacent the path of the rail members and with a tool on the spindle for cutting the workpiece. A template and servomotor controls the movement of the headstock toward and away from the workpiece being machined and the template is moved by a drive mechanism that includes a roller engaging the rail being machined so as to be driven thereby.

3,516,464
APPARATUS AND METHOD FOR REMOVING WOOD DEFECTS
 Joseph F. Cyr, Lebanon, Oreg., assignor to U.S. Plywood-Champion Papers Inc., a corporation of New York
 Filed July 22, 1968, Ser. No. 746,683
 Int. Cl. B27d 5/00

U.S. Cl. 144-309

14 Claims



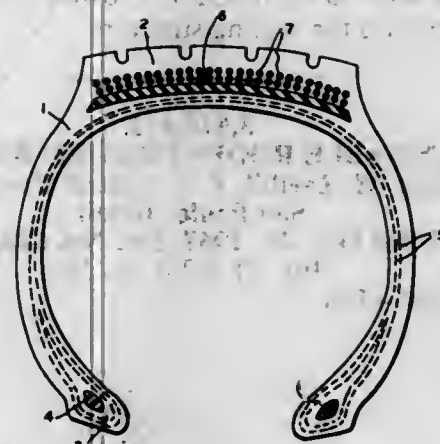
An apparatus and method is provided for deknottling wood, particularly thin wood sections such as veneer, and includes a plurality of striking elements, such as rods positioned above the wood and means for periodically forcing the rods into contact with the wood to thereby loosen and dislodge wood defects. Each rod is separately regulated to strike the wood at predetermined intervals and each is provided with means to reciprocally move the rods in a plane substantially at right angles to the wood which is being processed.

3,516,465
REINFORCED TIRE
 Raymond F. J. Guyot, Paris, France, assignor to Fiverel Company, Paris, France, a corporation of France
 Filed Jan. 18, 1968, Ser. No. 698,800
 Claims priority, application France, Jan. 18, 1967,
 91,579

Int. Cl. B60c 9/20, 9/18

U.S. Cl. 152-361

5 Claims

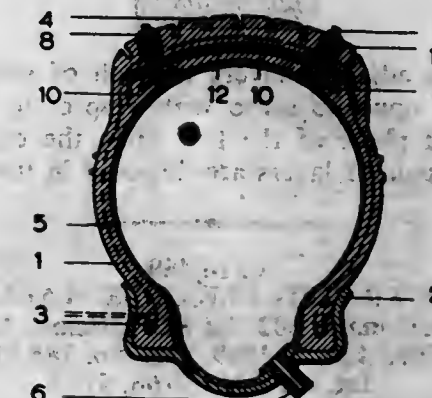


A reinforced tire having in the zone of the tread a belt comprising one or more sheets of cabled cords or twisted single yarns or threads of glass filaments which can be individually coated in a sheath of elastomer, and one or more layers of high-hardness elastomer having a Shore hardness of greater than 70. The high-hardness elastomer can be located either below the belt or below and between the multiple elements thereof.

3,516,466
SPIKED TIRES FOR AUTOMOTIVE VEHICLES
 Michael Smit, 70 Buecklestrasse, 7750 Constance (Bodensee), Germany
 Filed Jan. 29, 1968, Ser. No. 701,296
 Claims priority, application Germany, Jan. 30, 1967,
 S 108,075; May 24, 1967, S 110,003
 Int. Cl. B60c 11/16

U.S. Cl. 152-208

7 Claims



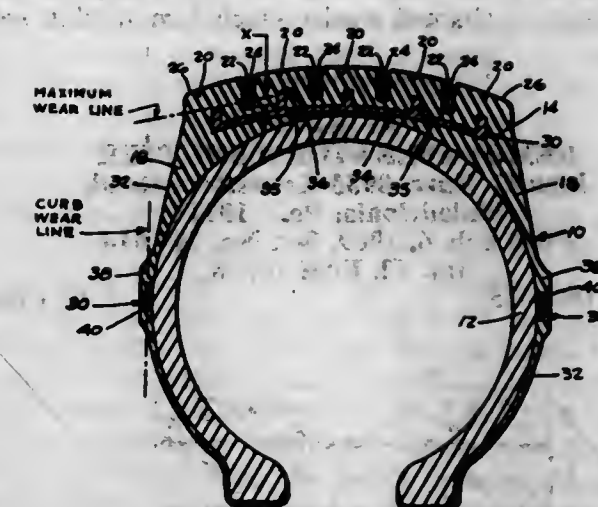
An automobile tire with retractable spikes has each spike located in a hole in the tread of the tire. The spike has a head fastened to a band inside the tire, and inflation of a tube of which the band forms part, retracts the spikes into the tread. Deflation of the tube causes the spikes to protrude from the tread.

3,516,467
TIRE WITH AUTOMATIC WEAR INDICATING MEANS

Clark D. Sims, Huntington Station, N.Y. (3604 Ann Circle SE., Rio Rancho Estates, N. Mex. 87124)
 Filed Mar. 19, 1968, Ser. No. 714,264
 Int. Cl. B60c 19/10

U.S. Cl. 152-330

8 Claims



A tire for motor vehicles having an indicating device to automatically determine when the tread or sidewall portions of a tire is worn beyond a safe limit for driving.

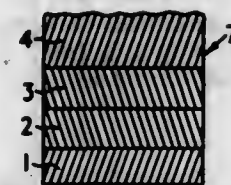
3,516,468
BREAKER STRIP FOR PNEUMATIC TIRES
 Frank B. Jones, Birmingham, England, assignor to The Dunlop Company Limited, London, England, a British company
 Filed May 28, 1968, Ser. No. 732,616
 Claims priority, application Great Britain, June 16, 1967,
 27,765/67

U.S. Cl. 152-361

5 Claims

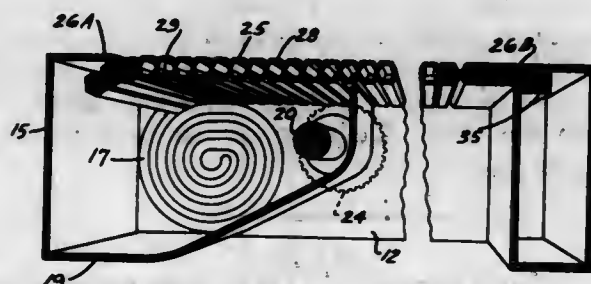
A pneumatic tire provided with a breaker assembly such that self-aligning torque in the complete tire is substantially eliminated, the breaker assembly comprising an even number of breaker layers greater than two

arranged such that the cord angles of the layers in the radially outer half of the breaker assembly are mirror imaged by those of the radially inner half and such that



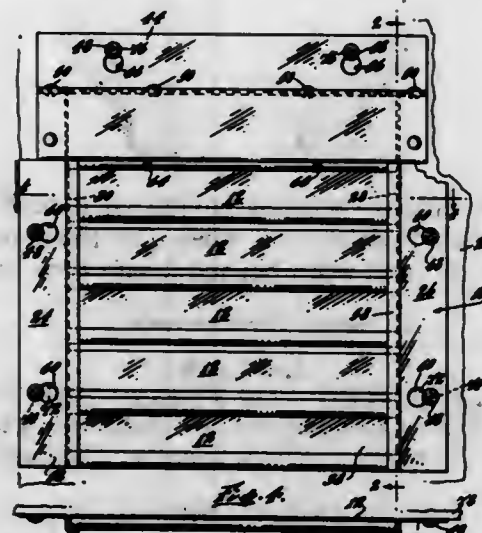
at least two adjacent layers in each of said halves are disposed in opposite sense with respect to the mid-circumferential plane of the tire while the cord angles of the central pair of layers are disposed in the same sense.

3,516,469
POWER OPERATED FLEXIBLE WALL SECTION
Bruce L. McDonald, 302 1st St., Jackson, Mich. 49203
Filed Jan. 2, 1969, Ser. No. 788,516
Int. Cl. E06b 9/08, 9/14
U.S. Cl. 160—26 2 Claims



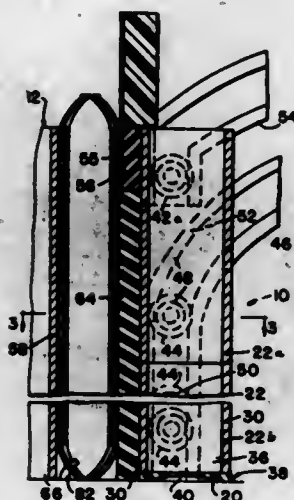
This application discloses a power driven device which may be used as a door, a partition, or a closure for any type of opening in a wall. The invention resides in the particular combination and arrangement of elements, particularly the double layer construction of the closer and the manner of supporting and tensioning its longitudinal edges in channel tracks which terminate in spiral housings.

3,516,470
REMOVABLE STORM SHUTTER
John C. Kurz, 8933 Krewstown Road, Philadelphia, Pa. 19115
Filed Feb. 6, 1969, Ser. No. 797,014
Int. Cl. E04f 10/08
U.S. Cl. 160—35 12 Claims



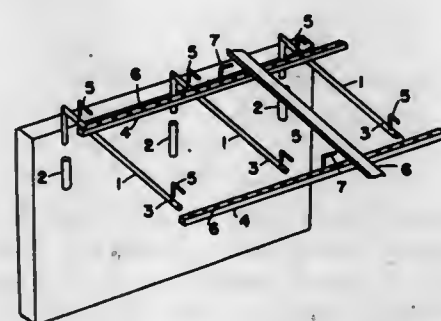
A removable storm shutter including a plurality of interfolded transverse metallic blades and easily removable means for securing the blades over windows and doors of a building to thereby provide protection against high winds and unauthorized entry into the building.

3,516,471
SEAL STRUCTURE
Allen A. Harkins, Grosse Ile, Mich.; Richard G. Stoner, 806 Washington Road, Grosse Pointe, Mich. 48236, and Bruce D. Caulkins, 806 Shoreclub Drive, St. Clair Shores, Mich. 48080; said Harkins assignor to said Stoner and said Caulkins
Filed Mar. 25, 1968, Ser. No. 715,845
Int. Cl. E06b 7/18
U.S. Cl. 160—40 5 Claims



A seal structure is provided for sealing the space between a fixed structure defining an opening and a movable closure member slidably associated therewith. The movable closure structure is preferably a sliding overhead type door having articulated horizontal sections mounted on the loading opening of truck trailer bodies, shipping containers, and some home garages where temperature control is desired. One of the seal structures is provided on the fixed structure on each side of the opening. The seal structures each comprises a hollow sealing actuator carried by the fixed structure. Each sealing actuator has flexible, resilient wall portions which define a closed chamber. A sealing element is provided on each sealing actuator between the sealing actuator and the door. The wall portions of the sealing actuator normally expand because of their resiliency and maintain the sealing element in sealing contact with the door. A vacuum pump is provided. The pump is connected to the hollow chamber of the sealing actuator to collapse the chamber when it is desired to open the door and relieve the sealing element of sealing contact with the door to thereby permit the door to be raised and lowered without contact of the door with the sealing structure.

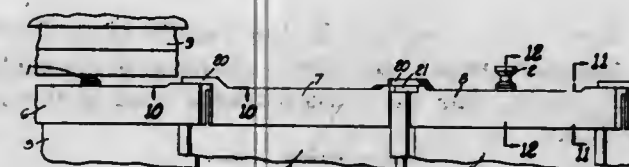
3,516,472
EXPANDABLE ROOFS FORMED BY PLATES
Salvador M. Zveibil, P.O. Central Postal 12800, Sao Paulo, Brazil
Filed Dec. 26, 1967, Ser. No. 693,654
Int. Cl. E04f 10/10
U.S. Cl. 160—136 5 Claims



A roof that is supported by rods in the form of a parallelogram, the rods being pivotally connected at the crossing points so that they are expandable to rectilinear

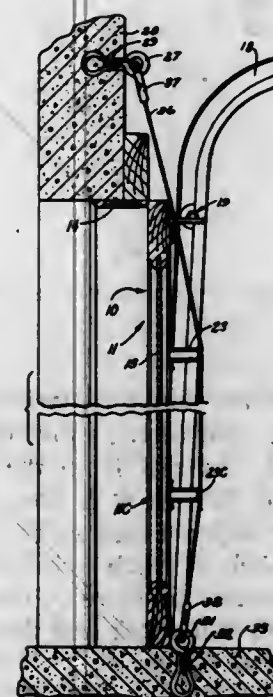
form or collapsible to a substantially linear form always retaining the shape of a parallelogram; a series of nestable plates each pivotally connected to one pair of parallel rods provides the cover of the roof.

3,516,473
INTERLOCKING CAP FOR FOLDABLE DOOR
Kurt E. Rosenquist, Pacific Palisades, Calif., assignor to Louverdrape, Inc., Santa Monica, Calif., a corporation of California
Filed Oct. 17, 1968, Ser. No. 777,952
Int. Cl. E05d 15/26
U.S. Cl. 160—183 6 Claims



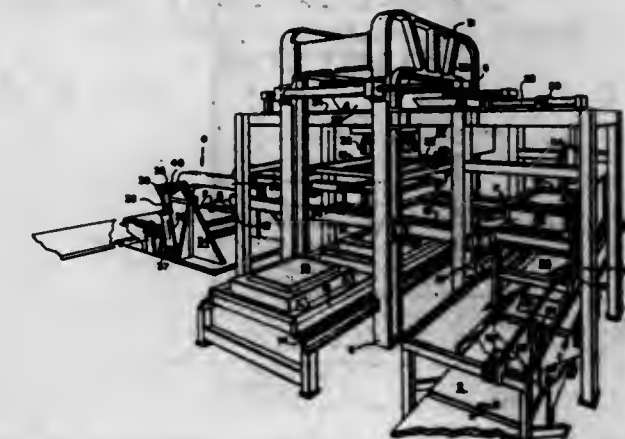
This disclosure relates to a cap which is affixed to the upper portion of each panel in a vertical foldable panel door. This cap is useful with the type of foldable doors which are hinged by some means which permits vertical movement of one panel with respect to its adjacent panel. The cap permits a panel to be vertically supported by the panel next to it, while still permitting a freedom of rotation around a non-concentric axis at the hinge.

3,516,474
DOOR BRACE STRUCTURE
Paul E. Pemberton, Irving, and Sheldon D. Loose, Carrollton, Tex., assignors to Overhead Door Corporation, Dallas, Tex., a corporation of Indiana
Filed Apr. 10, 1968, Ser. No. 720,288
Int. Cl. E05d 15/20, 15/58
U.S. Cl. 160—209 9 Claims



A brace device for a door, particularly of the upwardly acting type having a plurality of horizontally hinged sections, wherein brace members are secured to and project from the internal surfaces of said sections in vertical alignment. A flexible brace element, which is anchored at its upper end to a portion of the building above the door and is releasably secured at its lower end to the floor adjacent the door opening, extends along and firmly engages the projecting edges of the brace members.

3,516,475
MOLDING METHOD AND APPARATUS
William E. Dougherty, Pittsburgh, Pa., assignor to Herman Pneumatic Machine Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1966, Ser. No. 594,086
Int. Cl. B22c 15/00
U.S. Cl. 164—37 18 Claims



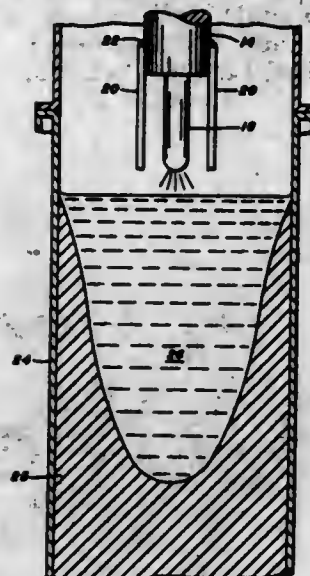
A molding method comprising forming a cope mold in a first slip flask having a pattern therein, drawing said pattern, forming a drag mold in a second slip flask having a pattern therein, drawing said second mentioned pattern, inverting the second slip flask with the drag mold therein, supporting the drag mold and removing the second slip flask therefrom, placing the cope mold on the drag mold and removing the first slip flask from the cope mold. Preferably the drag mold is formed at a first station and the second slip flask with the drag mold may be shifted to a second station and at the second station the drag mold may be supported and the second slip flask removed therefrom.

Also molding apparatus comprising a first slip flask and pattern for forming a cope mold, a second slip flask and pattern for forming a drag mold, means for introducing mold forming material into the flasks upon the patterns, means for compacting the introduced mold forming material to form cope and drag molds, means for drawing the patterns, means for inverting the second slip flask with the drag mold therein, means for supporting the drag mold and removing the second slip flask therefrom, means for placing the cope mold on the drag mold and means for removing the first slip flask from the cope mold. One station may be provided at which the molds are formed and another station may be provided at which the cope mold is placed on the drag mold, and transfer means may be provided for transferring the molds between the stations. The cope mold may be formed in the first slip flask and the drag mold in the second slip flask at a common station. Cope molds and drag molds may be formed alternately at the common station.

3,516,476
ELECTRODE AND METHOD OF IMPROVING SOUNDNESS OF INGOTS
Richard M. Scriver, North Jackson, Ohio, assignor to Reactive Metals, Inc., a corporation of Delaware
Filed Apr. 25, 1968, Ser. No. 724,101
Int. Cl. B22d 23/06
U.S. Cl. 164—52 7 Claims

A method of improving the soundness of ingots produced in a consumable-electrode melting process and a specially constructed electrode for use in such processes. The electrode has a non-consumable auxiliary electrode suspended above its body. At the end of the melting op-

eration, an arc of reduced current is maintained between the auxiliary electrode and the top of the ingot to con-



trol final solidification of the ingot. Produces an ingot having a flat upper surface.

3,516,477

CORE MAKING MACHINE

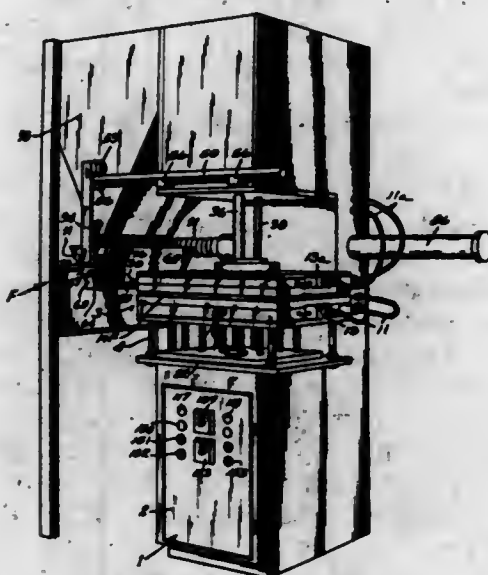
George V. Harris and Arden L. Borgen, Racine, Wis., assignors to Harris Metals, Inc., Racine, Wis., a corporation of Wisconsin

Filed Apr. 5, 1968, Ser. No. 719,130

Int. Cl. B22c 15/28, 19/04

U.S. Cl. 164-157

10 Claims



A machine for making molds for foundries and including means for automatically and accurately filling the mold forms with sand or the like, curing the mold by heat and in a very short time, and ejecting the finished mold.

3,516,478

APPARATUS FOR SEPARATION OF IMPURITIES FROM METAL MELTS IN A FILAMENT SPINNING DEVICE

Stanley A. Dunn, Verona, Wis., and Lawrence F. Rakestraw, Raleigh, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Filed Dec. 5, 1967, Ser. No. 688,165

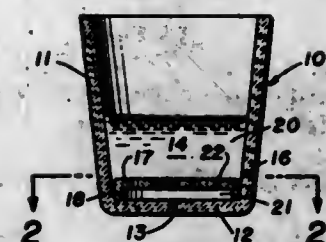
Int. Cl. B22d 11/10

U.S. Cl. 164-281

6 Claims

A low viscosity metal melt which is contained by a heated crucible is passed through a hearth plate which is

positioned in the heated crucible to free the melt of insoluble non-metallic film and particle inclusion impurities prior to being extruded through a spinning orifice to form



metal fibers. The openings in the hearth plate through which the melt passes have cross-sectional areas each of which is greater than the cross-sectional area of the spinning orifice.

3,516,479
WATER COOLED CONTINUOUS CASTING MOLD

Johannes Kurth, Josef Glaser, and Manfred Strohschein, Gelsenkirchen, Germany, assignors to Mannesmann Aktiengesellschaft, Düsseldorf, Germany, a corporation of Germany

Filed Oct. 24, 1967, Ser. No. 677,546

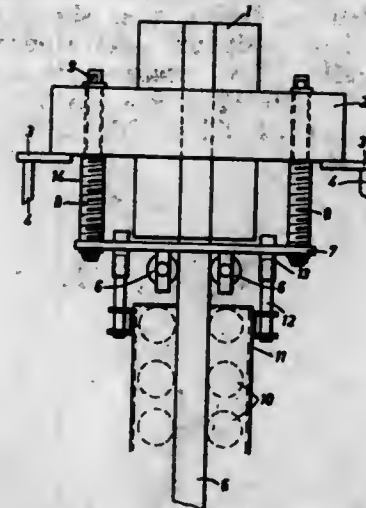
Claims priority, application Germany, Oct. 26, 1966,

M 71,435

Int. Cl. B22d 11/12

U.S. Cl. 164-282

2 Claims



A continuous casting mold is corrected with a water box for chilling the wall of the mold to enable a chilled metal shell to form and exit from the mold as a billet. Under the water box, sets of rolls are disposed to engage the exiting billet to support and guide the moving billet. When the chilled shell of such a billet is inadequate to withstand the hydrostatic pressure of the still liquid metal in the shell, the shell will crack and the liquid metal leak out onto the rolls and freeze.

3,516,480

SHOT TUBE FOR A DIE CASTING TYPE MACHINE

Joseph A. Woltering, Hamilton, Ohio, assignor to Hamilton Die Cast, Inc., Hamilton, Ohio, a corporation of Ohio

Filed June 17, 1968, Ser. No. 737,748

Int. Cl. B22d 17/10

U.S. Cl. 164-312

10 Claims

An improved shot tube structure for a die casting type machine of horizontal cold chamber design. The preferred

embodiment of the shot tube has an outer sleeve fitted to an inner sleeve, the outer sleeve having a heat exchange insert fitted into a longitudinal slot along the bottom of the outer sleeve. The insert acts as a heat transmitter to receive and to dissipate heat from the bottom of the shot



tube to the atmosphere as successive molten metal charges are ladled into and ejected from the shot tube. Such structure prevents warping or bowing of the shot tube during extended die casting runs of high melting point alloys.

3,516,481

MOLDING APPARATUS

William E. Dougherty, Zellenopole, Pa., assignor to Herman Pneumatic Machine Company, Pittsburgh, Pa., a corporation of Pennsylvania

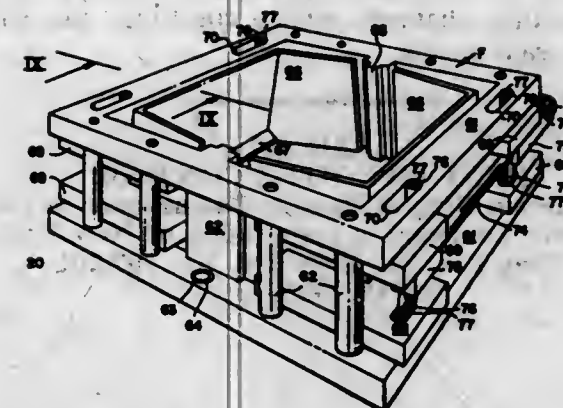
Original application Nov. 14, 1966, Ser. No. 594,086.

Divided and this application Aug. 26, 1968, Ser. No. 777,524

Int. Cl. B22c 21/02

U.S. Cl. 164-384

7 Claims



Molding apparatus comprising a fixture, a plurality of flask parts mounted in the fixture for relative movement between closed or molding position and open or mold clearing position, the fixture having means for accurately positioning the flask parts in closed or molding position, and means for relatively moving the flask parts between said positions. Preferably the fixture has accurately positioned locating means, such as bushings, for cooperation with locating devices, such as for receiving locating pins, on base means on which the molding apparatus is adapted to be mounted in accurately predetermined position. The means for relatively moving the flask parts are preferably mounted on the fixture and have portions operatively connected with the flask parts. Desirably reciprocable means are mounted on the fixture with connections to the flask parts constructed and arranged to move the flask parts into open or mold clearing position when the reciprocable means move in the opposite direction. The reciprocable means may be a piston operating in a cylinder mounted on the fixture with piston rods connected with the piston extending out of both ends of the cylinder, the piston rods having projections in inclined slots in the flask parts so that the flask parts are moved

into closed or molding position when the piston moves in one direction in the cylinder and the flask parts are moved into open or mold clearing position when the piston moves in the opposite direction in the cylinder.

3,516,482

ROTARY REGENERATOR WITH RECTANGULAR MATRIX SECTIONS

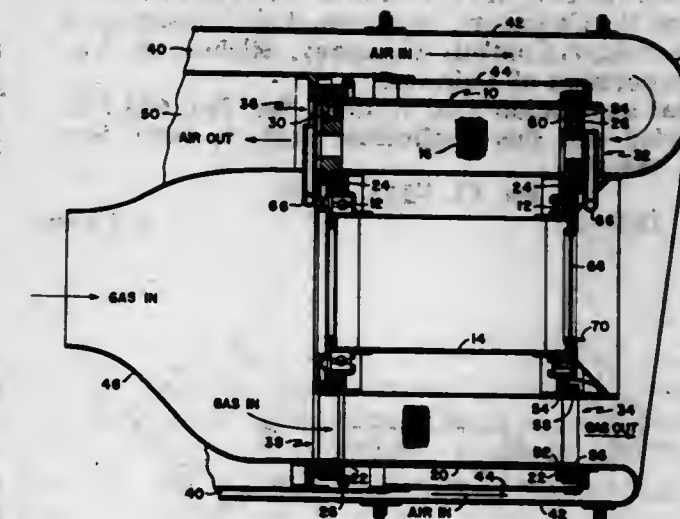
Salvatore Straniti, Orange, and Frederick Manney-Shaw, Stratford, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware

Filed Sept. 13, 1968, Ser. No. 759,668

Int. Cl. F28d 19/04

U.S. Cl. 165-7

2 Claims



A heat exchanger is constructed with a plurality of rectangular sections of wire mesh, axially extending and radially supported matrices positioned within a rotating cylindrical drum. The matrices are retained diagonally within axial channels so that the axial flow of gases is directed transversely through each matrix.

3,516,483

HEAT EXCHANGE ARRANGEMENT

Erich Benteler, Heepen, Hermann Schmidt, Niederdornberg, and Wilhelm Schmidt and Wilhelm Beermann, Bielefeld, Germany, assignors to Benteler-Werke Aktiengesellschaft, Bielefeld, Germany

Filed May 27, 1968, Ser. No. 733,222

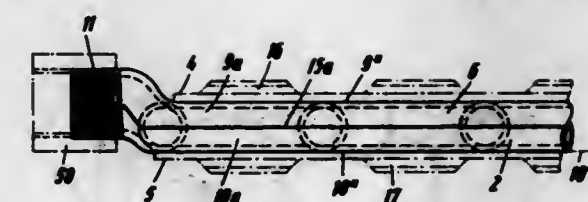
Claims priority, application Germany, May 27, 1967,

B 92,755; Aug. 16, 1967, B 93,994

Int. Cl. F28d 1/00

U.S. Cl. 165-22

15 Claims



A heat exchange arrangement includes a heat exchange unit having a housing, a fluid inflow manifold tube and a fluid outflow manifold tube respectively arranged in an upper and lower portion of the housing, and a plurality of upright tubes connecting the inflow and outflow manifold tubes. In accordance with the invention each of the manifold tubes consists of two hollow elongated shell sections having opposite ends and together constituting the respective manifold tube, these shell sections being formed inter-

mediate their opposite ends with first projections extending transversely of the elongation of the shell sections and together constituting first tubular sockets to which the upright tubes are to be connected, and at their opposite ends with respective second projections together constituting second tubular sockets extending axially of the respective manifold tube and being laterally offset to one side of the longitudinal axis of the same to such an extent as to assure that a tubular component which is connected to the respective second sockets surrounding the same is substantially flush with the manifold tube at the opposite side thereof from the one side.

3,516,484

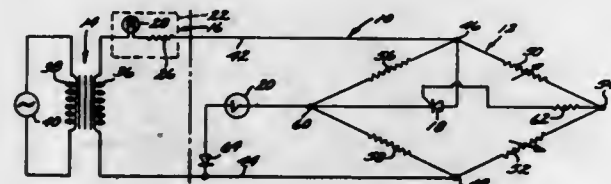
TEMPERATURE CONTROL SYSTEM FOR HEATING AND COOLING APPARATUS

William W. Chambers, Anaheim, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Original application Jan. 7, 1967, Ser. No. 688,772.
Divided and this application Sept. 9, 1969, Ser. No. 856,429

Int. Cl. F25b 29/00

U.S. Cl. 165-26

8 Claims



A temperature control system for heating and cooling apparatus and including a temperature sensitive bridge circuit which becomes unbalanced in response to environmental temperature change, the bridge circuit including a pair of impedances connected in series with a voltage source and a temperature change apparatus, the system being operative to apply substantially all of the source voltage to the temperature change apparatus when the bridge becomes unbalanced, the unbalanced triggering a rectifier which shorts out one impedance, and the triggering of the rectifier operating a switching means which shorts out the other impedance.

3,516,485

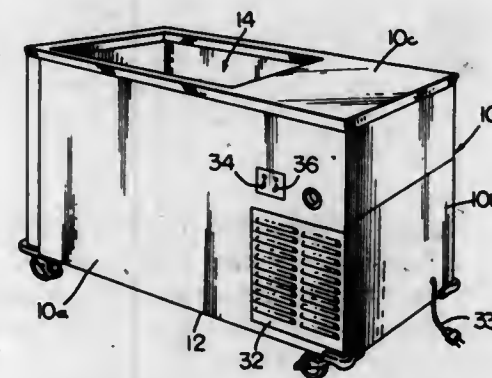
FOOD CONTAINER

Delmar D. Rhoads and Robert H. MacKay, Fort Wayne, Ind., assignors to Lincoln Manufacturing Company, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed May 15, 1968, Ser. No. 729,306

Int. Cl. F25b 29/00

U.S. Cl. 165-27

4 Claims



A food container is provided with cooling means around its side walls and with heating means at its bottom. The

cooling means and the heating means are selectively operated to maintain the container at cold temperatures or hot temperatures.

3,516,486

HEATED OR COOLED CEILING OR WALL STRUCTURES

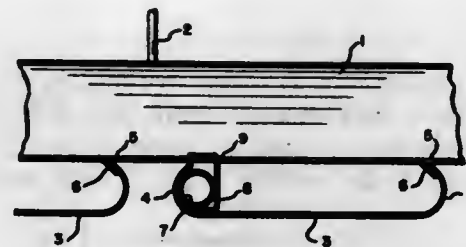
Pierre A. J. Ledoux, Paris, France, assignor to Hunter Douglas International Ltd., Pointe Claire, Montreal, Quebec, Canada

Filed Apr. 18, 1968, Ser. No. 722,487

Int. Cl. F24h 9/08

U.S. Cl. 165-54

5 Claims



The present invention relates to panel ceiling and wall structures comprising metal elements constituting the visible ceiling structure and comprising supporting bars or channels upon which said elements are clipped. These supporting channels are hung by means of hanger straps from the ceiling of the building. The invention relates more specifically to the type of ceiling in which the elements which are clipped on the supporting channels are shaped as panels with upturned longitudinal edges thus leaving a free space between their interior wall and the supporting channels which constitute the support means for said panels.

3,516,487

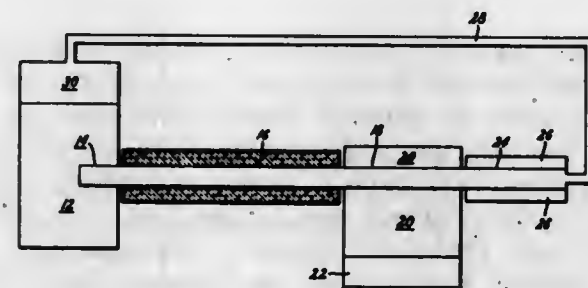
HEAT PIPE WITH CONTROL

John T. Kelsner, King of Prussia, Pa., assignor to General Electric Company, a corporation of New York
Filed Feb. 21, 1968, Ser. No. 707,201

Int. Cl. G05d 23/00

U.S. Cl. 165-105

1 Claim



Heat is conveyed from a nominally constant-output heat source to a heat utilization device by a heat pipe employing a transfer medium whose vapor pressure varies rapidly with temperature change. In order to maintain the operating temperature approximately constant with changes in consumption by the utilization device (or in the event of variation in the supposedly constant source output) an inert gas reservoir is connected to the end of the heat pipe remote from the source. The reservoir temperature is maintained approximately constant in order to keep the pressure of the inert gas approximately constant by placing it in close thermal communication with the heat pipe whose temperature it tends to regulate.

3,516,488

DEVICE FOR INTRODUCING TOOLS OR INSTRUMENTS INTO AN UNDERWATER WELL FROM A FLOATING INSTALLATION

Philippe Joubert, Rungis, and André Castela, Measil-Le-Roi, France, assignors to Institut Français du Pétrole, des Carburants et Lubrifiants, Ruell-Malmaison, France

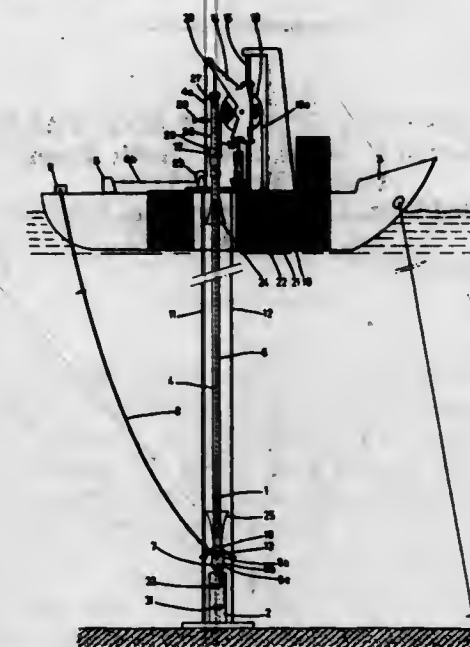
Filed Dec. 26, 1967, Ser. No. 693,584

Claims priority, application France, Dec. 28, 1966, 89,255

Int. Cl. E21b 33/035; E21c 19/00

U.S. Cl. 166-5

7 Claims



The device includes a flexible pipe whose lower end is adapted to the top of the wellhead and is maintained under tension between the water bottom and the surface installation.

Two guiding devices of bell shape limit the inclination which may be taken by this pipe at the top of the well-head and at the water surface, the internal wall of these guiding devices having in a section by an axial plane an incurved profile the slope of which has, with respect to the guiding device axis, a continuous variation.

3,516,489

OFFSHORE DRILLING AND WELL COMPLETION APPARATUS

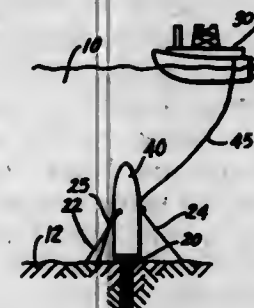
Allen A. Jergins, 900 NE. Loop 410, San Antonio, Tex. 78209

Filed Jan. 5, 1968, Ser. No. 696,047

Int. Cl. E21b 7/12, 33/035, 43/01

U.S. Cl. 166-5

13 Claims



Apparatus is provided for drilling and completing hydrocarbon production wells in substantial depths of water. Such apparatus includes a surface vessel and a submersible drilling vessel. After the surface vessel sets and cements at least one pipe in the formations below the floor of the body of water, the submersible drilling vessel is coupled in a watertight manner to the pipe and drilling of a well is performed from the interior of the submersible drilling vessel which houses well drilling equipment as well as logging and completion equipment. Such interior is at substantially atmospheric pressure and is in fluid communication with the surface vessel. If the drilled well is com-

pleted as a producing well, the submersible drilling vessel installs valves on a plate means which is left on the floor of the body of water when the submersible drilling vessel is moved to a new location.

3,516,490

METHOD AND APPARATUS FOR PRODUCING AN OFF-SHORE WELL

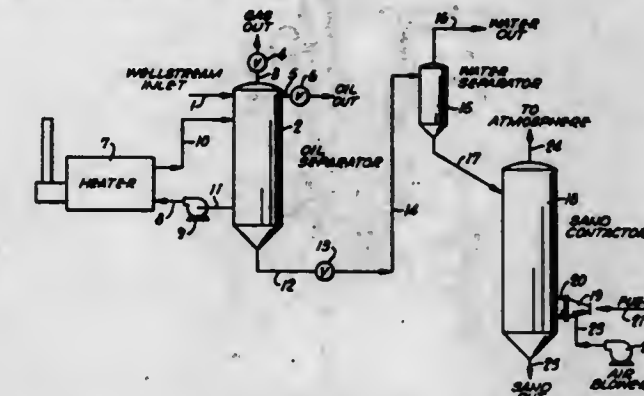
Charles E. Smalling, Oklahoma City, Okla., and Otis J. Waguespack, Metairie, La., assignors to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware

Filed Mar. 12, 1969, Ser. No. 835,829

Int. Cl. C10g 33/00; E21b 43/01

U.S. Cl. 166-5

7 Claims



A method and apparatus for producing a well surrounded by a body of water wherein the well stream includes gas, water, oil, oil-water emulsion and oil-coated sand. The gas, oil and a portion of the water are separated from the well stream to form a slurry of water and oil-coated sand. The slurry is then contacted by hot gases to carbonize the oil on the sand so that the sand may be disposed of directly into the body of water surrounding the well without causing pollution thereof.

3,516,491

UNDERWATER CONTROL SYSTEM

George E. Lewis, Arcadia, Calif., assignor to Hydril Company, Los Angeles, Calif., a corporation of Ohio

Original application Oct. 14, 1963, Ser. No. 315,827, now Patent No. 3,353,594. Divided and this application June 28, 1967, Ser. No. 661,486

Int. Cl. E21c 19/00

U.S. Cl. 166-6

9 Claims



The invention concerns the remote operation, from a surface station, of electrically responsive means including valving for controlling delivery of fluid pressure to actuator apparatus at a submarine well head location, the occurrence of sub-surface valving change of state being detected at the surface and with minimum wiring.

3,516,492

UNDERWATER WELLHEAD CONNECTOR

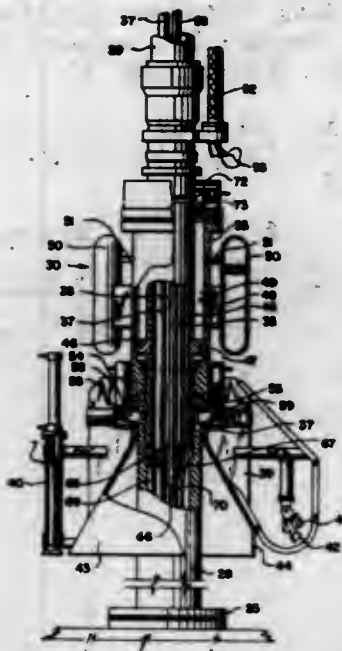
William H. Petersen, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 23, 1968, Ser. No. 731,381

Int. Cl. E21b 43/01; F16l 39/00

U.S. Cl. 166—6

4 Claims



A wellhead connector for establishing operative communication between a subsea wellhead assembly and a floating vessel. The connector includes wellhead assembly locating and positioning means for assisting the operator in locating the wellhead assembly and operatively positioning the connector with respect thereto without the use of guidelines. The connector also includes conduits extending to the vessel and movable with respect to the rest of the connector to cooperate with conduits in the assembly so that desired operations, such as maintenance and work-over operations may be carried out.

3,516,493

WELL PACKER APPARATUS

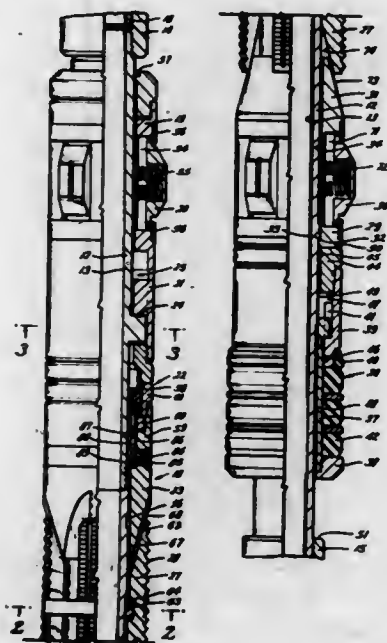
Howard L. McGill, Houston, Tex., assignor to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas

Filed Apr. 22, 1968, Ser. No. 722,912

Int. Cl. E21b 23/06, 33/128

U.S. Cl. 166—140

12 Claims



A retrievable well packer apparatus including a body member having upper and lower expander means slid-

ably mounted thereon for movement toward and away from each other, slip means between said expander members and slidably coupled to said body member and one of said expander means, and packing means for sealing off a well bore in response to movement of said body member relative to slip and expander means in one longitudinal direction, said packing means including elastomeric packing elements and pressure responsive parts subject to fluid pressure acting in the opposite longitudinal direction for exerting compressive force on said packing elements.

3,516,494

MIGRATORY SCRAPER AND VALVE

Warren F. Ward, 3601 Turtle Creek, Dallas, Tex. 75219

Filed Sept. 23, 1968, Ser. No. 761,762

Int. Cl. E21b 37/02

U.S. Cl. 166—175

13 Claims



A paraffin scraper which is free to migrate up and down a length of sucker rod to clean the same and also the tubing in which the rod is reciprocating, the scraper having a body surrounding the rod and insertable thereon by way of a slot disposed longitudinally through one side of the body, and the scraper having a sliding valve support and scraping blade assembly extending through the slot and beyond it at each end of the body and supporting a valve member which can either restrict the slot or leave it open depending upon the longitudinal position of the valve assembly with respect to the body, the valve support comprising an actuator having means surrounding the sucker rod above and below the body to guide it thereon and to move the valve into and out of the slot in response to impact against abutments spaced apart along the sucker rod, the longitudinal position of the valve member determining the direction of migration of the scraper on the sucker rod.

3,516,495

RECOVERY OF SHALE OIL

John T. Patton, Houston, Tex., assignor to Esso Research and Engineering Company

Filed Nov. 29, 1967, Ser. No. 686,677

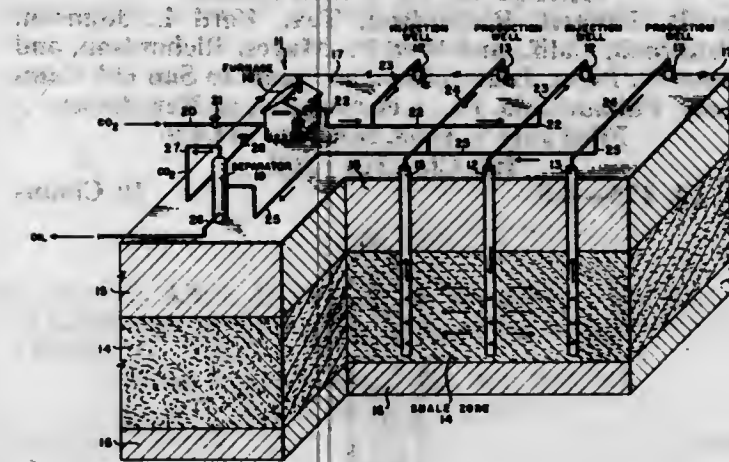
Int. Cl. E21b 43/24

U.S. Cl. 166—272

9 Claims

Shale oil is recovered from oil shale by injecting hot carbon dioxide into an undisturbed impermeable oil shale formation containing carbonates and having highly per-

meable water-bearing streaks to heat the formation and convert kerogen to shale oil which is recovered from a



production well spaced from an injection well through which the hot carbon dioxide is injected.

3,516,496

WELL COMPLETION AND WORKOVER FLUID AND METHOD OF USE THEREOF

James H. Barkman, Jr., Ventura, Calif., and Henry C. H. Darley, Robert M. Jorda, and Robert N. Tuttle, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 29, 1968, Ser. No. 748,166

Int. Cl. E21b 33/13

U.S. Cl. 166—281

10 Claims

An improved well completion and workover fluid comprising an aqueous solution containing a synergistic additive mixture of a polyoxyethylene polymer and powdered marble particles of 1-400 micron dimensions and optimally a wetting and bulk reducing agent. The above composition is injected into a permeable subsurface earth formation, e.g., during drilling, well completion or before oil recovery by fluid drive, to temporarily plug desired portions thereof by means of an impermeable filter cake. The filter cake is removed by backflowing and/or dissolving the solid particles with a pH-adjusting fluid which is displaced into contact with the portion of the formation in which the filter cake was formed.

3,516,497

LAND LEVELER

Arthur P. Waterson, Box 415, Dighton, Kans. 67839

Filed July 30, 1968, Ser. No. 748,736

Int. Cl. E02f 3/76

U.S. Cl. 172—4.5

10 Claims



An articulated land leveling machine comprising the combination of a conventional tractor for towing a hitch on which is mounted a ground engaging scraper blade to scrape and fill ground to a predetermined depth and including manually operable means for presetting the cutting depth, the machine further comprising a trailer having a rear supporting wheel and means connecting the hitch and trailer for pivotal movement relative to one another about a horizontal axis, the rear wheel taken together with the tractor front wheels cooperating to provide feeler or sensing means, and a hydro-mechanical system on the hitch and trailer actuated by means on the tractor responsive to the sensing means to automatically maintain the preset cutting depth of the scraper blade and feeler wheels in a common plane when in their respective ground-engaging positions, and wherein the

control means for the hydro-mechanical system comprises an actuating yoke connected to the tractor drawbar and being operable in response to the vertical pivotal movement of the sensing wheels relative to the axis of the rear wheels of the tractor.

3,516,498

ELECTRO DRAFT CONTROL MECHANISM

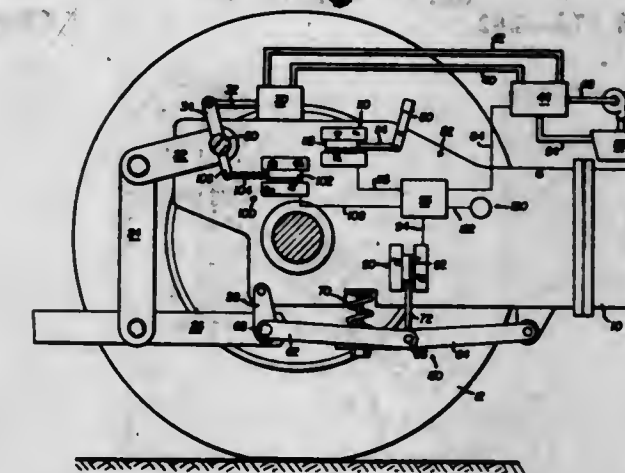
Lewis G. Schowalter, Racine, Wis., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Filed Mar. 7, 1968, Ser. No. 711,444

Int. Cl. A01b 63/112; 63/114

U.S. Cl. 172—9

9 Claims



A draft control system including a draft sensing mechanism for controlling the magnitude of draft exerted upon a tractor-drawn implement as well as a positioning mechanism for positioning the implement with respect to the tractor. The sensing and/or positioning mechanisms include electrical apparatus for producing a signal which in turn is compared with a reference signal and a single resultant output signal is produced which actuates an electrically operated valve to reposition the implement with respect to the tractor and/or maintain a predetermined draft load on the implement.

3,516,499

FLEXIBLE TANDEM IMPLEMENT

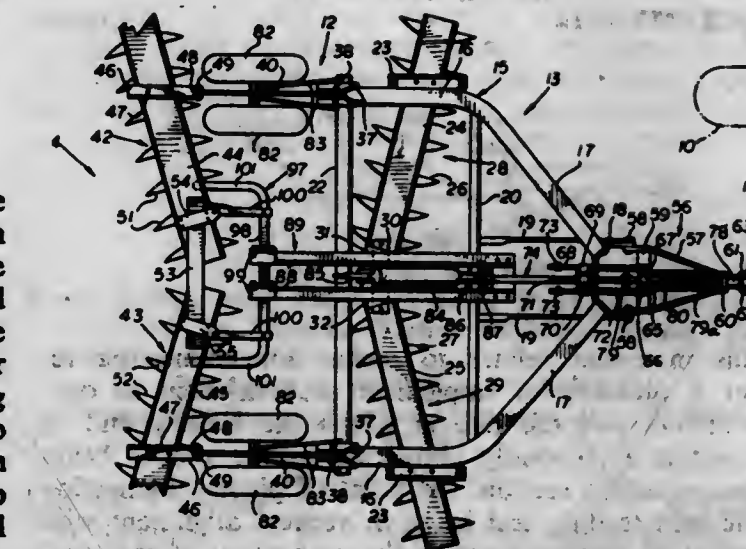
Otto E. Johnson, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Continuation of application Ser. No. 614,127, Feb. 6, 1967. This application Oct. 20, 1969, Ser. No. 667,937

Int. Cl. A01b 61/00

U.S. Cl. 172—261

17 Claims



A flexible tractor-drawn implement such as a tandem disk harrow wherein the front operating unit is connected to the rear unit by means accommodating relative vertical movement between the units while supporting the

weight of the rear unit on the front unit when the latter is elevated by engaging an obstruction offering a low draft resistance. The implement is connected to the tractor by a slidable draft member which releases the supporting means for the rear unit when the front unit rides over an obstacle offering abnormal draft resistance.

3,516,500

TRAILING PLOUGHS

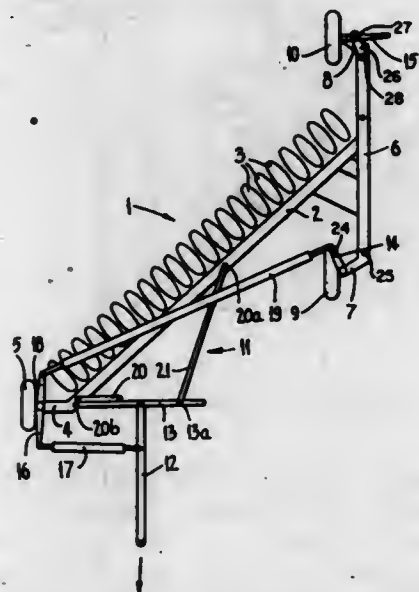
James F. Butler, Blemont, Geelong, Australia, assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed June 1, 1967, Ser. No. 642,842

Int. Cl. A01b 69/00

U.S. Cl. 172-282

5 Claims



A trailing disk plough is provided with front and rear furrow wheels and a land wheel, and in the transport position steering linkage connecting the furrow wheels is also operatively connected to the draft means to transmit steering motion of the propelling vehicle to the furrow wheels. Turning of the plough is facilitated by arranging the wheels in such a way that the locus of intersection of the axes of the furrow wheels during turning of the plough lies on a line through the axis of the land wheel.

3,516,501

BALL AND SOCKET AND DEPTH CONTROL CONNECTION FOR CULTIVATING IMPLEMENTS

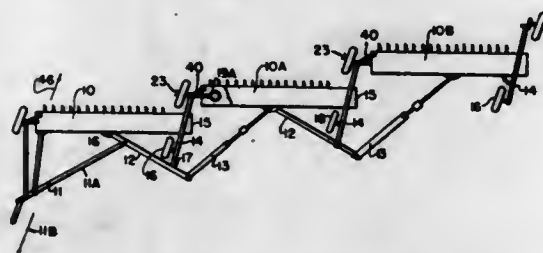
Ralph W. Sweet, Forgan, Saskatchewan, Canada

Filed May 4, 1967, Ser. No. 636,166

Int. Cl. A01b 49/00

U.S. Cl. 172-314

6 Claims



This invention relates to means for connecting together a plurality of implement sections such as one-way discers and the like in which the leading end of one section is pivotally connected to the rudder beam of the preceding section, the point of pivotal connection of the said trailing end being in vertical alignment with the point of vertical pivot of the rear wheel of said rudder beam. Vertical adjustment is provided for the said leading end connection so that the section can be levelled without interfering with the levelling of the preceding section.

3,516,502
METHOD AND APPARATUS FOR EXPLOSIVE DRILLING OF WELL BORES

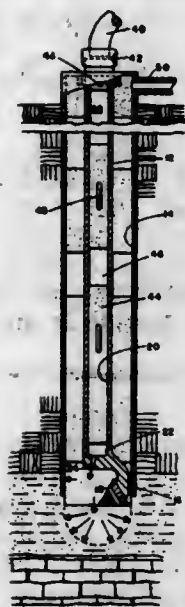
John D. Bennett, Richardson, Tex., Ford L. Johnson, Fallbrook, Calif., and Fred M. Mayes, Richardson, and John W. Peret, Dallas, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 9, 1968, Ser. No. 743,426

Int. Cl. E21b 7/00

U.S. Cl. 175-4.5

10 Claims



The particular embodiment described herein as illustrative of one form of the invention utilizes, in a drilling operation, a system for introducing alternate slugs of liquid and gas into the well bore as the drilling fluid. At the same time, explosive capsules are introduced into the drilling fluid, which explosives are arranged to detonate upon impact with the earth formation being drilled.

3,516,503

ELECTRICALLY CONTROLLED AND POWERED SUBMARINE ROTARY CORER SYSTEM

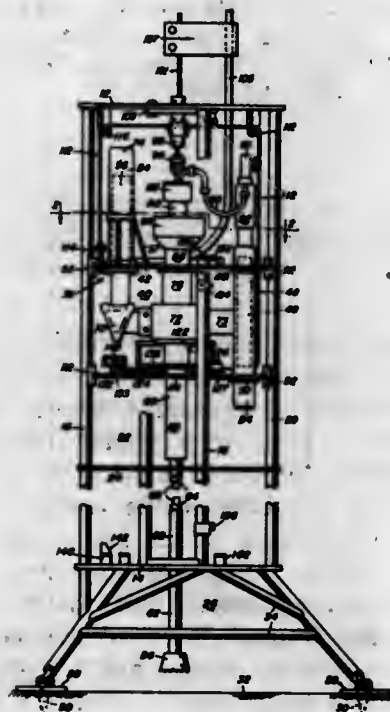
Ernest F. Mayer, Palo Alto, Ward Brannon, San Jose, and Edwin S. Schaller, Jr., Los Gatos, Calif., and Frank C. Pickard, Chatham, N.J., assignors to the United States of America as represented by the Secretary of the Interior

Filed Dec. 23, 1968, Ser. No. 785,918

Int. Cl. E21b 7/12

U.S. Cl. 175-6

5 Claims



Core sample drilling apparatus which is made operable when stationed on a sea floor. A carriage guided for vertical displacement in the apparatus supports self-contained

pump and drill drive mechanism governed by interrelated remote and internal control devices. Included is an internal control device for automatically connecting the drill drive to a carriage retracting mechanism at the end of the drilling stroke.

3,516,504
SCALES

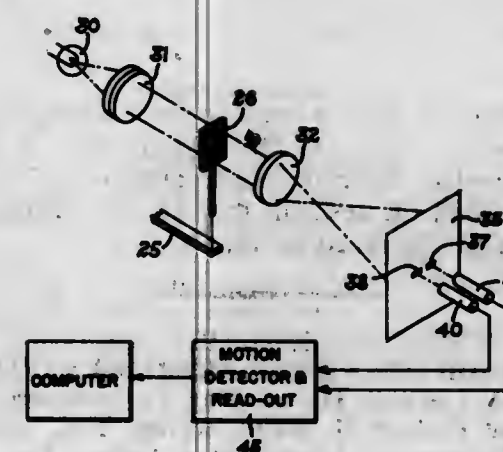
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio

Filed Aug. 31, 1962, Ser. No. 220,765

Int. Cl. G01g 23/38

U.S. Cl. 177-12

3 Claims



A motion cessation detector for scale read-out systems comprising photoelectric circuits whereby the movement of the mechanism over a range consisting of "hunting" cause two series of electrical pulses and the movement of the mechanism within a smaller range consisting of vibrational movement causes one series of electrical pulses, said one series of electrical pulses indicating that weighing has been completed.

3,516,505

SCALE BEAM AND POISE

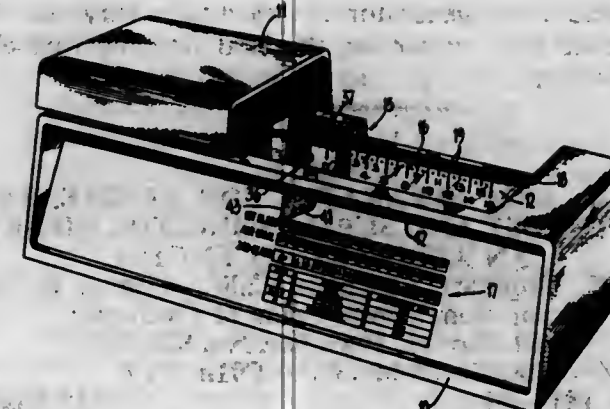
Ralph N. Montoya, Castro Valley, Calif., assignor to The Singer Company, a corporation of Delaware

Filed Feb. 1, 1968, Ser. No. 702,465

Int. Cl. G01g 1/36

U.S. Cl. 177-44

1 Claim



This invention relates to the scale beam and poise of a postal scale, and more particularly to an improvement for lending lateral stability to the poise during and after adjustment of the poise along the beam.

3,516,506

CONTROL APPARATUS FOR AUTOMATIC INDUSTRIAL OPERATIONS

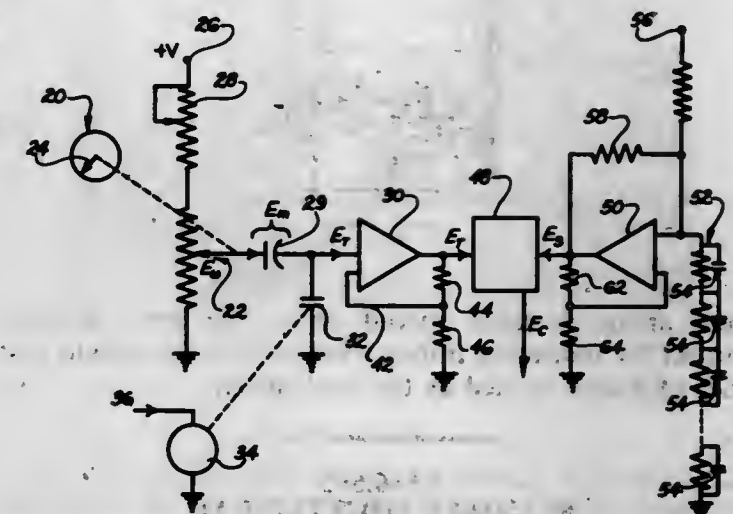
James H. Furlong, Columbus, Ohio, assignor to Auto-Control, Inc., Columbus, Ohio, a corporation of New Jersey

Filed Sept. 18, 1967, Ser. No. 668,420

Int. Cl. G01g 23/16, 19/22, 3/14

U.S. Cl. 177-164

3 Claims



A control apparatus for automated industrial processes, such as for example, the delivering of material in a batching operation according to a given weight ratio wherein the apparatus would include a weighing scale and a transducer operatively connected thereto which yields an output signal proportional to weight. This output signal is selectively permitted to charge a capacitor such that the capacitor functions as a memory storing device and stores a signal which represents the weight of the actually delivered material. When additional material is added to the scale, the output signal emitted from the transducer, in effect, is continuously decreased by the value of the charge stored in the capacitor. The signal appearing at the output of the capacitor then represents the weight of the material indicated by the scale at any given instant minus the weight of the material at the time the capacitor was charged. The charge is maintained in the capacitor substantially unchanged for relatively long periods of time by the use of an operational amplifier having a high input impedance which is connected in series to the output side of the capacitor. The signal appearing at the output of the amplifier is then compared with a given predetermined signal and a control signal is developed to control some phase of the operation when the signal appearing at the amplifier output and the predetermined signal reach a given ratio.

3,516,507

WEIGHING SCALES

Ernst Kuhnle and Josef Schwarz, Balingen, Germany, assignors to Bahr-Werke Wilhelm Kraut KG., Balingen, Germany, a firm

Filed Dec. 7, 1967, Ser. No. 688,935

Claims priority, application Germany, Dec. 7, 1966, B 90,185

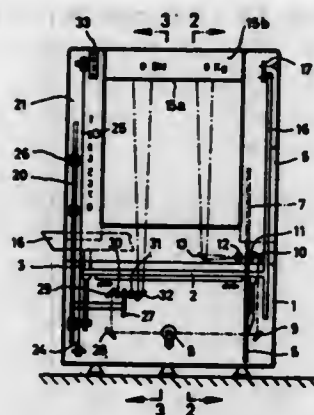
Int. Cl. G01g 1/02

U.S. Cl. 177-216

6 Claims

A weighing scale for weighing and also, if desired, indicating the price of a load which is carried by a load carrier of the scale. The scale has a hollow housing which houses a weighing means for weighing a load carried by the load carrier, and this housing has a lower hollow portion and a pair of upstanding hollow columns extending upwardly from the lower housing portion and spaced

from each other so that the load carrier is visible from all sides of the columns as well as through the space therebetween. An indicating means is carried by the col-



umns at an elevation spaced above the lower housing portion for indicating information such as the weight and price of a load carried by the load carrier.

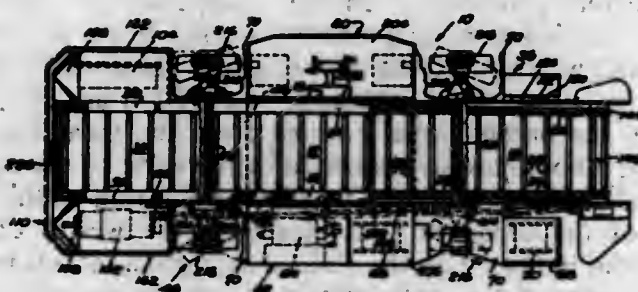
3,516,508

FLEXIBLE SHUTTLE CAR

Arthur L. Lee and Arthur B. Coval, Columbus, Ohio, assignors, by mesne assignments, to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Delaware
Original application Oct. 11, 1965, Ser. No. 494,783, now Patent No. 3,403,797, dated Oct. 1, 1968. Divided and this application Apr. 30, 1968, Ser. No. 739,986
Int. Cl. B60h 35/00

U.S. Cl. 180-85

4 Claims



A haulage vehicle having a flexible body mounted on a pair of relatively rigid axle assemblies. The flexible body has a pair of vertical side plates forming the side walls of an elongated trough shaped material haulage compartment. A deck plate is supported by the flexible side plates and forms a bottom wall for the haulage compartment. The relatively rigid axle assemblies are connected to the side plates adjacent the end portion of the side plates so that the side plates remain free to flex when the haulage vehicle is subjected to torsional stresses. The axle assemblies have pairs of driven and steerable wheels mounted thereon for supporting the flexible body and propelling the vehicle.

3,516,509

SEISMIC WAVE GENERATOR HAVING ADJUSTABLE REACTION FORCE AND METHOD OF OPERATION THEREOF

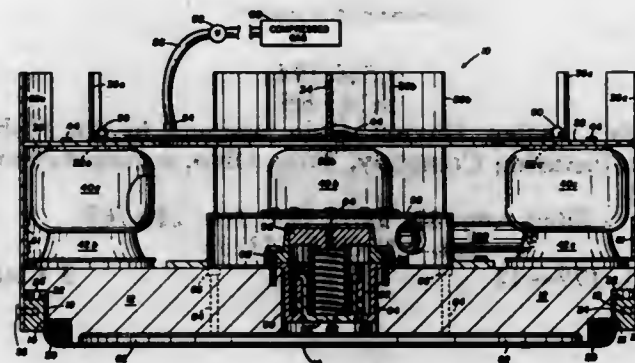
Herbert D. Coburn, Dallas, and Gilbert H. Kelly, Irving, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 2, 1968, Ser. No. 725,977
Int. Cl. G01v 1/02, 1/22, 1/38

U.S. Cl. 181-5

6 Claims

A gas exploder seismic wave generator includes a rigid reaction mass and a rigid bottom member slidably connected to form a chamber in which gas may be detonated.

Rigid bail structure abuts with lower portions of the bottom member and extends around and over the reaction mass. Resilient bags filled with air under pressure are disposed between the rigid bail structure and the reaction



mass in order to exert a reaction force against separation of the reaction mass and the bottom member when the gas is detonated. Structure is also provided to vary the air pressure within the resilient bags for the variance of the magnitude of the reaction force.

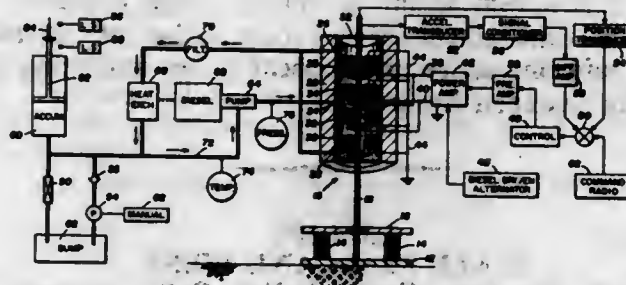
3,516,510

SEISMIC WAVE GENERATING SYSTEM

Herbert D. Coburn, Dallas, Roy C. Johnston, Richardson, and Gilbert H. Kelly, Irving, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 20, 1967, Ser. No. 692,070
Int. Cl. G01v 1/14, 1/00, 9/00

U.S. Cl. 181-5

13 Claims



A seismic wave generator is operated by the action of fluid which exhibits viscosity variations upon the application of electrostatic fields. Electric-field valves are disposed between a pressurized source of the fluid and the seismic wave generator to selectively vary the flow paths of the fluid by varying the fluid viscosity with electrostatic fields.

3,516,511

METHOD AND APPARATUS FOR AUGMENTING THE THRUST AND SUPPRESSING THE NOISE OF AN AIRCRAFT JET ENGINE

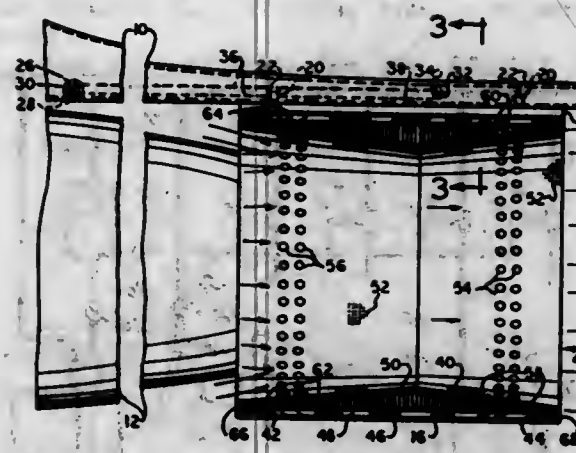
George R. Urquhart, El Cajon, Calif., assignor to Rohr Corporation, a corporation of California
Filed May 22, 1969, Ser. No. 826,884
Int. Cl. B64d 33/06; F01n 1/14

U.S. Cl. 181-35

10 Claims

The inner surface of a tubular jet aircraft thrust augmenting ejector is formed with a multiplicity of perforations that respectively communicate with resonating cavities in the wall of the ejector. The jet stream flowing through the ejector is prevented from detaching from the inner surface of the latter by flow of a portion of the boundary layer of said stream into holes which terminate

within an area encircling the aft portion of said inner surface and which communicate with the forward portion of



the ejector throat through a passage in the wall of the ejector.

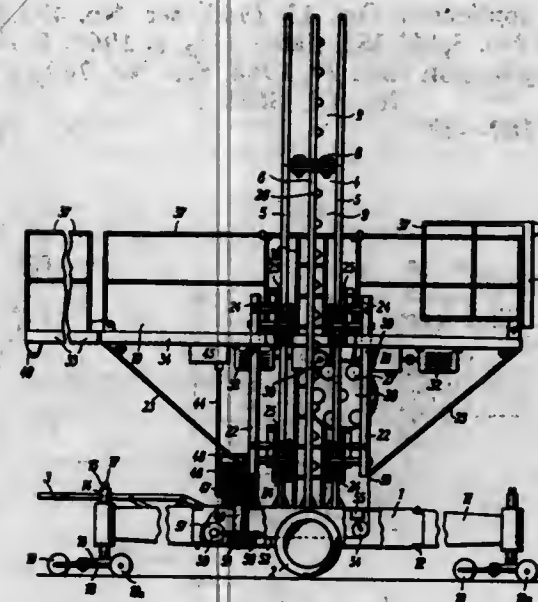
3,516,512

MOBILE SCAFFOLD

Rudolf Manfred Kupke, Dresden, Karl-Heinz Ladwig and Peter Ladwig, Cossebaude, Curt Adolf Manfred Mortensen, Radebeul, and Hugo Harry Handschack, Cossebaude, Germany, assignors to Eisenbau Karl Ladwig BSH, Dresden, Germany
Filed Mar. 6, 1968, Ser. No. 710,878
Int. Cl. E04g 1/18, 1/24

U.S. Cl. 182-16

25 Claims



A mobile scaffold wherein a wheel-mounted carriage supports a multi-section upright tower which guides a vertically movable rectangular work platform provided with hinged mounted auxiliary platforms. The tower is eccentric with reference to the carriage and one longer side of the platform has a recess for the tower. The drive for the platform comprises a row of teeth provided on one standard of the tower, a wheel which carries an annulus of rollers engaging with successive teeth during movement of the platform and two reversible electric motors mounted on the platform to rotate the wheel by way of self-locking transmissions. Stabilizing arms are detachably connected with the carriage so as to be movable between extended and retracted positions in response to detachment from, inversion by 180 degrees, and renewed attachment to the carriage.

Bridges can be employed to connect the platform with the platform or platforms of one or more adjoining scaffolds. Such bridges are pivotable with reference to the platform so that they can be moved to or from horizontal positions.

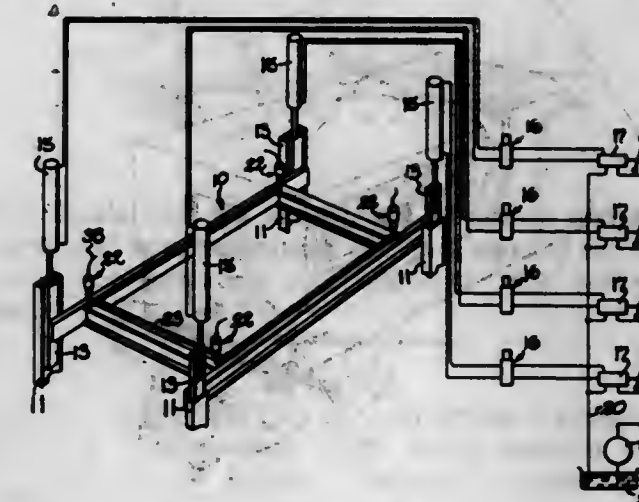
3,516,513

METHOD AND APPARATUS FOR LEVELING SELF-ERECTING PLATFORM STRUCTURES

Dean S. Robertson and Carroll V. Jackson, Lima, Ohio, assignors to Baldwin-Lima-Hamilton Corporation, a corporation of Delaware
Filed Apr. 22, 1968, Ser. No. 723,056
Int. Cl. E04g 1/18

U.S. Cl. 182-19

8 Claims



For use with self-erecting platforms, a method and apparatus for leveling are described in which electrical sensing probes are positioned with respect to a common horizontal plane as determined by an electrically conductive fluid so as to provide a corrective response from either make or break contact when a portion of the platform leads in raising or lowering movement.

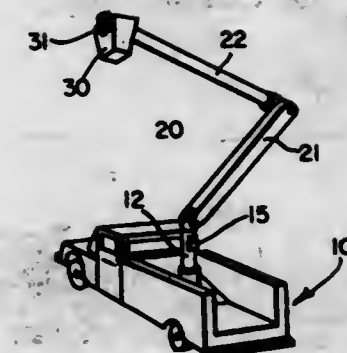
3,516,514

SAFETY CONTROL FOR AERIAL BUCKET TRUCK

George L. Malloy, Bethel Road, R.D. 2, Lansdale, Pa. 19446, and Edward L. Dold, 539 Eisenhower Ave., Woodlyn, Pa. 19094
Filed Feb. 4, 1969, Ser. No. 796,379
Int. Cl. B66f 11/04

U.S. Cl. 182-46

8 Claims



In a hydraulically-operated aerial bucket truck, of the type used by electric utility companies for working on overhead lines and poles, a manually operable safety control is disclosed to allow the lineman, from his elevated position in the aerial bucket, to shut down the hydraulic system by utilizing the pneumatic pressure available in the bucket for driving his pneumatic tools.

3,516,515

FOLDABLE STEP STRUCTURE FOR CAMPERS

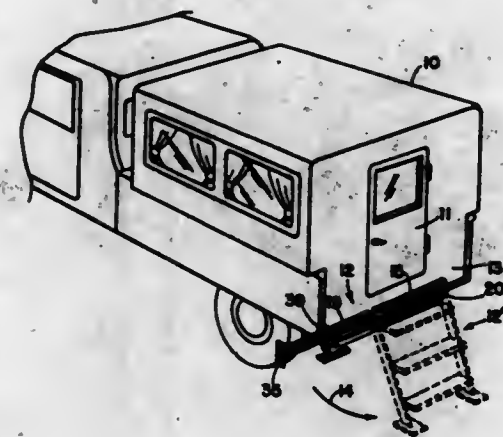
Douglas Keith Clark, 22730 Dralle Drive, Torrance, Calif. 90505
Filed Oct. 15, 1968, Ser. No. 767,694
Int. Cl. E06c 9/08

U.S. Cl. 182-96

4 Claims

A foldable step structure includes an elongated member arranged to be secured in a horizontal position above the ground adjacent to the lower sill of a camper door or

portion of another area to which access is to be provided. First and second legs are hinged at their upper ends to opposite ends of the secured member with their lower ends engaging the ground when in an unfolded position. Steps extend between and have their ends pivoted to the first and second legs for pivoting movement about axes parallel to each other and normal to the plane of the



legs. With this arrangement the legs and steps may be folded by laterally swinging movement of the legs about their upper hinges in their plane in the manner of a collapsing parallelogram so that the legs and step means can be nested in positions closely in horizontal alignment with the elongated member. A suitable bracket and co-operating coupling means is provided to hold the legs and steps in their folded positions.

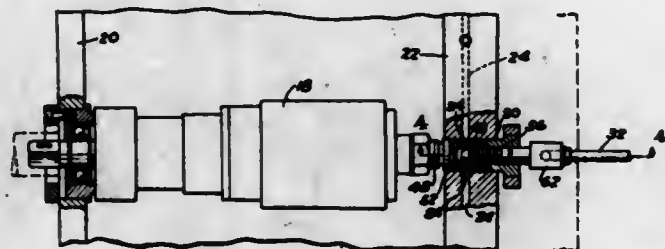
3,516,516

LUBRICATOR FOR AIR MOTORS

John T. Bertva, Utica, and George E. Thrasher, Jr., Pontiac, Mich., assignors to Master Pneumatic-Detroit, Inc., Utica, Mich., a corporation of Michigan
Filed Sept. 16, 1968, Ser. No. 759,892
Int. Cl. F16n 7/30

U.S. Cl. 184-55

5 Claims



A metering screw for metering the flow of air into an air motor has an inlet passageway for lubricant. When the lubricant is pressurized, it opens a check valve in the passageway, and the lubricant is injected into the region of metered air flow to the motor.

3,516,517

AIR LUBRICATION SYSTEM

Walter F. Kuhlman, Norwalk, Ohio, assignor to Kuhlman Machine Company, Norwalk, Ohio, a corporation of Ohio

Filed Sept. 9, 1968, Ser. No. 758,427

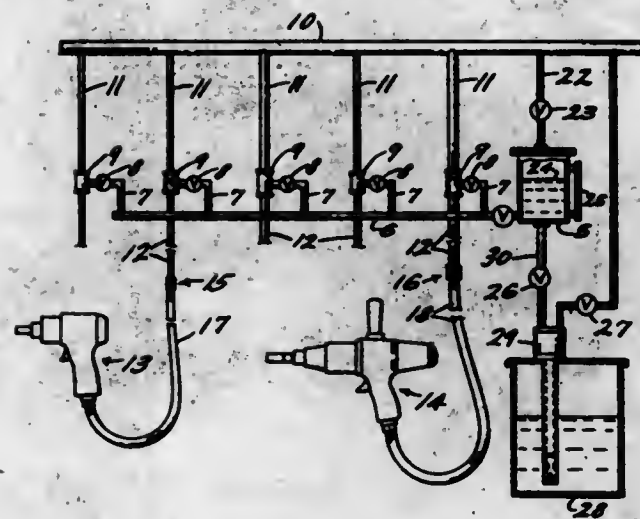
Int. Cl. F16n 7/30

U.S. Cl. 184-55

4 Claims

Oil from a single pressurized reservoir is supplied to each of a plurality of wick-type air line lubricators. Oil

in the reservoir is pressurized by line pressure of the air, so that both pressures fluctuate together, and the propor-



tion of air introduced by each of the lubricators is determined by the size of a fixed orifice within each lubricator.

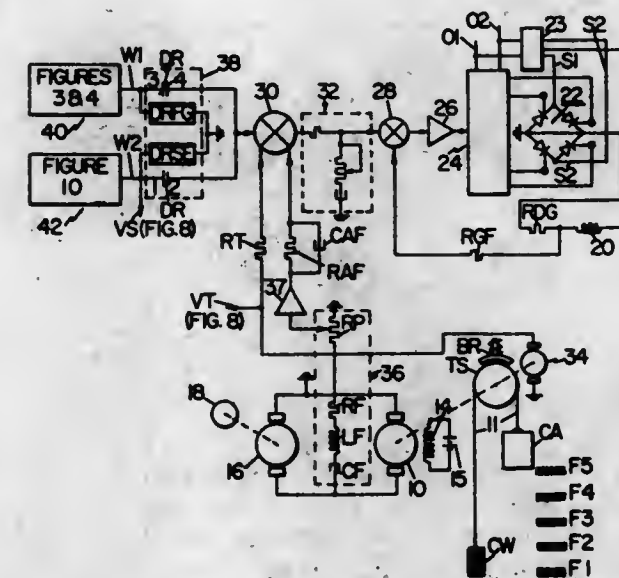
3,516,518

ELEVATOR CONTROL SYSTEM

Otto Albert Krauer, Tuckahoe, and Kenneth Raymond Brooks and Sidney Howard Benjamin, Brooklyn, N.Y., assignors to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Original application Oct. 13, 1965, Ser. No. 495,585, now Patent No. 3,442,352, dated May 6, 1969. Divided and this application June 27, 1968, Ser. No. 740,667
Int. Cl. B66h 1/28

U.S. Cl. 187-29

18 Claims



A control system for an elevator car in which the acceleration is controlled by a signal which varies as a continuous function of time and the deceleration is controlled primarily by a signal which varies as a continuous function of the distance the car is from a landing which has been selected as the one at which the car is to stop. A signal to stop at a selected landing is generated in response to the existence of a predetermined relationship between a signal proportional to the actual speed of the car and the signal which varies as a continuous function of the distance from the selected landing. After a signal to stop has been generated control of the car is switched from the time varying signal to the distance varying one in response to the magnitudes of said signals attaining substantial equality.

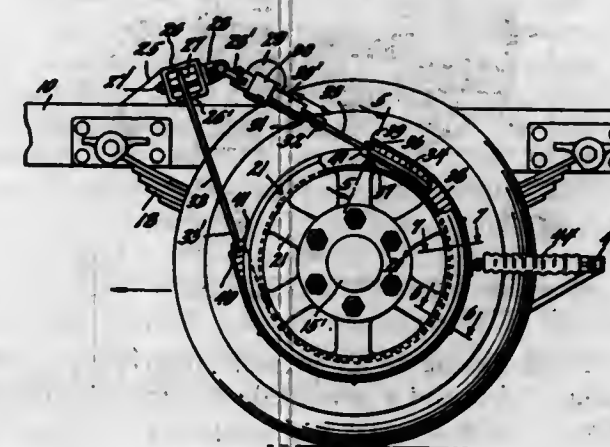
3,516,519

AUXILIARY BRAKE AND BRAKING SYSTEM

Kirk Besoyan, Gila Bend, Ariz., assignor to Auxiliary Brake Systems, Inc., Phoenix, Ariz., a corporation of Arizona
Continuation of application Ser. No. 591,513, Nov. 2, 1966. This application Feb. 19, 1969, Ser. No. 802,751
Int. Cl. F16d 49/02, 69/04

U.S. Cl. 188-77

13 Claims



A brake in which the brake shoes are carried by a flexible actuating cable extending about a V-shaped sheave which forms the brake drum of the wheel. An electric motor actuates the cable to apply the brake.

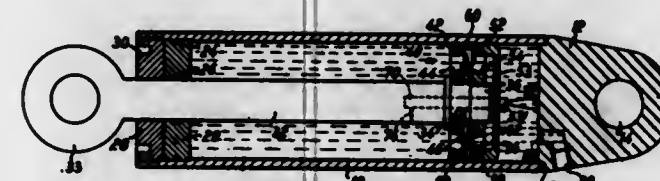
3,516,520

FLUID SHOCK ABSORBER

Sven Birger Ågren, Ornskoldsvik, and Erkki Antero Stenman, Gullnag, Sweden, assignors to Aktiebolaget Haglund & Soner, Ornskoldsvik, Sweden, a corporation of Sweden
Filed Aug. 23, 1967, Ser. No. 662,794
Int. Cl. F16d 57/00; F16f 9/10

U.S. Cl. 188-96

3 Claims



A shock absorber filled with a shock absorbing medium preferably consisting of a gas and oil emulsion and having a piston which is movable along with a piston rod in a cylinder and which constitutes a throttle valve with a valve body movable between two valve seat rings provided with openings for the passage of the medium.

3,516,521

VEHICLE BRAKE ACTUATOR

Lloyd J. Wolf, 2425 Irving Blvd., Dallas, Tex. 75207
Filed Oct. 7, 1968, Ser. No. 781,293
Int. Cl. B60k 7/20

U.S. Cl. 188-119

9 Claims

A brake actuator for trailing vehicles such as four-wheel baggage trucks of the type used at railroad stations and airports, includes a cam movable lengthwise of the vehicle, a transverse depression in the cam, a follower normally seated in the depression and movable transversely outwardly of the vehicle upon longitudinal movement of the cam from its centered position, a lost motion connection between the cam and the vehicle tongue, such that when the tongue is moved to an upright

position it will pull the cam forward, thereby urging the follower outwardly into brake setting position, or if the tongue drops to the ground, it will push the cam rearward to set the brake, and if the tractor and/or preceding



trailer decelerates, the tongue will be pushed rearwardly, as permitted by a lost motion slot in it, causing the tongue to push the operating cam rearward, thus setting the brake.

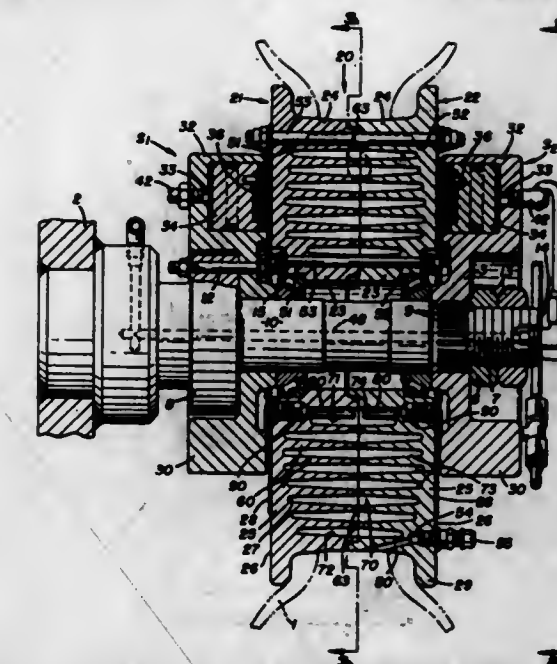
3,516,522

LIQUID COOLED WHEEL AND BRAKE ASSEMBLY

Richard K. Chamberlain, Stow, Ohio, assignor to The General Tire & Rubber Company, a corporation of Ohio
Filed Aug. 14, 1968, Ser. No. 752,616
Int. Cl. F16d 65/84

U.S. Cl. 188-264

4 Claims



Disclosed is a liquid cooled wheel and disc-brake assembly wherein the brake rotor forms a part of the wheel structure. The rotor, made of a good heat conducting metal, contains a closed "heat-sink" chamber with controlled fluid outlet means operable to release fluid from the chamber when fluid pressure within reaches a predetermined value. The chamber is provided with annular heat transfer fins extending between the chamber side walls, which in effect divide the chamber into a plurality of concentric sub-chambers. Such a design provides a maximum amount of metal-liquid contact within the chamber so that heat developed through braking is rapidly transferred to the fluid in the chamber.

3,516,523

COMBINATION SUITCASE AND IRONING BOARD

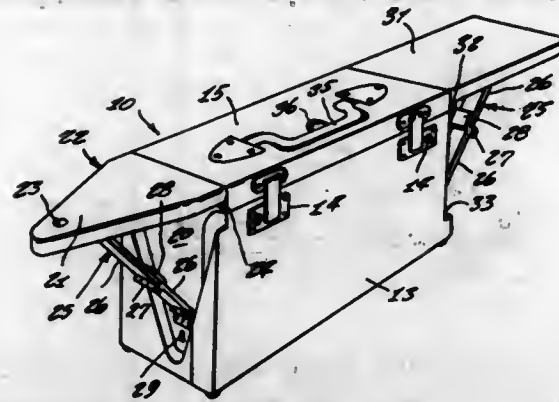
Russell V. Pemberton, Jr., 502 Monticello St., Culpeper, Va. 22701
Filed Aug. 19, 1968, Ser. No. 753,342
Int. Cl. A45c 9/00

U.S. Cl. 190-11

4 Claims

A combination utility item comprising a suitcase having extendable opposite end walls so to form an ironing

board, the ends being retractable into a flush fit with the remainder of the opposite ends of the suitcase and the



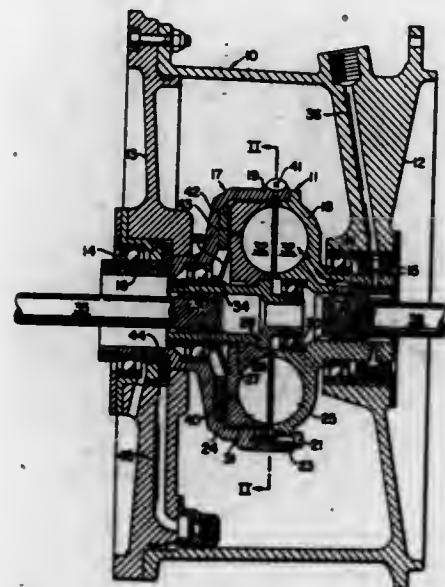
opposite ends each including a recess for receiving one of the extendable end walls.

3,516,524

FLUID COUPLING WITH LOCKUP CLUTCH
Glenn L. Kelty, Phoenix, and Sanford H. Hinton, Scottsdale, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 28, 1968, Ser. No. 741,097
Int. Cl. F16d 33/00

U.S. Cl. 192-3.3

7 Claims



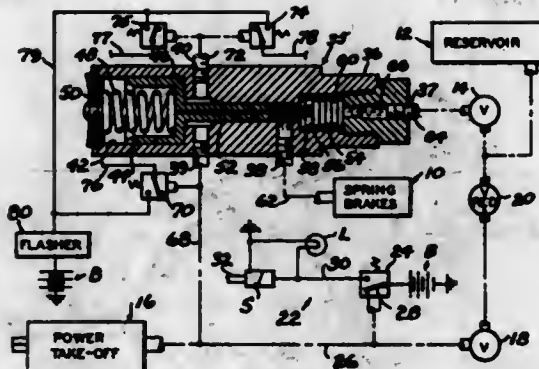
The subject coupling has an outer casing with complementary input and output rotor means supported for rotation therein, the input and output sections also being relatively rotatable. The input rotor means provides a chamber with a semitoroidal recess at one side for cooperation with a similar recess formed in the output rotor means which is enclosed in the chamber. Both rotor sections have vanes extending radially of the recesses in circumferentially spaced order. Each rotor section also has a clutch face arranged to oppose that of the other section and resilient means are provided to normally tend to separate such clutch faces. This action tends to dispose the open sides of the recesses in close proximity for operation in the fluid driving phase. Means are provided to conduct fluid under pressure to the recesses and rotation of the input section causes similar movement of the output section due to the reaction of the fluid against the vanes. Pressure balancing bleed holes in the output rotor permit this section to be resiliently held initially in the fluid driving position. As the speed of rotation increases, fluid pressure, due to centrifugal force, will separate the input and output sections against the force of the resilient means and cause a direct motion-transmitting engagement of the clutch

3,516,525 VEHICLE POWER TAKE-OFF AND BRAKE CONTROL

Billy J. Skaggs, 2600 SW. 70, Oklahoma City, Okla. 73159
Filed Mar. 13, 1969, Ser. No. 806,802
Int. Cl. F16h 57/10

U.S. Cl. 192-4

4 Claims



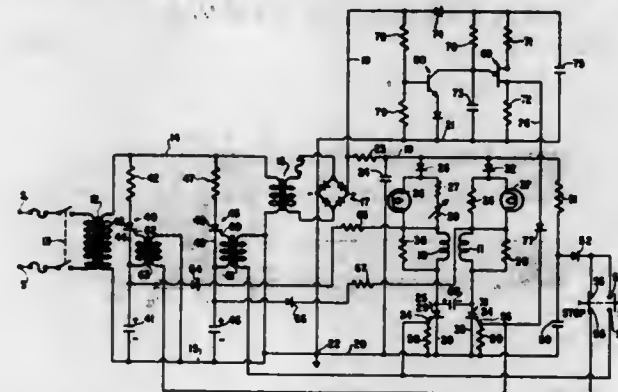
In a vehicle having an air pressure reservoir connected with spring brakes and a power take-off unit through control valves, a pressure and spring operated two position valve device is interposed in the spring brake air conduit and connected with the power take-off air conduit. The valve device prevents release of the spring brakes when the power take-off unit is in operation and simultaneously flashes vehicle front and rear warning lamps.

3,516,526

CONTROL CIRCUITS FOR ELECTROMAGNETIC CLUTCH-BRAKE DRIVING DEVICES
Henry A. Seesselberg, South Plainfield, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed June 17, 1968, Ser. No. 737,543
Int. Cl. F16d 67/06

U.S. Cl. 192-12

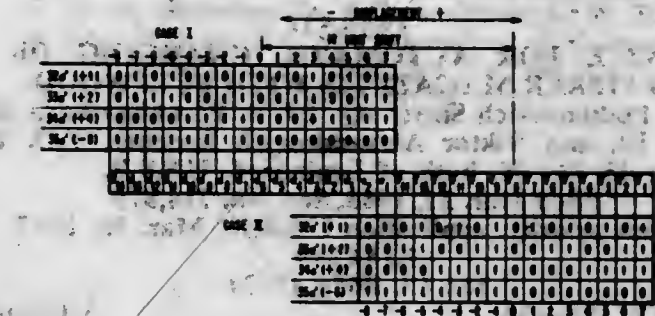
7 Claims



A circuit which does not require mechanical relays is disclosed using silicon controlled rectifiers (SCR's) for controlling manually and/or automatically the starting and stopping of a clutch-brake motor having an electromagnetically actuated clutch and brake. Each clutch and brake winding is connected to a source of full-wave rectified A.C. voltage through its own SCR and selective turn off is effected by capacitor commutation. Momentary overexcitation of both windings is provided by alternative initial discharge therethrough of energy previously stored in respective capacitors. These capacitors are charged through separate individual SCR's from an A.C. voltage of a value higher than the normal D.C. energizing voltage used for continuously exciting the coils. The four SCR's are turned on in pairs, one SCR of each pair closes a circuit connecting the respective winding to the previously charged capacitor and thereafter to the normal D.C. energizing bus. Diode gates prevent adverse interaction between the capacitors and the D.C. bus and provide properly timed energy flow from the D.C. bus to the winding as soon as the capacitor voltage drops to a value slightly below the bus voltage so that

there is no discontinuity in the winding excitation. The trigger pulse which turns on one SCR to energize one winding also turns on the other SCR of the pair, which latter SCR connects the capacitor for charging or storing energy which is later released for initially energizing the other winding. A non-voltage release circuit employs a unijunction transistor (UJT) as a relaxation oscillator connected to a D.C. supply having a large capacitor. This oscillator provides triggering pulses to the gate of the SCR which controls excitation of the brake winding. Normally, however, with full line voltage, a transistor, base-biased to saturation, has its emitter-collector circuit connected across the timing capacitor of the UJT oscillator, thus normally shorting the capacitor and preventing oscillation. Upon failure of line voltage, the transistor turns off due to loss of base bias and the timing capacitor charges from the energy in the large capacitor, and the oscillator supplies a triggering pulse to the SCR for energizing the brake coil. The voltage of the previously charged capacitor now connected to the brake winding will, even in the absence of line voltage, supply a high impulse of energy to the brake coil to bring the load quickly to standstill.

inverting control logic by which certain predetermined characters are selectable directly when the character matrix is in either case. Such predetermined characters are more rapidly selected by eliminating the need for



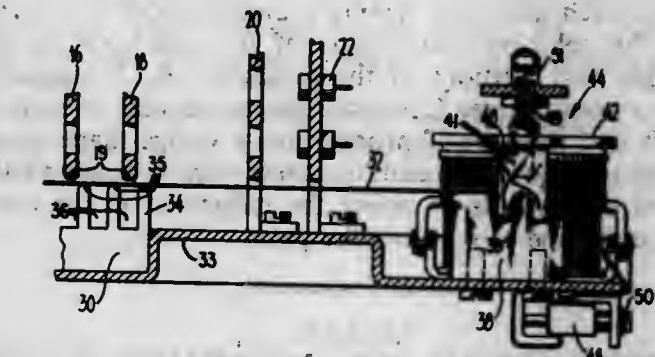
3,516,529

KEYBOARD LOCK

Russell A. Shurtliff, San Leandro, Calif., assignor to The Singer Company, a corporation of New Jersey
Filed Jan. 26, 1968, Ser. No. 700,833
Int. Cl. B41j 5/22

U.S. Cl. 197-107

4 Claims



In a keyboard, a normally slack tape extends under the key bars, and is pulled taut by an electric magnet to block the key action.

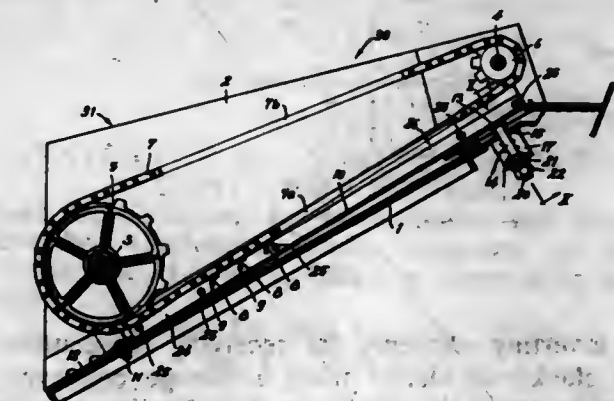
3,516,530

ELEVATORS FOR CROPS ETC.

August Braet, Beernem, Belgium, assignor to Clayson N.V., Zedelgen, Belgium, a company of Belgium
Filed Dec. 18, 1967, Ser. No. 691,415
Claims priority, application Belgium, Dec. 19, 1966, 46,341, Patent 691,385
Int. Cl. B65g 65/06; A61d 23/06

U.S. Cl. 198-8

9 Claims



Improved elevators for crops and similar materials comprising a fixed bottom plate, a conveyor means movable

3,516,528

CHARACTER SELECTOR

Ronald V. Davidge, Donald L. Greer, Richard W. McCormack, and Jerome B. O'Daniel, Lexington, Ky., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Jan. 16, 1968, Ser. No. 698,295
Int. Cl. B41j 7/34

U.S. Cl. 197-16

6 Claims

A selector for positioning a character matrix and including a case shift selecting mechanism is provided with

above said bottom plate and a false bottom plate hinged to said bottom plate at one end thereof and elastically urged towards said conveyor means at the other end.

3,516,531

DEVICE FOR AUTOMATIC CHARGING OF DEFIBRER MAGAZINES WITH PULPWOOD

Adolf Pinkhusovich Sinyavsky, Ul. B. Porokhovskaya 46, kv. 50, and Viktor Alexandrovich Bedeker, V.O. 10 linia 43, kv. 35, both of Leningrad, U.S.S.R.

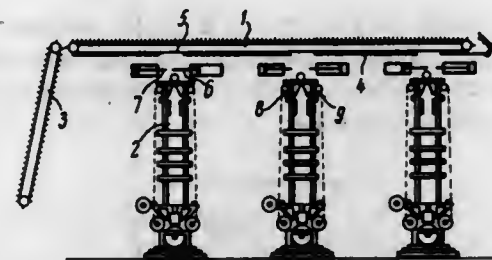
Filed Mar. 21, 1968, Ser. No. 714,875

Claims priority, application U.S.S.R., Mar. 30, 1967, 1,144,099

Int. Cl. B65g 47/24

U.S. Cl. 198—33

3 Claims



A pulpwood feed device comprises a conveyor for transporting pulpwood through hatches in a frame to a plurality of defibrer magazines positioned beneath the hatches, each magazine having a distributor device thereabove for selective distribution of the pulpwood to left and right half portions of the magazine. Each magazine has two pivotal gates inside the magazine, one in each of the left and right half portions and a wedge-shape guide member is disposed beneath the gates with its pointed edge directed downwards to orient the pulpwood in the associated magazine as it passes the gates.

3,516,532

STACKING SYSTEM FOR PAPERBOARD BLANKS

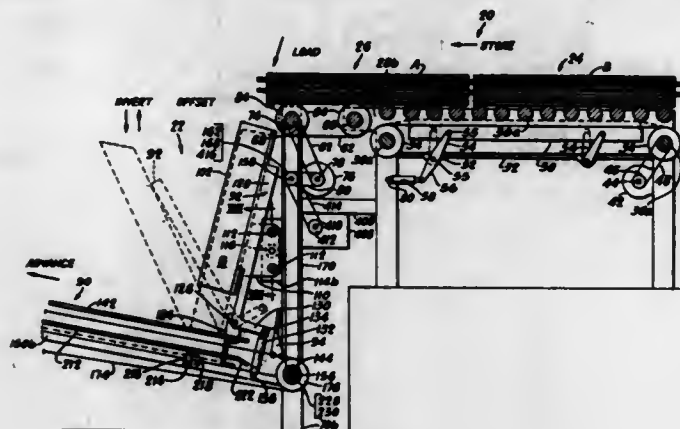
Mircea Calistrat, Baltimore, Md., assignor to Koppers Company, Inc., a corporation of Delaware

Original application Sept. 11, 1967, Ser. No. 666,605, now Patent No. 3,447,696, dated June 3, 1969. Divided and this application Nov. 27, 1968, Ser. No. 810,869

Int. Cl. B65g 37/00, 47/24

U.S. Cl. 198—33

2 Claims



An inverting conveyor for receiving consecutive individual stacks of blanks from a storage conveyor in a manner to stand the stacks on their leading edge; a first pivoting means for pivoting a first stack about its upstanding trailing edge to position the stack on a rising conveyor with its top face up and a second pivoting means

for pivoting a second stack about its leading edge to position the stack on the rising conveyor with its top-face down; and, advancing means for thereafter advancing the automatically inverted stacks to a downstream portion of the conveyor which then advances the stacks at a faster rate to draw them away from the advancing means.

3,516,533

MACHINE FOR HANDLING AN ELONGATED WORKPIECE TO ENABLE MACHINING OPERATIONS THEREON

Fritz Schenkel, Wangen, Oten, Switzerland, and Ernst von Hayn, Butzbach, Oberhessen, and Helmut Andres, Espa, near Butzbach, Germany, assignors to Pintsch Bamag Aktiengesellschaft, Berlin and Butzbach, Oberhessen, Germany

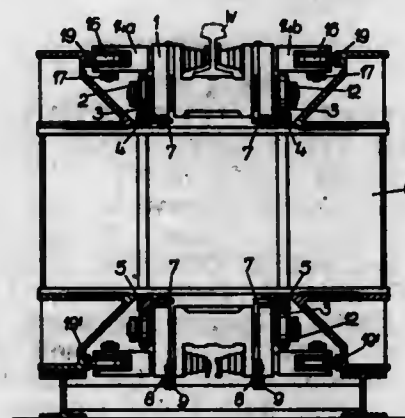
Filed Mar. 8, 1968, Ser. No. 711,634

Claims priority, application Germany, Mar. 8, 1967, P 41,575

Int. Cl. B65g 15/06

U.S. Cl. 198—179

10 Claims



A machine in which a workpiece such as a railroad rail, or the like, is transported longitudinally through a work zone while being clamped between driver dogs which are carried by a chain and are slidable in the chain to be acted on by guide members to be forced into contact with the rails.

3,516,534

CONVEYOR AXLE SUPPORT

Heinrich Heitzer, Nuss (Rhine), Weckhoven, Germany, assignor to Demag-Lauchhammer Maschinenbau und Stahlbau G.m.b.H., Düsseldorf-Benrath, Germany

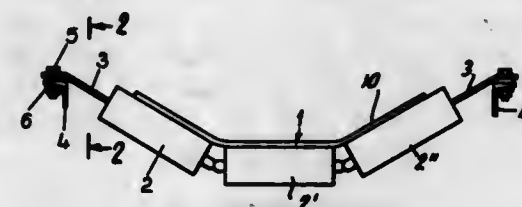
Filed Mar. 6, 1968, Ser. No. 710,886

Claims priority, application Germany, Mar. 7, 1967, D 52,444

Int. Cl. B65g 15/08

U.S. Cl. 198—192

7 Claims



A fixed support or axle member for a set of bearing pulleys of trough-shaped conveyor belts includes a laminate made up of a plurality of horizontally elongated flat plates arranged in a substantially vertical stack. The plates are made of a spring steel and the laminate package may be covered with an outer cover of a synthetic material or held together by through-bolts or rivets. The construction provides vertical resiliency and longitudinal stability for supporting the bearing pulleys.

3,516,535

FLIGHT CLEANER FOR MATERIAL MOVING MECHANISM

Paul Patz, Pound, Wis., assignor to Patz Company, Pound, Wis., a partnership

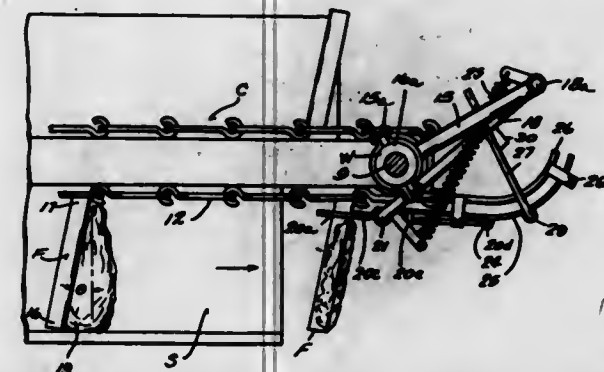
Filed Sept. 16, 1968, Ser. No. 759,944

Int. Cl. B65g 45/00

U.S. Cl. 198—229

9 Claims

A device for cleaning the flights of material moving mechanism such as for example, a barn cleaner. Barn cleaners of the type to which this invention relates have an endless chain and a series of spaced flights each secured at one end along the length of the chain and extending outwardly from the chain to terminate in a free end.



More specifically, the present invention relates to an improved mechanism for positively cleaning the flights, even though the flights are of nonuniform height.

3,516,536

DISPENSER CLOSURE

Kisaburo Ino, Tokyo-4th, Japan, assignor to Hiroko Ino, Tokyo-10, Japan

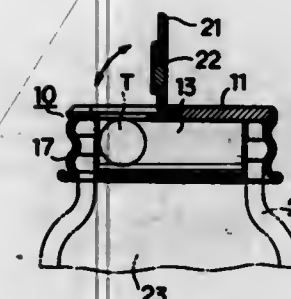
Filed Sept. 5, 1968, Ser. No. 757,694

Claims priority, application Japan, Nov. 7, 1967, 42/93,511

Int. Cl. B65d 83/04

U.S. Cl. 206—42

6 Claims



This invention is related to a dispenser closure in the form of a bottle cap, through which tablets in the tipped bottle roll out one by one, so that the user can take just as many tablets as he needs. The outer surface of said cap has an outlet sized enough for one tablet to pass through. Across the inside of the cap is a channel wide enough for tablets to be aligned in it, and a part of said channel is connected to said outlet. When a bottle with said cap is tipped, tablets enter the channel to be aligned in it and then roll out from the outlet one after another in the order of alignment. When tablets in the tipped bottle rush to the inside of the cap, banks on both sides of the channel bear the weight of the tablets which have not entered the channel, so that the tablets aligned in the channel are not obstructed by the other tablet in rolling out from the outlet.

3,516,537

OPENING DEVICE ON BAGS AND THE LIKE

Robert L. Dreyfus, William O. Griffiths, Stanley E. Holbrook, and Richard R. Perdue, Greenville, and William Z. Snow, Simpsonville, S.C., assignors to W. R. Grace & Co., Duncan, S.C., a corporation of Connecticut

Filed June 27, 1968, Ser. No. 749,704

Int. Cl. B65d 85/00, 33/16

U.S. Cl. 206—46

16 Claims



A package in which an object is encased in plastic and the plastic has a unitary part formed into a tab external of the package's enclosure that cooperates with a seal to strip an opening in the package along the seal and a bag suitable for forming such a package.

3,516,538

CUSHIONING AND PACKAGING STRIP

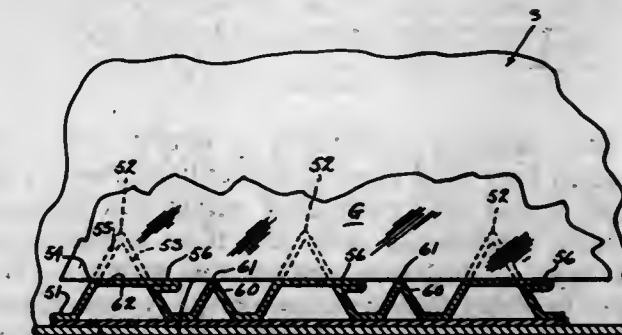
Lloyd D. Van Antwerpen, Milwaukee, Wis., assignor to Menasha Corporation, Neenah, Wis., a corporation of Wisconsin

Filed Sept. 19, 1966, Ser. No. 589,315

Int. Cl. B65d 85/00

U.S. Cl. 206—62

1 Claim



A two-ply packaging and cushioning strip for effectively cushioning articles such as glass during shipment, having an elongated flat base ply and an inner ply formed with spaced peaks. The peaks intermediate their ends having parallel slits defining an intermediate independent tongue member folded down for cushioning purposes and means between said peaks for further cushioning and supporting the glass, the peripheral edge of the glass being received within the slots of the peaks formed by the slits.

3,516,539

APPARATUS FOR SEPARATING AND HANDLING A CANT AND SIDEBOARDS

Richard R. Gulstrom, Lewiston, Idaho, and Gerald F. Scheelke, Clarkston, Wash., assignors to Poffelch Forests, Inc., Lewiston, Idaho, a corporation of Delaware

Filed May 13, 1968, Ser. No. 728,710

Int. Cl. B47c 5/06

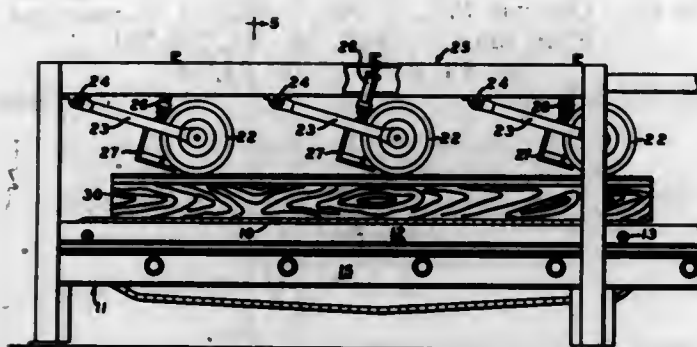
U.S. Cl. 209—74

10 Claims

An apparatus for separating a cant and sideboards wherein the sideboards are formed at opposite sides of the cant in a sawmill. The cant is conveyed in a straight line path by narrow conveying means. The sideboards are permitted to fall upon a lowered roll case extending

parallel to the cant conveying means along both sides thereof. The cant is subsequently directed to a transverse shifting apparatus that throws the cant over the roll case

device when partially filled with water provides a seal to prevent upward discharge of explosive vapors through the drain structure into the ambient atmosphere.



carrying the separated boards. The cant is shifted to one side or the other, depending upon the size of the particular cant.

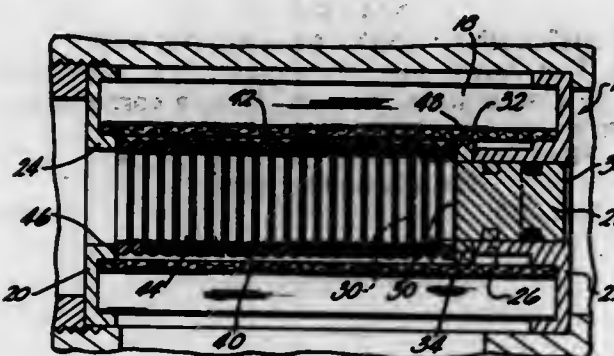
3,516,540

FILTER WITH AUTOMATIC SHUTOFF

Raymond L. Landree, Madison Heights, and Ray J. Rapp, Bloomfield Hills, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Filed Nov. 12, 1968, Ser. No. 774,722
Int. Cl. B01d 27/10

U.S. Cl. 210-137

5 Claims



A filter assembly comprising a tubular filter element adapted to filter fluid flowing substantially radially there-through, a coil spring disposed within and in a radial supporting relationship with the filter element, and a piston engaged with one end of the spring so that in response to higher fluid pressures in the system, the piston is moved in a direction to compress the spring and move the spring coils into engagement so as to shut off flow of fluid through the filter element.

3,516,541

DRAIN SAFETY DEVICE

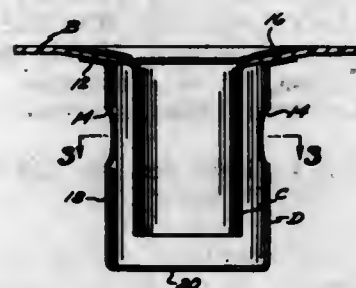
Derek D. Hardingham, Long Beach, Calif., assignor, by direct and mesne assignments, of fifty percent each to David D. Coles and Donald M. Moss, Newport Beach, Calif.

Filed Nov. 7, 1968, Ser. No. 773,983

Int. Cl. B01d 35/02

U.S. Cl. 210-164

10 Claims



A prefabricated drain safety device that may be removably mounted in a vertical drain structure, which

device when partially filled with water provides a seal to prevent upward discharge of explosive vapors through the drain structure into the ambient atmosphere.

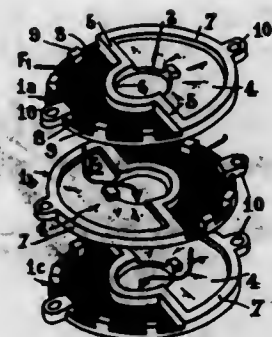
3,516,542

STACKED, IDENTICAL FILTER ELEMENTS

René Jaume, 36 Rue Erlanger, Paris, France
Filed Aug. 19, 1968, Ser. No. 753,410
Claims priority, application France, Aug. 24, 1967, 118,818/67
Int. Cl. B01d 25/04

U.S. Cl. 210-168

6 Claims



A stack of identical filtering elements, each element having a sealing bead thereon, adjacent elements having beads disposed in different relative positions.

3,516,543

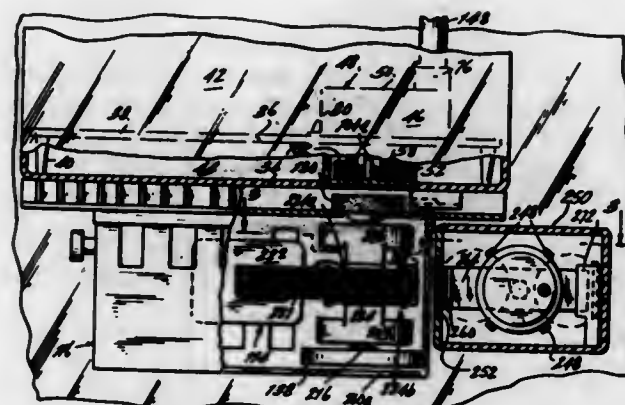
WATER CONDITIONING DEVICE

Allan H. Willinger, New Rochelle, N.Y., assignor, by mesne assignments, to Mattel-Aquarium, Inc., Hawthorne, Calif., a corporation of Delaware
Continuation-in-part of application Ser. No. 376,105, June 18, 1964. This application May 23, 1967, Ser. No. 640,605

Int. Cl. E04h 3/20

U.S. Cl. 210-169

8 Claims



This invention and this disclosure are directed to the combination of a rotary electric motor operated aquarium apparatus with a vibratory operated aquarium air pump. More particularly, this invention and this disclosure are directed to the combination of an aquarium water filter means with an aquarium air pump which derive their motive power from the same simple, low-cost motor, said units being independently housed. The preferred embodiment of this invention combines a filtration system employing a shaded pole induction motor operable to rotate a magnet to turn an impeller, to circulate water through the filtration system in combination with a vibratory bellows system for supplying air to the aquarium or an apparatus located therein, responsive to the same motor.

3,516,544

UNDERWATER AQUARIUM FILTER

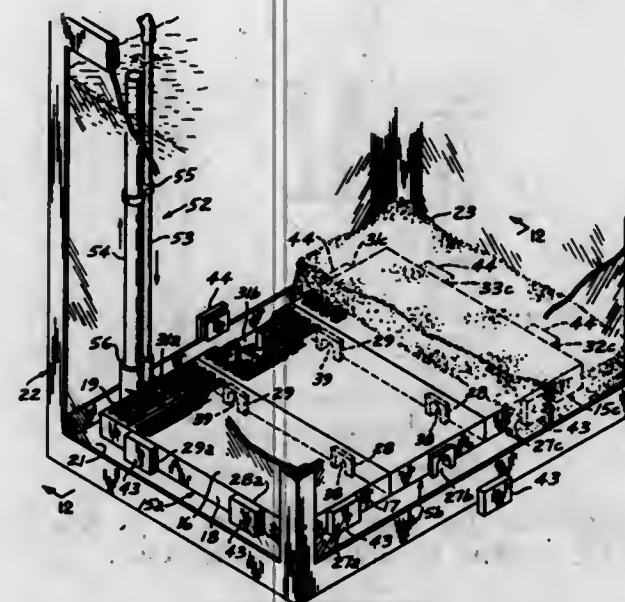
Walter Sesholtz, Park Ridge, N.J., assignor to Sternco Industries, Inc., Harrison, N.J., a corporation of New Jersey

Filed Oct. 25, 1968, Ser. No. 770,752

Int. Cl. E04h 3/16, 3/20

U.S. Cl. 210-169

11 Claims



A filter for placement upon the floor of a home aquarium and adapted to underlie a layer of filtering material such as gravel. The filter comprises a basic member that can either be used alone or in combination with a plurality of similar members. Said basic member comprises a substantially flat grated top wall with downwardly extending peripheral walls adapted to rest upon the aquarium floor, the top wall supporting said filter material, the peripheral walls having apertured portions serving as gates or conduits for the flow of filtered water there-through. Said gates are adapted selectively to receive closures thereover or interconnect with corresponding gates in similar adjacent members, the gates also being adapted to receive a fitting connected to suction pumping means for returning the purified water to the top of the aquarium tank.

3,516,545

WASTE TREATMENT APPARATUS

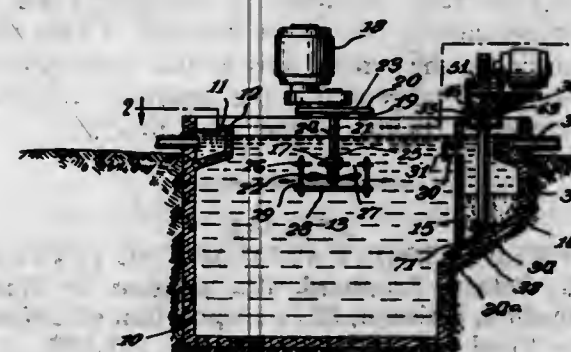
Francis J. Larkin, 1707 N. 78th Ave.,
Elmwood Park, Ill. 60635

Continuation-in-part of application Ser. No. 502,354, Oct. 22, 1965. This application Oct. 11, 1968, Ser. No. 766,874

The portion of the term of the patent subsequent to Jan. 14, 1986, has been disclaimed
Int. Cl. B01d 21/04; C02c 1/10

U.S. Cl. 210-195

12 Claims



An apparatus for treating waste materials such as sewage having side by side aeration and settling tanks with a common wall therebetween and upper and lower ports connecting the tanks, the lower port for return of

sludge being below the bottom of the common boundary and the sloped settling tank bottom having the lowest point thereof adjacent the lower port. Air dispersers are positioned in the aeration tank and scraper means move longitudinally in said settling tank to sweep return sludge through said lower port beneath the common wall into the aeration tank.

3,516,546

CHROMATOGRAPHY APPARATUS

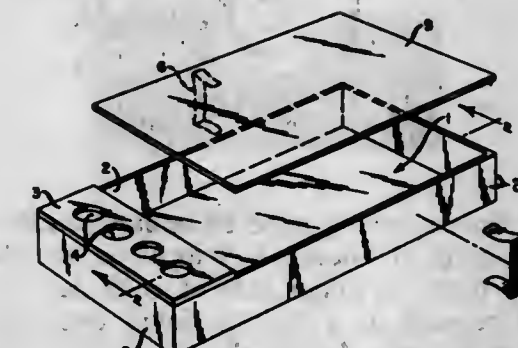
George W. Clark III, 1515 Ashland Ave.,
Columbus, Ohio 43212

Filed Apr. 2, 1969, Ser. No. 812,690

Int. Cl. B01d 15/08

U.S. Cl. 210-198

9 Claims



A thin-layer, thick-layer preparative chromatographic element support device (including a rear wall and side walls contiguous to a chromatography medium coated on the rear wall, and having a perforated partial front wall) provides increased dimensional stability of the medium and promotes uniform solvent evaporation across the width of the chromatography medium during development of a chromatogram. This support device can be advantageously integrated into a wide variety of preparative chromatography apparatus systems.

3,516,547

FILTER CLEANING MEANS

Basil T. G. Bishop, Mickleover, England, assignor to Rolls-Royce Limited, Derby, England, a British company

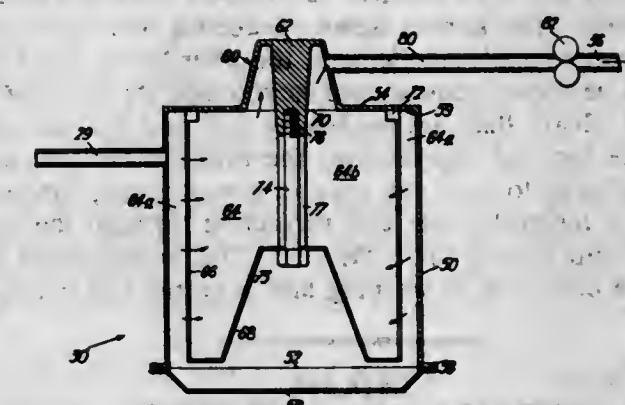
Filed Feb. 8, 1968, Ser. No. 704,041

Claims priority, application Great Britain, Mar. 1, 1967, 9,592/67

Int. Cl. B01d 29/38

U.S. Cl. 210-304

5 Claims



Filtering apparatus in which a gear pump is connected to receive filtered liquid from a filter element, the gear pump having teeth which are designed to produce pressure pulses in the filtered liquid, which pressure pulses pass upstream in the filtered liquid and through the filter element so as to dislodge debris and other foreign matter adhering to the upstream side of the filter element.

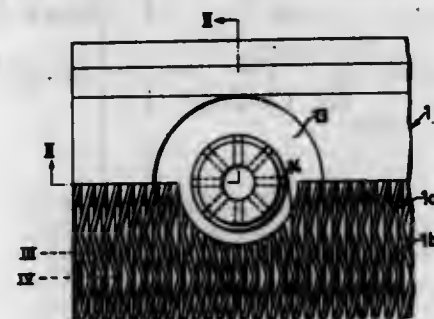
3,516,548 DIALYSIS MEANS HAVING SPACING DISKS WITH GRATINGS DISPLACED OR TWISTED IN RELATION TO EACH OTHER

Nils Alwall, Bo Lennart Ostergren, and Nils Olov Wilhelm Hagstrom, Lund, Sweden, assignors to AB Gambro, Lund, Sweden, a Swedish company
Filed May 22, 1968, Ser. No. 731,007
Claims priority, application Sweden, May 25, 1967, 7,324/67

Int. Cl. B01d 13/00

U.S. Cl. 210—321

11 Claims



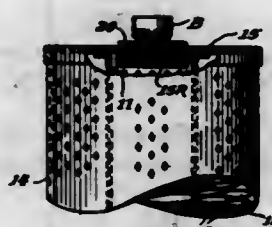
Dialysis devices having pairs of semi-permeable membranes for passage of a liquid, such as blood, therebetween and spacing disks on either side of each pair of membranes, for passage of a dialysis liquid thereabout, the disks having gratings facing the membranes, and the gratings having different patterns so that tortuous passages for the dialysis liquid on both sides of the membranes is obtained whereby a meandering, turbulent flow of the dialysis liquid produces an optimum dialysis effect.

3,516,549 FILTER

Robert W. MacDonnell, Crete, Ill., assignor to Allied Filter Engineering, Inc., a corporation of Illinois
Continuation of application Ser. No. 481,266, Aug. 20, 1965. This application Oct. 6, 1967, Ser. No. 673,518
Int. Cl. B01d 27/06

U.S. Cl. 210—351

5 Claims



A mechanically clamped filter mounting arrangement is disclosed for a locomotive lubrication system wherein a renewable filter is held down between a floor stub and a top pressure applying element, the filter being of a type having a perforate central core surrounded by an annular array of pleats that are sealed by top and bottom end caps. The top end cap receives the pressure element and abuts the core to load the core in compression, the core having an integral lower end projecting through the bottom end cap to seat upon the stub. This arrangement relieves the end caps of warping and prevents end leakage.

3,516,550 ROTARY DRUM STRAINER

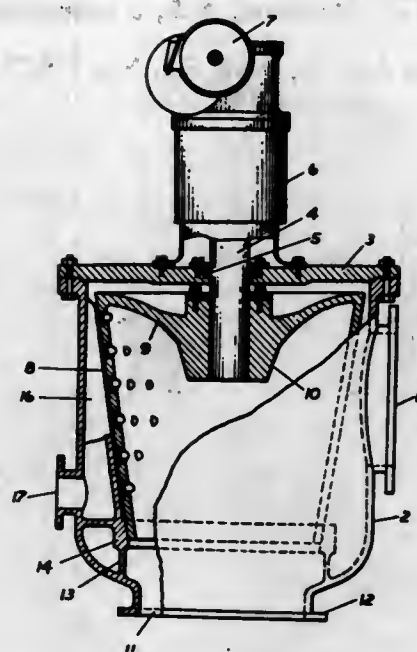
Hugh B. Carr, McMurray, Pa., assignor to S. P. Kinney Engineers, Inc., Carnegie, Pa., a corporation of Pennsylvania
Filed Jan. 22, 1969, Ser. No. 793,102
Int. Cl. B01d 33/06

U.S. Cl. 210—359

4 Claims

There is disclosed a rotary drum type of strainer, in one form of which the strained water is discharged from the end of the strainer casing, and in a second form where it

flows out the end of the casing into an annular chamber which has an outlet connection through the side wall.



Either provides for pipe connections to be provided to direct the outflow in any selected direction.

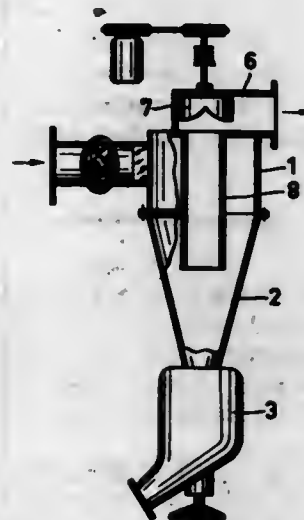
3,516,551 CYCLONE SEPARATOR

Emil Olof Lennart Wallén, Stockholm, and Frank Peter August Neumann, Enbyberg, Sweden, assignors to Grubbens & Co. Aktiebolag, Stockholm, Bandhagen, Sweden, a Swedish joint-stock company
Filed June 11, 1968, Ser. No. 736,147
Claims priority, application Germany, June 13, 1967, G 50,341

Int. Cl. B01d 21/26

U.S. Cl. 210—512

1 Claim



A cyclone separator having a controllable valve in the inlet line, the valve member of which is close to the separator container. The valve member is also substantially parallel to the central axis of the cyclone separator and substantially tangential to the separator container and has an angle of 20-90° to the inlet direction.

3,516,552 ARTICLE SUPPORT SYSTEM AND FIXTURE

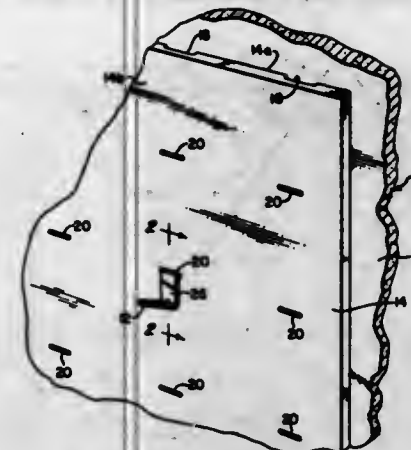
Otto G. Salava, Lombard, Ill., assignor to Masonite Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 29, 1968, Ser. No. 701,299
Int. Cl. A47b 96/12

U.S. Cl. 211—87

6 Claims

An article support system for mounting on a wall including a perforated board with grooves on its back surface and slots extending between the front surface and

the groove, a fixture having a hook adapted to be inserted through a panel slot and being of such dimension as to



engage the panel slot with an interference fit between the panel and the wall.

3,516,553 BOOM CONSTRUCTION

Albert E. Reske, Bloomington, Minn., assignor to Tel-E-Lect, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 25, 1968, Ser. No. 762,547
Int. Cl. B66c 23/06; E04h 12/34

U.S. Cl. 212—55

13 Claims



This invention relates to a boom construction of the dielectric type used in hazardous, electrical shock areas. The improved boom construction incorporates a hollow tubular member with arcuate sides and restricted corners which have combined therewith a bottom supporting plate member made of a fiber glass and epoxy resin similar to the dielectric material in the boom element and so positioned thereon as to provide increased compression strength to the boom element.

3,516,554 TWO-STAGE EXTENSIBLE BOOM

Tatsuo Nakamura, Tokyo, Japan, assignor to Kyoei Kaihatsu Co., Ltd., Tokyo, Japan
Filed Mar. 21, 1968, Ser. No. 715,044
Int. Cl. B66c 23/04

U.S. Cl. 212—55

1 Claim



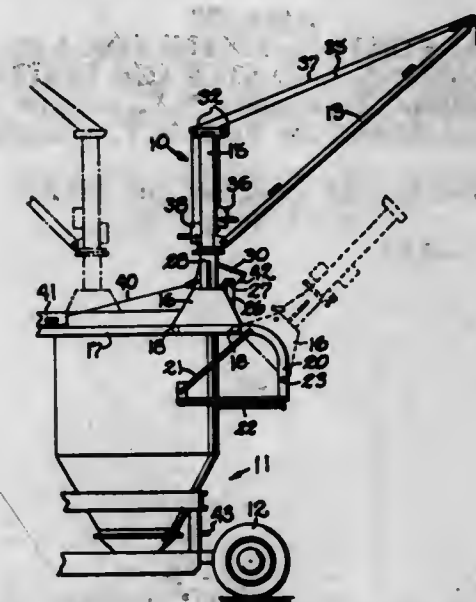
A two-stage extensible boom, comprising a main boom member, an intermediate boom member, and an end boom member. The intermediate boom member is movable relative to said main boom member by a hydraulic means. The end boom member is movable relative to said intermediate boom member by controlling wire ropes for hanging hooks at the tip of the intermediate boom member and the end boom member, without using any separate extending means.

3,516,555 TRAVELING CRANE

Dean S. Robertson and Carroll V. Jackson, Lima, Ohio, assignors to Baldwin-Lima-Hamilton Corporation, a corporation of Delaware
Filed Apr. 25, 1968, Ser. No. 724,073
Int. Cl. B66c 23/42

U.S. Cl. 212—140

4 Claims



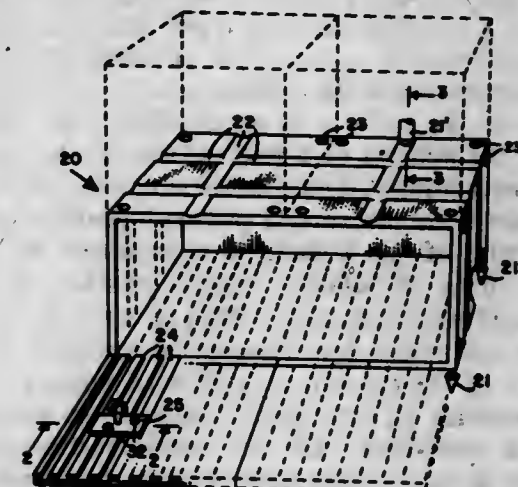
An auxiliary traveling crane for use atop a transport vehicle is described, in which a boom and upright stanchion are mounted on a carriage which is captively retained by a horizontal track having an overhanging downturned end portion, wherein the carriage is moved to the downturned portion and the stanchion folded vertically downward and secured for transport.

3,516,556 INTERLOCKING CARGO CONTAINERS

Patrick R. Nelson, 710 Independence Ave., Mountain View, Calif. 94040
Filed July 21, 1967, Ser. No. 655,038
Int. Cl. B65d 57/00

U.S. Cl. 214—10.5

2 Claims



The present invention relates to material handling apparatus wherein a cargo container of dimensions which are multiples of a unit cube is employed. Each multiple of the unit surface area has a uniform pattern of extendible connectors, so that such containers may be compactly stacked and locked together. The bottom of each container has spherical wheels or other bearing members, and the top of each container has grid pattern track for engaging the bearing members and permitting movement of one container over the top of another container. The interior wall of the container has a plurality of rails of T-shaped cross-section which permit a section of wall to be folded down and used as a loading ramp, the rails also serving to provide channels in which the contents of the container can be secured. In various embodiments, the

walls are provided with embedded conductors or heating elements and with power transmission and storage cavities. Provision of a thermal barrier between cavities of different transverse cross-section permits a heat pump to be used to either refrigerate or heat the interior of the container.

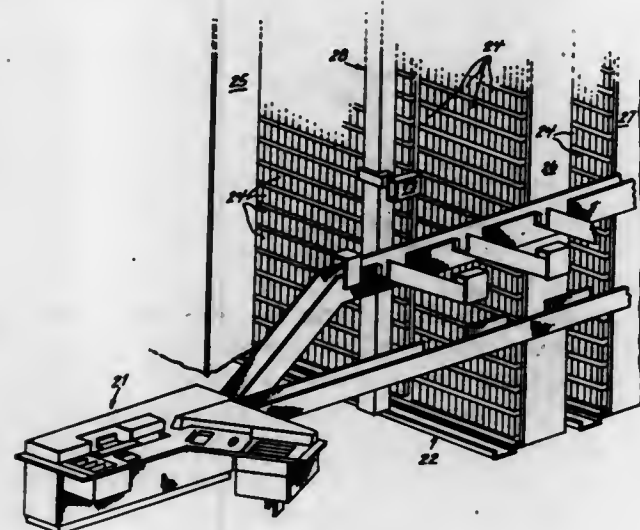
3,516,557 POSITIONAL CONTROL MEANS FOR A MATERIAL HANDLING AND STORAGE SYSTEM

Robert P. Kaplan, Tonawanda, N.Y., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 23, 1968, Ser. No. 769,934
Int. Cl. B65g 1/00

U.S. Cl. 214-16.4

7 Claims



An article-handling system comprising one or more aisles in which a vehicle is disposed on a vertical column which traverses in a path adjacent accessible storage modules. The vehicle is adapted to automatically retrieve or replace articles normally stored in the modules. Appropriate controls are provided whereby the vehicle is translated to a position adjacent a predetermined module for automatic transfer of an article between an article receiving compartment in the vehicle and the storage array. Positioning of the vehicle is accomplished by remotely determining the address of a selected article and signaling the column accordingly. The column is driven horizontally in accordance with the sensed physical position thereof, and positioning of the vehicle is determined by signals derived by virtue of relative vehicle position along the column. Askew-free columnar travel is assured by virtue of a torsion rod mechanism adapted to maintain the vertical stability of the column regardless of vehicle disposition at extremities of the column. A position sensing arrangement is associated with the torsion rod mechanism and provides accurate alignment between the vehicle and a selected article.

3,516,558 AUTOMATIC WAREHOUSING SYSTEM WITH TRANSFER MECHANISM

Wayne G. Atwater, Willoughby, Ohio, assignor to The Triax Company, Cleveland, Ohio, a corporation of Ohio

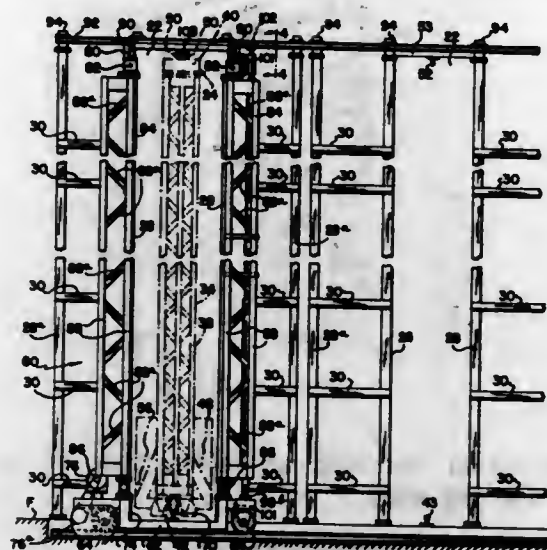
Filed Sept. 3, 1968, Ser. No. 756,893
Int. Cl. B65g 1/00

U.S. Cl. 214-16.4

17 Claims

An automatic warehousing system comprising a plurality of storage bay sections and a plurality of separated travel zones along which are disposed the storage bay sections, and with a load carrier which is adapted to move in the travel zones for depositing loads into or removing loads from load storage locations in the storage

sections. A mobile transfer mechanism is provided for receiving the load carrier thereon and transferring the load carrier from one travel zone to another travel zone,



thereby enabling the load carrier to move in more than one travel zone and service the storage sections disposed along the plurality of travel zones.

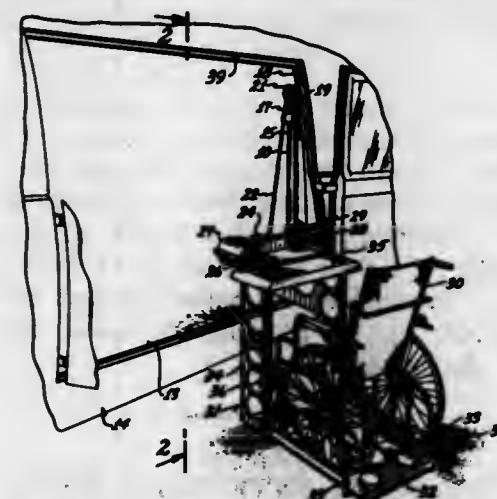
3,516,559 WHEELCHAIR HANDLING APPARATUS

Eldon G. Walter, 1711 W. Glenrosa, Phoenix, Ariz. 85015

Filed Feb. 15, 1968, Ser. No. 705,663
Int. Cl. B60p 1/46; B66f 9/14

U.S. Cl. 214-75

2 Claims



An apparatus for handling wheelchair patients, particularly the loading and unloading of patients in a wheelchair into an out of a motor vehicle under full control of the patient sitting in the wheelchair so that the patient unaided can wheel himself to the vehicle, load himself while sitting in the wheelchair into the vehicle and reverse the process with full control and safety for the patient.

3,516,560 POWER SKIDS

John Monroe Brighton, 1612 N. Dauphin Lane, Orlando, Fla. 32803

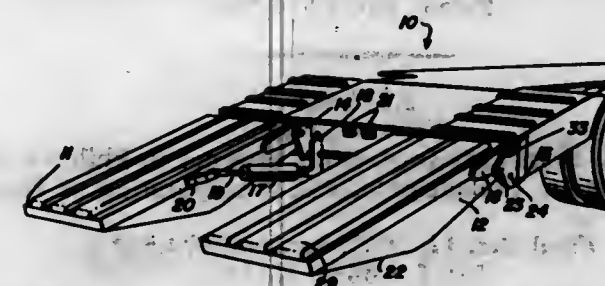
Filed June 26, 1968, Ser. No. 740,241
Int. Cl. B60p 1/44

U.S. Cl. 214-85

4 Claims

A power operated skid apparatus for vehicle trailers and the like, especially adapted for low-boy heavy duty trailers, and having skids attached to a trailer to form a loading ramp in their extended position and a vertical block to prevent loads from falling off the trailer in their retracted position. Hydraulic or pneumatic cylinders connected between leverage brackets located on the trailer,

and the hydraulic cylinders are used to drive the skids from extended to retracted positions and locking pins



prevent the skids from accidentally falling while the trailer is in use.

3,516,561 METHOD FOR SEPARATING INTERLACED STACKS OF PAPERBOARD BLANKS

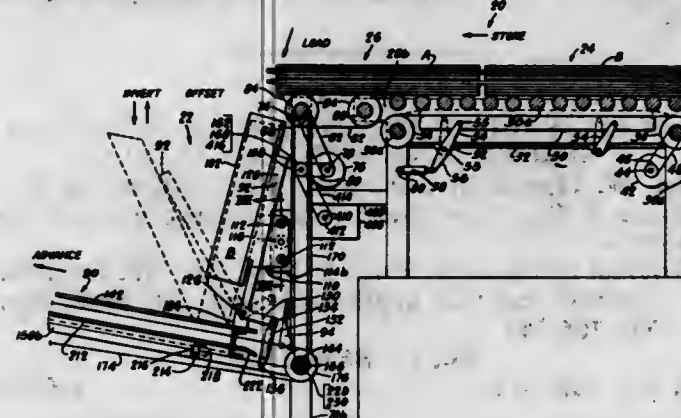
Mircea Calistrat, Baltimore, Md., assignor to Koppers Company, Inc., a corporation of Delaware

Original application Sept. 11, 1967, Ser. No. 666,605, now Patent No. 3,447,696, dated June 3, 1969. Divided and this application Nov. 27, 1968, Ser. No. 810,870

Int. Cl. B23p 19/00

U.S. Cl. 214-152

1 Claim



Apparatus for stacking alternate stacks of corrugated paperboard blanks discharged from a blank-forming machine face up and face down to reduce warping comprising an intermittently rotating transverse storage conveyor means for receiving and temporarily storing stacks of blanks in face-up position from an in-line conveyor adjacent the blank-forming machine; the intermittent conveyor means serving to feed the stacks of blanks so that any interlacing existing between adjacent stacks is separated, an inverter for sequentially receiving stacks from the storage conveyor and inverting alternate stacks to a face-down position on a rising conveyor comprising a guide for directing the stacks into a substantially vertical position with the stack resting on its leading edge on the rising conveyor where a pivoting finger carried by the rising conveyor engages the bottom edge of a first stack on the conveyor to advance it along the conveyor thereby positioning the first stack face up, an inverting lever adjacent the underside of a subsequent stack intermittently operable to engage the underside surface of this second stack to pivot it about its bottom edge so that it descends onto the rising conveyor with its underside up, first and second advancing fingers for sequential engagement with the trailing edges of the first and second stacks to advance them along the rising conveyor; a stacker for receiving stacks of blanks from the rising conveyor and stacking them one under the other to form a pile of blanks comprising a lifting conveyor including a stop for positioning each of the stacks, means for raising the lifting conveyor, with the stack thereon, a distance slightly greater than the height of the stack, a support for engaging the bottom face of the lifted stack to maintain

the stack in its lifted position, means for lowering the lifting conveyor to receive another stack for repeating the foregoing lifting operation, and means rotating the lifting conveyor in its uppermost position when the pile of blanks reaches a selected height to discharge the pile on a skid or other conveyor for further handling.

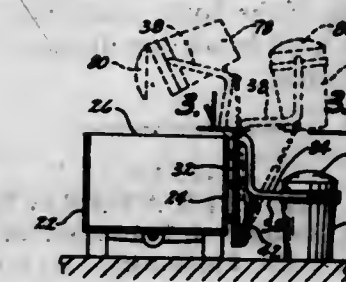
3,516,562 REFUSE COLLECTION VEHICLE

John W. Knight, New Hampton, Iowa, assignor to Sani-Systems, Inc., New Hampton, Iowa, a corporation of Iowa

Filed Aug. 2, 1968, Ser. No. 751,895
Int. Cl. B65t 3/02

U.S. Cl. 214-302

2 Claims



A refuse collection vehicle including a lifting arm means which is movably mounted at one side thereof adapted to raise a refuse receptacle from a position adjacent one side of the vehicle to a dumping position over the box of the vehicle. The lifting arm means is longitudinally movably mounted at one side of the vehicle and includes means for detachably connecting the refuse receptacle thereto.

3,516,563 COMBINATION BOTTLE AND CLOSURE CAP UNIT THEREFOR

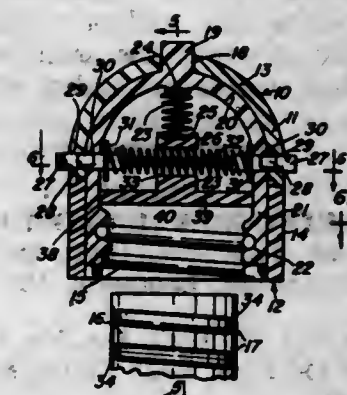
August J. Durso, 1604 Blackthorn Drive, Glenview, Ill. 60025, and Frank C. Maurer, Skokie, and George A. Panczyszyn, Glenview, Ill.; said Maurer and said Panczyszyn assignors to said Durso

Continuation-in-part of application Ser. No. 741,586, July 8, 1968. This application Jan. 16, 1969, Ser. No. 791,647

Int. Cl. A61j 1/00

U.S. Cl. 215-9

24 Claims



A combination bottle and closure cap unit therefor are provided which include a bottle for use, among other ways, in holding or packaging liquid or solid medicines, pills, aspirin, and other tablets, capsules, and other materials which may be dangerous to small children and particularly if and when taken in large quantities. The bottle has a neck portion on which the closure cap unit is removably mounted. The closure cap unit and the neck portion of the bottle include coacting attaching means for detachably attaching the closure cap unit to the neck portion of the bottle. The closure cap unit also includes means for restraining movement of the closure cap unit into and out of assembled relationship on the

neck portion of the bottle, and manually operable operating means for the restraining means. The closure cap unit likewise includes manually operable control means for the restraining means and for preventing movement of the restraining means independently of the manually operable control means therefor. To remove the closure cap unit from the neck portion of the bottle it is necessary for the operator to use both hands simultaneously, that is, to hold the bottle in one hand and against rotational movement while, at the same time, with the other hand manipulating both the operating means for the restraining means and the control means for the restraining means whereupon the closure cap unit may be removed from the bottle by giving the bottle a partial rotational movement or twist. This makes it impossible or at least extremely difficult for small children to remove the closure cap unit from the neck of the bottle since small children cannot ordinarily use both hands simultaneously in performing such an operation.

3,516,564

NIPPLE ASSEMBLY AND PACKAGE

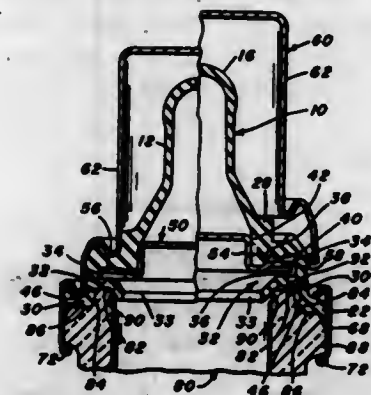
Elmer E. Pohlenz, Richmond, Ind., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 30, 1969, Ser. No. 795,228

Int. Cl. A61j 9/00; B65d 51/16

U.S. Cl. 215—11

9 Claims



An assembly of an elastic contents dispensing nipple and disk therein for affixation, with a removable protective shroud thereover, upon the entrance mouth of a rigid container to form a tamperproof hermetically sealed package, the dispensing nipple having interior, vertically disposed ribs for disposition against a substantially cylindrical side wall of a raised central portion of the disk to center the same without stiffening the nipple against compressive sealing with the container mouth.

3,516,565

GASKETED METAL CLOSURE CAP

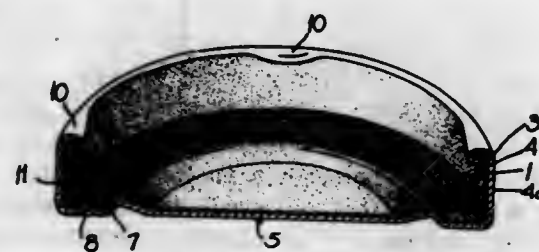
Albert Hatkevich, Lancaster, Ohio, assignor to Anchor Hocking Corporation, Lancaster, Ohio, a corporation of Delaware

Filed July 10, 1967, Ser. No. 652,353

Int. Cl. B44d 1/14; B32b 15/08; B65d 41/00

U.S. Cl. 215—40

3 Claims



Closure caps are prepared by coating a metal substrate with a solution of a high molecular weight vinyl resin, drying the adhesive solution, and bonding thereto a plastisol.

ERRATUM

For Class 220—7 see:
Patent No. 3,516,592

3,516,566

FOAM STOP

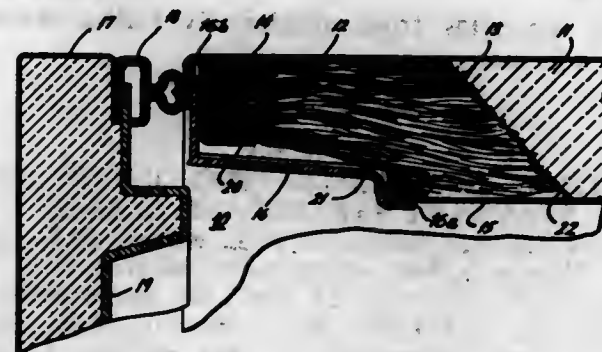
Howard S. Franck, Oxford, Ohio, assignor to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Oct. 11, 1967, Ser. No. 674,562

Int. Cl. B65d 25/18

U.S. Cl. 220—9

3 Claims



Foam stop for precisely delimiting the flow of expanding foam in the construction of heat-insulating cabinet walls.

3,516,567

SPACED WALL CONTAINER WITH DESICCANT SPACER RING BETWEEN WALLS

Adley W. Hemphill, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

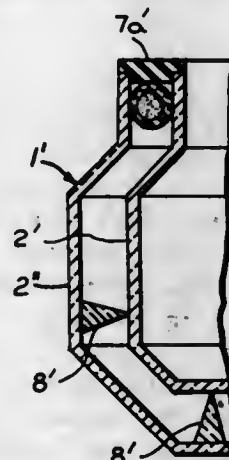
Original application Nov. 23, 1966, Ser. No. 596,596.

Divided and this application June 20, 1968, Ser. No. 766,341

Int. Cl. B65d 25/00

U.S. Cl. 220—14

3 Claims



Multi-wall units having spaced walls are provided with desiccant spacing means to prevent the formation of moisture between the walls. An example of such a unit is a multi-wall pharmaceutical container having at least one transparent wall retained in spaced relationship with regard to a second wall by a desiccant spacing means.

3,516,568

STORAGE OF LIQUIDS

Daniel Cecil Edward Fish, Ightham, near Sevenoaks, England, assignor to National Research Development Corporation, a corporation of Great Britain

Filed June 29, 1967, Ser. No. 650,058

Claims priority, application Great Britain, July 1, 1966, 29,634/66

Int. Cl. B65d 25/24

U.S. Cl. 220—18

11 Claims

An installation for storing liquid, comprising a tank of flexible sheet material located in a pit lined with waterproof sheet material and a layer of liquid, of a density

not less than that of the stored liquid, between the bottom of the tank and the lined bottom of the pit. Flexible ducts

across the lid. The lid skirt length is determined by the formula: seven thirty-seconds to eleven thirty-seconds of skirt length for each one inch of lid diameter.



are provided in the tank to drain rain-water off the top of the tank to the liquid layer beneath the tank.

3,516,569

RADIATOR CAP FOR VEHICLES

Friedrich A. Goes, Wolfsburg, Germany, assignor to Volkswagenwerk Aktiengesellschaft, Wolfsburg, Germany

Filed Jan. 24, 1969, Ser. No. 793,702

Claims priority, application Germany, Jan. 24, 1968, 1,655,660

Int. Cl. B65d 41/06

U.S. Cl. 220—40

7 Claims



A tank cover to fit by bayonet lock over the filling collar of the tank and having a packing ring and a dome-shaped packing member in the cover and contacting a rim of the filling collar to close the latter.

3,516,570

LID COVERED CONTAINER

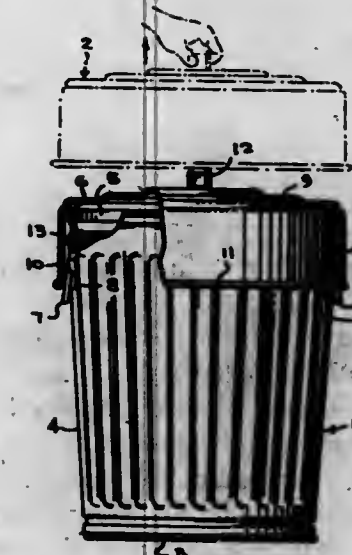
Carl W. Morgan, 96 Orchard Lane, Bethlehem, Wheeling, W. Va. 26003

Filed Mar. 13, 1969, Ser. No. 807,769

Int. Cl. B65d 41/00

U.S. Cl. 220—42

5 Claims



A container and lid, wherein the lid has a skirt of sufficient length to prevent removal of the lid from the container by a tilting force, or any force not directed upwardly away from the container and evenly distributed

3,516,571

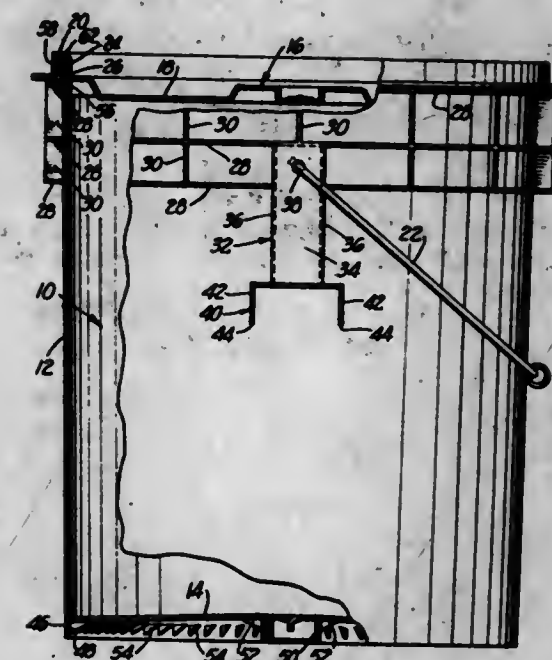
CONTAINER AND COVER THEREFOR

William H. Roper, Los Angeles, Robert E. Roper, Rossmore, and Charles R. Roper, Sherman Oaks, Calif., assignors of one-fifth each to Frank Roper, North Hollywood, and Ralph A. Miller, Van Nuys, Calif. Continuation-in-part of application Ser. No. 708,943, Feb. 28, 1968. This application Aug. 2, 1968, Ser. No. 756,339

Int. Cl. B65d 43/10, 21/05, 7/44

U.S. Cl. 220—60

8 Claims



The container sidewall terminates downwardly in a recessed bottom and upwardly in outer, annular ribs and an upper end bead. The bead and an overlying sealing ring are telescoped by downward flanges of a cover U-shaped edge, the inner flange extending down into the container below a cover closing wall and the outer flange engaging a bead under side. The container annular ribs outwardly protect the container bead and cover flange engagement, and certain of vertical ribs between the annular ribs reinforce side handle attachment members which terminate downwardly in broadened stacking supports. The container recessed bottom has a central annular support member and a series of triangular ribs between the bottom and sidewall, and between the bottom and support member. The cover may have either an upwardly or downwardly opening, annular recess at an inner side of the cover edge inwardly adjacent the container sidewall within which are positioned a series of circumferentially spaced, radially extending ribs stiffening the cover edge and resisting deformation of the container sidewall. This stiffening of the cover edge also provides support for a sidewall lower edge of a container positioned over and resting downwardly on the cover radially within the cover edge.

3,516,572

CLOSURE HAVING DOUBLE FASTENING MEANS
Paul Davis, Swampscott, Mass., assignor to Sweetheart Plastic, Inc., Wilmington, Mass., a corporation of Maryland

Filed Sept. 6, 1968, Ser. No. 758,000

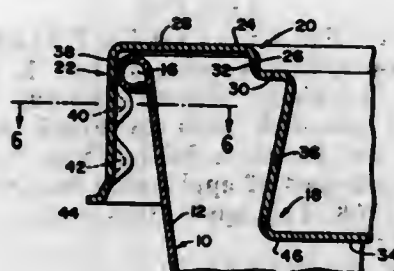
Int. Cl. B65d 43/10

U.S. Cl. 220—60

7 Claims

A disposable flexible plastic lid having a closure wall and a downwardly extending skirt with a pair of beads

which may be continuous or interrupted and extend inwardly on the skirt, and which serve as primary and secondary retaining means to hold the lid on the rim of



a container. The secondary bead also serves to prevent compacting of the lid when stacked with other identical lids.

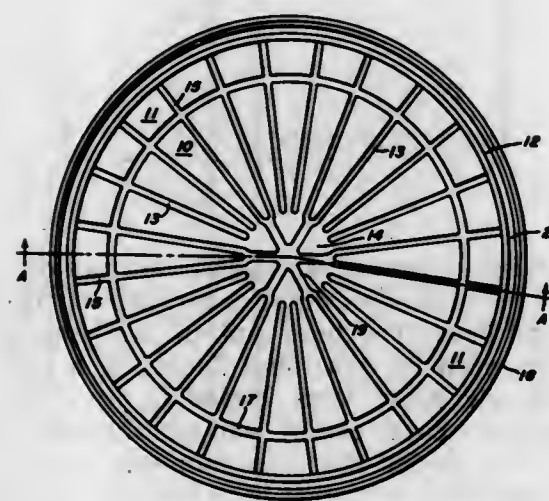
3,516,573
PIE PAN

John Mizuk, New Kensington, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 21, 1967, Ser. No. 647,791
Int. Cl. B65d 7/42

U.S. Cl. 220—72

4 Claims



A pie pan is provided having a plurality of downward embossed V-shaped grooves extending outwardly from the center area of the pan bottom and communicating with a plurality of striae extending upwardly throughout the height of the sidewall.

3,516,574
NAIL SELECTING AND FEEDING MECHANISM
FOR NAILING APPARATUS

Herbert André, Raidwangen, and Adolf Cast, Oberlenningen, Germany, assignors to Karl M. Reich, Maschinenfabrik, Nürtingen, Nürtingen, Germany, a German company

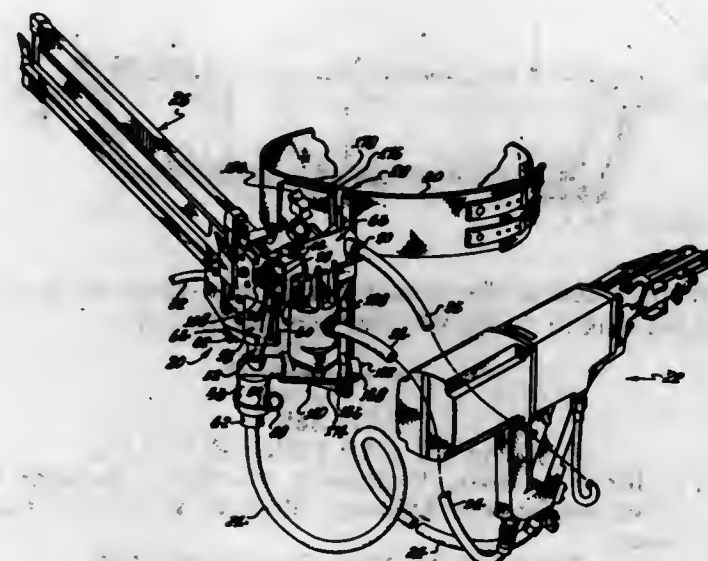
Filed Nov. 20, 1967, Ser. No. 684,450
Int. Cl. B65g 59/00

U.S. Cl. 221—278

6 Claims

A pneumatically operated mechanism for selecting and feeding nails one at a time from a magazine to a single-stroke pneumatic nailing apparatus. The magazine holds a series of nails in side-by-side relation and a pneumatically-operated nail selecting mechanism takes one nail at a time from the magazine. A pneumatically-operated

nail feeding mechanism then propels each nail to the nailing apparatus through a nail feeding conduit leading



to such apparatus. After each nail has been driven by the nailing apparatus, it pneumatically demands another nail from the selecting and feeding mechanism.

3,516,575
SYSTEM FOR IDENTIFYING AND FEEDING
ANIMALS

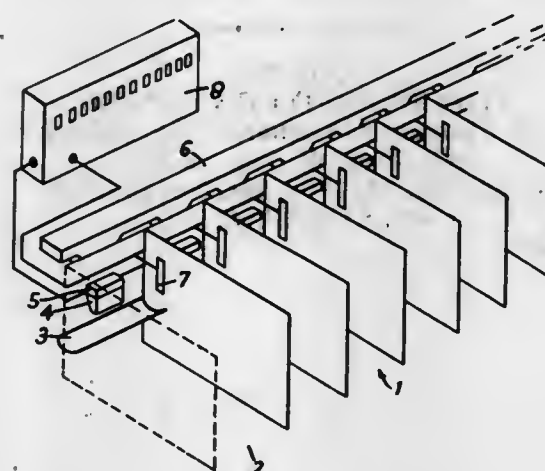
John Edward Moffitt, Peepys Farm, Stockfield, Northumberland, England

Filed June 18, 1968, Ser. No. 738,056
Claims priority, application Great Britain, June 20, 1967, 28,286/67

Int. Cl. B67d 5/14; G06k 9/00

U.S. Cl. 222—52

5 Claims



A system for identifying which of a number of animals is at a particular stall, and for feeding the identified animal at said stall. The system operates on a set of electro-magnetically radiated signals of discrete frequencies, and has, at the stall a set of frequency conscious circuits responsive respectively to each of the set of operating frequencies. On each animal to be identified is a group of frequency conscious circuits complementary in type to the frequency conscious circuit of the sets, the circuits of each group being responsive to different frequencies, and the frequencies of each group constituting a unique combination. The circuits of the set and the group will interact when an animal is at the stall to give a unique combination of output signals. Means is provided for

analyzing the output signals to identify the particular animal which is at the stall.

3,516,576
SPREADER VEHICLE WITH POWER TAKE-OFF

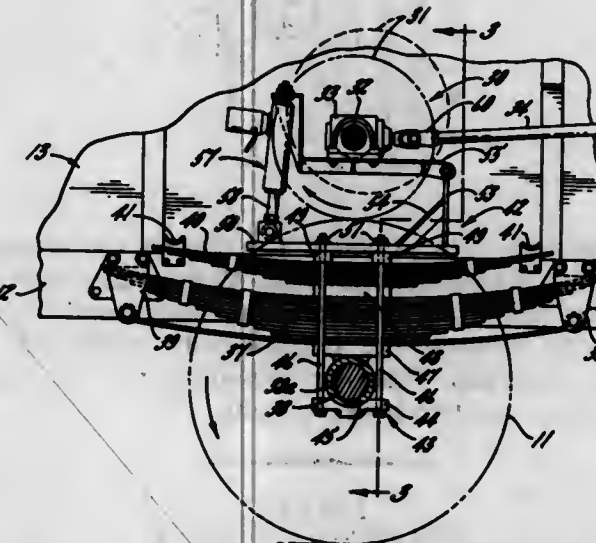
Eugene C. Elliott, % E. C. Spreader, Sharon, Wis. 53585

Filed June 9, 1969, Ser. No. 831,567

Int. Cl. A01c 15/00; F16h 37/00

U.S. Cl. 222—177

10 Claims



A vehicle for spreading fertilizer or the like in even quantities per area of ground covered by the vehicle even though the speed of the vehicle varies. The rear ground wheels of the vehicle are connected to the frame of the vehicle to float relative to the frame. A dispenser for dispensing the material is mounted on the vehicle and is driven directly and in timed relation to the speed of the vehicle by a power take-off unit driven by the rear ground wheels and mounted to float with the rear ground wheels. Two embodiments are illustrated and, in the first, the rear ground wheels are mounted on an axle which is connected to float relative to the vehicle frame by means of leaf springs. The power take-off comprises a drive wheel pressed into a tight frictional engagement with one rear ground wheel, and the drive wheel is mounted on the axle to float with the ground wheel and relative to the frame. In the other illustrated embodiment, a pair of rear ground wheels are mounted on each side of the vehicle and are supported on stub axles at opposite ends of rocker arms pivotally connected to the frame to rock and thus floatably mount the rear ground wheels with respect to the frame. The power take-off, in this instance, comprises a drive wheel which is connected to the rocker arm to float with the ground wheels and which is pressed into tight frictional engagement with both of the rear ground wheels on one side of the vehicle.

3,516,577
SYRINGES

Peter Pitt, London, England, assignor to Shandon Scientific Industries Limited, London, England, a British company

Filed Apr. 10, 1968, Ser. No. 720,074

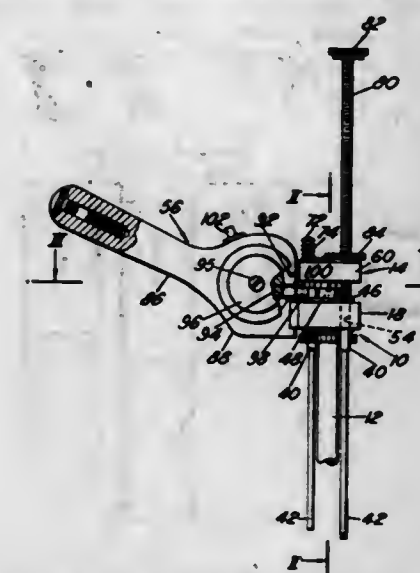
Claims priority, application Great Britain, May 23, 1967, 23,995/67

Int. Cl. G10f 11/06

U.S. Cl. 222—309

9 Claims

A metering device for use with a syringe comprise a body member to grip the syringe barrel and a head member which grips the syringe plunger button and is pulled towards the body member by a constant tension spring. A plate on the body member can be moved from a position in which it engages a pin on the head member to



charge the syringe. A switch is operated by the members closing to produce an event mark signal.

3,516,578

ROLLING METAL DIAPHRAGM

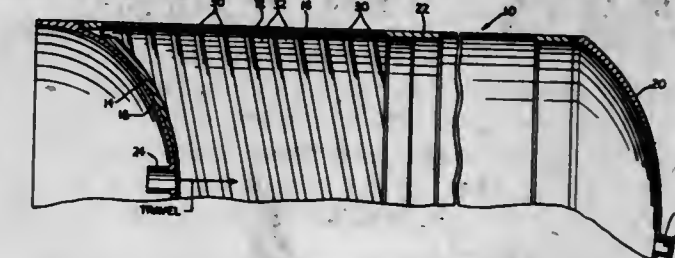
Walter B. Grossman, Fair Lawn, and George B. Rabe, Sparta, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed Oct. 12, 1965, Ser. No. 495,128

Int. Cl. B67d 5/00

U.S. Cl. 222—386.5

4 Claims



This invention relates generally to positive displacement, liquid expulsion systems in which a diaphragm is attached to the liquid containing tank and to a piston therein which is propelled by gas pressure through the tank to expel the liquid, and more particularly to an improved diaphragm for such use and other varied applications.

3,516,579

PORTION DISPENSER, MORE PARTICULARLY
FOR FEEDING CATTLE

Carl Olof Brommarker, Bronas enteri, Lidköping, Sweden

Filed Mar. 19, 1968, Ser. No. 714,282

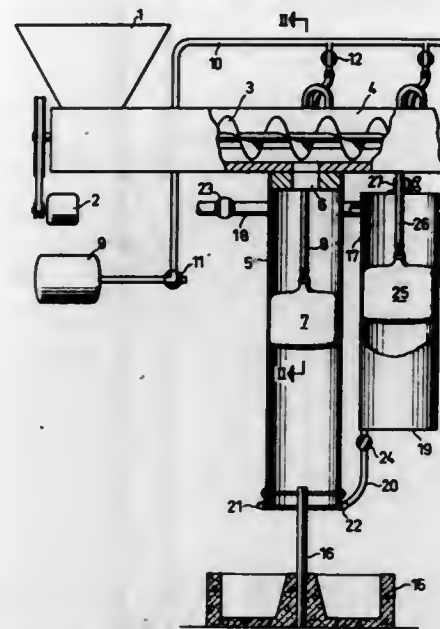
Int. Cl. G01f 11/28

U.S. Cl. 222—440

4 Claims

A portion dispenser system is provided for discharging predetermined portions of loose solid or liquid material. The dispenser is particularly useful for dispensing food portions to cattle in cattle pens. The system comprises a number of food containers having an individually adjustable effective volume corresponding to the portion to be discharged. A conveyor supplies food from a food storage or supply to the containers. The containers are substantially vertical tubes. Each container contains a flexible balloon which forms a closed bottom of the container, when inflated. The balloons are connected to a compressed air supply through pipes and cocks so that they can be inflated and collapsed. The container space above the inflated balloons are filled with food by the conveyor, the food being discharged by releasing the pressure of the balloons. The level of the balloons within the containers and, thus, the effective volume determining the volume of the food portions may be varied by lifting

and lowering the balloons, preferably by flexible compressed-air pipes connecting the balloons with the com-



pressed-air supply. Thus, the balloons serve as kind of valves and movable container bottoms of variable level.

3,516,580

BEVERAGE DECANter

John P. Hester, Lakewood, Calif., assignor to Margaret A. Curtis, North Hollywood, Calif.
Filed May 17, 1968, Ser. No. 729,964
Int. Cl. A47g 19/14; B65d 5/74; A47j 45/07
U.S. Cl. 222-465 7 Claims



A beverage decanter of the type having a handle and pouring spout assembly attached to the neck of a glass flask. The handle and spout assembly includes a resilient annular attachment collar integral with the handle, the collar being split proximate the handle permitting it to be spread open for engagement around the neck of the flask, with an annular sealing gasket interposed between the collar and neck. The collar is then secured by fasteners means in this operative position about the neck of the flask.

3,516,581

TOGGLE TYPE CLOSURE

Lewis A. Micallef, New York, N.Y., assignor, by mesne assignments, to Robert D. Wise, Whittier, Calif.
Continuation-in-part of application Ser. No. 666,335, Sept. 8, 1967. This application Sept. 6, 1968, Ser. No. 757,891.

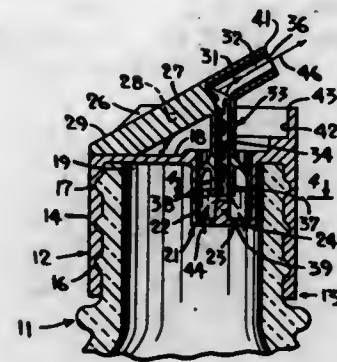
Int. Cl. B67d 3/00

U.S. Cl. 222-529

22 Claims

A dispensing closure in which the discharge passage extends through a lever pivoted on the container of material to be dispensed for angular movement between

dispensing and sealing positions. Telescopically associated ducts from the lever and the container establish communication between the container and the passage through the lever at a location eccentric to the angular movement of the lever, and suitable means associated

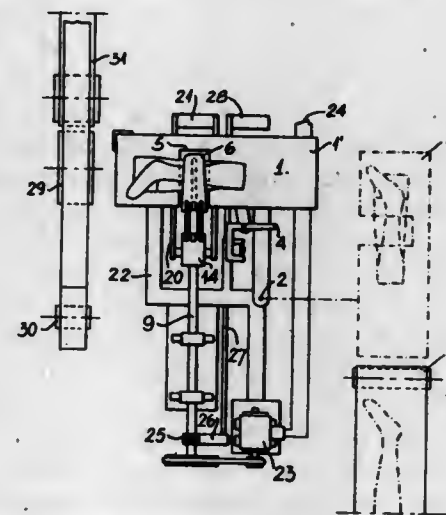


with the lever are provided for closing the passage in the sealing position of the lever. Various means are provided for permitting simultaneous angular and telescopic movement between the telescopically associated ducts without damaging them or impairing the substantially fluid-tight connection between them.

3,516,582

FOLDING MACHINE

Arnold Stossel, Neustift Gasse 131, Vienna VII, Austria, and Josef Eichberger, Baden, near Vienna, Austria; said Eichberger assignor to said Stossel
Filed Apr. 7, 1969, Ser. No. 814,092
Claims priority, application Austria, Apr. 11, 1968, A 3,614/68
Int. Cl. A41h 33/00
U.S. Cl. 223-37 5 Claims



A folding machine for strip-shaped textile materials, such as stockings comprises a folding fork turntable about a horizontal axis, means for feeding the strip-shaped material between the tines of the fork, and a drive for rotating the fork to thereby fold the textile material on the fork to a width equal to that of the fork.

3,516,583

APPARATUS FOR TURNING TUBULAR ARTICLES

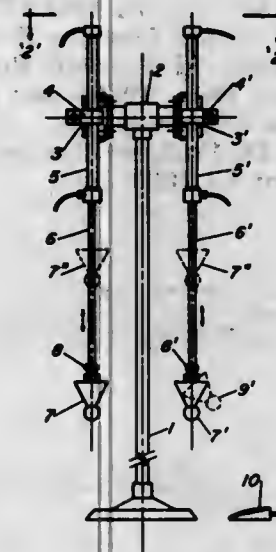
Gilbert L. Petty, Petal, Miss. 39465
Filed July 9, 1969, Ser. No. 840,257
Int. Cl. A41h 43/00

U.S. Cl. 223-39

9 Claims

Two long stroke fluid cylinders are supported in a spaced apart parallel arrangement and each of the exterior ends of the piston rods from the cylinders is provided with a cone-shaped end piece. The latter are attached so as to

flare outwardly on the piston rod side such that as garment sleeves or pant legs are slipped over the cone-shaped ends and rods, the cuffs thereof will be caught in the flared portions and provide for a rapid turning as the piston rods are caused to move with the cone-ends away from the



hands of the operator. A preferred design also effects a movement of the fluid cylinder support means such that the two parallel units are brought closer together as the rod ends are pulled toward the cylinders and a garment can be pulled off more readily with one hand of the operator.

3,516,584

WRENCH HOLSTER

Jack Fabyan, Wasilla, Alaska 99687
Filed July 24, 1968, Ser. No. 747,209
Int. Cl. A45f 5/00
U.S. Cl. 224-5 10 Claims



A belt worn holster for holding and preventing inadvertent withdrawal of a hand tool having detents on opposite faces of its shank. The holster has superposed panels with the front panel being secured to the rear in a manner so as to provide a lower flexible flap. A U-shaped cut through the front panel provides a tool opening and the resulting tongue and flap have leaf spring means normally biasing them into planar relationship. Pawl means on both the flap and tongue cooperate with the detents in the tool shank to prevent withdrawal.

3,516,585

TOOL MOUNT

Alvin Inwood, Fairfield, Conn., assignor to Coastal Abrasive and Tool Company, Inc., Trumbull, Conn., a corporation of New York
Filed Nov. 12, 1968, Ser. No. 774,637
Int. Cl. A45f 5/02

U.S. Cl. 224-5

10 Claims



This invention relates to the art of tool mounts and more particularly to a tool mount preferably formed from plastic material which serves as the container in which the tool is sold and which can be carried on the belt of a user, which mount includes an elongated supporting plate having abutment means extending outwardly from the mid-portion of the plate adjacent its lower end against which a portion of the tool to be carried by the mount may abut, with retaining means extending transversely over the lower end of the tool, said mount including a removable identification card.

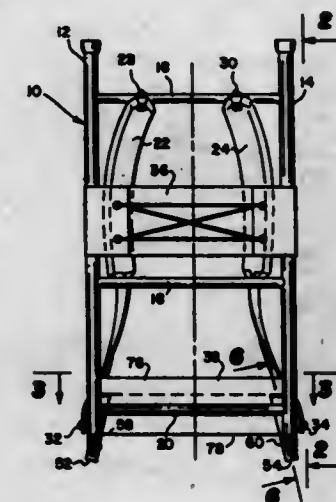
3,516,586

PACK FRAME AND SUSPENSION MEANS

Fred A. Farnbach, Phoenix, Ariz., assignor to Jack C. Abert, Phoenix, Ariz.
Filed June 14, 1968, Ser. No. 737,107
Int. Cl. A45f 3/10

U.S. Cl. 224-25

16 Claims



A pack frame having a substantially rigid frame provided with shoulder engaging straps, and a hip engaging belt adapted to bear on and surround the downwardly diverging portions of human hips; and flexible suspension straps extending downwardly from said belt and suspending a lower portion of said rigid frame in free swingable movable relation to said belt.

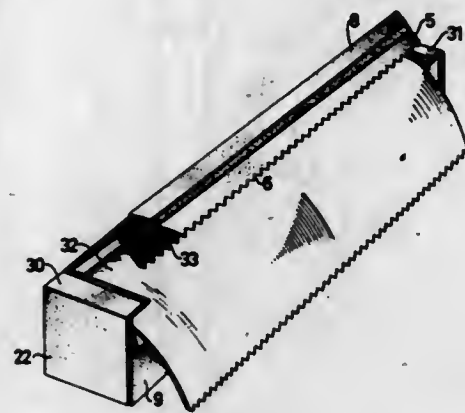
3,516,587

CARTON HAVING A TEARING EDGE
Bengt Bjorklund, Kävlinge, Sweden, assignor to AB Akerlund & Rausing, Lund, Sweden, a company of Sweden

Filed Feb. 2, 1968, Ser. No. 702,579
Claims priority, application Sweden, Feb. 10, 1967, 1,861/67

Int. Cl. B26f 3/02
U.S. Cl. 225-19

6 Claims



A carton for dispensing a roll of web-shaped material in which the front wall thereof is multilaminar, one lamina being contiguous with the top wall and the other lamina with the bottom wall, the inner lamina having a cutting edge at its free end which may be reinforced with a hard plastic material. Also the outer lamina may be composed of two longitudinally separable sections to facilitate opening of the carton to release and expose the cutting edge of the inner lamina.

3,516,588

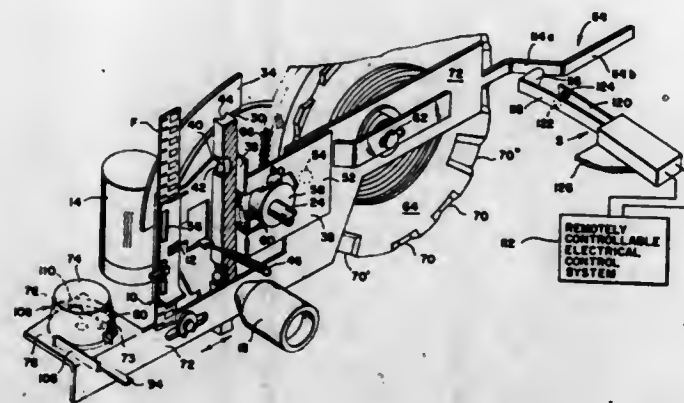
PROJECTOR SYSTEM WITH AUTOMATIC CUT-OUT SWITCH FOR CONTROL UNITS DURING HIGH SPEED OPERATION

Miles C. O'Donnell, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 5, 1968, Ser. No. 695,954
Int. Cl. G03b 1/22

U.S. Cl. 226-43

14 Claims



A cut-out switch in a motion picture projector automatically disables an electrical control unit upon change-over to high speed operation of the projector in either forward or reverse direction. A switch actuating member is mounted on a speed control lever, axial movement of which is controlled by a speed control knob. Setting of the knob to either of the extreme positions thereof, corresponding to 54 frames per second operation of the

projector in forward and reverse directions, causes movement of the switch actuating member to a position where the switch is opened and the electrical control unit disabled.

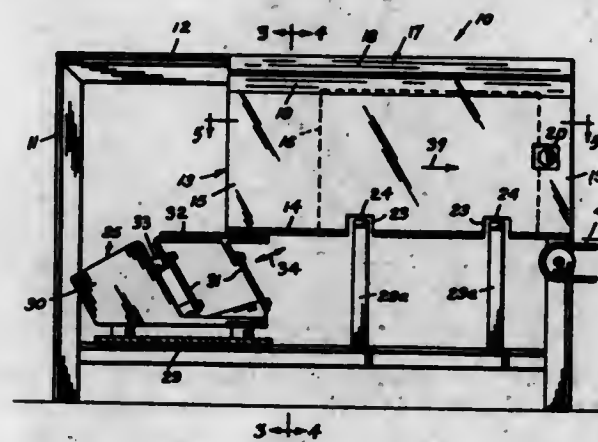
3,516,589

APPARATUS FOR STAPLING SHEETS INTO PADS
Dominick J. De Franck, 413 Eastman Road, Northwood, and James M. Fooks, 31 Paschall Road, Shellburne, both of Wilmington, Del. 19803, and Louis T. Staats, Sr., Rte. 1, Lincoln University, Pa. 19352

Filed June 28, 1967, Ser. No. 649,605
Int. Cl. B27f 7/06

U.S. Cl. 227-7

8 Claims



A horizontal trough-shaped holder adapted to receive a set of vertical, juxtaposed sheets which are to be stapled together. An electric vibrator is connected to the holder for vibrating the same so that the sheets are advanced against a retractable stop in the holder, this causing vertical edges of the sheets to become transversely aligned and the bottom edges of the sheets to become horizontally aligned on the bottom of the holder. Means are provided for stapling the aligned sheets together into the form of a pad, which is discharged from the holder by its vibrating movement when the stop is retracted.

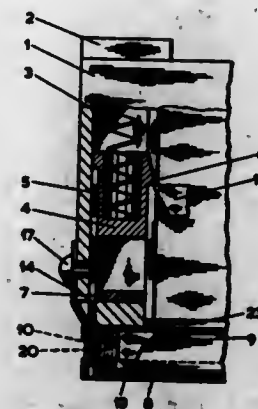
3,516,590

FASTENER APPLYING IMPLEMENT
Ewald Rudolf Timmerbell, Rudolf de Ruiter, and Eppo Hemmo Jeronimus, Arnhem, Netherlands, assignors to VERFA Draadindustrie N.V., Arnhem, Netherlands

Filed Sept. 26, 1967, Ser. No. 670,669
Int. Cl. B25c 5/02

U.S. Cl. 227-123

5 Claims



A fastener applying implement has a front plate formed by a resilient member preferably in the form of a leaf spring held in a guideway defining position such that forces keeping the front plate in its position diminish from the top of the guideway towards the outlet of the guideway to achieve the effect of self-cleaning of the guideway if the guideway should become obstructed by an improperly separated fastener.

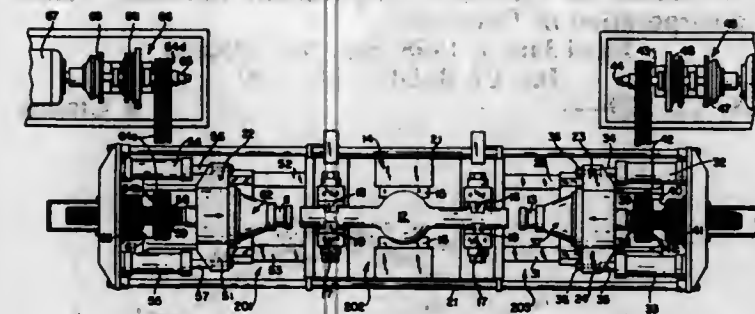
3,516,591

FRICITION WELDING APPARATUS
Arthur F. Gage, Detroit, Mich., assignor, by mesne assignments, to Rockwell-Standard Company, Pittsburgh, Pa., a corporation of Delaware

Filed June 30, 1967, Ser. No. 650,317
Int. Cl. B23k 27/00

U.S. Cl. 228-2

16 Claims



A friction welding apparatus is particularly adapted for the friction welding of relatively heavy workpieces, as for example the center section and wheel bearing end spindles of a drive axle housing. The apparatus comprises a very heavy rigid support structure consisting of a central base portion on which the stationary workpiece is clamped against movement and two essentially identical but reversed end base portions on which rotating workpieces to be welded to the stationary work-engagement with the stationary workpiece. The central and end base portions are rigidly secured together end to end in the assembly. The central base portion mounts three pairs of laterally movable jaws and mechanism for moving the jaws of each pair into clamping engagement with the stationary workpiece at three places along the workpiece. The mechanism comprises a fluid pressure cylinder actuated lever system for actuating the central pair of jaws and similar differentially threaded shaft arrangements for actuating the end pairs of jaws. The end base portions each comprise hydrostatic journal and thrust bearings for mounting an arbor assembly having a clutch for attachment of one of the rotating workpieces. Individual and independent power sources each comprising a motor, clutch and brake assembly are mounted separate from the support structure and connected by a special belt and pulley drive to the arbor assembly for each rotating workpiece.

3,516,592

COLLAPSIBLE TRANSPORT BOX
Wolfgang Friedrich, 31 Bieberskamp, Lendringen, Germany

Filed Apr. 18, 1968, Ser. No. 722,406
Claims priority, application Germany, Apr. 19, 1967, F 52,173

Int. Cl. B65d 7/24

U.S. Cl. 220-7

5 Claims



A transportable collapsible container consisting of a rectangular base and four walls hinged to the base along the edges thereof. One pair of walls is formed with arcuate

circular-segmental guide formations centered upon the respective hinges of the other walls and extending through substantially 90° while these other walls have formations engaging the guides in all positions thereof. The guides are provided at their upper ends with notches or formations for retaining the walls in an erected state. The walls carrying the formations are formed with reinforcing ribs extending parallel to the hinged sides over substantially the entire length thereof, the arcuate guide formations extending into the ribs.

3,516,593

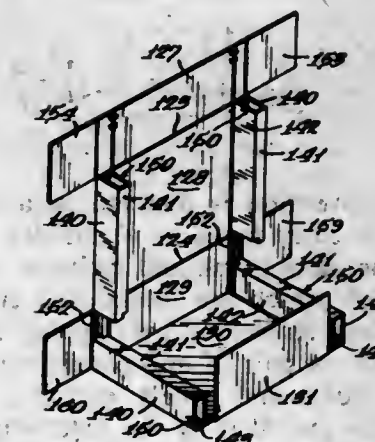
PROTECTIVE CONTAINER FOR BOOKS AND THE LIKE

Howard F. Larsen, Chicago, Ill., assignor to R. R. Donnelley & Sons Company, a corporation of Delaware

Filed Mar. 14, 1968, Ser. No. 713,097
Int. Cl. B65d 5/22

U.S. Cl. 229-33

6 Claims



A protective shipping container, or carton, for one or more books, which may be set up on an automatic book boxing machine by folding a flat container blank around a book, or books, along parallel longitudinal fold lines and parallel transverse fold lines to provide a container having protective air cells at both ends of the book.

3,516,594

FASTENERLESS TOTE BOX

Donald W. Stenzel, 1700 Ridgewood Drive, Crestwood, Mo. 63126, and Robert N. Stenzel, 745 Southshire Drive, St. Louis, Mo. 63125

Filed Nov. 1, 1968, Ser. No. 772,568
Int. Cl. B65d 5/22, 13/00, 21/00

U.S. Cl. 229-34

12 Claims



A tote box folded from a single piece of plastic coated fibreboard and requiring no staples or adhesive, capable

of being folded in reverse directions, and having a flat inner bottom which keeps the assembled tote box in assembled relation.

3,516,595

FOLDING FRUIT OR VEGETABLE BASKET

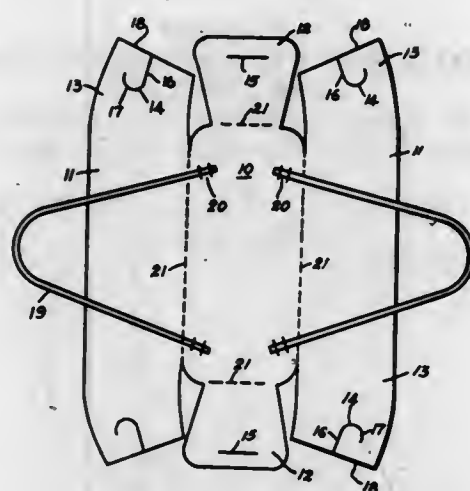
George Edward Bailey, R.R. 3, Belleville,
Ontario, Canada

Filed Aug. 26, 1968, Ser. No. 767,603

Int. Cl. B65d 5/46

U.S. Cl. 229—35

5 Claims



The present invention is directed to a folding basket which is used to carry fruits or vegetables. The basket is formed of a one-piece blank and includes a base with integral side panels which are folded and erected to form integral side walls, as well as overlapping end walls. The base also includes a pair of end panels which are folded and erected to form end panels, exteriorly of the overlapped end walls provided by the extensions on the side walls. A carrying handle is provided by a pair of U-shaped loop members. The legs of the loop of each member are stapled or otherwise permanently secured to the base, and the closed loop portions extend upwardly beyond the top of the side walls. In this way, when the basket is used for carrying fruits or vegetables, the handles provide additional support to the side walls of the basket.

3,516,596

CITRUS FRUIT AND VEGETABLE SHIPPING CONTAINER

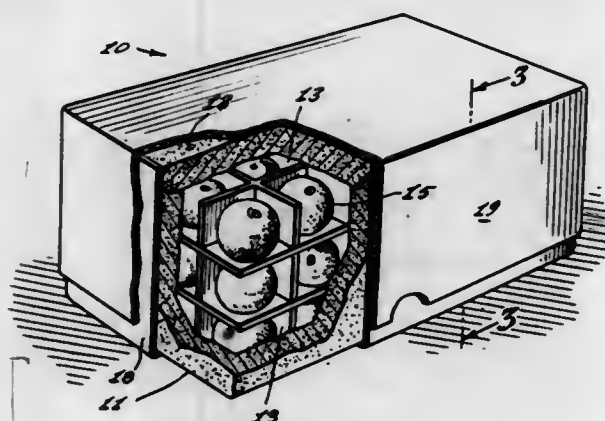
Richard Madden, 3659 Russell Ave. 45226, and Donald A. Madden, 5418 Eastwood Drive 45227, both of Cincinnati, Ohio

Filed Aug. 19, 1968, Ser. No. 753,404

Int. Cl. B65d 5/56

U.S. Cl. 229—42

4 Claims



A container for shipment commercially of citrus fruit and other produce, the container being comprised of an air tight foamed polystyrene enclosure encased within a

protective cardboard box, and the container having the characteristics of preserving the produce in a fresh condition over longer periods of time than has been possible heretofore.

3,516,597

FOIL CONTAINER

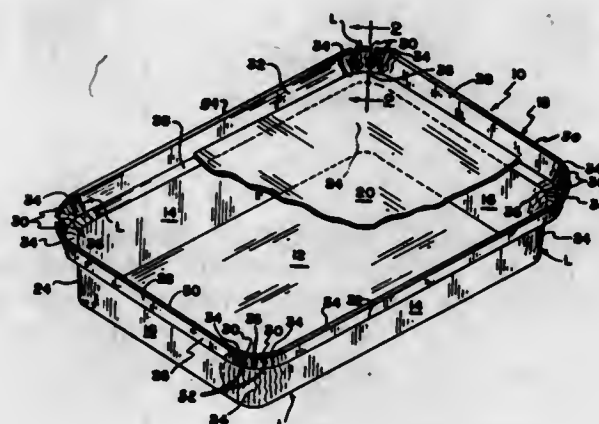
James T. Bigelow, River Forest, Ill., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed Jan. 4, 1968, Ser. No. 695,666

Int. Cl. B65d 5/64, 1/00

U.S. Cl. 229—43

2 Claims



A container for food products and the like comprising a receptacle provided with a rim assembly for receiving a lid and wherein selected portions of the rim assembly are specially notched to facilitate the opening and closing of the rim assembly about the lid.

3,516,598

CONTAINER FOR RECORDS, DOCUMENTS AND THE LIKE

Ruben de Freitas Martins, Alameda Franca 459,
Sao Paulo, Brazil

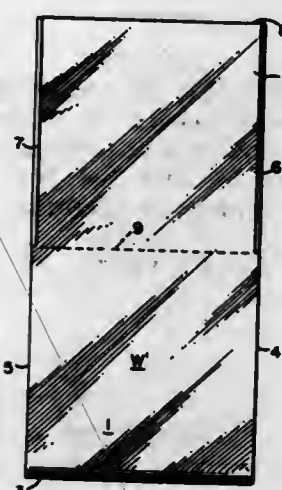
Filed June 7, 1968, Ser. No. 735,460

Claims priority, application Brazil, July 13, 1967, 191,320

Int. Cl. B65d 27/08, 85/30

U.S. Cl. 229—72

4 Claims



A flexible cover for disc records and the like comprising a two part envelope adapted to be folded, one part upon the other, and forming two pockets accessible either from a lateral opening in the front wall adjacent the fold or from an open side of one of the pockets. Alternatively, one part may be inserted within the other part to form an open end envelope for storing a record.

3,516,599

PAPERBOARD FOLDER WITH POCKETS

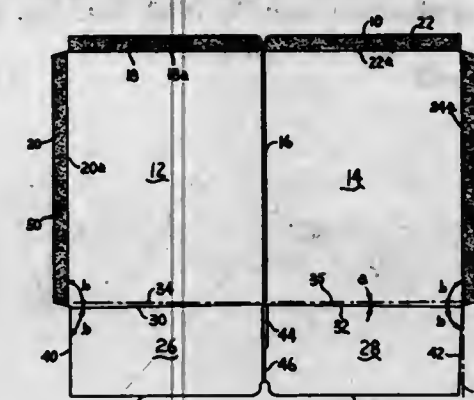
Kenneth T. Buttery, Kalamazoo, Mich., assignor to Brown Company, New York, N.Y., a corporation of Delaware

Filed Aug. 6, 1968, Ser. No. 750,720

Int. Cl. B65d 27/08

U.S. Cl. 229—72

3 Claims



A folder jacket formed from an integral cut and scored blank is provided with integral pockets on the inner surface of the front and rear covers adapted to pull away from the covers when the folder is in an open position. The blank is also cut in a fashion so as to prevent the building up of stock on the inner surface of the score line dividing the front and rear cover panels when the folder is in a closed position.

3,516,600

DEPOSIT RECEPTACLE FOR NEWSPAPERS OR THE LIKE

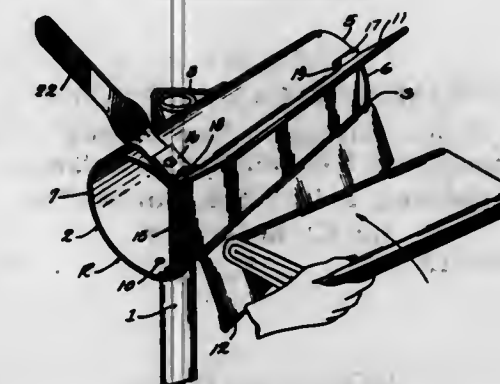
Ernest R. Andis, 3528 N. Bay Drive,
Racine, Wis. 53402

Filed May 27, 1968, Ser. No. 732,411

Int. Cl. A47g 29/12

U.S. Cl. 232—17

1 Claim



A receptacle for receiving newspapers, magazines or the like from a postman or newsboy and without the necessity for the deliverer to stop in order to place the newspaper in the receptacle.

3,516,601

PUNCHING APPARATUS

Herbert Behrens, Neuenburg, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany

Filed Dec. 11, 1967, Ser. No. 689,380

Claims priority, application Germany, Dec. 13, 1966, O 12,142

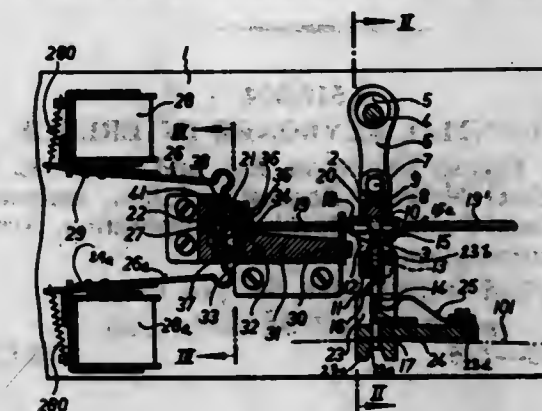
Int. Cl. B26f 1/04

U.S. Cl. 234—115

23 Claims

A reciprocating drive means is coupled with selected punches by coupling members which are turnable about axes perpendicular to the direction of reciprocation of the drive means. Each coupling member has a coupling portion whose cross section is non-circular and has a greater dimension and a smaller dimension. When the greater dimension is located in the path of movement of

the drive means or a coupling lever thereon, during a working stroke force is transmitted to selected punches, but when the smaller dimension is effective, the drive means or coupling lever does not touch the coupling mem-



ber so that no force is transmitted to the non-selected punches during a working stroke. Electromagnetic selector means turn the coupling members during the return stroke of the drive means.

3,516,602

CIRCULAR SONAR SLIDE RULE

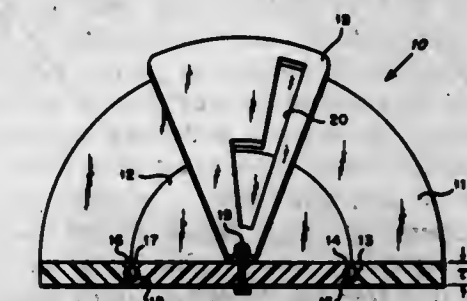
Daniel Barron, 6223 Springhill Court, Apt. 202,
Greenbelt, Md. 20770

Filed Jan. 25, 1968, Ser. No. 703,226

Int. Cl. G06c 3/00

U.S. Cl. 235—88

1 Claim



A circular sonar slide rule for determining the optimum depth to position an active sonobuoy and for predicting the best estimated range of that sonobuoy at the optimum depth. The rule comprises an outer and inner plate the confronting edges of which are grooved to receive an annular resilient retaining ring which both secures the plates together and permits the relative rotation thereof. A cursor is rotatably secured to the inner plates. Sonar information is provided in predetermined fashion to enable the rule to be read along any radial segment thereof upon correlation of the plates and cursor.

3,516,603

TAMPER-PROOF ODOMETER ONE-WAY DRIVE

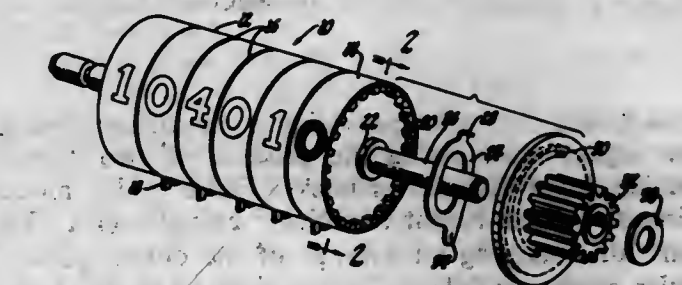
Guenter Hachtel, Swartz Creek, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 2, 1968, Ser. No. 749,798

Int. Cl. G01c 22/00; G06m 1/04

U.S. Cl. 235—95

4 Claims



This invention relates to a drive mechanism for use on a counter having a number of wheels such as the

counters commonly used on odometers wherein the drive mechanism drives the counter as well as prevents reversal of operation, by means of a gear and ratchet arrangement.

3,516,604

SEQUENTIAL KEYBOARD INTERLOCK

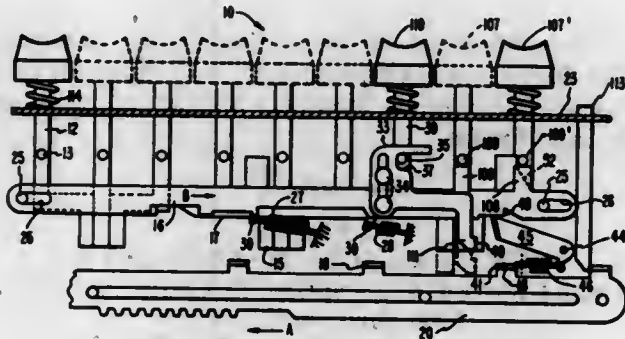
Jackson C. Taylor, Lexington, Ky., and Robert E. Yates and Michael N. Zell, Rochester, Minn., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Jan. 10, 1968, Ser. No. 696,919

Int. Cl. G06c 7/04; G07g 1/00

U.S. Cl. 235—145

10 Claims



Keyboard interlocks are utilized to enforce a sequence of operation of keys within a keybank of control keys. Two slides cooperate to cause an interlock to be set or removed to respectively prevent or permit operation of another key or keys within the keybank in accordance with the sequence of operation it is desired to enforce. One of the cooperating slides carries keystem stops which are positionable to interfere with a selected key assembly, preventing operation. Such slide is biased toward one position and selectively positionable in a second position from which it is released by actuation of the other of the slides.

3,516,605

FLUIDIC MULTIPLIER CIRCUIT

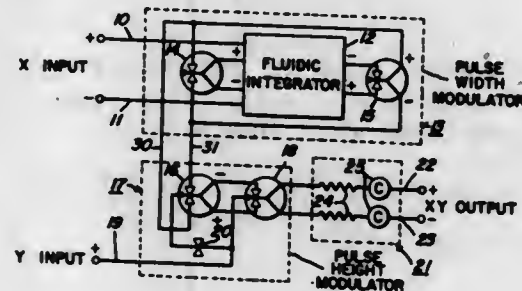
Donald L. Rexford, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Nov. 1, 1968, Ser. No. 772,616

Int. Cl. G06d 1/12

U.S. Cl. 235—200

12 Claims



A fluidic circuit for providing a pressurized analog output signal representing the product of two pressurized analog input signals includes a pulse width modulator circuit, a pulse height modulator circuit and a filter circuit for obtaining an average of the output pulses. The pulse height modulator is comprised of digital type fluid amplifiers and the pulse width modulator circuit is comprised of digital amplifiers and an integrator.

3,516,606
AIR-CONDITIONING TEMPERATURE VOLUME CONTROLLER

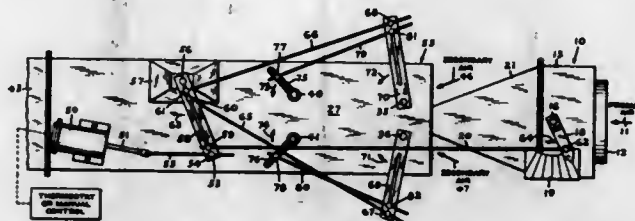
Albert S. Edwards, Agawam, Mass., assignor to Allied Thermal Corporation, New Britain, Conn., a corporation of Connecticut

Continuation of application Ser. No. 693,202, Dec. 26, 1967. This application Aug. 7, 1969, Ser. No. 854,014

Int. Cl. G05d 23/13

U.S. Cl. 236—13

16 Claims



A fluid controller for maintaining a substantially constant temperature and a substantially constant volume of air delivered to a space to be supplied with conditioned air. Primary conditioned air is delivered to a mechanical volume controller which delivers a substantially constant, but adjustable, volume of air to an aspiration chamber where the flow of primary air aspirates or induces secondary air through an orifice into the chamber. The primary and secondary air is mixed and delivered to the space. A control device actuated by the temperature of the space adjusts simultaneously the volume of primary air delivered by the mechanical volume controller and the size of the orifice to change the ratio of primary and secondary air in a sense to oppose changes in temperature in the space without changing the total volume of air delivered to the space.

3,516,607

STEAM APPLICATION SYSTEM

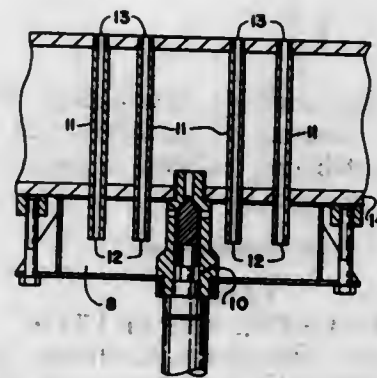
Clifford D. Shelor, Covington, Va., assignor to Westvaco Corporation, a corporation of Delaware

Filed Aug. 2, 1968, Ser. No. 749,744

Int. Cl. B05b 1/24

U.S. Cl. 239—13

10 Claims



A steam application system for delivering dry steam to a moving paper web is formed with two chambers: a first, high pressure, high temperature chamber extending across the web and a series of relatively low temperature, low pressure chambers interconnected by valves to the first chamber. Several conduits are positioned in the first chamber with their inlet ends connected to the second chamber and their outlet ends delivering steam to the web of paper. When high temperature, high pressure steam is fed into the first chamber it passes through the

valves into the second chambers and thence, through the conduits to the material being treated. Since the interior of the first chamber and hence, the conduits, is at an appreciably higher temperature than the steam in the second chambers, any water entrained in the steam as it exits the second chambers is vaporized to give a substantially dry steam at the outlets of the conduits.

3,516,608

ELECTROSTATIC NOZZLE

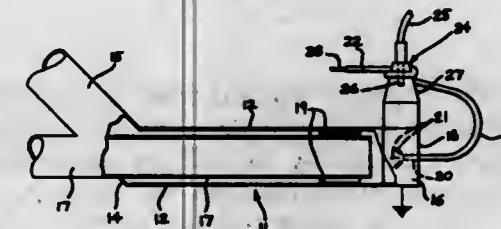
Henry D. Bowen, 2200 Charlotte Court, Raleigh, N.C. 27607, and William E. Splinter, 2120 S. 61st St., Lincoln, Nebr. 68506

Filed July 10, 1968, Ser. No. 743,786

Int. Cl. B05b 5/00

U.S. Cl. 239—15

12 Claims



In abstract, a preferred embodiment of this invention is an electrostatic charging nozzle used in conjunction with the application of coatings of liquid and powdered materials.

3,516,609

DRAGLINE SPRINKLER SYSTEM

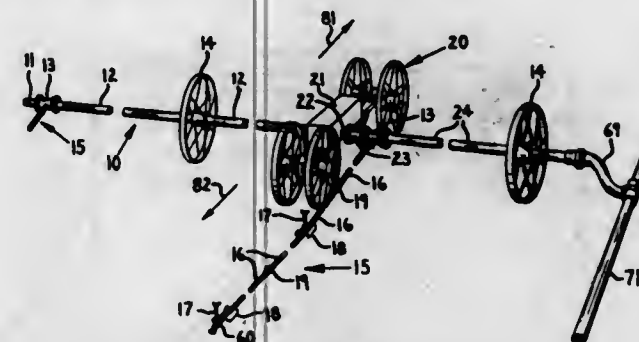
Robert Lee Gheen and Ernest Lee Gheen, both of 500 Willagillespie Road, Eugene, Oreg. 97401

Filed Mar. 1, 1968, Ser. No. 709,747

Int. Cl. A01g 25/02

U.S. Cl. 239—212

7 Claims



Large wheels are fixedly mounted at intervals on a pipe line to support the pipe in elevated position above a field crop. This wheel line is rotated by a power mover to drive the wheels. At each joint in the wheel line a special rotating coupler is provided to connect a dragline equipped with sprinklers.

3,516,610

WINDSCREEN WIPER AND WASHER MECHANISMS

Derek Norman Stevens, Dunstable, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 24, 1968, Ser. No. 770,319

Claims priority, application Great Britain, Oct. 26, 1967, 48,672/67

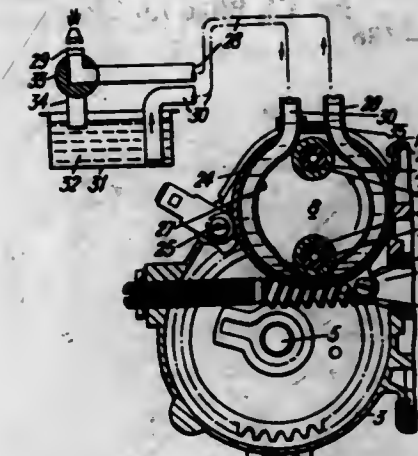
Int. Cl. B05b 1/10; B05s 1/46

U.S. Cl. 239—284

4 Claims

Rollers carried by one of the drive gears of a windscreen wiper motor progressively roll along and squeeze

a portion of a flexible tube, the ends of which are connected to a wash liquid reservoir and a washer nozzle, so



as to pump liquid from the reservoir and eject it from the nozzle.

3,516,611

INDEXABLE SPRAYER WITH PLURAL NOZZLE ORIFICES

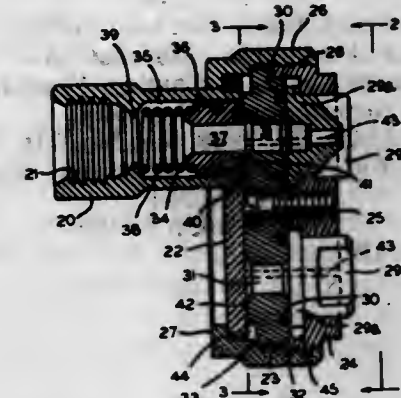
Richard G. Piggott, Bellwood, Ill., assignor to Spraying Systems Co., a corporation of Illinois

Filed June 4, 1968, Ser. No. 734,270

Int. Cl. A62c 31/02

U.S. Cl. 239—391

11 Claims



A nozzle assembly including a plurality of nozzle tips which are selectively indexed into a fluid line. Novel seal and holding means are spring and fluid pressure biased so that the latching action as well as the sealing action tighten as fluid pressure increases. In the event of seal failure, bleed passages prevent fluid from being directed toward the operator manipulating the nozzle.

3,516,612

SIZING OF FINE PARTICLE FERROMAGNETIC MATERIALS

Robert L. Fullman and Joseph J. Becker, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Feb. 28, 1968, Ser. No. 708,784

Int. Cl. B02c 23/00; B07b 1/28; H01f 1/06

U.S. Cl. 241—24

4 Claims

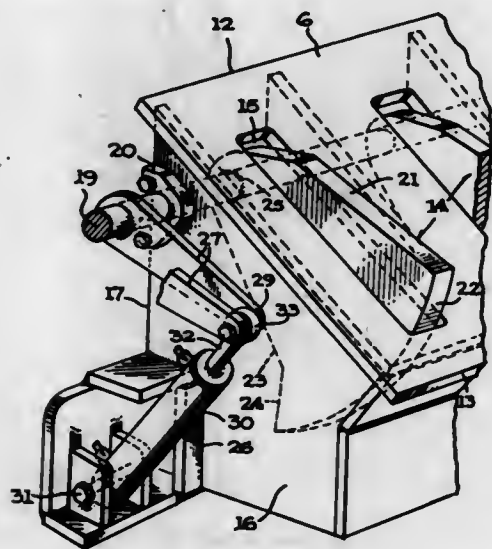
Fine particle ferromagnetic materials have a tendency to form clusters or clumps of strongly adherent aggregates which prevent effective screening or sieving. It has been found that if the screening or sieving is done in the presence of either a constant polarity magnetic field or a magnetic field the polarity of which is cyclically reversed or alternated, that this problem is eliminated or substantially so.

3,516,613

ROTARY IMPACT CRUSHER

George T. Gilbert, Bayport, Minn., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 27, 1967, Ser. No. 682,719
Int. Cl. B02c 13/286
U.S. Cl. 241—186

8 Claims U.S. Cl. 242—55.2



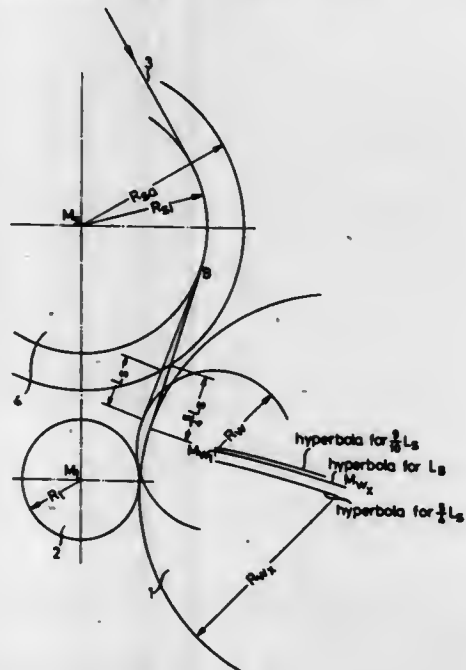
An anti-bridging mechanism for a crushing apparatus including a plurality of spaced apart clearing members movable from a retracted position below the in-feed plane to an elevated extended position projecting upwardly from a receiving plate.

3,516,614

PROCESS AND DEVICE FOR WINDING UP THREADS

Günther Bauer and Jakob Bucher, Bobingen, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
Filed Mar. 28, 1968, Ser. No. 716,774
Claims priority, application Germany, Apr. 7, 1967, F 52,061
Int. Cl. B65h 54/02
U.S. Cl. 242—18

5 Claims



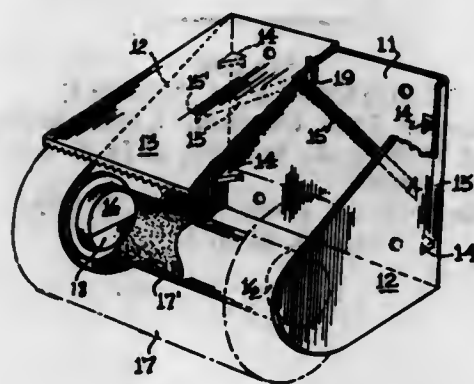
The present invention provides a process for winding up a drawn synthetic thread on a tube with a substantially constant tension of the thread during the winding operation. During the winding operation the length of the free thread between the point where it leaves the element which brings about a traverse motion of the thread and the point where it meets the bobbin does not change or changes only slightly.

3,516,615

DISPENSER FOR PAPER ROLLS OR THE LIKE

Chester H. Wickenburg, 890 Ford Ave.,
Elgin, Ill. 60120
Filed Jan. 24, 1968, Ser. No. 700,228
Int. Cl. B65h 19/00

1 Claim



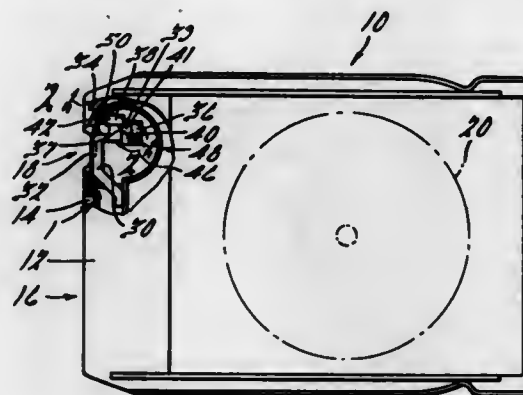
A paper roll dispenser formed from a single blank of plastic material so as to provide a back mounting plate, side walls having integrally formed on confronting faces thereof projections insertable into the opposite ends of the hollow core of a paper roll or the like, a top wall providing a free end which may be serrated and which, together with the side walls, is held in yieldable contact with the paper roll mounted within the dispenser, with the serrated edge of the top wall acting as a tear edge for the dispenser.

3,516,616

WHEELLESS TAPE CARTRIDGE

Robert Adell, 1525 Ardmoor, Birmingham, Mich. 48010
Filed Dec. 4, 1967, Ser. No. 687,590
Int. Cl. B65h 17/48
U.S. Cl. 242—55.19

1 Claim



A magnetic tape cartridge for use in automobile, home or other tape players comprising a cartridge top and bottom and a spool for holding wound magnetic tape thereon wherein the improvement lies in the utilization of a wheelless drive means contacted by the tape after it has left the sound head area of the cartridge enabling the tape to be driven through the cartridge during playing.

3,516,617

DIGITAL SYSTEM FOR AUTOMATIC SPLICE CONTROL

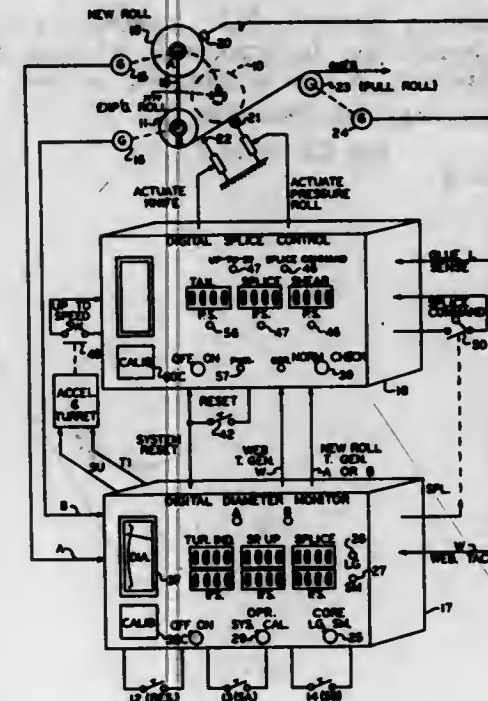
Lambert Haner, Rocky River, and Eugene F. James, Brookpark, Ohio, assignors to Avtron Manufacturing, Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 24, 1968, Ser. No. 747,378
Int. Cl. B65h 19/12

U.S. Cl. 242—58.2

3 Claims

An automatic control has at least two pulse train circuits, one responsive to r.p.m. of either of two rolls of paper stock, and the other responsive to f.p.m. line speed

as paper is pulled off of the same one of them. Subsequent event control is provided by digital counters for comparing the two pulse trains. The result is used to start additional digital counters, one controlling splice of web (as found on one roll) to web (as drawn from the other



roll), and the other counter controlling subsequent shear of web from roll no longer to be processed. The double thickness at the splice is thus minimized and held to a constant length despite variations in roll diameter and/or line speed.

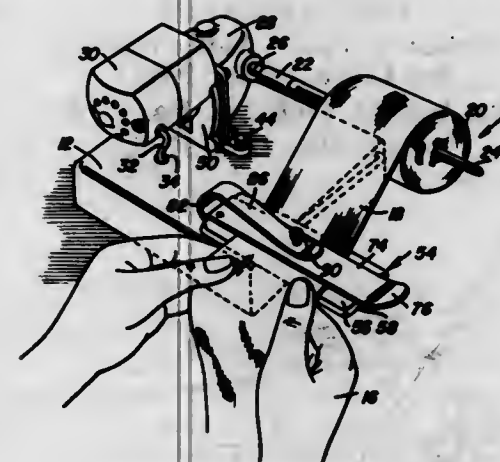
3,516,618

BANDAGE WINDER

Richard F. Reinke, P.O. Box 272,
Deahler, Nebr. 68430
Filed July 17, 1968, Ser. No. 745,522
Int. Cl. B65h 75/02

U.S. Cl. 242—60

4 Claims



A winder for bandages, particularly stretch bandages, including an electric motor driving a spindle through a reduction gear. A tension control device and switch actuator is provided for varying the tension on the bandage as it is wound onto the spindle and enabling accurate control of the electric motor by locating the control switch therefor in a position where it may be actuated by merely depressing the arm on which the tension control device is mounted.

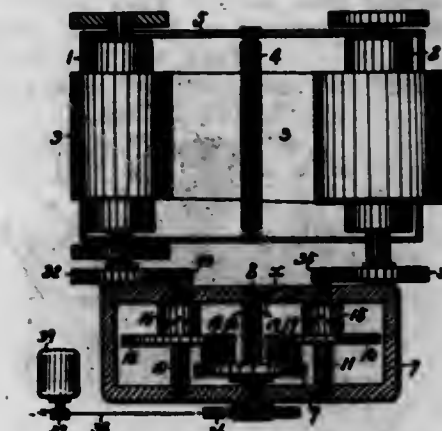
3,516,619

DRIVING MECHANISM FOR JIGGERS

Hiroshi Azuma, Wakayama-ken, Japan, assignor to Wakayama Tetsuko Kabushiki Kaisha, Wakayama-ken, Japan
Filed Mar. 28, 1968, Ser. No. 716,723
Int. Cl. B65h 17/02

U.S. Cl. 242—67.1

10 Claims



A driving mechanism for jigger cloth treating machines comprises means for driving the winding and unwinding rolls so as to maintain a predetermined speed and tension in the cloth between the rolls. A driving disc and driven discs bear upon friction driving wheels. These wheels are positioned between the discs so as to roll tangentially thereto in an intermediate position when a force yieldingly applied to displace the wheels from such position is balanced out by a force counter thereto, which counterforce is produced by the tension exerted on the unwinding roll by the cloth as transmitted from that roll to the associated wheel through the driven disc interconnecting the same. When the two forces do not balance, the wheels are moved out of the intermediate position and no longer track tangentially, and the resulting axial component of force moves the wheels axially to vary the drive ratios to the two rolls until the tension in the cloth is changed to again produce a balance. In a preferred embodiment, linkage means is provided to maintain more nearly constant the predetermined speed and tension of the cloth irrespective of its state of distribution between the winding and unwinding rolls.

3,516,620

METHOD OF AND APPARATUS FOR WINDING A WEB OF MATERIAL ON A CORE

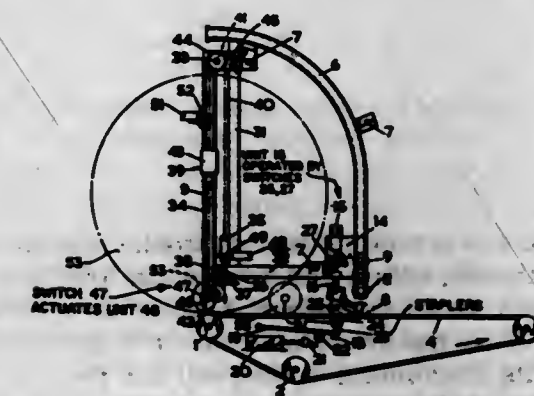
Hendrik Lenten, Veendam, Netherlands, assignor to N.V. Machinefabriek "Oost-Groningen," Nieuwe Pekela, Netherlands, a corporation of the Netherlands

Filed May 20, 1968, Ser. No. 730,493

Int. Cl. B65h 17/02

U.S. Cl. 242—67.1

14 Claims



The leading end of a web of material is attached to a core and the web is then wound on the core preferably by driving the periphery of the roll being formed.

3,516,621

STRAND TENSIONING DEVICE

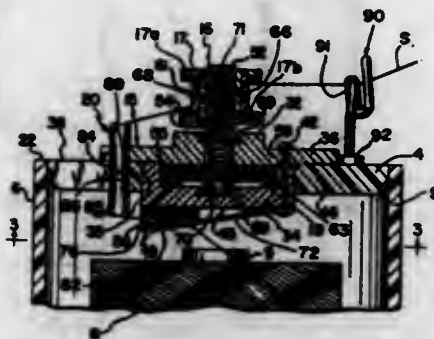
Edward M. Kavick, Chardon, Ohio, assignor to Samuel Moore and Company, Mantua, Ohio, a corporation of Ohio

Filed Aug. 19, 1968, Ser. No. 753,471

Int. Cl. B65h 49/00

U.S. Cl. 242—129.8

16 Claims



A device for controlling the tension of a fibrous strand as it is paid-off from a spool to a machine. The device comprises a rotatable member including a capstan at one end around which the strand from the spool is wound in tensioned relation for feeding to the machine. A reaction member is provided which coacts with the rotatable member to vary the resistance to rotation of the rotatable member. A pre-tensioning assembly including a resilient member and a deformable member is provided through which the strand passes for imparting a drag action thereto and for maintaining the strand in non-slip relation on the capstan.

3,516,622

LONGITUDE KEEPER

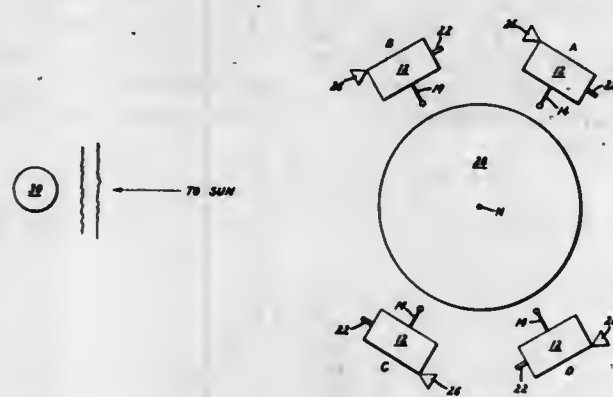
Hilliard W. Paige, Bryn Mawr, and Ronald G. Moyer, Norristown, Pa., assignors to General Electric Company, a corporation of New York

Filed Feb. 5, 1968, Ser. No. 702,891

Int. Cl. B64g 1/00

U.S. Cl. 244—1

5 Claims



Satellite in synchronous orbit around imperfectly spherical earth will, except at a few special longitudes, require a constant thrust component applied to it along the direction of its motion to maintain it at a fixed longitude. A satellite is stabilized against roll and pitch by a gravity gradient rod carrying a damper, and provided with two controllable thrusters symmetrically located on either side of the center of mass, producing thrust in the yaw plane. Sun sensors sample yaw orientation of satellite with respect to sun, and operate appropriate thruster to

minimize yaw. Operates as "bang-bang" servo system with sampling at least once each orbit.

3,516,623

STATION KEEPING SYSTEM

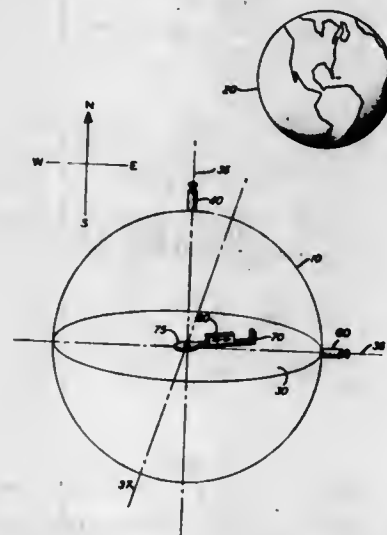
Frank W. Sinden, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Sept. 14, 1966, Ser. No. 579,393

Int. Cl. B64g 1/10

U.S. Cl. 244—1

6 Claims



A system for simultaneously providing station keeping and attitude control for a synchronous satellite is described. Two rockets or similar propulsion means aligned on perpendicular axes provide simultaneously the necessary thrust for station keeping and, in cooperation with means for shifting the center of gravity of the satellite, the torque required to maintain correct orientation.

3,516,624

PITCH STABILIZATION SYSTEM FOR DUAL UNIT AIRCRAFT

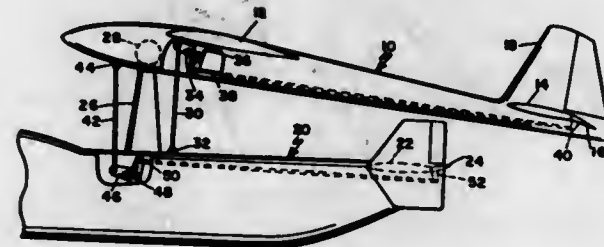
Norman L. Crook, 2840 Bosman, San Diego, Calif. 92111

Filed Aug. 12, 1968, Ser. No. 751,974

Int. Cl. B64c 3/38, 37/02

U.S. Cl. 244—2

7 Claims



The system provides pitch control stabilization of a dual unit aircraft of the type disclosed in U.S. Pat. No. 3,258,228, which comprises a flight sustaining unit with a payload unit pivotally suspended therefrom. Primary flight control means is incorporated in the flight unit, and the payload unit has trim controls for attitude adjustment. The pitch stabilization system senses pitch devia-

tions between the two units, due to turbulent air, power failure, or any other causes, and actuates the flight and trim controls to return the two units to stable flight.

3,516,625

AIRCRAFT STEERABLE MAIN LANDING GEAR

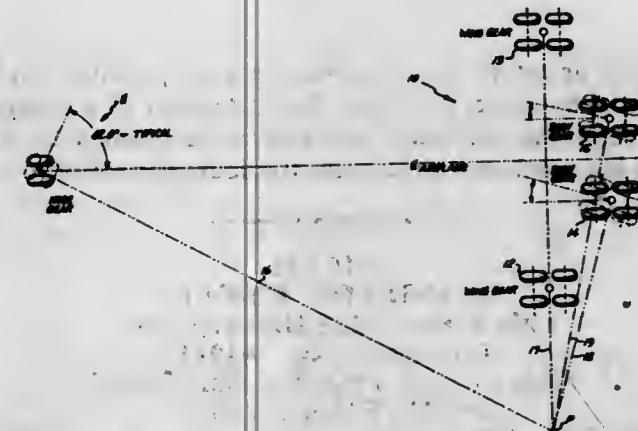
Richard W. Houser, Seattle, and David F. Woodlock, Mercer Island, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed Apr. 25, 1968, Ser. No. 724,159

Int. Cl. B64c 25/50

U.S. Cl. 244—50

32 Claims



An aircraft landing gear having a steering system for programming steerable main wheels to a steerable nose wheel for steering large aircraft weighing over 500,000 pounds while taxiing.

3,516,626

AIRCRAFT LAUNCHING SYSTEM

John S. Strance, % Eagle Signal Co., 736 Federal St., Davenport, Iowa 52803, and Robert W. Cruger, Springfield, Pa. (% E. W. Bliss Company, 101 Chester Road, Swarthmore, Pa. 19081)

Continuation-in-part of application Ser. No. 617,939,

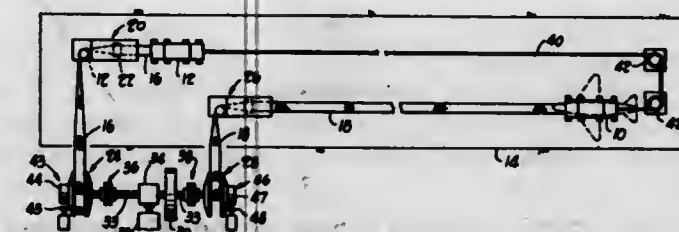
Feb. 23, 1967. This application June 6, 1969, Ser.

No. 840,093

Int. Cl. B64f 1/08

U.S. Cl. 244—63

12 Claims



A vehicle accelerating apparatus including a pair of vehicle engaging dollies arranged to traverse separate spaced parallel paths longitudinally of a runway. Each of the dollies is separately connected at one end to independent winding reels by elongated flexible synthetic tapes. The opposite ends of the dollies are interconnected by an elongated cable which passes around runway mounted sheaves. The winding reels are arranged to be rotated by a single power source comprised of an energy storing flywheel and an engine. Clutches are provided to connect either of the reels to the power source. Connection of one of the reels to the power source causes it to rotate to wind in the tape and dolly connected thereto and accelerate the dolly in a first direction. Simultaneously, because of the cable interconnection between the dollies, the other dolly is caused to move in a second direction and unwind the other tape from its winding reel. In this

manner, as one dolly is being used for accelerating a vehicle the other dolly is being moved to a position where it can subsequently be used for accelerating a vehicle.

3,516,627

ELECTRIC MOTOR RESILIENT MOUNTING

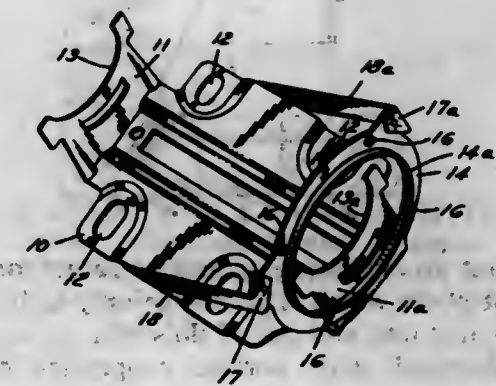
Charles E. Gable, Fort Wayne, and Glenn D. Wilkins, Grabbill, Ind., assignors to General Electric Company, a corporation of New York

Filed Aug. 28, 1968, Ser. No. 756,025

Int. Cl. H02k 5/24

U.S. Cl. 248—15

6 Claims



A cradle-shaped electric motor mount consisting of a base plate portion and turned-up matching end portions of a type normally used for base-plate attachment is converted to end-attachment by providing an offset adapter attached to one of the end portions near the base-plate portion and side braces extending from the base-plate portion to tabs on the adapter located near the extremity thereof.

3,516,628

SUSPENSION SYSTEM

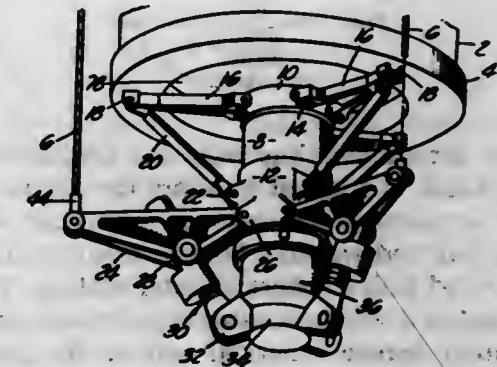
Giles Arthur Kendall, Torrance, Calif., assignor to Menasco Manufacturing Company, Burbank, Calif., a corporation of California

Filed Apr. 21, 1967, Ser. No. 635,309

Int. Cl. F16f 7/00, 9/346

U.S. Cl. 248—18

11 Claims



A stabilizing support system having a support surface connected to a telescoping support member, a liquid spring assembly which slides within the support member, at least three suspension levers, whose inner ends are pivotally connected to the telescoping support member and whose outer ends are connected to cables, support arm assemblies whose outer ends are pivotally connected to intermediate points of the suspension levers and whose inner ends are pivotally connected to the lower portion of the liquid spring assembly. The lengths of the telescoping support members can be varied by actuating means to change the position of the support surface which is resiliently supported by the suspension levers acting through the liquid spring assembly.

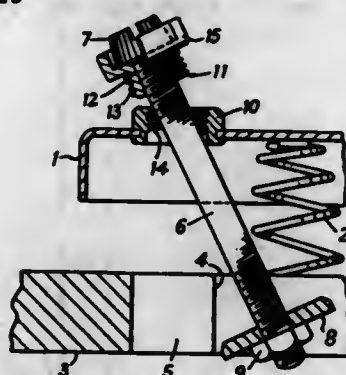
3,516,629
SPRING-SUPPORTED UNIT PLATES, MORE PARTICULARLY FOR GRAMOPHONE RECORD PLAYERS
 Alan W. Say, Ilford, England, assignor to The Plessey Company Limited, Ilford, England, a British company

Filed Sept. 23, 1968, Ser. No. 761,528
 Claims priority, application Great Britain, Sept. 29, 1967, 44,570/67

Int. Cl. F16f 15/06

U.S. Cl. 248—20

7 Claims



To permit an anchoring or locking screw for a record-player unit plate, which is accessible only at its head end, to be swivelled into and out of slots in a mounting board, a screw-threaded shaft portion cooperates with screw threads in a separate nut element which either can swivel in the unit plate or is inserted in a larger diameter bore by screw threads of opposite pitch or a bayonet fixture.

3,516,630
FIXED BRACKET FOR AN ELECTRIC CONDUCTOR SPECIFICALLY DESIGNED FOR HIGH TENSION

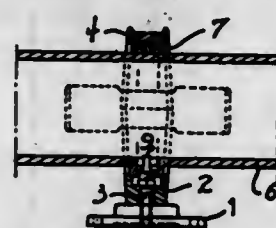
Gilbert Armand Janssens, East Flanders, Belgium, assignor to Burndy Corporation, a corporation of New York

Filed Dec. 11, 1967, Ser. No. 689,423
 Claims priority, application Belgium, Dec. 12, 1966, 691,082

Int. Cl. F16l 3/16

U.S. Cl. 248—55

5 Claims



A support, for tubular bus bars and similar electrical conductors, which is adapted to allow for angular movement of the conductor relative to an initial position. The conductor is disposed within a bore in a surrounding ring which is provided with a spherical outer surface. The ring, in turn, is captured within a mounting bracket which includes a mating female spherical surface for permitting ball-and-socket movement of the ring. One or a pair of longitudinally extending leaf springs are provided on the mounting bracket to maintain resilient engagement with the conductor.

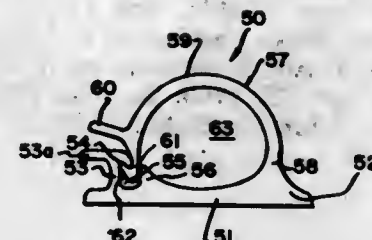
3,516,631
CABLE CLAMP
 Kenneth E. Santucci, 1380 Edgewood, Winnetka, Ill. 60021
 Continuation of application Ser. No. 659,377, Aug. 9, 1967. This application July 28, 1969, Ser. No. 846,655
 Int. Cl. F16l 3/08

U.S. Cl. 248—71

7 Claims

A clamp device for mounting one or more cables on a suitable sub-structure. The clamp is provided with adhesive or mechanical means for securing the clamp to a sub-

structure. The cable clamp includes at least a pair of legs which cooperate with a base member to provide a cable enclosure. This enclosure is open initially for the installation of a cable and can then be locked to positively retain

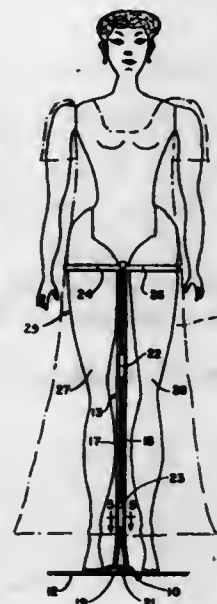


the cable or cables. Locking members are provided on legs of the cable clamp to permit the formation of a complete cable retaining enclosure and levers are applied to some of the leg portions to facilitate the locking process.

3,516,632
STAND FOR A DOLL
 Lula S. Hall, 1226 Highway Ave., Covington, Ky. 41011
 Filed Aug. 23, 1968, Ser. No. 754,937
 Int. Cl. F16m 11/16

U.S. Cl. 248—176

5 Claims



A doll stand including a base, an upright mounted on and extending upwardly from the base, and a pair of side-wise extending horizontal side-by-side loops mounted at the upper end of the upright, the loops snugly receiving upper portions of legs of a doll to support the doll in upright position without interfering with a dress worn by the doll.

3,516,633
FURNITURE LEG MOUNT
 Richard D. Blackwood, Kansas City, Mo., assignor to Kansas City Plywood Co., North Kansas City, Mo., a corporation of Missouri
 Filed Apr. 15, 1968, Ser. No. 721,252
 Int. Cl. F16m 11/16

U.S. Cl. 248—188

2 Claims

A furniture leg mount including a T-nut having a head disposed on one side of a furniture support member and projecting at a predetermined angle toward the opposite surface of the member. A circular leg-supporting wedge has one face lying flatly against said opposite surface of

the support member and the opposite face of the wedge is parallel to the upper end of the leg. A stud projecting perpendicularly from said upper end of the leg is received through an opening in the wedge and threadably engages



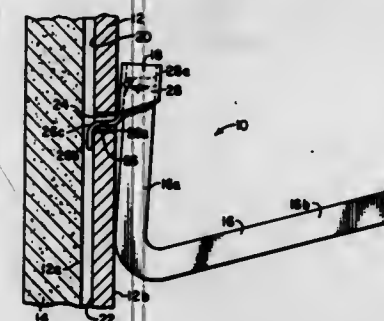
the T-nut to secure the leg to the member with the wedge interposed therebetween. A lug on the wedge is received in a depression in the member to prevent rotation of the wedge when the leg is tightened toward the member.

3,516,634
FIXTURE ASSEMBLY FOR PERFORATED PANEL
 Otto G. Salava, Lombard, Allan J. Luck, Mount Prospect, and Dale E. Schafernak, Addison, Ill., assignors to Masonite Corporation, Chicago, Ill., a corporation of Delaware.

Filed Jan. 29, 1968, Ser. No. 701,161
 Int. Cl. A47b 96/12

U.S. Cl. 248—223

7 Claims



An article support fixture including a shank slidably received within a collar, a hook attached to the collar adapted to engage an opening in a perforated panel, a hook on the lower end of the shank and a resilient tongue within the collar to hold the collar in position with respect to the shank by engaging a recess in the shank.

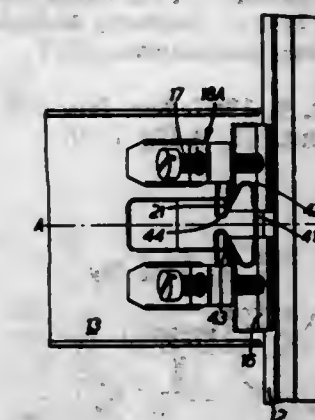
3,516,635
STORAGE EQUIPMENT AND BRACKETS THEREFOR
 Johan M. Daniel de Niet, 2-21 Northwood Hall, London N. 6, England
 Filed May 20, 1968, Ser. No. 730,356
 Claims priority, application Great Britain, May 30, 1967, 24,795/67
 Int. Cl. A47b 57/26

U.S. Cl. 248—245

2 Claims

Adjustable bracket means for shelving comprising aluminum extrusion support members, channel shaped in cross-section, each of the channels having an inwardly extending vertically arranged dovetailed projection, each bracket comprising a vertical web having a fixed jaw formed on the end thereof, an adjustable jaw slidable on the inner end of the web with both jaws being convergent, and screw-threaded means for moving the adjustable jaw toward the fixed jaw to clamp the opposed side faces

of the projections and thereby support the bracket, and spring means engaging the projections on the vertical web

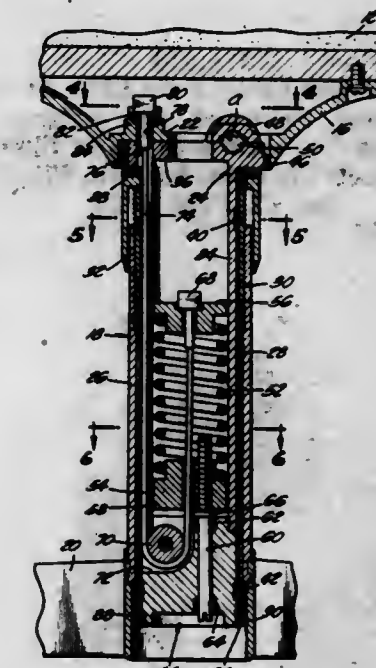


member and the sliding jaw member biasing the slidable jaw toward the fixed jaw.

3,516,636
TILT MECHANISM FOR CHAIRS AND THE LIKE
 Maurice P. Burke, Montreal, Quebec, Canada, assignor to Brunswick Corporation, a corporation of Delaware
 Filed Sept. 20, 1967, Ser. No. 696,959
 Int. Cl. A47c 3/00

U.S. Cl. 248—381

11 Claims



This invention relates to chairs, and particularly to tilt mechanisms of the type shown and described in my prior United States Letters Patent 3,206,153, issued Sept. 14, 1965, wherein the chair seat is attached to a surbase which in turn is pivotally attached to a thrust member for tilting movement about a horizontal axis. The thrust member is supported by a bearing at the top of a hollow column or pedestal for angular movement of the thrust member and surbase substantially about the vertical axis of the column which conceals a heavy compression spring which opposes the tilting movement of the surbase. The spring's axis is preferably coincident with the vertical axis of angular movement of the surbase. The horizontal pivot axis about which the surbase tilts is offset or spaced from the axis of angular movement thereof. In the present invention, a steel cable is coupled to the surbase at a point offset from the axis of the spring on the side of the column opposite the horizontal tilting axis of the chair and surbase. The steel cable passes downwardly around a pulley and then axially upwardly through the spring such that the tilting movement of the chair compresses the spring. The structure includes means for adjusting not only the spring tension, but also the height of the chair.

3,516,637

MIRROR SUPPORTING DEVICE

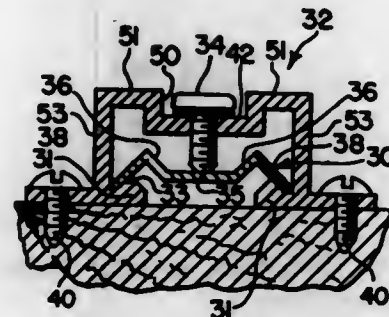
Ivar S. Lawson, Asheville, N.Y.; Ethel Nelson Lawson, executrix of said Ivar S. Lawson, deceased, assignor to AVM Corporation, Jamestown, N.Y., a corporation of Delaware

Filed Oct. 9, 1967, Ser. No. 678,146

Int. Cl. A47g 1/16

U.S. Cl. 248-477

2 Claims



This invention relates to a mounting system for mirrors, which includes a structure fixedly mounted to the back of a mirror frame, the structure extending downwardly and being slidably and adjustably mounted in supports which are fixed to the object with which the mirror is to be associated.

3,516,638

FLOW DIVERTER BALL VALVE

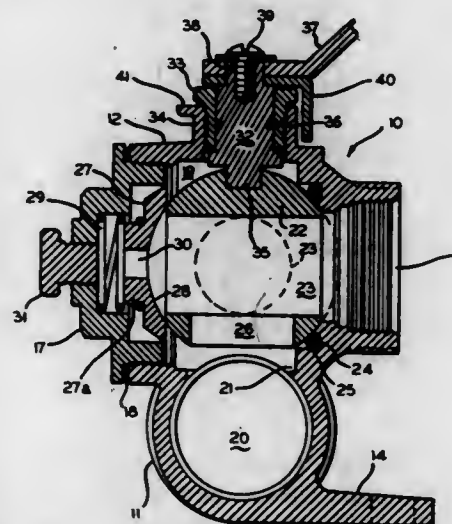
Richard G. Piggott, Bellwood, Ill., assignor to Spraying Systems Co., a corporation of Illinois

Filed Oct. 31, 1966, Ser. No. 772,233

Int. Cl. F16k 5/20

U.S. Cl. 251-175

9 Claims



A flow diverting valve with ball operator and formed to allow selective diversion of flow from a main conduit line without shutting off the flow through the line. The valve body is formed so that all of the operating parts of the valve may easily be removed and replaced without taking the valve body out of the main piping line.

3,516,639

GAS CONTROL VALVE FOR GAS SHIELDED ELECTRIC WELDING TORCHES

Louis F. Himmelman, 28 Arrowhead Drive,

Upper Saddle River, N.J. 07458

Filed May 17, 1968, Ser. No. 730,016

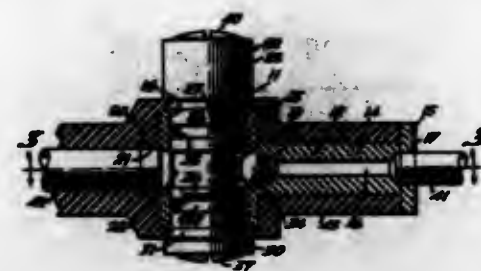
Int. Cl. F16k 27/00, 43/00

U.S. Cl. 251-257

6 Claims

A rotary gas control and shut-off valve utilizing a spherical ball check seatable in a frusto-conical valve seat formed along a gas flow path in a valve body member,

and a valve stem extending transversely through the body member across the flow path and rotatable with respect thereto about an axis perpendicular to the axis of symmetry of the valve seat. The valve stem has an eccentric



cam portion operative, when the valve stem member is rotated, to move the ball check between seated and unseated positions with respect to the valve seat to control gas flow.

3,516,640

BUTTERFLY VALVE

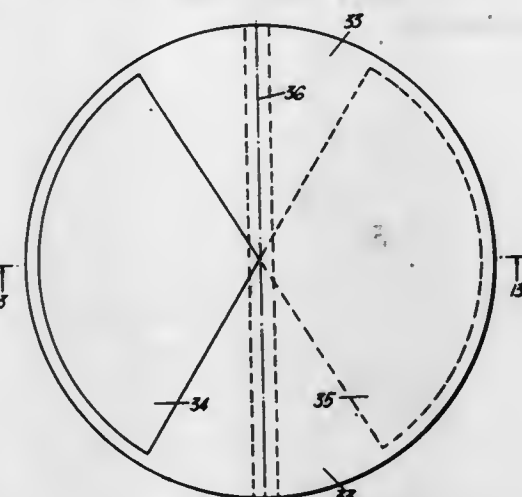
Denis William Bryer and Denis Eugene Joseph Walshe, Teddington, England, assignors to National Research Development Corporation, London, England, a British corporation

Filed Sept. 6, 1967, Ser. No. 665,909

Int. Cl. F16k 1/22, 39/00

U.S. Cl. 251-305

12 Claims



A butterfly valve is cambered or provided with one or more peripheral flanges which modify the surface pressure distribution over the valve so as to reduce the torque in a closing direction to which the valve is subjected in operation.

3,516,641

FORKLIFT TRUCK AND PUSH-PULL UNIT THEREFOR

Kenneth F. Ferguson, Placentia, Calif., assignor to Hunt-Wesson Foods, Inc., Fullerton, Calif., a corporation of Delaware

Filed Nov. 13, 1967, Ser. No. 682,024

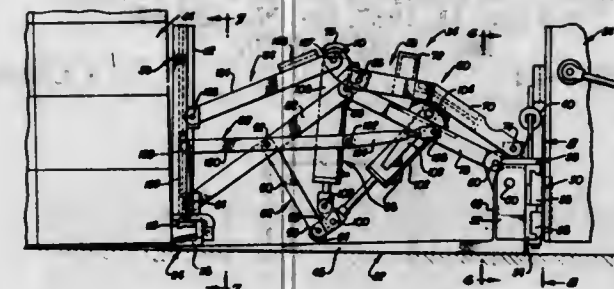
Int. Cl. B66f 3/22; B60p 1/00

U.S. Cl. 254-122

10 Claims

A forklift truck having a push-pull unit combining high capacity and a long reach with high strength. A push-pull linkage system which includes a push-pull link and a four-bar guide linkage for guiding the forward end of the push-pull link toward and away from the truck along a substantially straight-line path substantially parallel to the upper surface of the fork. A four-bar lazy-tongs actuating linkage interconnects the push-pull link and

the guide linkage and serves to move the free end of the push-pull link toward and away from the truck along the substantially straight-line path mentioned. A hydraulic cylinder forms one of the links of the actuating linkage and another hydraulic cylinder extends across one diagonal thereof. A push-pull assembly is connected to the free end of the push-pull link and a four-bar parallel-



motion linkage interconnects the push-pull assembly and the guide linkage to maintain the push-pull assembly parallel to itself as it is moved back and forth substantially parallel to the upper surface of the fork. The fork includes tines pivotally mounted on a time-supporting structure in such a way that they can be removed readily for replacement if necessary.

3,516,642

HOIST

Jean Pomagalski, La Tronche, and Marcel Durand, Grenoble, France, assignors to Jean Pomagalski S.A.

Filed Dec. 11, 1967, Ser. No. 689,577

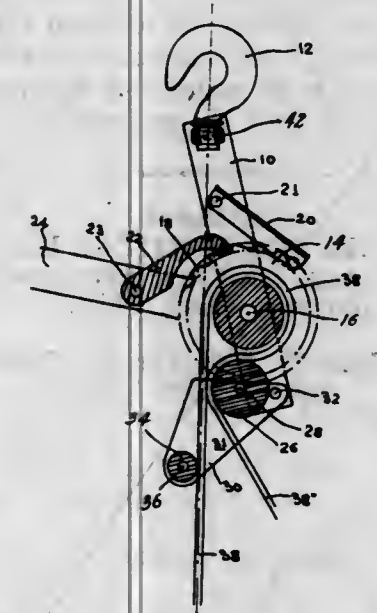
Claims priority, application France, Dec. 28, 1966,

5,032

Int. Cl. B66d 1/28

U.S. Cl. 254-167

2 Claims



A hoist with a frame in which is so fitted that it may rotate a pulley with a groove for driving a cable passing in the groove, the slack side of the said cable being pressed into this groove by a compression wheel the axle of rotation of which is carried by a lever freely pivoting around an axle carried by the frame, this lever carrying a component so arranged as to be engaged by the traction side of the said cable to pull the said lever in response to the action of the load side of the said cable in a direction provoking the penetration of the said compression wheel in the said groove.

3,516,643

ELECTRIC FENCE

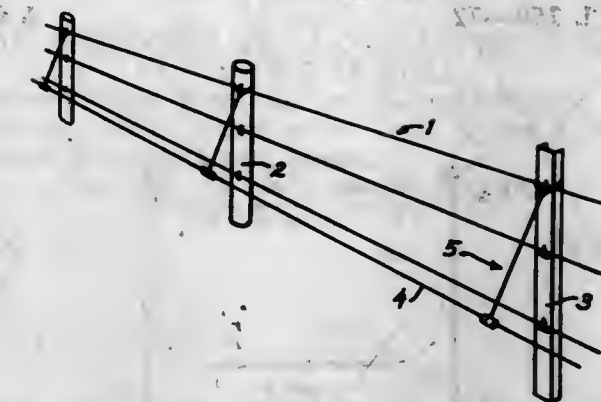
Robert B. Cox, Rte. 1, Corns, Iowa 50841

Filed Mar. 24, 1969, Ser. No. 809,494

Int. Cl. A01k 3/00

U.S. Cl. 256-10

5 Claims



A wire bracket adapted to have its upper end looped over the upper end of a fence post and hanging downwardly therefrom at an angle to the post and away from the fence, the lower end of the wire carrying an electric insulator for supporting a bare metal wire above the ground and parallel to but spaced from the fence.

3,516,644

HANDRAIL SUPPORT MEANS

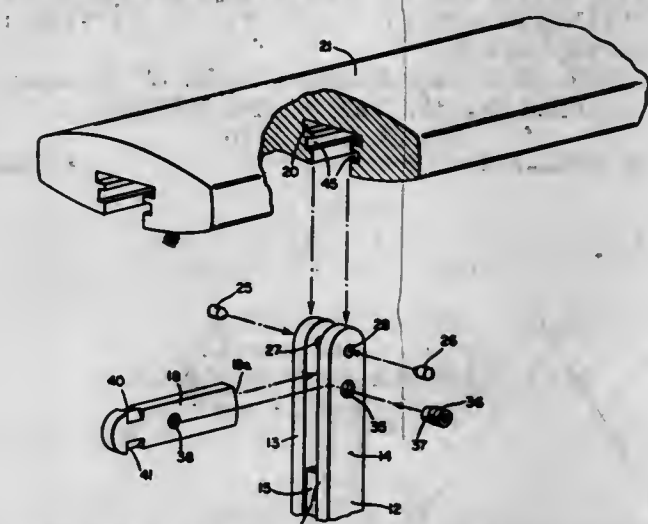
William J. Horgan, Jr., Pittsburgh, Pa., assignor to Blumcraft of Pittsburgh, Pittsburgh, Pa., a firm of Pennsylvania

Continuation-in-part of application Ser. No. 733,063, May 29, 1968. This application June 23, 1969, Ser. No. 840,125

Int. Cl. E04h 17/16

U.S. Cl. 256-65

14 Claims



A handrail has a slot in its underside, for reception of the upper end of a post. The slot is substantially T-shaped with the addition of an intermediate, horizontal leg. The end of the post is forked by a single, vertical slot. On either side of the slot there is a hole completely through the side wall of the post. The holes are spaced from the rounded, terminal portion of the post, so that when the post is inserted into the T-shaped slot of the handrail, the holes will be opposite to the intermediate, horizontal leg of the slot. A pin is disposed in each hole having a conical point protruding into the vertical slot. Means are disposed in the slot to engage the conical points of the pins and force them into the horizontal grooves of the intermediate leg of the T-shaped slot in the handrail. In one embodiment this means comprises a pivotally mounted cam arm. In another embodiment it comprises a plurality of balls. In both embodiments a set screw is tightened to force the forked end of the post to spread and firmly engage the side walls of the slot in the handrail.

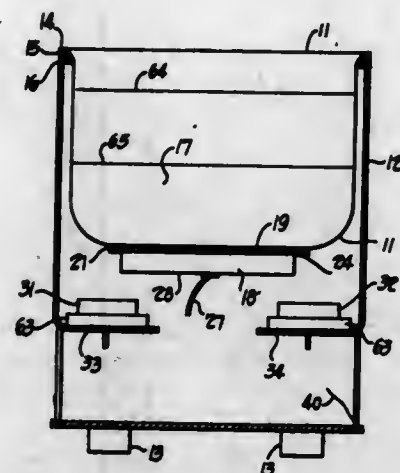
3,516,645 ULTRASONIC CLEANER

John P. Arndt, Cleveland, and Edmond G. Franklin, North Canton, Ohio, assignors to Clevite Corporation, a corporation of Ohio

Filed Aug. 14, 1967, Ser. No. 660,262
Int. Cl. B01f 11/02

U.S. Cl. 259-72

6 Claims



An ultrasonic cleaner is formed with a tank for containing liquid and articles to be cleaned with a ceramic piezoelectric transducer bonded to a surface of the tank for producing ultrasonic vibrations of the liquid therein. The piezoelectric transducer is driven by a switching circuit having transistors connected in series, and with the transducer connected in series with a feedback circuit to the bases of the transistors.

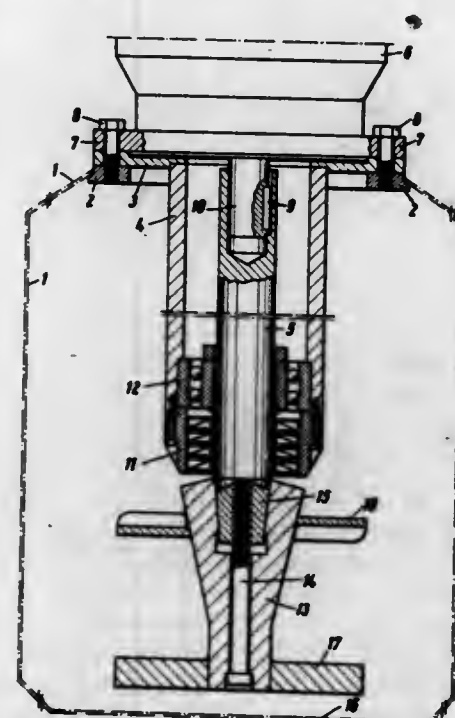
3,516,646 MIXER WITH MIXER DRUM EQUIPPED WITH MIXING BLADES LOCATED ON A CENTRAL DRIVE SHAFT

Paul Stiff, 15 Markgrafenstr., 1 Berlin 28, Germany

Filed Oct. 30, 1967, Ser. No. 678,947
Int. Cl. B28c 5/10

U.S. Cl. 259-178

2 Claims



Mixer with a drum containing mixing blades near the bottom and located on a central drive shaft, with the blades serving to conduct the material along the bottom and sides of the container towards the top and then re-

turn it to the bottom. The shaft having the mixing blades mounted thereon is surrounded by a hollow sheath and the latter is mounted on the drum.

3,516,647 ANTI-AIR POLLUTION DEVICE

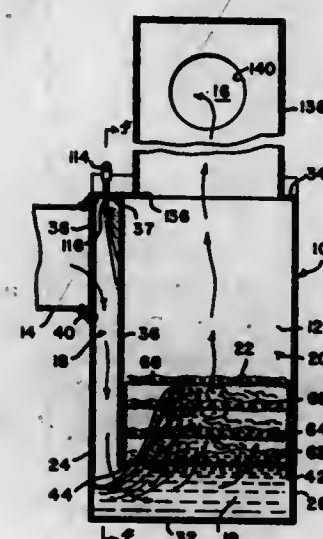
Sam Jaffe, Wyncote, and Gregory L. Thompson, Maple Glen, Pa., assignors to Johnson-March Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed July 11, 1967, Ser. No. 652,494

Int. Cl. B01d 47/02

U.S. Cl. 261-24

8 Claims



An anti-air pollution device for removing impurities from polluted air. The device comprises a housing having an inlet chamber, a main chamber and an exhaust means for drawing the polluted air through the inlet and the main chambers. The inlet chamber and the main chamber have a common portion which acts as a receptacle for water. The main chamber further includes a first perforated member for distributing the air drawn from the inlet chamber uniformly through the inlet chamber. The water and the first member act to shred the polluted air as it is drawn through the water and the first member so that contact between the water and the shredded air removes the impurities from the polluted air.

3,516,648 GRATE FOR VERTICAL KILN

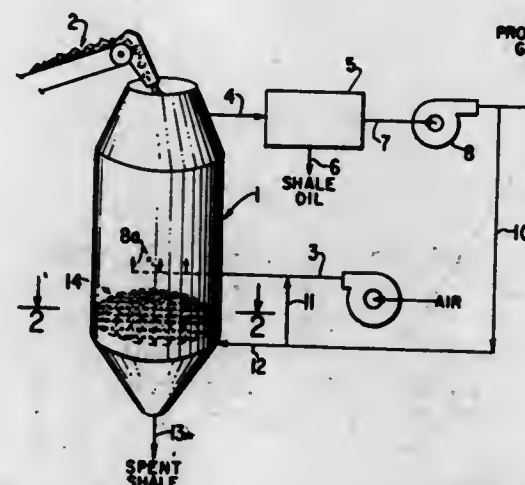
Edwin W. Biederman, Jr., Tulsa, Okla., assignor to Cities Service Oil Company, Tulsa, Okla., a corporation of Delaware

Filed June 27, 1968, Ser. No. 740,534

Int. Cl. F27b 1/00

U.S. Cl. 263-29

13 Claims



Two sets of piston-driven linear grates are positioned in horizontal planes in the lower portion of a vertical

kiln. One linear grate is positioned above and at right angles to the other. The horizontal distance between the individual grate members will depend upon the particular solids passing through the vertical kiln, but will generally range from about 1-2" to about 24". The vertical distance between the linear grates will generally be from about 1/2" to about 6-8". By oscillating each linear grate by the action of pistons connected thereto, an even flow of solids across the cross-sectional area of the kiln may be achieved. The tendency for solids to flow downwardly more rapidly either at the side or at the center may thus be overcome. A more uniform treatment of solids is thus achieved, and the efficiency of retorting is enhanced.

3,516,649 ANNEALING FURNACE FOR COIL MATERIAL

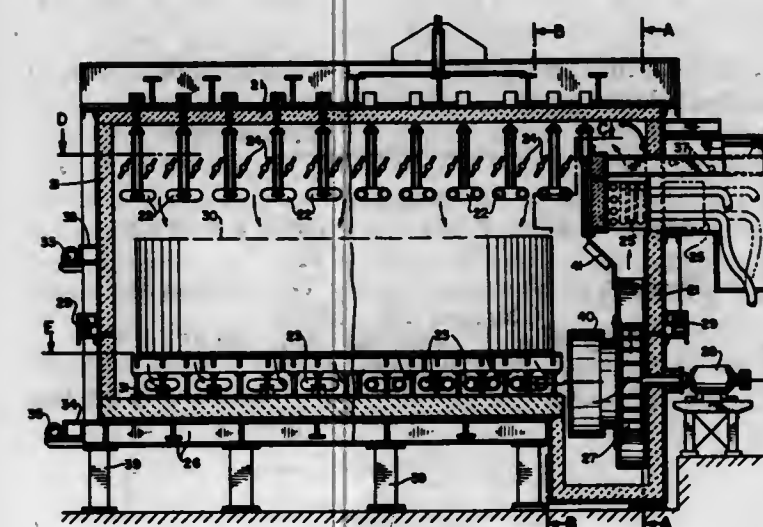
Sukeharu Endo, Yokohama-shi, Japan, assignor to Ishikawajima-Harima Jukogyo Kabushiki Kaisha, Tokyo-to, Japan, a Japanese company

Filed June 18, 1968, Ser. No. 737,878

Int. Cl. F27b 11/14

U.S. Cl. 263-40

1 Claim



The present invention relates to an annealing furnace. In the furnace, coils covered with a heating cover are directly heated by radiant tubes arranged on both top and bottom.

3,516,650 CUTTING DEVICE WITH SLIDABLY LINKED SUPPORTING POINTS

Alfred Pfeuffer, Neu-Isenburg, and Gerhard Komma, Dulsburg, Germany, assignors to Messer Griesheim G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany

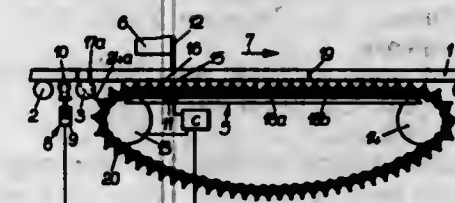
Filed Apr. 15, 1968, Ser. No. 721,319

Claims priority, application Germany, Apr. 18, 1967, D 52,836

Int. Cl. B23k 7/00; B26d 5/20

U.S. Cl. 266-23

8 Claims



A cutting arrangement for continuous casting equipment wherein the workpiece rides on support points moving at same speed as the cutting tool is characterized

by a plurality of support points slidable relative to each other which are linked together to be delayed or accelerated in their movement prior to the start of the separation cut so that the cutting will take place between adjacent support points.

3,516,651 RAIL MOUNTED DRILLING MACHINE FOR FURNACE TAP HOLE

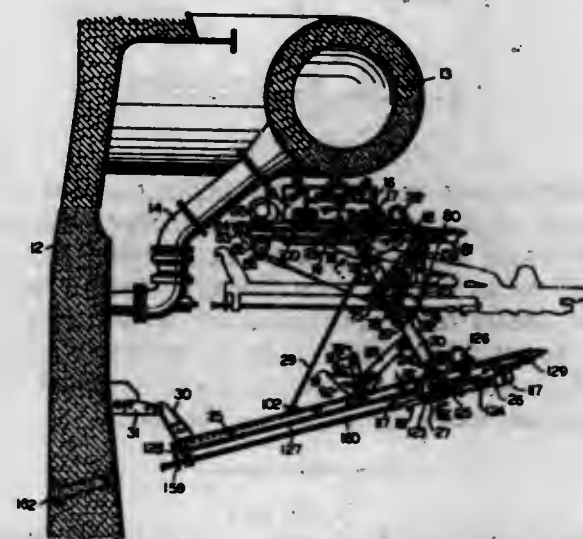
Toshikazu Honda, Kure-shi, and Tadaaki Minato, Hiroshima-shi, Japan, assignors to Toyo Kogyo Company Limited, Hiroshima-ken, Japan

Filed Oct. 16, 1967, Ser. No. 675,493

Int. Cl. C21b 7/12

U.S. Cl. 266-42

14 Claims



A blast furnace tap hole drilling machine having a carriage movably mounted on rails positioned near the bustle pipe of the furnace. A hanger is pivotally mounted on the carriage, and a guide channel is pivotally mounted on the hanger. A rock drill and a reverse impact device are slidably mounted on the guide channel. Power means are provided to cause the guide channel and the hanger to fold up toward the carriage, to retract the drill machine away from the furnace, and to operate the rock drill.

3,516,652 METHOD AND APPARATUS FOR ALLEVIATING DISCOMFORT IN THE LITHOTOMY POSITION

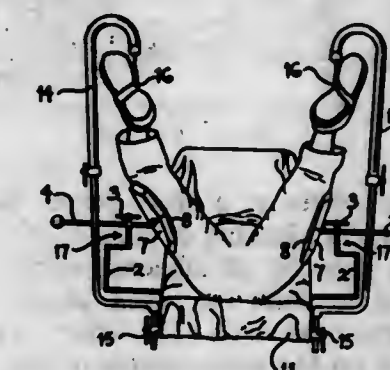
Melvin A. Robles, 5 Kingston Manor, Ladue, Mo. 63124

Filed July 31, 1967, Ser. No. 657,386

Int. Cl. A61g 13/00

U.S. Cl. 269-328

8 Claims



A method of alleviating certain discomforts and nerve injuries associated with the lithotomy position. An adjustable apparatus for limiting abduction of the thighs and reducing external rotation of the hip joint of a patient whose legs are suspended in the lithotomy position. A pair of pads mounted on semiflexible frames which are attached to the sides of an operating table or treatment table.

3,516,653

METHOD OF AND APPARATUS FOR ASSEMBLING STACKS OF FLEXIBLE SHEETS IN A PREDETERMINED ORDER

Geoffrey Bland, Newcastle, England, assignor to Formica International Limited, London, England, a British company

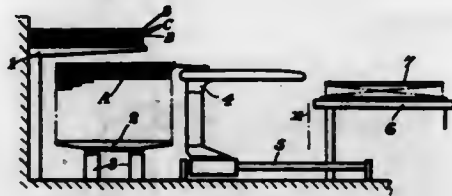
Filed Apr. 18, 1967, Ser. No. 631,753

Claims priority, application Great Britain, Apr. 26, 1966, 18,214/66

Int. Cl. B32b 31/00; B65h 39/02

U.S. Cl. 270—58

2 Claims



A method and apparatus for facilitating the assembly of a stack of flexible sheets on a horizontal support surface in which sheets are removed in order from a plurality of stacks onto a sheet support member which carries the sheets to a position above a receiving support station for the final stack. The invention is particularly concerned with the manufacture of laminates of resin impregnated sheets of paper or the like.

3,516,654

SHEET SORTER HAVING AUTOMATIC SHEET FEED CONTROL AND RESTART

Luis Mestre, Miami, Fla.

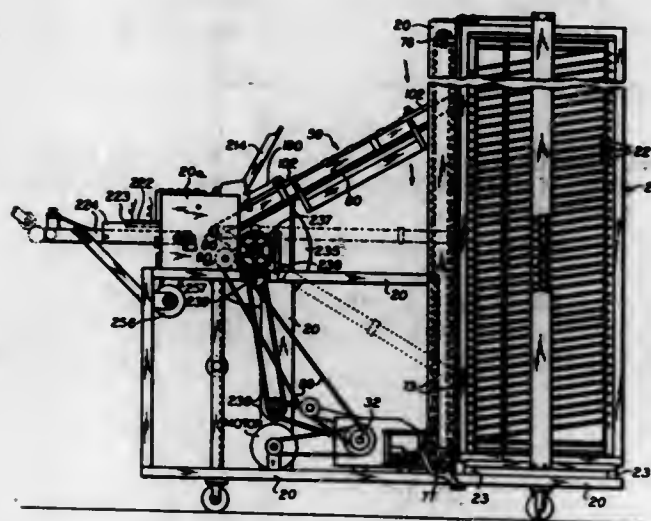
(305 E. 46th St., New York, N.Y. 10017)

Filed Apr. 18, 1968, Ser. No. 722,337

Int. Cl. B65h 29/60, 31/24, 39/00

U.S. Cl. 270—58

17 Claims



The invention relates to a sheet sorter for delivering one sheet to each of a plurality of pockets in a bin or stack means having a plurality of adjacent stacks and having automatic means to shift the stack means and restart the sorting for the next stack. The sorter is an improvement particularly on the sheet sorters of my applications S.N. 498,744 filed Oct. 20, 1965, now Pat. No. 3,356,362, and S.N. 586,152 filed Oct. 12, 1966, now Pat. No. 3,414,256, although it is applicable to sorters of other constructions. The sorter has switching means to enable any three or any two of the stacks of a stack means having four stacks to be operated automatically and sorting restarted automatically for each stack. Switching is provided for selective use of any two or three stacks in addition to all four.

3,516,655

METHOD AND MEANS FOR FOLD ADJUSTMENT IN A BUCKLE CHUTE FOLDING MACHINE

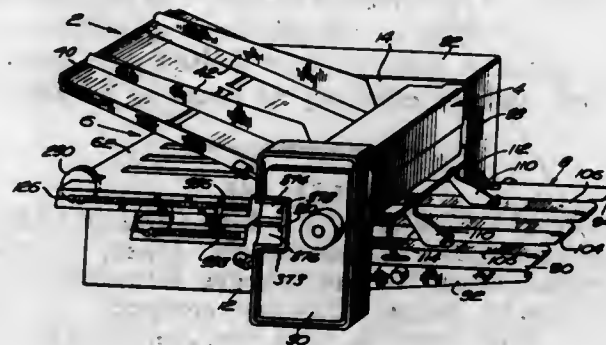
Robert E. Schneck, Riverside, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Filed May 18, 1967, Ser. No. 639,410

Int. Cl. B65h 45/14

U.S. Cl. 270—68

6 Claims



This patent specification relates to machines adapted to automatically fold sheets in the general manner disclosed in U.S. Pats. 3,178,171, 3,150,871 and 2,766,569. The invention is concerned with improved means for facilitating the setting of the buckle chute stops to obtain desired fold lengths.

3,516,656

MEANS FOR FEEDING SHEET PAPER INTO MACHINES

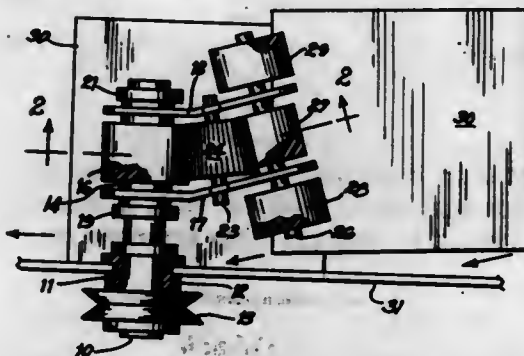
Herbert P. Sherman, 724 W. Washington St., Chicago, Ill. 60606

Filed Aug. 7, 1968, Ser. No. 750,951

Int. Cl. B65h 5/06

U.S. Cl. 271—52

9 Claims



In accordance with my invention I provide roller means for frictionally engaging sheets of paper or the like and propelling the same angularly in a direction to engage a guide rail whereby the sheets are caused to be separated and accurately aligned for entry into a machine which is to operate on the sheets.

3,516,657

HIGH CAPACITY STACKERS

James B. Knudsen, Lewiston, N.Y., assignor to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware

Filed Aug. 6, 1968, Ser. No. 750,726

Int. Cl. B65h 29/20; 31/10

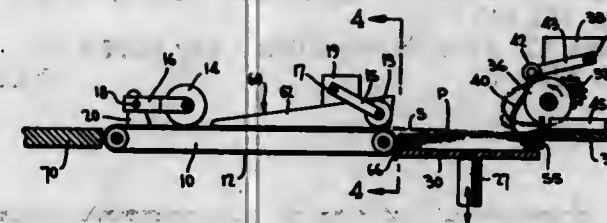
U.S. Cl. 271—68

10 Claims

In a variable height stacker for receiving sheets delivered thereto from a printing press or a business machine, there is provided a back-stop against which the successive sheets are moved and by which the pile is trued up. To move the successive sheets as delivered, a groove wheel or pulley is rotatably mounted above the stacker, and around an arc of the periphery of the wheel is disposed an O-ring of relatively soft rubber, plastic, or other

flexible soft material, the O-ring being of considerably larger diameter than that of the wheel or pulley. A presser wheel is employed at a point generally above the center of the pulley to retain the O-ring in tracking contact with the pulley.

The excess size of the O-ring leaves a large amount of surplus ring to extend over the sheet stacking area and to gently "slap" the on-coming horizontally fed sheets in the direction toward the back-stop. The only support for the O-ring is the pulley itself, the greater portion of the O-ring being free to move gently onto the sheet to positively urge it up to the stop, and from there on slip easily on the surface of the sheet without damage or ruffling.



A desirable adjunct to the O-ring feed is a deflector chute comprising two preferably divergent substantially vertically disposed ribs or blades over which the sheets may float toward the stack or pile board, which serves to cause a slight curl or bowing of the sheets, especially in handling thin or exceptionally large sheets, to add a certain stiffening to the feed as it is gently and frictionally urged forward by the action of the "floating" O-ring, and to ensure proper separation of the sheets against possible snagging or interference by linehole apertures or hook-lock protuberances.

3,516,658

METHOD AND APPARATUS FOR STACKING THIN SHEETS IN AN EVEN-EDGED STACK

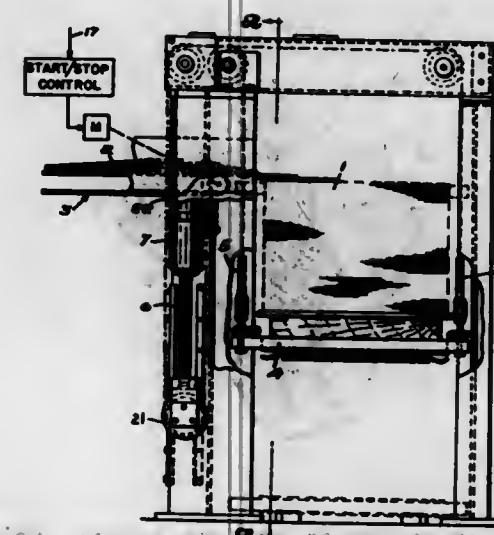
Ruel E. Taylor, Jr., West Buxton, and Norman C. Wedge, Gorham, Maine, assignors to Scott Paper Company, Delaware County, Pa., a corporation of Delaware

Filed June 4, 1968, Ser. No. 734,384

Int. Cl. B65h 31/16

U.S. Cl. 271—88

4 Claims



An apparatus and method for continually lowering a growing stack of thin sheets, such as paper, at a predetermined rate, by bleeding fluid from a hydraulic elevator which supports the stack. The fluid bleed rate is adjustable to the rate of growth of the stack and is independent of

the weight of the stack and the level of the top of the stack. Also included is a means for stopping the fluid flow when the machine which feeds sheets to the stack stops.

3,516,659

COMBINED TOY STORAGE AMUSEMENT DEVICE FOR CHILDREN

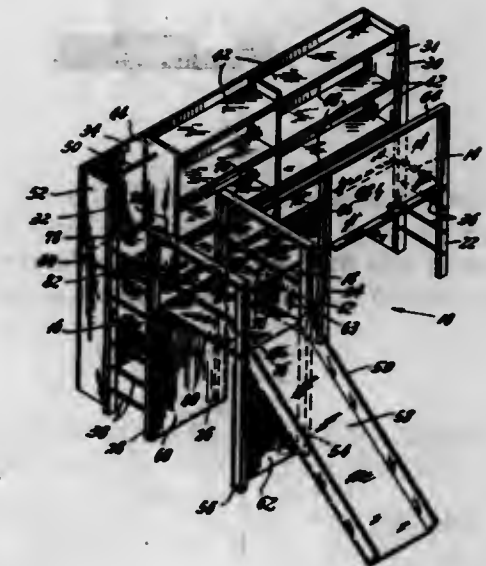
Robert E. Kleid, 24 Eda Drive, Fairfield, Conn. 06430

Filed June 21, 1968, Ser. No. 738,915

Int. Cl. A63g 31/00; 21/00

U.S. Cl. 272—1

7 Claims



An integral structural unit serving the dual purposes of providing children with amusement and play opportunity and also providing storage facility for both small and large toys. The unit incorporates a variety of play devices as well as shelf space for small toys and open cabinet space for larger toys, and the components are so related that certain of the play devices must be made use of in connection with placing toys in the storage facilities whereby to increase a child's desire to keep his toys in a neat and orderly manner.

3,516,660

COMBINATION DIVING BOARD, GRAB RAIL AND MOUNTING

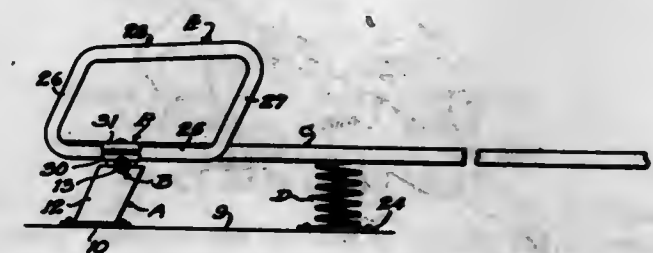
Bernard Bellinson, Sherman Oaks, and Henry R. Young, Arleta, Calif., assignors to Marine Swimming Pool Equipment Co., North Hollywood, Calif., a corporation of California

Filed Sept. 25, 1968, Ser. No. 762,591

Int. Cl. A63b 5/10

U.S. Cl. 272—66

7 Claims



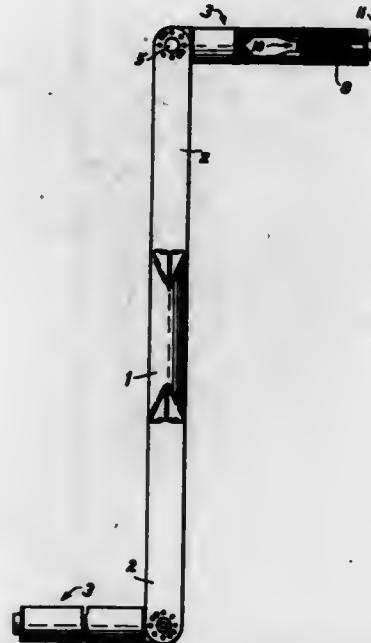
A pedestal having a cross-head provides a fulcrum support for a diving board on the center of the head and

mounts a pair of grab rails at the ends of the head. The mounts for the grab rail are of the sleeve clamp type with a saddle attached to the cross-head and a cap clamping the rail to the saddle by way of a fastener bolt piercing the cap, rail, saddle and cross-head.

3,516,661
CRANKING ACTION EXERCISING BAR
Ben Hansen, 216 Maryland Ave.,
Towson, Md. 21204
Filed Mar. 15, 1968, Ser. No. 713,481
Int. Cl. A63b 23/00

U.S. Cl. 272-80

9 Claims



An exercising device comprising a rigid bar carrying at each end thereof a handle or foot pedal on opposite sides of the bar wherein the handles are preferably angularly adjustable to a fixed position and can be folded into the adjacent end of the bar or positioned in alignment with the bar.

3,516,662
FENCING SWORDS
Robert E. Kuenstler, Jr., Rte. 3, Box 33-X,
Marianna, Fla. 32446
Filed Jan. 4, 1968, Ser. No. 696,682
Int. Cl. A63b 69/02

U.S. Cl. 273-1

4 Claims

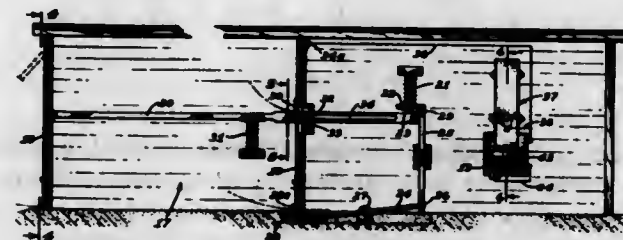


A pair of toy fencing swords, each having an attached target to be worn by the person engaged in fencing with

the attached sword; releasing means within each sword and connected target, whereby a thrust against the said target separates the blade from the attached sword. A second target provided on the handle of each sword, is identically responsive to a thrust against its surface, through the said common releasing means.

3,516,663
GAME PRIZE WITH INTERLOCKING DOOR ENTRANCE MEANS AND TOKEN DISPENSER
Walter E. Perrine, 3001 N. 55th Drive,
Phoenix, Ariz. 85031
Continuation-in-part of application Ser. No. 582,916,
Sept. 29, 1966. This application Aug. 9, 1968, Ser.
No. 751,543
Int. Cl. A63b 69/00; E06b 7/00; E05f 7/00
U.S. Cl. 273-1

2 Claims

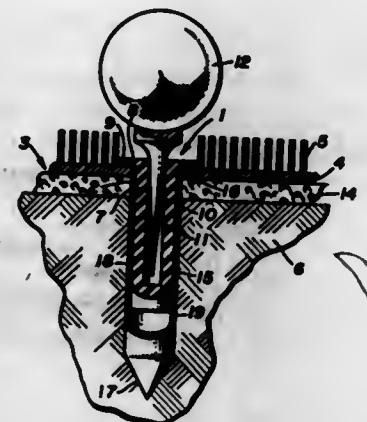


A playing area is salted with prize tokens. A gate controls the sequence in which contestants may obtain their prize and leave the playing area and comprises two interlocking doors through which individuals sequentially enter and exit from, so that only one door can be opened at a time. A token dispenser is provided to dispense different time slips. The prize tokens consist of two separable hemispheres with a prize slip inside.

3,516,664
GOLF TEE HOLDER
Wendell E. Brennan, Decatur, Ala., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 26, 1967, Ser. No. 633,986
Int. Cl. A63b 57/00

U.S. Cl. 273-33

1 Claim

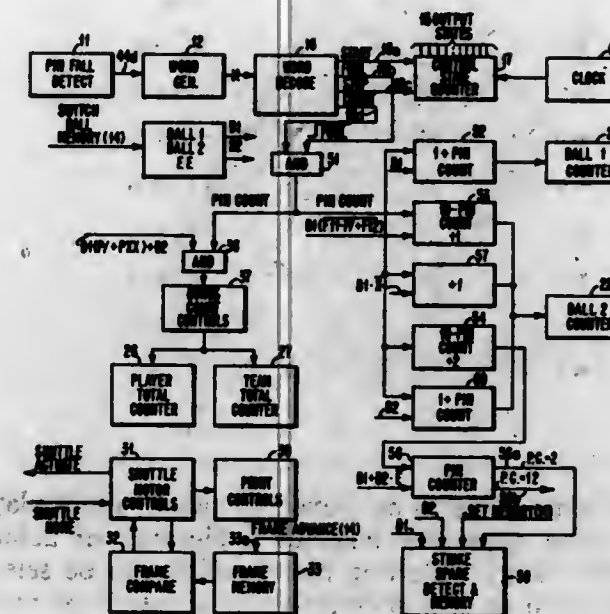


This invention relates to golf tee holders which are capable of rigidly maintaining golf tees in an upright position, and which eliminate the practice of golfers of randomly positioning tees in man-made turf and harming the backing. The holder has an upright portion with an upper flange integrally secured to the top of the upright portion. A vertical opening extends through the holder for receiving a golf tee.

3,516,665
AUTOMATIC BOWLING SCOREKEEPING SYSTEM
Mark Danielson, Mountain View, Calif., assignor to
Doban Labs, Inc., Sunnyvale, Calif., a corporation
of California
Filed Oct. 4, 1967, Ser. No. 672,834
Int. Cl. A63d 5/00

U.S. Cl. 273-54

2 Claims



An automatic bowling scoring system provides a measure of pin fall by pin position, as well as a serial pulse train in which the pulses indicate the position of fallen pins. This pin fall count is utilized to store measures of pin fall on each ball, as well as player and team totals, and this information is printed at the appropriate times during the game.

3,516,666
TELESCOPIC GOAL POST
James W. Trimble, R.R. 1, Hudson, Quebec, Canada, and
Joel Rottman, 113 Finchley Road, Hampstead, Quebec, Canada
Filed Oct. 24, 1966, Ser. No. 589,817
Claims priority, application Canada, Sept. 23, 1966,
971,114
Int. Cl. A63b 71/02

U.S. Cl. 273-55

12 Claims



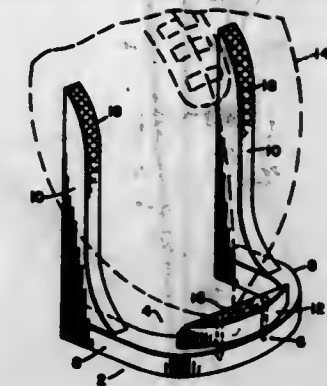
A goal post for use in playing the game of football in which the upright structures mounted at each end of the cross-bar comprises a plurality of upright members at least one of which is telescopically received in another of said members, remotely controlled drive pulleys being provided for extending and retracting the telescopic member or members.

875 O.G.—21

3,516,667
KICKING TEE
William H. Williams, 701 Hobbs Drive,
Silver Spring, Md. 20904
Filed Mar. 12, 1968, Ser. No. 712,480
Int. Cl. A63b 71/02

U.S. Cl. 273-55

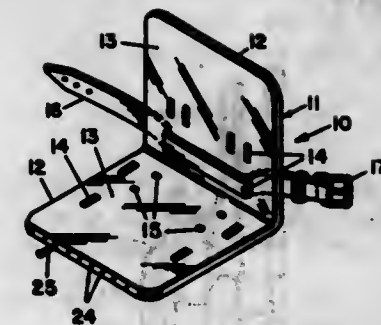
5 Claims



A support for a football which aids in kicking the ball comprising a base having an open end, a closed end, and sides, upstanding elements on each side adjacent said open end, and a raised portion at the closed end.

3,516,668
LIMB-ATTACHABLE BALL PADDLES
Norbert A. Kirk, 3915 N. Pine Grove Ave.,
Chicago, Ill. 60613
Filed June 25, 1968, Ser. No. 739,815
Int. Cl. A63b 31/06, 39/00
U.S. Cl. 273-67

5 Claims



A device attachable to a hand for bouncing or to a shoe for kicking a ball. The device consists of an angled plate having a pair of plate members substantially at right angles to each other, the plate being provided with openings to receive a hand encircling strap or a shoe lace for holding the device in position. The plate may be relatively rigid, or it may be formed with slots so that it is resiliently flexible. In another embodiment, resiliently flexible bands are attached to the plate to enhance its ball bouncing ability.

3,516,669
BASEBALL BAT
Fester Gray, 2640 S. Harvard Blvd.,
Los Angeles, Calif. 90018
Filed Oct. 27, 1967, Ser. No. 678,632
Int. Cl. A63b 69/00; 69/30

U.S. Cl. 273-72

9 Claims

A special purpose bat devised to enable the batsman, usually an inexperienced youngster, to hit a poorly tossed ball and to enjoy the game of baseball. The bat proper resembles an ordinary baseball bat but is uniquely equipped with added ball striking members. The top and bottom surfaces are provided with outstanding fins which

provide extra striking faces. The front face of the stout part of the bat is provided with a spring mounted pressure



responsive paddle. This innovation enables the youngster to whack the ball in a lively self-pleasing manner.

3,516,670

POLYETHYLENE TARGET WITH WAFFLE-TYPE RIGIDIFYING STRUCTURE

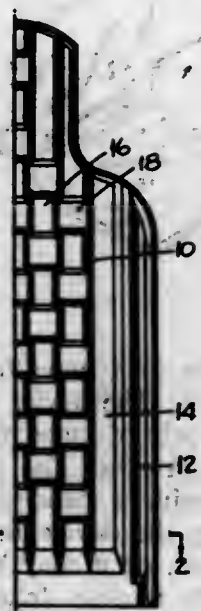
Vincent F. D'Agostino and Philip Brick, Huntington Station, N.Y., assignors to RAI Research Corporation, Long Island City, N.Y., a corporation of New York

Filed May 23, 1968, Ser. No. 731,391

Int. Cl. A63b 63/04

U.S. Cl. 273-102.2

7 Claims



A gunnery training target made of a rigid, weather-resistant, shaped sheet of polyethylene. The polyethylene is molded or treated to provide a member which produces small diameter holes when punctured by low caliber projectiles. These holes may also be partially sealed by heat treating the polyethylene. Alternating vertical and horizontal protrusions and indentations form a waffle-type structure on the target to impart rigidity thereto. The target may also be made to look like an aggressor soldier by coloring it drab green as a soldier's uniform, cutting it in the shape of a silhouette of a soldier, or by using a vinyl decal bearing the likeness of a soldier. The target may have its lower edge clamped to a reset device which allows the rigid target to transmit a bullet's energy thereto to lower the target. In a short predetermined time the target is raised.

3,516,671 BOARD GAME APPARATUS WITH PATH FORMING PIECES

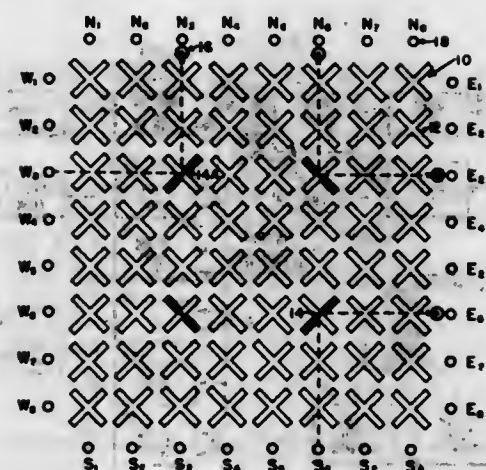
Gerald Estrin, 900 Warner Ave., Los Angeles, Calif. 90024

Filed June 15, 1967, Ser. No. 646,322

Int. Cl. A63f 3/00

U.S. Cl. 273-130

9 Claims



A board type game to be played by two or more players. The game apparatus includes a plurality of actual or symbolic energy deflecting pieces which can be selectively positioned at any intersection of a matrix of rows and columns. Each piece can be retained in either a first or second orientation so that it diverts energy incident thereon from a column (or row) to the intersecting row (or column) in one or both directions. Energy sources (e.g., a light source or electric current source) can be positioned to the direct energy along selected columns to the deflecting pieces. The primary idea is for the players to alternately position pieces in the matrix with each attempting to complete an energy path to the other side of the matrix prior to the other player doing so. In one embodiment, the energy source comprises a battery for driving an electric current along an established energy path. In this embodiment, the deflecting piece can comprise a copper clad insulating member receivable between normally closed contacts to break electrical continuity along a row or column and establish a path with the intersecting column or row. The pieces may be provided with letters so that the players may attempt to form a word along the completed path.

3,516,672

GAME BOARD DICE AGITATOR

Carl Max Maurer, Nuremberg, Germany, assignor to Ferna Gesellschaft mit beschränkter Haftung, Nuremberg, Germany, a company of Germany

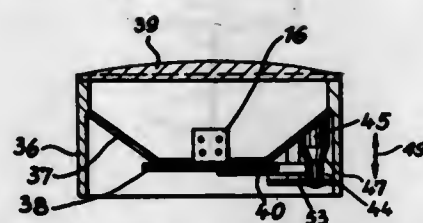
Filed May 6, 1966, Ser. No. 548,201

Claims priority, application Germany, May 14, 1965, P 36,798; Nov. 6, 1965, P 38,062

Int. Cl. A63f 9/04

U.S. Cl. 273-134

10 Claims



A dice game is played by one or more players by placing the dice (or only one die) into a well and then subjecting the dice to random shaking or tumbling. Such random movements of the dice are produced by shaking the bottom of the well by means of a vibrator or shaker operated by each player in turn.

3,516,673 CLUB WITH SHIFTING WEIGHT

Sanford A. Ertz, P.O. Box 12315,

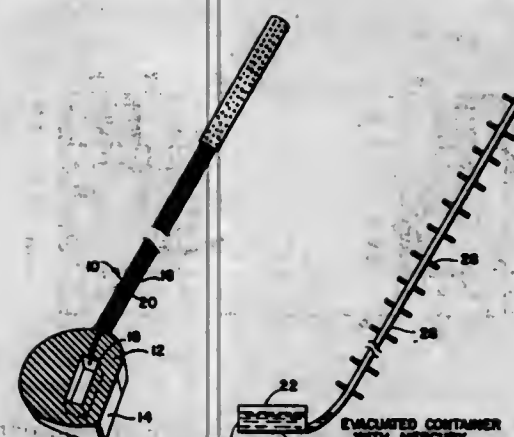
Tucson, Ariz. 85711

Filed Dec. 11, 1967, Ser. No. 689,475

Int. Cl. A63b 53/00, 53/02

U.S. Cl. 273-162

5 Claims



A golf club, having a hollow in the head and extending into the shaft; in the hollow is an evacuated container partially filled with mercury; a projecting part of the container extends into the shaft and is spaced therefrom by annular spacers on the projecting part.

3,516,674

GOLF PUTTER

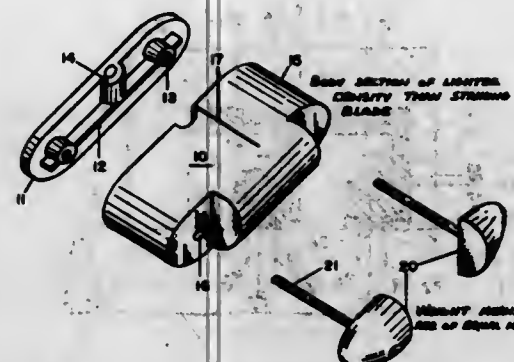
James Anthony Scarborough, Tucson, Ariz. (120 Belvedere Court, Cleveland, Miss. 38732)

Filed Dec. 28, 1967, Ser. No. 694,289

Int. Cl. A63b 53/04, 53/08

U.S. Cl. 273-169

3 Claims



A golf putter having a relatively thin striking blade made from a relatively dense material. A boss is affixed to the blade centrally thereof. Positioned against the rear of the blade in interlocking relationship therewith is a body section made of lighter density material than the blade. First and second weight means of equal mass are secured by threaded screws to the rear of the body section and equally spaced from the center line of the club head to minimize twisting of the club. Each screw extends through one weight means and the body section into threaded engagement with a boss at the rear of the striking blade.

3,516,675

GOLF GAME APPARATUS

Frank E. Kuester, Richard A. Clark, and Kenneth J. Gregory, Muskegon, Mich., assignors to Brunswick Corporation, a corporation of Delaware

Filed May 13, 1966, Ser. No. 549,851

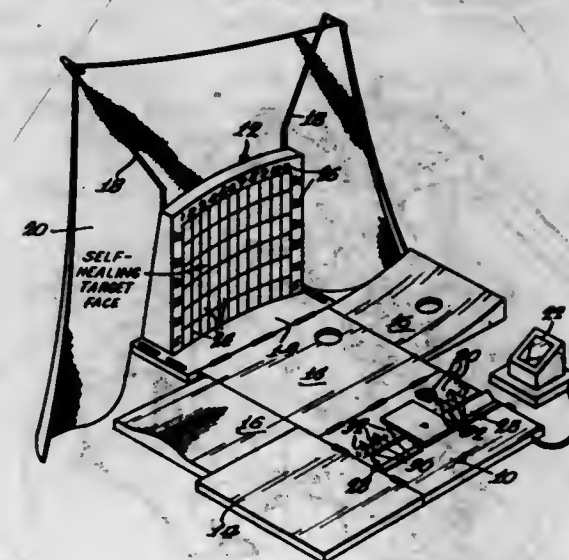
Int. Cl. A63b 67/02, 69/36

U.S. Cl. 273-176

15 Claims

A target for use in a game wherein a missile is directed toward a target including a frame, a layer of energy absorbing material mounted on the frame, and a sheet of inherently resilient, compactible material impregnated

with the pressure-sensitive adhesive mounted on the layer of energy absorbing material, so as to intercept the missile directed thereat to indicate the point of impact of the missile thereon for a short period and thereafter "heal" leaving no evidence of the point of impact. In the exemplary embodiment, the compactible material is formed of an open celled foam and the layer of energy absorbing material is formed of a composite layer of a



rubber having a hysteresis loss backed by a layer of open celled foam. Golf balls rebound from the target at a very low velocity to adjacent the tee area. By algebraically combining numbers designating different zones on the target and adjacent the tee area, a golfer is able to determine the direction from the tee the shot would have terminated had it not encountered the target. A meter is provided to indicate the distance each ball would have traveled.

3,516,676

RECORDING PLAYBACK MECHANISM

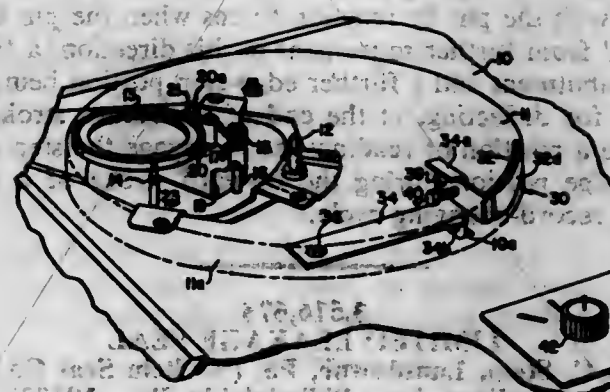
Everett J. Draper, Cypress, Calif., assignor to Rheem Manufacturing Company, New York, N.Y., a corporation of California

Filed Mar. 18, 1966, Ser. No. 535,447

Int. Cl. G11b 25/04

U.S. Cl. 274-9

3 Claims



The playback mechanism has a driving wheel, a brake, and a rotatable switch movable successively between "off," "pause" and "play" positions. A spring mechanism connects the rotary switch to the driving wheel and to the brake so that the driving wheel is engaged and the brake is disengaged in the "play" position of the switch, and the brake is engaged and the driving wheel is disengaged in both the "pause" and "off" positions of the switch.

3,516,677 PICKUP-ARM CONTROL IN AUTOMATIC RECORD-PLAYING DEVICES

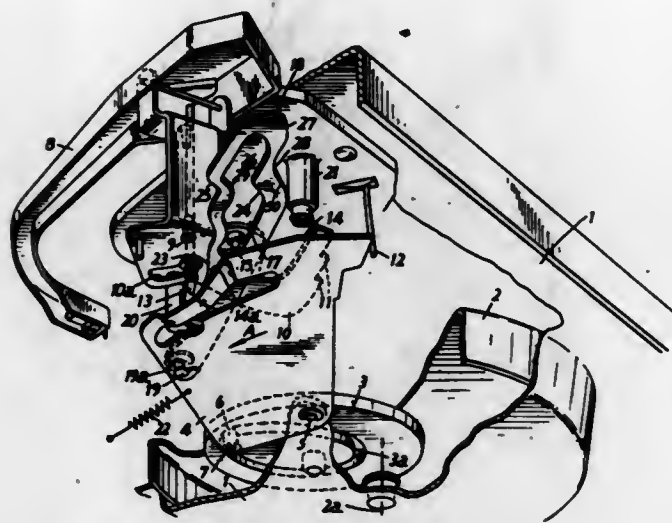
Edward Thomas Hamby, Swindon, England, assignor to The Plessey Company Limited, Ilford, England, a British company

Filed July 9, 1968, Ser. No. 743,518
Claims priority, application Great Britain, July 14, 1967, 32,574/67

Int. Cl. G11b 3/08

U.S. Cl. 274—9

5 Claims



In a gramophone record changer drive for the movement of the pickup arm is transmitted to the arm from a drive plate which is actuated for one forward-and-return stroke for each record-changing cycle, by a coupling link, which is frictionally pivoted to the drive plate and has a shaped slot which embraces the coupling pin and has on each side a step for respective driving engagement with the pin during the forward and return stroke.

A fixed abutment stem and an edge-cam portion of the link co-operate to deflect the link about its pivot to disengage the step of the first edge portion from the pin to stop the outward drive of the arm while permitting it to be moved further outwardly when the outwardly moving pickup arm reaches a predetermined position and to cause the step of the second edge portion to strike the pin and propel it, during the subsequent return stroke, in the direction producing inward movement of the arm, said last-mentioned step being so inclined to the direction of movement of the coupling pin as to be moved out of engagement with the pin by reaction forces when the pin is prevented from further movement in this direction, a further fixed abutment and a further edge-cam portion being provided for deflecting, at the end of the return stroke, the link to a position of readiness to re-engage the step of the first edge portion during the forward stroke of a subsequent record-changing cycle.

3,516,678 LIMITED LEAKAGE SEAL

Philip C. Stein, Lansdowne, Pa. (% Stein Seal Co., 20th and Indiana Ave., Philadelphia, Pa. 19132)

Filed June 1, 1964, Ser. No. 371,452

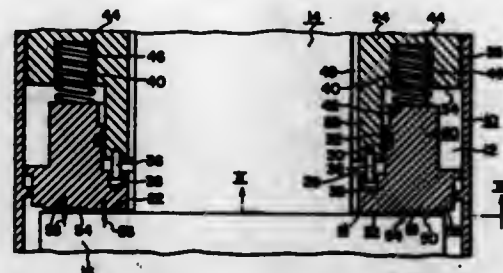
Int. Cl. F16j 15/34

U.S. Cl. 277—27

3 Claims

1. In a seal assembly, a rotatable shaft having a radially extending annular substantially flat surface formed thereon, a seal ring mounted about said shaft and having a pair of generally opposed radial surfaces formed thereon, said ring being axially movable relative to said shaft, one of said seal ring radial surfaces confronting said shaft radial surface, a hollow housing defining a fluid pressure chamber therein receiving said shaft and said seal ring

therein, said other seal ring radial surface and the outer edge of said one seal ring radial surface being exposed to said pressure chamber, the inner edge of said one seal ring radial surface being exposed to a region of relatively low pressure disposed adjacent said shaft, so that fluid flows from said pressure chamber to said low pressure region along a path between said confronting sur-



faces, said one seal ring surface having an annular portion thereof adjacent said ring outer edge spaced farther from said radial shaft surface than the remainder of said one seal ring surface to vary the radial pressure drop along said path, and the remainder of said one seal ring surface being substantially flat and always substantially parallel to the flat surface of the shaft.

3,516,679 SEALING ARRANGEMENT

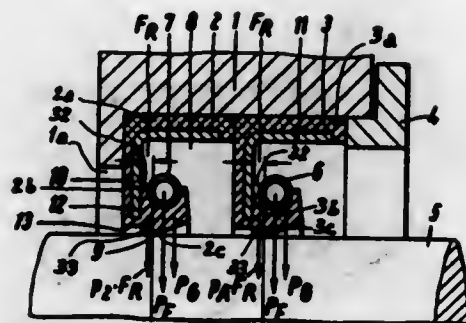
Wilhelm Schmitt, Vordersberg, Germany, assignor to Carl Freudenberg, Weinheim, Germany

Filed Aug. 22, 1967, Ser. No. 662,511

Int. Cl. F16j 15/32

U.S. Cl. 277—51

12 Claims



The lip portions of a plurality of annular sealing means surround a shaft and form at least one chamber. The lip portions exert a resilient sealing force on the shaft and have two pressure surfaces subjected to the chamber pressure and to outer pressure, respectively, so that the pressure is gradually reduced. The high outer pressure urges the lip portion away from the shaft, while the chamber pressure and the resilient sealing force urge the lip portion against the shaft, overcoming the effect of the outer pressure after a balanced sealing condition is established.

3,516,680 DEVICE FOR CLAMPING ARTICLES TO BE MACHINED

Edmond André, 56 Rue Henri Richaume, 78 Montesson, France

Filed July 24, 1967, Ser. No. 655,532

Claims priority, application France, July 29, 1966, 71,389; July 21, 1967, 115,234

Int. Cl. B23b 31/30, 31/16

U.S. Cl. 279—4

6 Claims

Clamping device for clamping articles to be machined on machine tools, the device comprising at least one radi-

ally slidable clamping dog which is radially shiftable by means including a rib in the shape of an arc of a spiral



provided on a control plate and a cylindrical element slidable on the rib and rotatably engaged in the dog.

3,516,681

HYDRAULIC CHUCK OR ARBOR

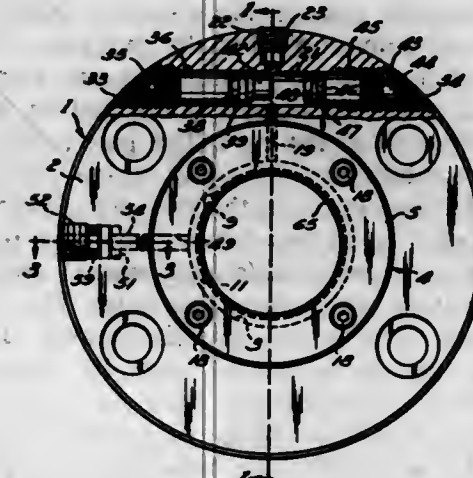
John R. Cox, Lakewood, and Joseph E. Mix, Cleveland, Ohio, assignors to Balas Collet Company, Cleveland, Ohio, a corporation of Ohio

Filed May 16, 1968, Ser. No. 729,818

Int. Cl. B23b 31/30, 25/06, 19/00

U.S. Cl. 279—4

1 Claim



A hydraulic chuck or arbor having a thin wall portion adapted to be pressurized into contact with a workpiece or tool by the application of hydraulic pressure on a pressure chamber in the chuck. A pressure indicator is provided that visually indicates the presence of or lack of pressure on the workpiece or tool.

3,516,682

CROSS COUNTRY VEHICLES

Rudolf Klanner, Munich-Obermenzing, and Josef Merkle, Munich, Germany, assignors to Maschinenfabrik Augsburg-Nürnberg Aktiengesellschaft, Munich, Germany

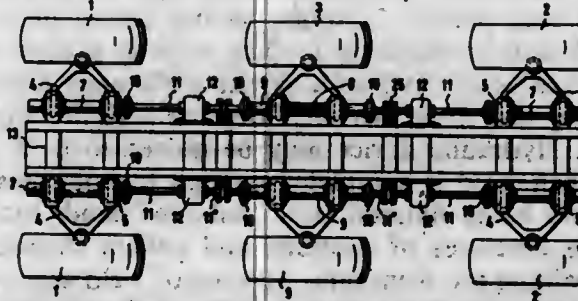
Continuation-in-part of application Ser. No. 447,642, Apr. 13, 1965. This application Dec. 6, 1967, Ser. No. 688,397

Claim priority, application Germany, Apr. 14, 1964, M 60,643

Int. Cl. B60g 11/18; 19/02; 19/04

U.S. Cl. 280—104.5

10 Claims



The specification describes various forms of six-wheeled vehicles having each wheel connected with its own torsion

rod suspension spring. The springs are connected together by rotation reversing means in such a manner that vertical movement of the center wheel pair produces a downward thrust on the two outer wheel pairs. Conversely, an upward movement of one or both of the outer wheel pairs produces a downward thrust on the center wheel pair.

3,516,683

HYDROPNEUMATIC SUSPENSION

René Capras, Paris, France, assignor, by means assignments, to Industrial Development Company Etablissements, Vaduz, Liechtenstein, a corporation of Liechtenstein

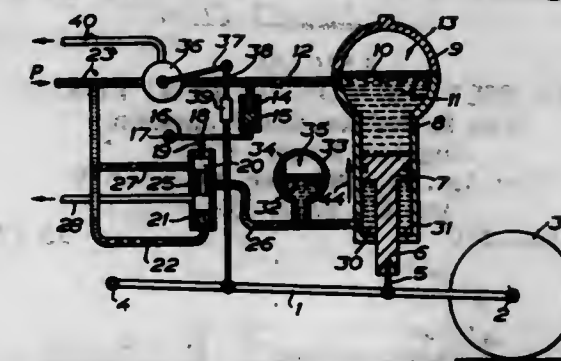
Filed Mar. 27, 1968, Ser. No. 716,687

Claims priority, application France, Mar. 29, 1967, 48,465; June 19, 1967, 48,805

Int. Cl. B60g 3/14, 17/04

U.S. Cl. 280—124

10 Claims



A vehicular shock absorber has a double-acting piston (7) coupled with a wheel-supporting arm (1) and loaded from above by a gas cushion. The weight of the vehicle, tending to drive the piston upwardly, is supplemented by a virtual load constituted by the output of a hydraulic pressure accumulator (35) acting upon the lower face of the piston, this virtual load being varied inversely to the loading of the vehicle in response to changes in the ground clearance of the vehicle body to maintain the overall load, and thereby the pressure of the gas cushion, substantially constant.

3,516,684

BRAKE SPLASH SHIELD

Horacio Shakerpear, Troy, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 1, 1968, Ser. No. 764,258

Int. Cl. B62d 25/16

U.S. Cl. 280—124

3 Claims



Splash shields are attached to the bottoms of vehicle lower control arms and shaped to prevent road splash from the opposite wheels from contacting the brake units.

3,516,685

INFLATABLE CONFINEMENT VEHICLE SAFETY APPARATUS

George W. Goetz, Detroit, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed Nov. 8, 1967, Ser. No. 681,393

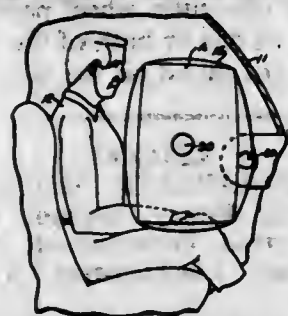
Int. Cl. B60r 21/10

U.S. Cl. 280—150

6 Claims

A vehicle safety apparatus comprises a confinement having a collapsed inoperative condition in which said confinement protects the occupant of a vehicle by restraining movement of the occupant during a vehicle collision.

The apparatus includes a reservoir and means for effecting the flow of gas from the reservoir to effect inflation of the confinement within an inflation time range of .010 to



.100 second. The apparatus is constructed in accordance with mathematical formulations so that between 20 and 95% of the gas available in the reservoir is utilized to fill the confinement within the inflation time.

3,516,686

TWIN BICYCLE CONNECTING FRAME

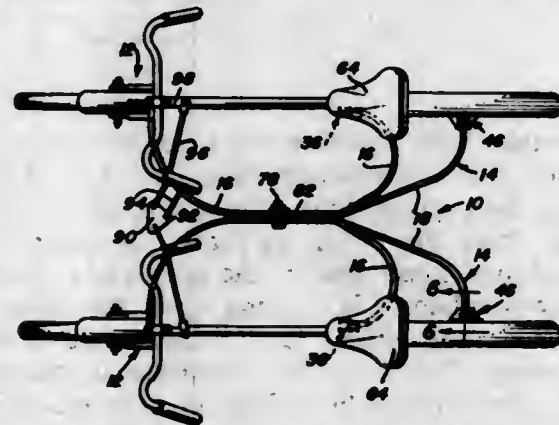
John R. Stalder, 621 S. Jackson,
Hugoton, Kans. 67957

Filed Apr. 24, 1968, Ser. No. 723,670

Int. Cl. B62k 13/06

U.S. Cl. 280-209

13 Claims



A frame for interconnecting a pair of laterally spaced bicycles which includes two pivotally interconnected frame sections. Each frame section is generally arcuate in configuration so as to, from the bicycle mounted opposite ends thereof, bulge laterally of the bicycle inwardly toward the second bicycle, and tie means interconnecting the handlebars for a tandem steering of the bicycles.

3,516,687

ASSEMBLY OF SHEETS STAPLED TO A BACKING MEMBER, AND ASSOCIATED METHODS OF INSTALLATION

John D. Langwell, Freeport, N.Y., assignor to Louis Witrick, Herman Alexander, and Bernhard Sandelman, Oceanside, Merrick, and New York, N.Y., respectively.

Filed Apr. 19, 1968, Ser. No. 722,770

Int. Cl. B42b 3/00

U.S. Cl. 281-25

8 Claims



An assembly of sheets mounted on a backing member by a loop staple having one leg passing through the sheets and the other leg passing through a plug which is held between the bridge of the staple and the backing member.

3,516,688
MULTIPLE-PURPOSE DEMOUNTABLE
PIPE-COUPLING SYSTEM

Jean Gachet, 179 Avenue de la Division Leclerc,
Enghien, France

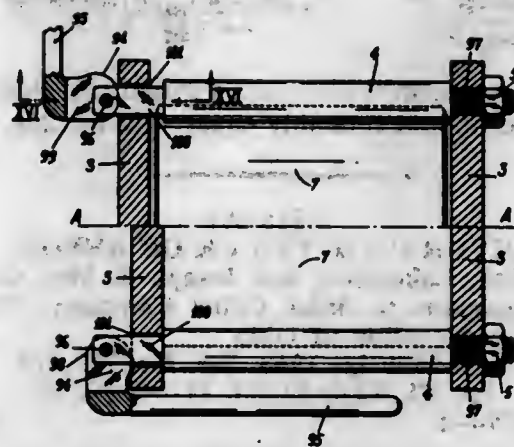
Filed Apr. 28, 1967, Ser. No. 632,377

Claims priority, application France, Apr. 28, 1966,
59,486; Sept. 9, 1966, 75,823

Int. Cl. F16l 23/00

U.S. Cl. 285-31

1 Claim



A multiple-purpose pipe-coupling system which is both demountable and convertible for the purpose of joining two elements of a same pipe comprising two oppositely-facing terminal coupling flanges connected by tie-bolts spaced about the axis of the pipe. The pipe-coupling system comprises a tubular coupling unit which is removably inserted and clamped between the two pipe-flanges while bearing longitudinally on two adjacent tie-bolts of an assembly of similar tie-bolts which are spaced around the coupling unit but do not traverse this latter. The coupling unit forms part of a set of interchangeable couplings having grooved end faces in which annular seals are fitted so as to project from the end faces to a slight extent in the rest position. The couplings of a same set are provided with different internal elements so as to constitute different equipment units which can be indifferently interchanged by positioning between the pipe-flanges and keying on the tie-bolts which serve to connect the pipe-flanges.

3,516,689

WELDED PIPE CONNECTION

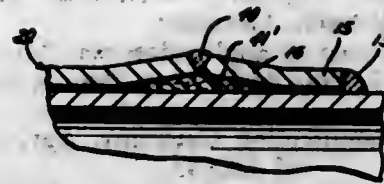
Robert F. Binford, Otis N. Rodgers, and George A. Pace,
Great Bend, Kans., assignors to Flexweight Corpora-
tion, Great Bend, Kans., a corporation of Kansas

Filed Aug. 19, 1968, Ser. No. 753,475

Int. Cl. F16l 11/12, 13/02, 55/00, 59/16

U.S. Cl. 285-47

9 Claims



Flaring collars are welded adjacent pipe ends. Pipe is then lined with plastic. Coupling having flaring ends and carrying a seal conforming to pipe ends is placed over adjacent pipe ends. Hydraulic device pulls ends together compressing seal therebetween. Coupling ends are welded to collars. Hydraulic device may be moved to next connection when weld is completed enough to hold tension, rest of weld being finished later. Asbestos bands around pipe inside junctures of coupling and collars electrically insulate welding arc from pipe. Spacing of weld area from pipe insulates pipe from heat. Length of flaring ends of collars and coupling dissipates heat of weld area before it travels through collars and coupling to pipe.

3,516,690
WELDED COUPLING CONSTRUCTION WITH
BONDED LINER

Galen W. King, 2831 Somerset Drive,
Wichita, Kans. 67204

Original application Mar. 15, 1966, Ser. No. 534,779, now
Patent No. 3,441,254. Divided and this application
Apr. 29, 1968, Ser. No. 785,405

Int. Cl. F16l 13/02, 59/16

U.S. Cl. 285-55

2 Claims



A coupling for coupling adjacent ends of aligned pipes comprising a cylindrical sleeve having an elastomeric liner therein that is securely bonded throughout its axial extent to the internal surface of the sleeve. The liner is of relatively reduced and minimal diameter at a position intermediate its opposite ends, and from adjacent such position the liner is of progressively increasing or flaring diameter. The liner can and in a preferred embodiment does have outwardly or oppositely-facing internal shoulders formed at the junctures of the flaring portions of the liner with the minimal diameter portion of the liner. The coupling is secured to pipes that are coaxially received in radially spaced relation within the opposite ends of the sleeve (such pipes being in sealing engagement with the liner) by the opposite ends of the sleeve being welded to the pipes, or alternatively, to the adjacent ends of annular members that are concentrically spaced about the pipes, such annular members being secured to their respective pipes at their remote extremities, the latter alternative being especially effective, on providing sufficient axial extent for the annular members, to minimize the heat conducted to the pipes on welding the coupling sleeve to the adjacent ends of such annular members.

3,516,691

FLUID SYSTEM CONNECTION ASSEMBLY OF
FLEXIBLE TUBE MEANS TO SOLID UNIT
MEANS

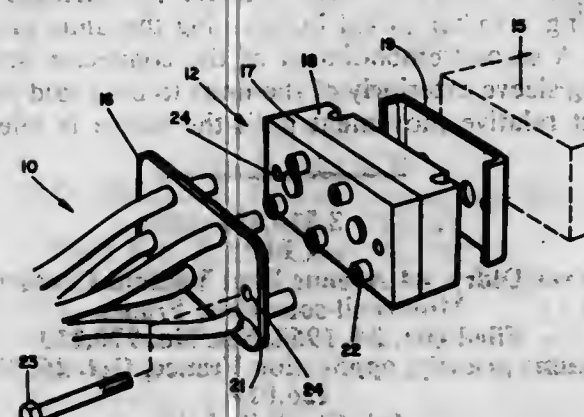
George F. Williams, Riverside, R.I., and Hoel L. Bowditch, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Filed June 20, 1968, Ser. No. 738,639

Int. Cl. F16l 33/22, 39/02

U.S. Cl. 285-137

1 Claim



In fluid instrumentation, a fluid connection assembly between a flexible tube and a solid unit boss by means of a squeeze plate around the tube, this assembly lending

itself especially to harness assemblies of multiple tube systems, on a separable but usually permanent basis. A further combination is a permanent assembly according to this invention, wherein the solid unit is readily separably mounted with respect to another solid unit, in separable continuance of fluid passages through the flexible tubes and through the first solid unit into the second solid unit, providing the advantage of solid unit to solid unit assembly in situations involving the interface between flexible tubings and passages in solid units.

3,516,692

BRANCH PIPE CONNECTION

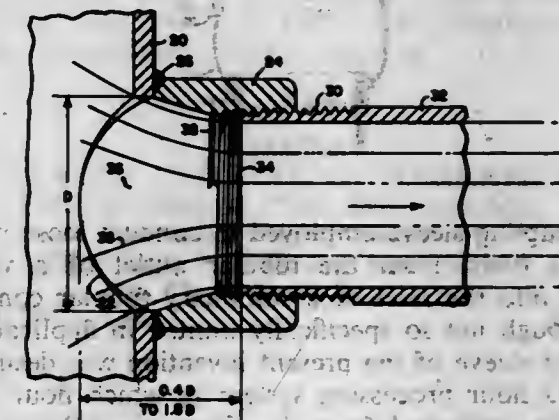
David Eugene Albrecht, Blue Bell, Pa., assignor to Allied Piping Products Company of Pennsylvania, Inc., Ambler, Pa., a corporation of Pennsylvania

Filed Feb. 9, 1968, Ser. No. 704,346

Int. Cl. F16l 13/02, 41/00

U.S. Cl. 285-156

5 Claims



A pipe is provided with a branch discharge orifice with a fitting secured adjacent to its exterior periphery. A branch pipe is provided through the outer end of the fitting with the inlet opening of the branch pipe a distance from the remotest point of the entrance of the fitting equal to from about 0.4 to 1.8 times the diameter of the entrance of the fitting. The square of the inside diameter of the branch pipe is equal to about .6 to about .8 times the square of the entrance of the fitting. The inside diameter of the branch pipe is substantially equal to the minimum contracted diameter of the unobstructed flow of liquid through the orifice and the inlet opening is positioned to be substantially in the region of maximum contraction of the fluid.

3,516,693

PIPE COUPLINGS

John Benjamin Glover, Stockbridge, near Sheffield, England, assignor to The Hepworth Iron Company Limited

Filed Apr. 8, 1968, Ser. No. 719,409

Int. Cl. F16l 21/00

U.S. Cl. 285-235

6 Claims



A synthetic plastic coupling sleeve for clayware, pitch-fibre, asbestos-cement or synthetic plastic plain-end pipes is provided at each end with a sealing ring having a radially-extending annular portion abutting the rim of the sleeve

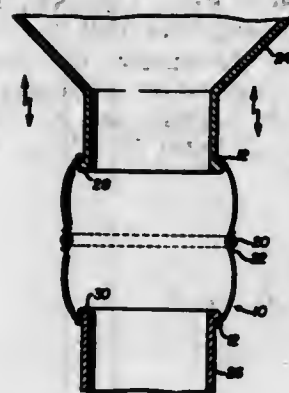
and an inwardly-projecting annular sealing head connected to the flange by an inner intermediate portion lying against the inside of the sleeve, held in place by a separate channel-section locking member gripping the sleeve.

3,516,694 COUPLING SLEEVE

Larry M. Schwartz, 1440 Stayvesant,
Birmingham, Mich. 48010
Filed Mar. 26, 1968, Ser. No. 716,184
Int. Cl. F16I 21/00

U.S. Cl. 285-236

1 Claim



A coupling sleeve employed to conduct loose material, such as flour, from the tubular outlet of a vibratory hopper into the inlet of a stationary tubular conduit.

Although not so specifically limited in application, the coupling sleeve of the present invention was designed for use in a flour processing system in which flour is sifted and then conducted from the sifter to a subsequent step in the flour processing operation. Flow of the flour from the sifter to the next processing step is primarily under gravity flow conditions and, to assist in the sifting and gravitational feed of the flour from the sifter, the sifter is vibrated. To conduct the flour to the next processing step, a stationary conduit is employed, and the present invention is concerned with the confining and guiding of the flour from the outlet of the vibratory sifter to the stationary conduit.

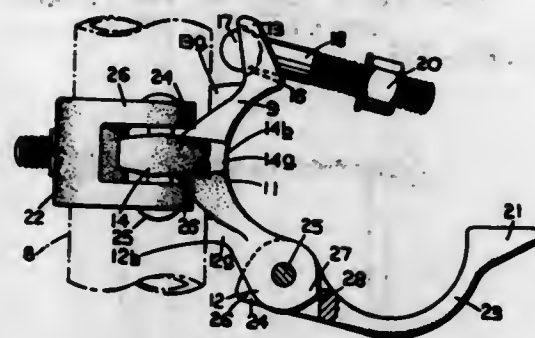
3,516,695 SCAFFOLD COUPLINGS

Jack Graham Lowe, Belbroughton, England, assignor to
Burton Dellingpole & Company Limited, Warley, Eng-
land, a British company
Filed Mar. 4, 1968, Ser. No. 710,098
Claims priority, application Great Britain, Mar. 4, 1967,
10,339/67

Int. Cl. F16b 7/00; E04g 7/20

U.S. Cl. 287-54

3 Claims



A scaffold coupling for securing a non-vertical, e.g. horizontal scaffold tube to a vertical scaffold tube, with the body of the coupling having a downwardly directed sharp edge which deforms and locks into the surface metal of the vertical scaffold tube, to lock the coupling against downward movement on the vertical tube.

3,516,696

SLACK ADJUSTER

John W. Kaim, Chicago, Ill., assignor to Amsted Indus-
tries Incorporated, Chicago, Ill., a corporation of
Delaware

Filed Aug. 21, 1968, Ser. No. 754,263
Int. Cl. F16b 7/06

U.S. Cl. 287-61

3 Claims



A manual slack adjuster usable to adjust railway brake rigging has the threaded end of a screw engaged with a helicoid secured to the interior of a tube and is aligned therewith by a bushing. A cover secured to the screw telescopes over the tube and has an annular scraper contacting the tube's outer surface. Rotatably fastened to the opposite end of the tube by bolts contacting an annular groove is a cup-like jaw having a pivotal hinge lock that is engageable with a gripping area on the tube to rotatably lock the tube to the jaw. The jaw and screw are pivotally engageable with railway brake levers.

3,516,697

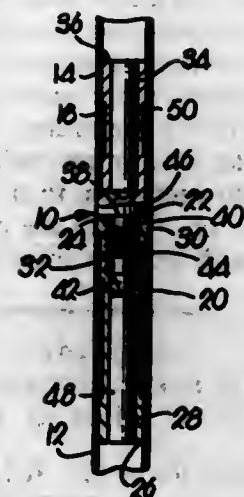
CONNECTOR FOR TUBULAR MEMBERS

Raymond P. Hahn, Leawood, Kans., assignor to Raymar,
Inc., Leawood, Kans., a corporation of Kansas
Filed Feb. 20, 1969, Ser. No. 800,840

Int. Cl. F16b 7/00

U.S. Cl. 287-125

6 Claims



A connector for joining a pair of tubular members in end to end relationship with the connector including a pair of interengaging threaded units, each unit having a magnetic element which attracts the element of the opposing member to aid in retaining the units in engagement. A second embodiment of the connector includes a locking sleeve exteriorly of the units to hold said members against relative movement until the sleeve is released.

3,516,698

CLIP

Yves Didry, 44 Avenue Paul Vaillant Couturier,
Montreuil-sous-Bois, France

Filed Oct. 24, 1968, Ser. No. 770,213

Claims priority, application France, Oct. 26, 1967,
126,019

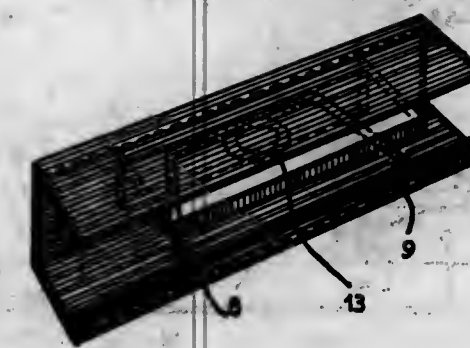
Int. Cl. F16b 5/06

U.S. Cl. 287-189.35

4 Claims

A clip used to secure two angled members in assembled relationship to each other comprising a central arm and two lateral arms. The central arm may be in the shape of

a loop, straight wire or planar figure and engages the inner surface of one angled member when in operable position. The lateral members simultaneously engage the latch arms toward each other to release position. The latch arm shafts are biased apart to a locking position by a spring connected between the levers. The latch arms lock



lower inner surface of the second angled member by being bent down so that they extend angularly outward and downward from the top inner surface of the inner angled member.

over a substantial distance on arcuate locking surfaces in the locking plate permitting substantial tolerance for misalignment between the interlocked parts.

3,516,699

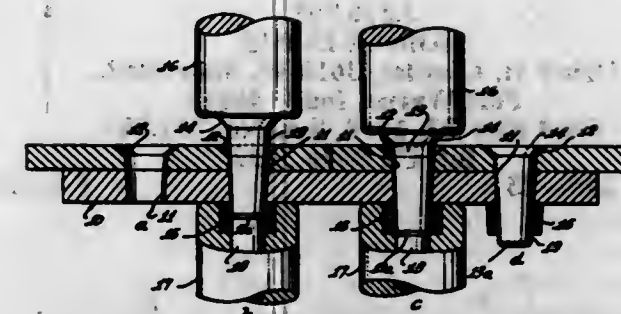
TAPER RIVET

Emric W. Borgers, 2324 Nottingham Ave.,
Los Angeles, Calif. 90027
Continuation-in-part of application Ser. No. 587,898,
Oct. 19, 1966. This application Feb. 28, 1969, Ser.
No. 803,288

Int. Cl. F16b 5/04

U.S. Cl. 287-189.36

6 Claims



A fastener for sheet metal comprising a headed rivet with a continuously tapered shank slightly larger than, and protruding through and beyond the hole into which it is driven, the rivet being hardened to near maximum shear strength and having a smooth-bored locking collar driven onto the projecting end of the shank, said collar being of a similar material and hardness to those of the shank and having a gross interference fit with the shank so as to lock it in place by a galling action between the collar bore and shank when the collar is driven home against the work face opposite the head.

A bolt containing a magnetized rotor member is longitudinally movable within a housing between a retracted position in which it is locked whenever the door is open and a door locking position in which it is within a magnetized strike member. A ball or pin locks the bolt in both its retracted and outwardly projected positions. The rotor and strike member are magnetized so that, as the door is moved to a closed position, their flux will first rotatively move the rotor and unlock the retracted bolt, then move the rotor and bolt endwise into the strike member locking the door closed, then lock the bolt in the strike member by further rotatively moving the rotor. A pull back link unlocks the bolt, retracts it and leaves it locked in the retracted position when the door is open.

3,516,700

LATCH DEVICE

Nils O. Myklestad, 1022 S. Cooper, Apt. 243,
Arlington, Tex. 76010

Filed Feb. 2, 1968, Ser. No. 702,665

Int. Cl. E05b 15/02; E05c 3/16, 9/10

U.S. Cl. 292-49

14 Claims

A latch for releasably connecting separable parts and having a pair of spaced pivoted latch arms supported by one part for a releasable engagement with a locking plate mounted on another part. The latch arms are supported on spaced rotatable shafts actuated by a cam pivotally mounted on a rotatable operating shaft extending between the latch arm shafts and engageable with a crank on each of the latch arm shafts for rotating the shafts to pivot the

3,516,702

INSTANTANEOUS TENSION LOAD RELEASE DEVICE

Stuart K. Edleson, Dallas, Tex., assignor, by mesne as-
signments, to the United States of America as repre-
sented by the Secretary of the Navy
Filed June 26, 1968, Ser. No. 740,842

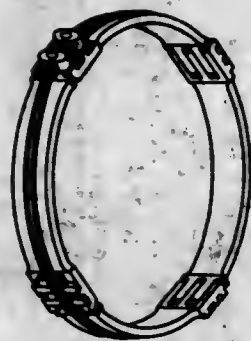
Int. Cl. B66c 1/00

U.S. Cl. 294-1

6 Claims

This is a device to instantaneously release a heavy tension load with essentially zero transition time between full and zero load. Tension members are interlocked by

means of finger members and locking wedges, and by reason of the wedge angle design, when unrestrained the



wedges start to accelerate out of the fingers to relieve the tension load.

3,516,703

DAMPENER RELEASE, RUNNING AND PULLING TOOL

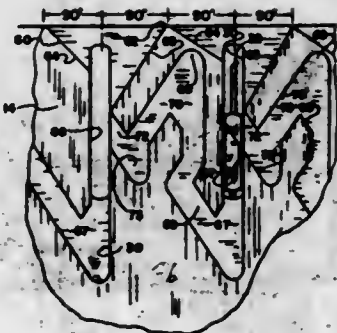
Charles A. Templeton, P.O. Box 2761,
Odessa, Tex. 79760

Filed Apr. 1, 1968, Ser. No. 717,609

Int. Cl. E21b 31/00

U.S. Cl. 294-86.17

14 Claims



Apparatus for running retrievable objects into and out of bore holes which includes a damper release in combination with a running and pulling tool. The pulling tool is comprised of a barrel and a mandrel, with the mandrel being affixed to the retrievable object while the barrel is affixed to the damper release. The lower terminal end of the barrel and the upper terminal end of the mandrel include releasable engaging means associated therewith which cooperate together in a manner whereby relative downward movement of the barrel with respect to the mandrel enables oppositely disposed fingers to ride in a set of slots which guidably permit the release of the barrel with respect to the mandrel when the barrel is lifted upwards. Upon disengagement of the barrel from the mandrel, a second downward movement of the barrel with respect to the mandrel permits the oppositely disposed fingers to ride through the series of slots whereupon the fingers engage the mandrel to thereby enable the entire combination to be lifted from the bore hole as a string of tools. The damper release includes a depending biased shaft which bears against the upper extremity of the mandrel in a manner whereby relative motion of the barrel towards the mandrel occurs over a much longer time interval as compared to a normal separation type motion. This action prevents inadvertent release of the pulling tool from the retrievable object, should any component of the combination inadvertently strike the bore hole wall and become arrested when the string is being run into the hole.

3,516,704

LATCH RELEASE SYSTEM

William C. Rector, Williamsville, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.

Filed Aug. 24, 1967, Ser. No. 662,934

Int. Cl. B60r 21/00; B60n 1/04

U.S. Cl. 296-65

6 Claims



A motor vehicle having a seat back pivotal relative to the seat with a latch for preventing relative pivotal movement between the seat and seat back. A remote controlled latch actuator system includes a fluid pressure differential energized servo unit supplied by a bellows type pump or vacuum from the intake manifold through a remotely disposed valve assembly, either solenoid operated or mechanically operated, in response to opening or closing of a vehicle door for supplying fluid pressure to the servo unit. A single door switch operates a courtesy light and the solenoid valve. A diode separates the manual courtesy light switch from the door switch circuit.

3,516,705

MOBILE HOME

Henry H. Giesler, 3618 W. State Blvd.,
Fort Wayne, Ind. 46808

Filed May 22, 1968, Ser. No. 731,085

Int. Cl. B60p 3/32

U.S. Cl. 296-23

5 Claims



A mobile home which has partitions dividing the interior of the same into a plurality of rooms including a hallway and a furnace room located on the perimeter or outside wall of the home and separate from the rooms constituting the living quarters, which furnace room is of a size sufficient to accommodate an oil fired furnace or other heating unit, and a water heater, with the furnace room having a door or panel closed opening in an exterior wall through which access to the heating unit may be had and a door or panel closed opening in an oppositely disposed interior wall which will provide access for servicing the water heater.

3,516,706

FREIGHT VEHICLES

Harry J. Bruce, Barrington, Ill., assignor to Spector Industries, Inc., Chicago, Ill., a corporation of Delaware

Filed Oct. 25, 1967, Ser. No. 678,022

Int. Cl. B60p 1/34

U.S. Cl. 296-24

25 Claims

A freight vehicle provided with adjustable decks or platforms movable between the floor and ceiling of the vehicle whereby freight may be supported on said plat-

forms when same are horizontally positioned; said decks or platforms are also capable of being pivoted to a vertical position wherein they serve as bulkheads and also



wherein they may be pivoted to a position against and parallel with the side wall of the vehicle to be in an out-of-the-way position.

3,516,707

MOTOR VEHICLE BODY

Karl Wilfert, Gerlingen-Waldstadt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

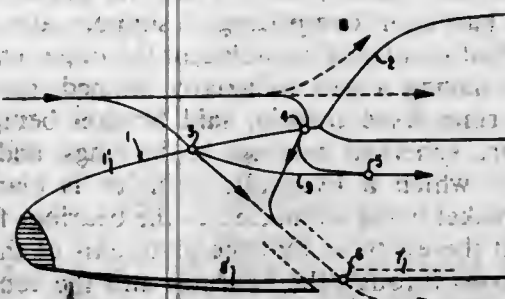
Filed Sept. 8, 1967, Ser. No. 666,387

Claims priority, application Germany, Sept. 8, 1966, D 51,055; Nov. 11, 1966, D 51,525

Int. Cl. B60j 1/20

U.S. Cl. 296-91

10 Claims



A motor vehicle body which includes a windshield and a body structure located in front thereof, especially for passenger motor vehicles, in which the windshield and/or other parts of the vehicle are kept substantially free of dust and dirt by providing apertures in the body structure in front of the windshield through which either at least a part of the dynamic air flow, which would normally flow against the windshield and/or other part to be kept clean, is sucked off into and through the vehicle body or an additional air stream or air flow is blown directly toward the windshield and/or other vehicle wall to be kept clean.

3,516,708

HARDTOP CAMPING TRAILER

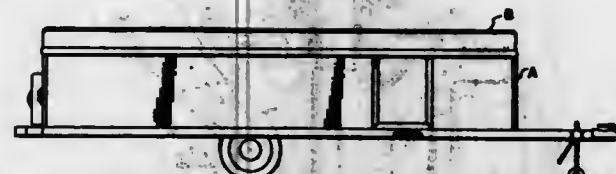
William F. Cox, % Cox Trailers, Inc.,
Grifton, N.C. 28530

Filed Dec. 3, 1968, Ser. No. 780,756

Int. Cl. B60p 3/32

U.S. Cl. 296-23

4 Claims



The camping trailer is contained within a trailer body covered by a hardtop. Four corner posts, at each corner of the body, each formed by four telescoping sections, may be extended by cords operated from a central manually actuated mechanism, and raise the top into expanded

position. Two bunks at opposite ends are mounted on slides to move outwardly from the body. Canvas side and end walls are opened into position by movement of the top and bunks. The manual operating mechanism includes friction mechanism for pulling on the cords to raise the top and to maintain the top in its raised position.

3,516,709

CONVERTIBLE HIGH CHAIR

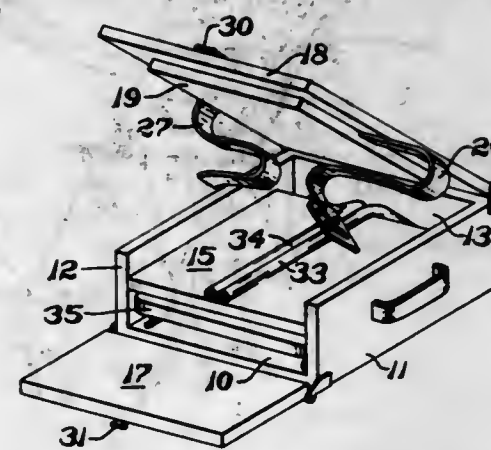
Donald J. Nader, 3443 W. 96 St.,
Cleveland, Ohio 44162

Filed June 14, 1968, Ser. No. 737,075

Int. Cl. A47c 13/00

U.S. Cl. 297-153

4 Claims



A combined luggage case and a collapsible baby's chair that is operative as a high chair having a storage compartment therein for the storage of the tray when used as a booster chair. The chair has strap means which secures the chair to a conventional chair as well as to an automobile seat to operate as a baby's safety car seat.

3,516,710

FOLD-DOWN BACKREST AND PASSENGER VEHICLE IMPROVEMENTS

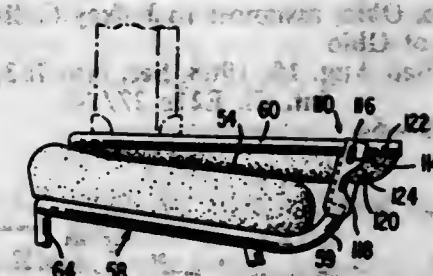
Thomas Leroy Sherbert, Landon, Md., and Tillson Myron Sherbert, Washington, D.C., assignors to D.C. Transit System, Inc., District of Columbia, a corporation of the District of Columbia

Original application July 20, 1967, Ser. No. 654,965, now Patent No. 3,455,597, dated July 15, 1969. Divided and this application Apr. 4, 1969, Ser. No. 813,462

Int. Cl. A47c 3/00

U.S. Cl. 297-379

4 Claims



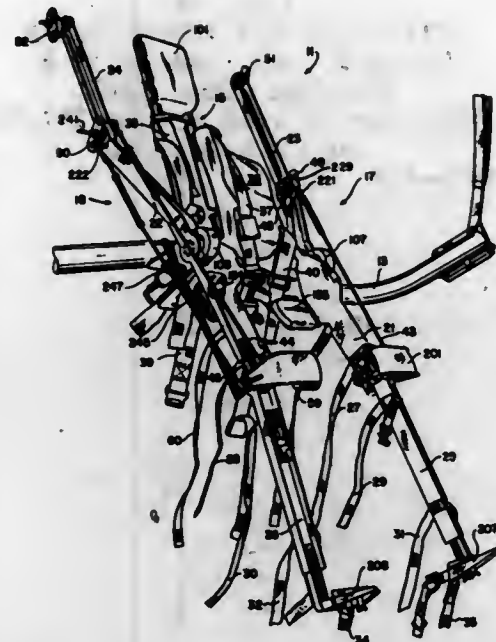
In a passenger vehicle such as a bus having a door in the rear wall thereof for bringing large packages or other articles into the bus, a passenger seat in the rear of the bus adjacent the door having a foldable backrest for providing a platform on which to rest the articles. The backrest includes opposite side members pivoted to adjacent portions of the associated seat frame, and locking pins movable into and out of recesses in the adjacent seat frame portions for locking the backrest in an upright position and for releasing the backrest for movement into a horizontal, article-receiving position.

3,516,711

HARNESS ASSEMBLY

Dan H. Dane, Huntsville, Ala., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 23, 1968, Ser. No. 723,476
Int. Cl. A62b 35/00; C09b
U.S. Cl. 297—385

11 Claims



A harness assembly adapted to support a human test subject on a ground based apparatus which simulates low or no gravity conditions. The harness assembly has a backrest which is adjustably connected to the support bar of the simulator so as to position the center of gravity of the human within the harness at the desired location. On each side of the backrest and pivotally connected thereto at a location approximating the hip joint of the human test subject is an articulated side member. The upper segment of the side member is connected to the lower segment together with the weight of the human's test subject's legs strapped thereto. Thus, the harness assembly allows the human test subject to pivot his legs and at the same time simulates the effects of weightlessness upon the legs.

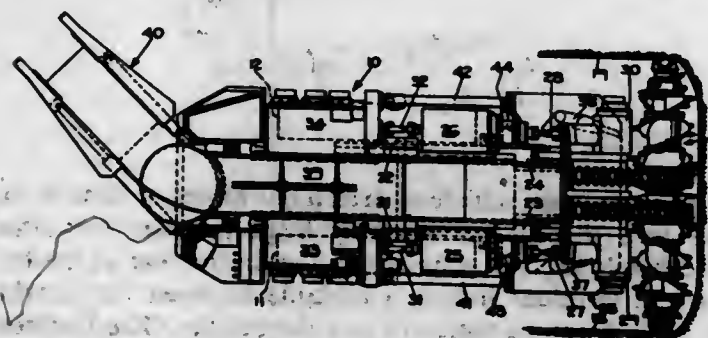
3,516,712

MINING MACHINE FOR MINING MATERIAL FROM THE ENTIRE FACE

John E. Bennett, Columbus, and Fay E. Munger, Upper Arlington, Ohio, assignors to Jeffrey Gallon Inc., a corporation of Ohio
Filed Aug. 19, 1968, Ser. No. 753,460
Int. Cl. E21c 27/24

U.S. Cl. 299—64

11 Claims



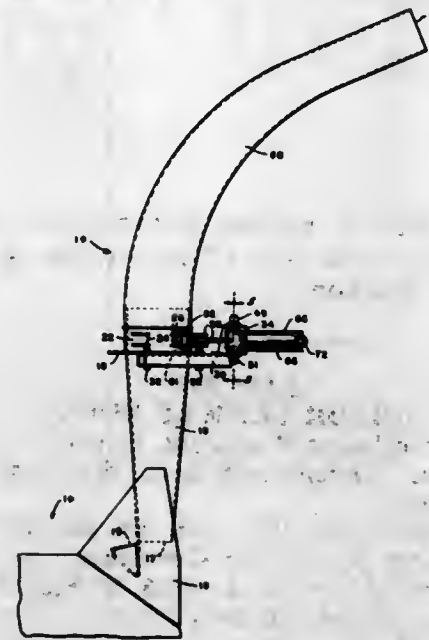
A mining machine with a transverse rotary mining head to mine material from the entire area of the mine face by traversing the mining head through the mine face, and which produces a curved or arched form of the roof at each rib.

3,516,713

HYDRAULIC CYLINDER MOUNT FOR A FORAGE HARVESTER

Robert A. Wagstaff, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Sept. 26, 1968, Ser. No. 762,930
Int. Cl. B65g 53/42, 53/04
U.S. Cl. 302—61

9 Claims



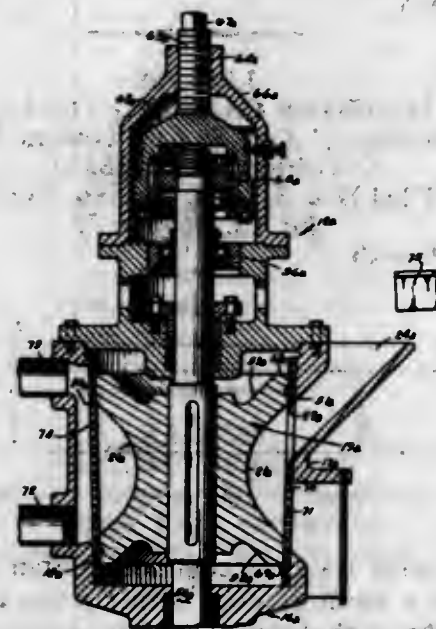
A hydraulic cylinder mount for the spout control of a forage harvester comprising a support attached to a fixed vertical spout section, adjacent the upper end thereof, a bracket having a pair of axially aligned, spaced apart retaining rings fixed therein, said bracket being fixed to the support, spherical bearings in the rings, and a second bracket to which a hydraulic cylinder is clamped, the second bracket being connected to the bearings for pivotal movement therewith so that the pivot axis of the cylinder mount passes through the bearings and the center of the cylinder, adjacent the rod end of the cylinder housing, producing an effective force column between the pivot axis and the rotatable spout section of the harvester to which the cylinder rod is connected.

3,516,714

CHIP FEEDER VALVE

Arnold J. Roerig, Beloit, Wis., and Keaton J. Brown, Rockford, Ill., assignors to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Mar. 23, 1966, Ser. No. 536,706
Int. Cl. B65g 53/40
U.S. Cl. 302—14

2 Claims



A valve for continuously metering and feeding a supply of wood chips in a continuous pulping or digesting process.

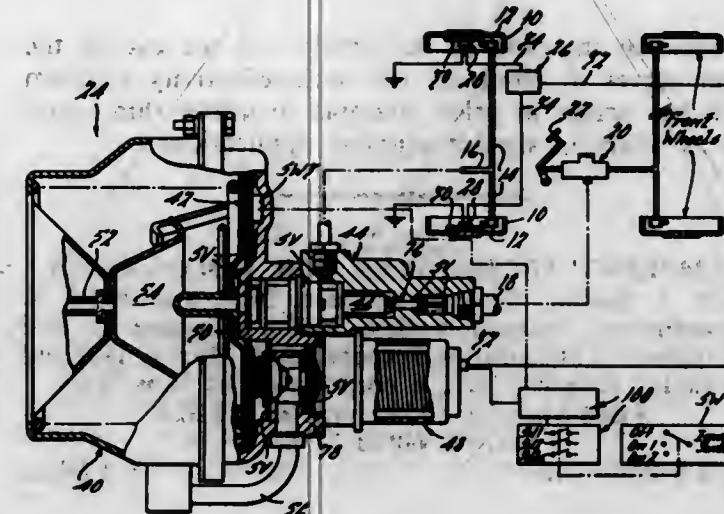
3,516,715

SKID CONTROL SYSTEM INCLUDING VALVE CYCLING AND CHECKING CIRCUIT

Anthony C. Fieck, Jr., Dearborn, and Francis J. Weber, Southfield, Mich., assignors to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Continuation of application Ser. No. 647,001, June 19, 1967. This application June 20, 1969, Ser. No. 838,030
Int. Cl. B60t 8/08, 17/22

U.S. Cl. 303—21

23 Claims



A skid control system having a modulating valve and including apparatus for automatically cycling the valve independently of a skid control function in order to prevent deterioration of the valve from inaction and for checking the cycle of the valve in order to determine valve malfunction.

3,516,716

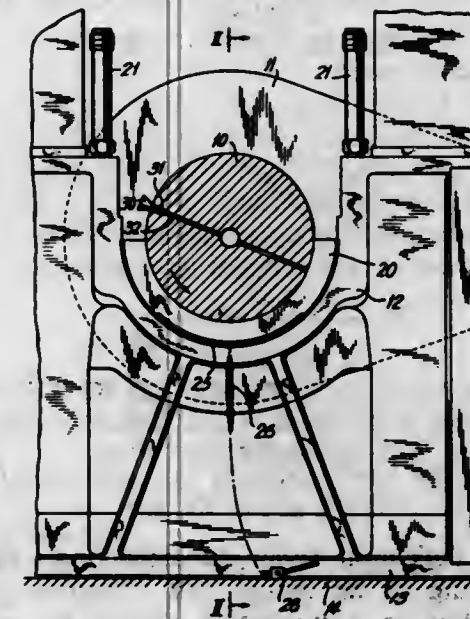
CRANKSHAFT BEARING BUSHINGS FOR INTERNAL COMBUSTION ENGINES

Hugo Seibel, Augsburg, and Franz Steidle, Haunstetten, Germany, assignors to Maschinenfabrik Augsburg-Nürnberg, A.G., Augsburg, Germany, a corporation of Germany
Original application Aug. 23, 1965, Ser. No. 481,774. Divided and this application Aug. 9, 1968, Ser. No. 810,395

Claims priority, application Germany, Aug. 26, 1964, 1,211,825
Int. Cl. F16c 9/00

U.S. Cl. 308—23

6 Claims



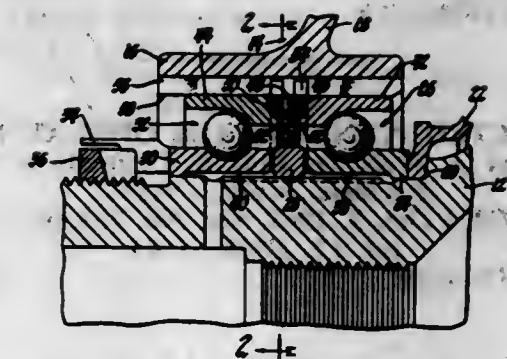
The present invention provides apparatus for facilitating the removal of the lower semi-cylindrical bearing

bushing from between a bearing pin of an engine crankshaft and a bearing block upon which said bushing seats, which comprises in combination at least one circumferential groove in the radially outer circumferential surface of said bushing and extending throughout a substantial extent of said radially outer circumferential surface, a fluid channel in said bearing block and disposed in flow communication with said groove in said bushing, and means for injecting fluid under pressure through said channel and into said groove for urging said bushing into friction engaging contact with said bearing pin on said crankshaft and out of contact with said bearing block whereby rotation of said crankshaft induces rotation of said semi-cylindrical bushing at least partially out of engagement with said bearing block for the removal of said bushing from between said bearing pin and said bearing block.

3,516,717
BEARING

Victor W. Peterson, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 15, 1968, Ser. No. 776,096
Int. Cl. F16c 13/06
U.S. Cl. 308—189

4 Claims



A pair of opposed angular contact bearings are used to rotatably mount and axially locate the main shaft in a gas turbine engine. Disposed between the bearing outer races is a wave spring sandwiched between two locking rings. The wave spring maintains a relatively constant preload on the bearings and the locking rings are interlocked between the bearing mounting structure and the outer races to prevent their rotation during operation at high temperatures which produce differential thermal expansion. The inner race is undercut to isolate the bearing raceway area from the effects of differential thermal expansion between the shaft and the inner raceway and to increase its resilience and ability to carry a preload.

3,516,718

LOWER THRUST EQUALIZER FOR DRILLING TOOLS

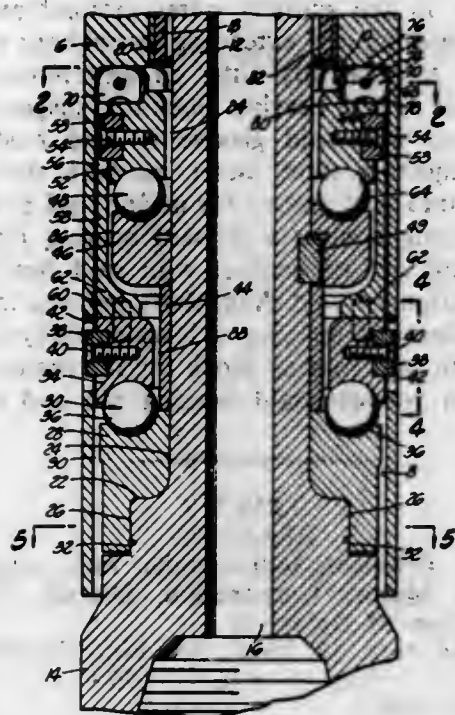
Erskine P. Garrison, Long Beach, and John E. Techirky, Manhattan Beach, Calif., assignors to Smith Industries International, Inc., Whittier, Calif., a corporation of California
Filed Oct. 12, 1967, Ser. No. 674,868
Int. Cl. F16c 19/30

U.S. Cl. 308—230

1 Claim

A thrust equalizer for transmitting thrust from a drill string downwardly through superimposed thrust bearings to a drill drive shaft including a series of toggle-like elements disposed beneath a downward thrust transmitting shoulder in a down hole drill spring pipe section, the toggle levers each being positioned to transmit thrust equally upon the two thrust bearings, a race of each thrust bearing being arranged for rotation with the drill string

pipe section, and the other race of each pair being arranged for rotation with the drill shaft; at least one race coated with a reflection-reducing material. The thin metal foil serves to filter infrared and ultraviolet rays while providing adequate transmission in the visible spectrum while the reflection-reducing material which preferably



lies between the bulk of the article and the eye of the viewer serves to eliminate the back-reflectivity problem which has arisen in prior attempts to utilize thin metal foils as filters in similar sunglass applications.

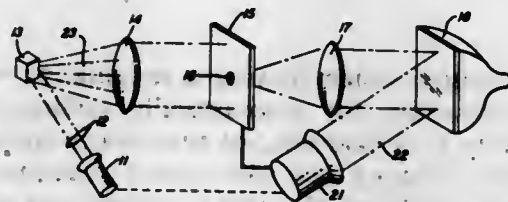
3,516,721

SAMPLING TECHNIQUES FOR HOLOGRAMS
Robert J. Collier, New Providence, N.J., and Keith S. Pennington, Putnam Valley, N.Y., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Mar. 13, 1968, Ser. No. 712,828

Int. Cl. G02b 27/00

U.S. Cl. 350-3.5

5 Claims



Methods are disclosed for sampling the information in a high spatial frequency Fourier transform plane to produce holograms of low spatial frequency. In each case the low frequency holograms are produced by projecting each sampled beam and reference light onto a recording medium in such a way that there is only a small constant angle between the sampled beam and the reference light. A technique is also disclosed for reconstructing the original information.

3,516,722

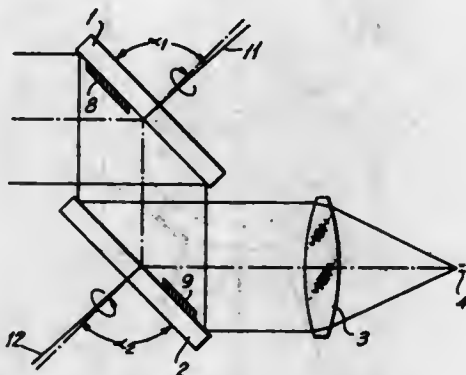
OPTICAL DEFLECTION DEVICE
Gunter Pusch, Eberbach (Neckar), Germany, assignor to Electro GmbH & Co.
Filed Mar. 21, 1968, Ser. No. 714,855

Claims priority, application Germany, Mar. 3, 1967, E 33,644

Int. Cl. G02b 17/00

U.S. Cl. 350-7

1 Claim



An optical deflection device, for deflecting a light beam in the scanning of an image and transmitting the resultant impulses to a utilization device, has a pair of refractive elements, such as mirrors, which are rotated in opposite directions, yet at equal speeds, to amplify the deflection movement of the light beam.

3,516,720

THIN FILM COATING FOR SUNGLASSES
Paul Bernard Mauer, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 4, 1968, Ser. No. 715,464

Int. Cl. G02b 1/10; 3/00; 7/10

U.S. Cl. 350-2

21 Claims

The present invention provides a multilayer article of manufacture for use in sunglasses which article consists of a thin metal foil "sandwiched" between two transparent layers of a material having an index of refraction approaching that of the metal foil, the outer surface of at least one of the transparent layers of the "sandwich" (preferably that which lies nearest the wearer's eye) being

3,516,723
MEANS FOR ESTABLISHING VISUAL COMMUNICATION IN FLUIDS RESISTANT TO LIGHT PENETRATION

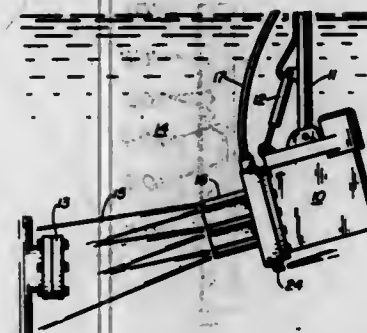
William Gates, 3100 E. 71st St., St. Louis, Mo. 63117

Filed Oct. 28, 1966, Ser. No. 588,157

Int. Cl. G02b 27/00

U.S. Cl. 350-63

1 Claim



An attachment for a subsea viewplate is connected to a source of clear fluid which is discharged by the passages of the attachment in a column having a core which readily transmits light for viewing, the core being provided an encapsulating curtain of the fluid to give definition to the core shape.

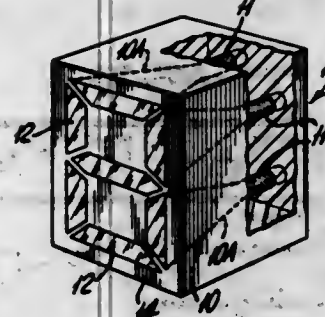
3,516,724

COLORED READOUT ASSEMBLY
Donald M. Ashton, Jr., Glen Ridge, and Richard Du Bois, Jr., Fairfield, N.J., assignors to Wagner Electric Corporation, a corporation of Delaware
Filed Mar. 13, 1967, Ser. No. 622,509

Int. Cl. G02b 5/14

U.S. Cl. 350-96

8 Claims



A plurality of light-transmitting rods are embedded in an opaque block with one end of each rod aligned in a common display plane, whereby selective illumination of said ends by passage of light through the rods from lamps positioned at the opposite ends thereof may be utilized to form characters which may be perceived and read. The surface of the display plane is covered with a colored layer to change the color of the characters and thereby increase the readability thereof. The light-transmitting rods are made of a polycarbonate resin and the remaining parts of epoxy resins to form an integral overall assembly.

3,516,725

TWO-OCULAR PANORAMIC VIEWING DEVICE
Harvey L. Ratliff, Jr., Waldorf, Md., assignor to Jetru Inc., Amarillo, Tex.
Filed Apr. 16, 1968, Ser. No. 721,841

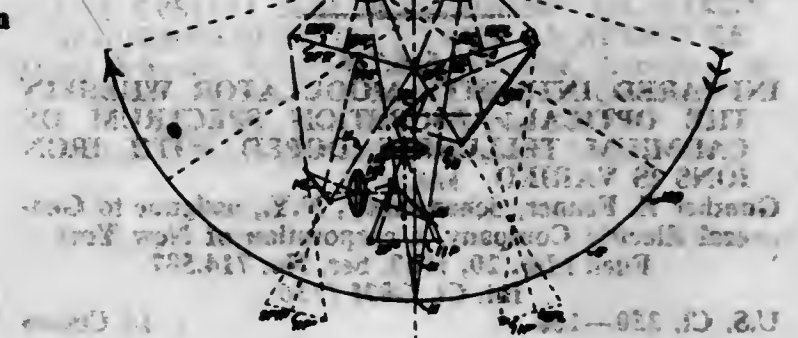
Int. Cl. G02b 27/22

U.S. Cl. 350-131

5 Claims

A structural combination which enables flat or slightly cylindrical transparent slides or the equivalent thereof to be expanded into the equivalent of a substantially spherical virtual image surface which is enlarged some 12½ times, at the standard assumption of 10 inches from

the eyes, to bring the peripheral rays of light into the eyes at some 145° (between 85° and 100°+) while retaining a resolution at the virtual image surface which



is substantially sharp enough to be beneath the resolving power of the eye even when the slides are made from color film.

3,516,726

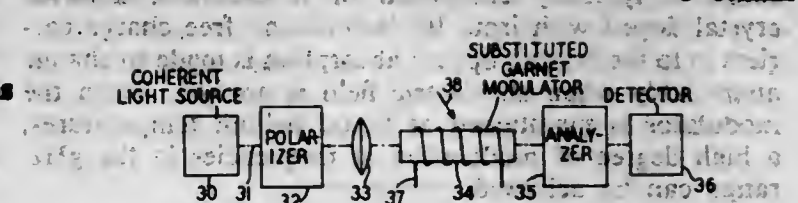
OPTICAL DEVICES WITH ZERO LINEAR MAGNETIC BIREFRINGENCE

Joseph F. Dillon, Jr., Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Feb. 8, 1968, Ser. No. 703,956

Int. Cl. G02f 1/22

U.S. Cl. 350-151

3 Claims



Magnetically-controlled optical devices using magneto-optical materials exhibiting zero linear magnetic birefringence (LMB). The normal LMB is compensated by substitution, into the material lattice, of appropriate amounts of rare earth elements having negative retardation coefficients.

3,516,727

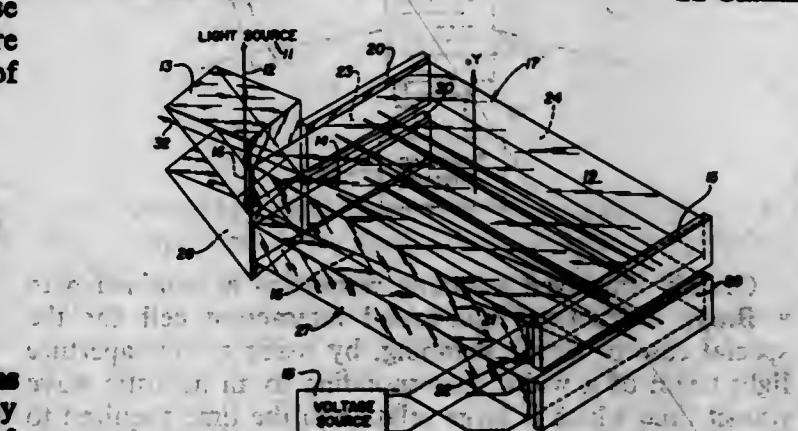
MULTIPASS INTERFEROMETRIC OPTICAL MODULATOR

John J. Hickey, Redwood City, and Arvind S. Marathe, Sunnyvale, Calif., assignors, by mesne assignments, to Technical Operations, Incorporated, Burlington, Mass., a corporation of Delaware
Filed Oct. 28, 1966, Ser. No. 588,131

Int. Cl. C02f 1/16; 1/34; 1/38

U.S. Cl. 350-160

11 Claims



This disclosure depicts a multi-crystal electro-optic modulator assembly comprising a parallel pair of single crystal transversely excited electro-optic modulators. An

input laser beam is split and fed into the parallel crystals. The component beams are recombined at the output so as to interfere. Mirror means are provided for causing each of the component beams to traverse its respective crystal reiteratively from one end of the crystal to the other and back again to the point of entrance into the crystal.

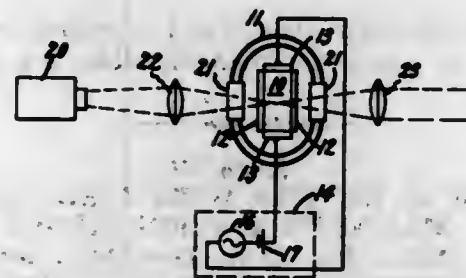
3,516,728

INFRARED INTENSITY MODULATOR WHEREIN THE OPTICAL ABSORPTION SPECTRUM OF CADMIUM TELLURIDE DOPED WITH IRON IONS IS VARIED

Gunther E. Fenner, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 20, 1968, Ser. No. 714,587
Int. Cl. G02f 1/36

U.S. Cl. 350-160

14 Claims



An optical intensity modulator for use in the middle infrared range such as in the 4-5 micron wavelength range and especially in the 4.4-4.7 micron wavelength range is typically comprised of a cadmium telluride crystal doped with iron. By introducing free charge carriers in to the crystal, optical absorption is made to change appreciably when an electric field is applied. When the modulator is maintained at liquid helium temperatures, a high degree of modulation at frequencies in the GHz range can be achieved.

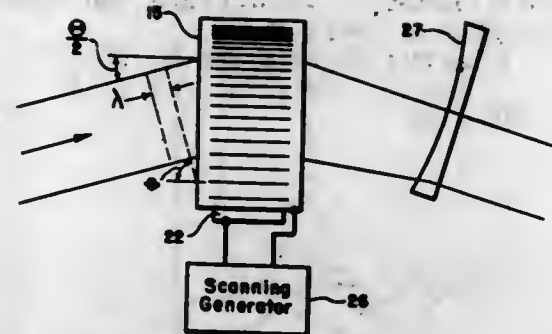
3,516,729

CYLINDRICAL LENS COMPENSATION OF WIDE-APERTURE BRAGG DIFFRACTION SCANNING CELL

Robert Adler, Northfield, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 388,589, Aug. 10, 1964. This application Aug. 3, 1965, Ser. No. 476,797
Int. Cl. G02f 1/16; H04a 3/02

U.S. Cl. 350-161

1 Claim



Greatly improved scanning resolution is obtained with a Bragg diffraction light-sound interaction cell for the special case of linear scanning, by using a wide-aperture light beam of a width corresponding to an acoustic wave transit time which is large relative to the time required to scan an individual picture element, and compensating for resultant astigmatic distortion by providing a cylindrical lens whose optical axis is orthogonal to the scanning plane.

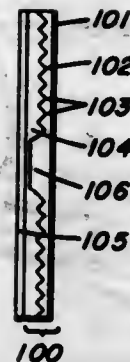
3,516,730

SELF-ADHESIVE DIFFRACTION GRATINGS

Reuben V. Wood, Ridderwood, Md. 21139
Continuation-in-part of application Ser. No. 467,312, May 28, 1965, and Ser. No. 606,988, Jan. 3, 1967. This application Feb. 13, 1967, Ser. No. 615,421
Int. Cl. G02b 5/18

U.S. Cl. 350-162

1 Claim



Ornamental diffraction gratings impressed in reflectively coated transparent plastic sheet, with self-adhesive material on the gratings to provide for ready attachment to chosen surfaces; optically transparent self-adhesive material in one embodiment allows use of both faces of the grating.

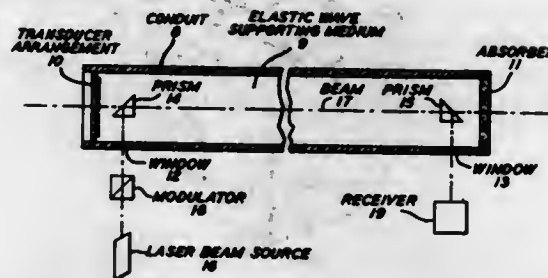
3,516,731

BEAM FOCUSING BY ACOUSTIC WAVES

John R. Whitney, Orinda, Calif., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Continuation-in-part of application Ser. No. 384,510, July 22, 1964. This application May 27, 1968, Ser. No. 732,239
Int. Cl. G02f 1/28; G02b 1/06

U.S. Cl. 350-179

4 Claims



This application discloses an arrangement for focusing a beam of high frequency electromagnetic wave energy within a conduit for long-distance transmission. More specifically, an elastic wave in a circularly symmetric mode is established in a transparent elastic wave supporting medium within the conduit to guide the beam by alternate gradient focusing. Arrangements using traveling waves and standing waves are described in detail.

3,516,732

CRANK AND LINK MECHANISM FOR NON-LINEARLY RELATED MOTIONS

James A. Clark, Brighton, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 602,729, Dec. 19, 1966. This application May 23, 1967, Ser. No. 653,581
Int. Cl. G02b 7/04, 15/00

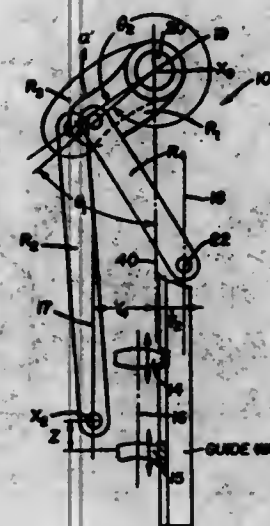
U.S. Cl. 350-187

3 Claims

A simple crank and link mechanism for moving two or more elements along parallel, straight paths relative to a fixed reference position, as in a zoom optical system, in conformance with arbitrarily predetermined motion laws

that relate the motions to each other in a nonlinear manner. The cranks are fixed relative to each other and con-

mentary lens is of a power sufficient to reduce the focusing travel of the projection head by substantially one-half whereby the size of both the projection head and its supporting structure are considerably reduced.



ected by simple links to pivot points which are mounted for straight motion along straight lines.

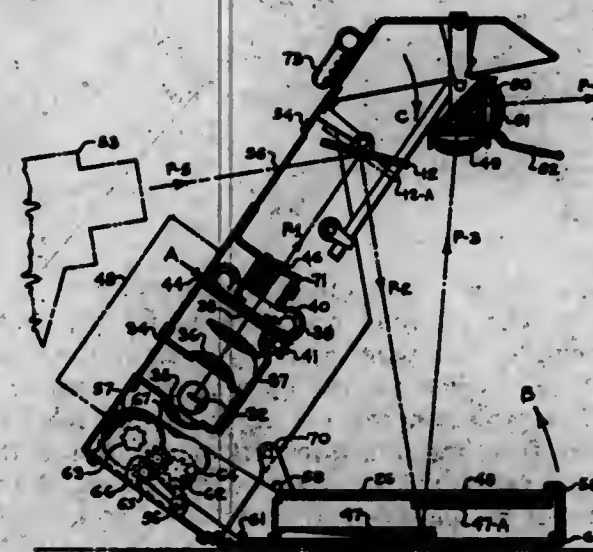
3,516,733

PROJECTION HEAD FOR COMPACT OVERHEAD PROJECTOR

James W. Lucas, 1400 N. Dehany Drive, Los Angeles, Calif. 90069
Continuation of application Ser. No. 630,774, Apr. 13, 1967, which is a continuation of application Ser. No. 542,840, Apr. 15, 1966, which in turn is a division of application Ser. No. 463,464, May 27, 1965, which in turn is a continuation of application Ser. No. 214,784, July 25, 1962. This application Mar. 26, 1969, Ser. No. 810,851
Int. Cl. G02b 17/00; G03b 3/00

U.S. Cl. 350-202

18 Claims



A small projection head for a compact overhead projector has first and second convergent meniscus lens elements positioned at substantially right angles to each other. The lens elements are separated by at least two-thirds of their diameters and have a 45° planar reflector disposed therebetween so that a bundle of light rays entering the first meniscus lens is at its smallest diameter within the projection head and has its direction changed substantially in the center of the projection head. A relatively weak supplementary lens is supported on the projection head and selectively insertable into axial alignment with one of the meniscus lens elements. The supple-

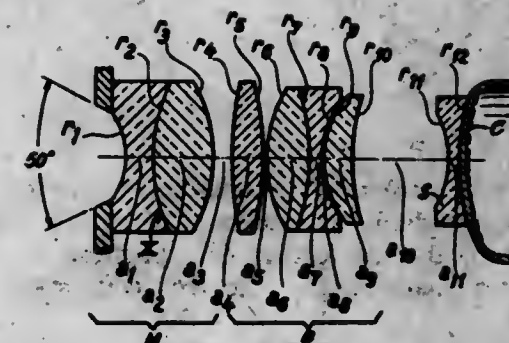
3,516,734

LENS SYSTEM FOR POSITIONING AN IMAGE RECORDER REMOTELY FROM AN APERTURE

Herst Schmidt, Nurnberg, Kreis Wetzlar, Germany, assignor to Ernst Leitz GmbH, Wetzlar, Germany
Filed Apr. 25, 1966, Ser. No. 544,749
Claims priority, application Germany, May 8, 1965, L 50,664
Int. Cl. G02b 9/04, 9/60

U.S. Cl. 350-216

5 Claims



A lens system for use where wide field viewing is desired through apertures or ports in heat shields, armored walls, etc., and where it is desired that the image plane be remote from the shield or wall. The system includes a reversed Galilean telescope objective coaxing with a basic lens, and may include a Smyth lens to flatten the image for projection on the cathode of an image converter.

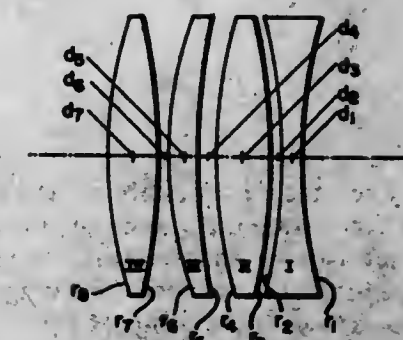
3,516,735

LARGE RELATIVE APERTURE PLASTIC LENS SYSTEM

William V. Goodell, Fairfax, Va., assignor to Melpar, Inc., Falls Church, Va., a corporation of Delaware
Filed Aug. 26, 1968, Ser. No. 755,359
Int. Cl. G02b 9/34

U.S. Cl. 350-220

5 Claims



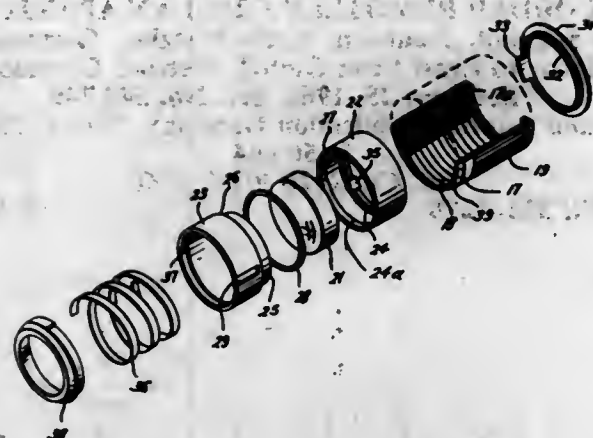
A Petzval-type lens system in which is provided a first lens component in the form of an air-spaced doublet including a divergent lens (I, -) and a convergent lens (II, +), and a second lens component, also an air-spaced doublet, including two convergent lenses (III, +; IV, +). The lenses are composed of plastic of specified indices of refraction to produce lens elements in excess of 19.5 inches diameter, and to provide a lens system of large relative aperture, with correction of aberrations at the periphery, for wide angle viewing of cathode ray tube or other visual displays.

3,516,736
FOCUSING OBJECTIVE FOR TELESCOPE SIGHTS
 William R. Weaver, El Paso, Tex., assignor to W. R. Weaver Company, El Paso, Tex., a corporation of Texas

Filed Jan. 16, 1967, Ser. No. 689,488
 Int. Cl. G02b 7/02

U.S. Cl. 356-255

6 Claims



A focussing objective for telescope sights for firearms employing a slidable lens cell and a threaded drive collar for urging the lens cell in one direction in opposition to a biasing means urging the lens cell in the opposite direction.

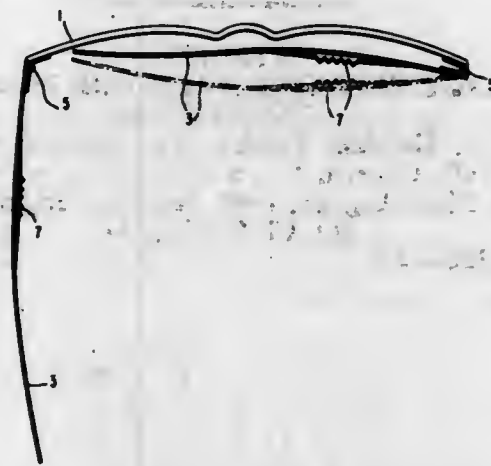
3,516,737
SPECTACLE BOWS THAT FLEX TO OVERLIE THE FRAME

Jacques Claude Banfi, 36 Avenue Cesar Franck, 95 Sarcelles, France, and Christian Chauvin, Place de la Mairie, 16 La Couronne, France

Filed July 26, 1966, Ser. No. 580,142
 Int. Cl. G02c 5/16

U.S. Cl. 351-114

2 Claims



The bows of spectacle frames are made to have an over-center snap action between convex and concave configurations. Thus they can be snapped-out convex for normal use and snapped-in concave when folded against the spectacle frames so as to be more compact.

3,516,738
MOTION PICTURE PROJECTOR

Leon W. Wells, Closter, N.J., assignor to Panopix Research Inc., New York, N.Y., a corporation of New York

Original application Apr. 8, 1966, Ser. No. 541,196, now Patent No. 3,458,251. Divided and this application June 28, 1968, Ser. No. 755,478

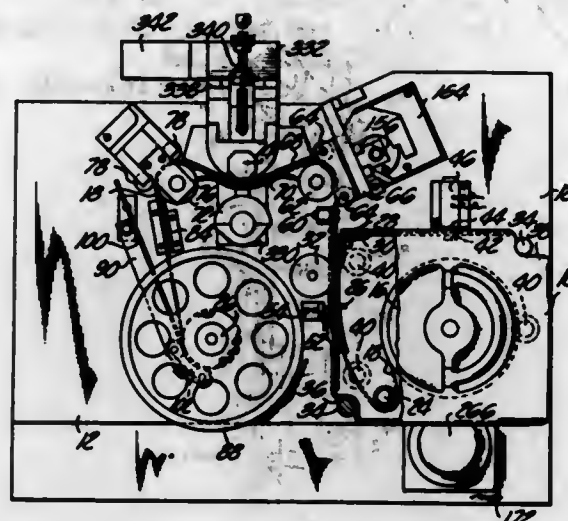
Int. Cl. G03b 1/58; 41/04

U.S. Cl. 352-158

5 Claims

Self-threading motion picture apparatus having inter-engaging means on the film and on the takeup reel so that the film is automatically wrapped around the takeup reel

after the automatic threading through the apparatus by means of a feed roller, a capstan, a timing sprocket and



a pivoted arm which guides the film from the timing sprocket to the takeup reel.

3,516,739
STRIP FILM PROJECTOR

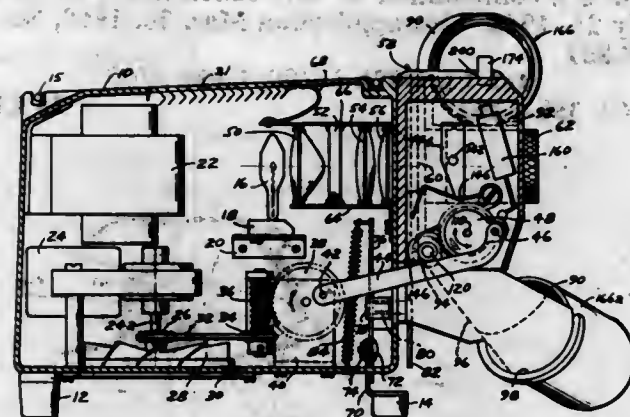
Morris Schwartz and William Castedello Plainville, Conn., and Edward E. Esquivel, Joppe, Md., assignors to The Kalart Company Inc., Plainville, Conn., a corporation of New York

Filed Aug. 11, 1967, Ser. No. 659,966

Int. Cl. G03b 1/48; 1/50; 1/52

U.S. Cl. 353-95

12 Claims



A strip film projector for projecting still pictures frame-by-frame. The projector permits accurate and convenient positioning of successive picture frames in the projection gate of the projector either by manual or remote operation. The projector has the capability of releasing the film strip from the film transport mechanism of the projector for rapid and safe reverse movement of the film strip or for pulling through action. The projector is provided with a storage container or can in which the film after passing through the projector is received rolled up ready for reprojection without rewinding. The container or can is self-labeling thereby correctly identifying the film in the can.

3,516,740
ILLUMINATION CONTROL DURING COLOR PRINTING

Roy A. Clapp, 10522 Foley Blvd., Coon Rapids, Minn. 55433

Filed Feb. 20, 1968, Ser. No. 706,849

Int. Cl. G03b 27/76

U.S. Cl. 355-36

14 Claims

A basic filter pack or unit is provided which will compensate for the individual emulsion batch number, the

particular equipment and other fixed or semi-fixed conditions. The basic filter pack will be used for a relatively large number of production negatives. The filter pack, however, is deliberately left undercorrected so that the desired correction, in order to obtain an adjusted color balance, may be made with an attachment comprised of individual filters for the particular negative which individual filters are controlled by recorded information signals

3,516,742
METHOD AND APPARATUS FOR FOCUSING AN OPTICAL DEVICE ON AN OBJECT Distant THEREFROM

Dieter Donitz, Braunschweig, Germany, assignor to Voigtlander A.G.

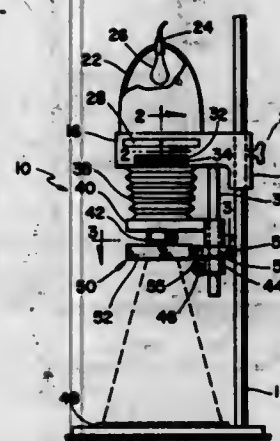
Filed Aug. 31, 1966, Ser. No. 576,356

Claims priority, application Germany, Sept. 24, 1965, V 29,392

Int. Cl. G01c 3/08; G03b 3/00

U.S. Cl. 356-4

9 Claims



so that they are introduced into the printing beam at the proper moment and retained in said beam for a requisite amount of additional exposure time after a predetermined amount of exposure time has taken place with only the basic filter pack in the light beam. The final state of filtration is provided by the recorded information.

3,516,741
APPARATUS FOR MAKING PRINTS FROM COLOR NEGATIVES

Kurt Thaddey, Buchs, Zurich, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

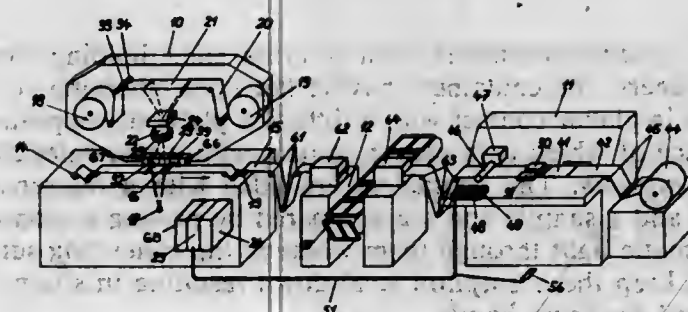
Filed May 22, 1968, Ser. No. 731,008

Claims priority, application Switzerland, May 31, 1967, 7,732/67

Int. Cl. G03b 27/04

U.S. Cl. 355-88

8 Claims



Positive print paper (in web form) is exposed to a series of color negatives in an automatic printing machine having a device for measuring the brightness of the negatives to control their exposures and prevent exposure of any negative measured as unprintable. Such negatives are marked. The developed prints are successively inspected in synchronism with a second passage of the negatives through the printing machine whereby the negative corresponding to any unsatisfactory print can be re-exposed. Exposure correction keys operable by the inspector are provided. Negatives marked as unprintable are detected and fed straight through the exposure station

A method and apparatus for focussing an optical device on an object distant therefrom. A pair of images of the object are respectively directed along different paths which substantially form a well-known range finder triangle. The images are electronically compared, and one of the light paths is automatically deflected with respect to the other until the electronic comparison indicates that there is no difference between the images, so that in this way there is an indication of automatic focussing on the object. The optical structure striates the images so as to lend thereto a considerable contrast even if such contrast is not already present. Moreover, this method and apparatus can be used for automatically focussing an objective of a camera.

3,516,743
LASER RADAR SYSTEM

Daniel C. McKown, Chino, Donald E. Howlett, Riverside, and Anthony Di Tommaso, Upland, Calif., assignors to General Dynamics Corporation, Pomona, Calif., a corporation of Delaware

Filed Sept. 10, 1965, Ser. No. 486,507

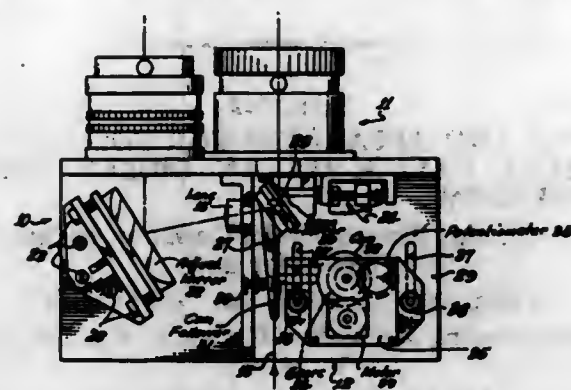
Int. Cl. G01c 3/08

U.S. Cl. 356-4

12 Claims

A compact optical system which changes the transmitted output of a laser unit into a slender rectangular beam which is scanned back and forth at right angles

to the length of the rectangle while, simultaneously, the field of view of associated receiver optics is scanned across a detector unit in synchronism with the scanning motion of the transmitted beam.

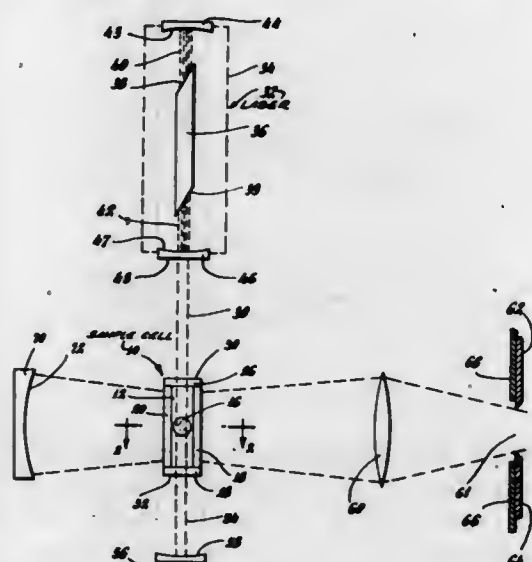


3,516,744 SAMPLING ARRANGEMENT FOR LASER-RAMAN SYSTEMS

Clyde D. Hinman, Wilton, and Albert F. Slomba, Ridgefield, Conn., and Hugh F. Stoddart, Groton, Mass., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed May 20, 1966, Ser. No. 551,685
Int. Cl. G01j 3/44

U.S. Cl. 356-75

10 Claims



This Raman spectrometer utilizes a laser as the excitation source. A beam-reversing mirror is positioned on the side of the sample cell remote from the laser so as to return radiation transmitted through the sample back to the laser. The end mirror of the laser nearer the sample will reverse most of this returned beam back through the sample again. Thus, the effective flux density through the sample is maintained at a substantially higher level than would be obtained by a single pass of the laser excitation beam.

3,516,745 APPARATUS FOR GAS ANALYSIS USING A CLOSED CYLINDER CONTAINING A FREE FLOATING PISTON

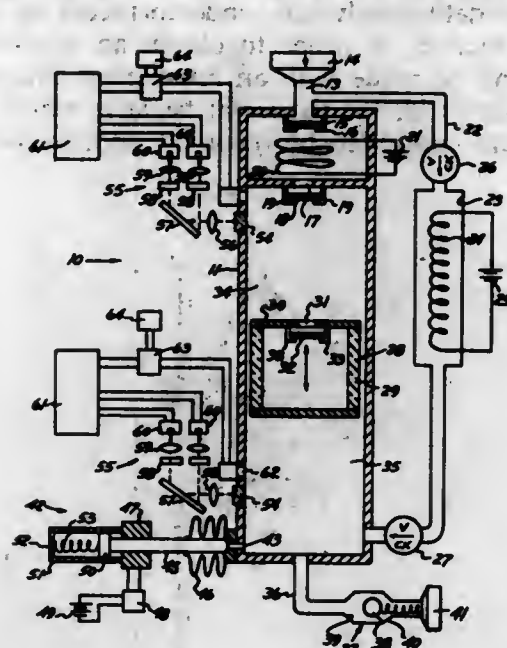
Mark Schuman, Ann Arbor, Mich.
(101 G St. SW., Apt. 516, Washington, D.C. 20024)
Filed Sept. 4, 1968, Ser. No. 757,271
Int. Cl. G01j 3/30

U.S. Cl. 356-85

7 Claims

Producing gas spectral emissions by regularly and cyclically compressing the gas and detecting the spectral emission therefrom at the compression frequency and phase, using a highly reflective, closed cylinder containing a free

floating regularly oscillating piston. A window in the cylinder wall, near each end of the cylinder, permits continuous optical observation of the gas spectral emis-

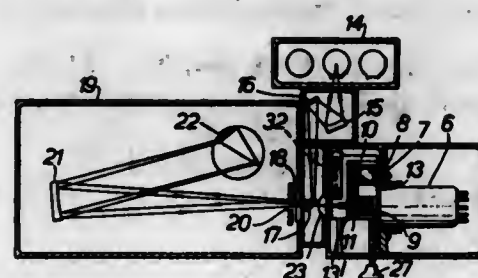


3,516,746 CROSS SLIDE SPECTROPHOTOMETER WITH A DIFFUSING ELEMENT BETWEEN SAMPLE CELL AND PHOTOELECTRIC TUBE

Kazuo Shibata, Tokyo, and Hideo Makabe, Kyoto, Japan, assignors to Shimadzu Seisakusho Ltd., Kyoto, Japan, a corporation of Japan
Filed Jan. 25, 1966, Ser. No. 522,858
Claims priority, application Japan, Jan. 28, 1965, 40/4,751
Int. Cl. G01j 3/42

U.S. Cl. 356-96

7 Claims



A spectrophotometer with a cross slide holding two containers, the containers having flat light emerging surfaces in planar contact with a diffusion plate, the opposite surface of which is in planar contact with a photoelectric tube window. The containers are filled with a reference fluid and a sample and are compared by passing a monochromatic light through them whereby the contacting surfaces keep the absorption level down resulting in sharply defined spectrum bands.

3,516,747 FIELD MODULATION METHOD FOR OBSERVING ULTRA-HIGH-SPEED FERROMAGNETIC DOMAIN DYNAMICS

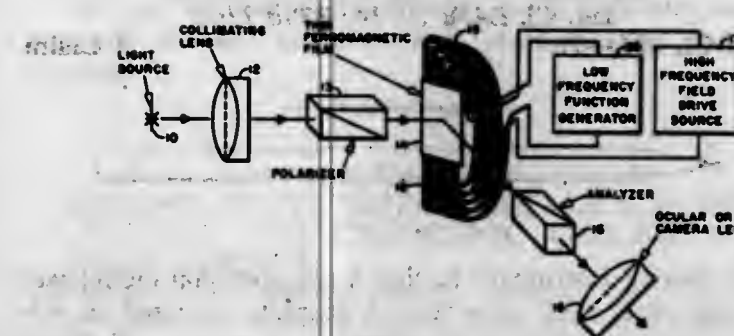
George H. Moore, Corona, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 12, 1968, Ser. No. 736,430
Int. Cl. G01n 21/40; G02f 1/26

U.S. Cl. 356-115

8 Claims

A field modulation method which makes possible visual observations and photographic studies of magnetic domain reversal dynamics that occur in the nanosecond time spec-

trum by subjecting a thin ferromagnetic film to an increasing magnetic field in one direction at a low or "scanning" frequency and returning to saturation magnetization in the opposite direction at very high frequency; the



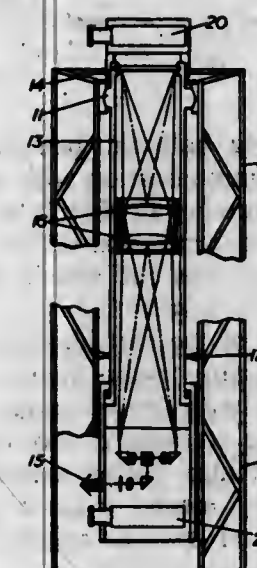
low frequency in effect "scanning" the reversal dynamics of the higher frequency, permitting observations to be made of the reversal process when viewed magneto-optically.

3,516,748 OPTICAL SYSTEM FOR READING THE SCALES OF AZIMUTH MEASURING INSTRUMENTS

David S. Ritchie, Anniesland, Glasgow, Scotland, assignor to Barr & Stroud Limited, Anniesland, Glasgow, Scotland
Filed Dec. 8, 1965, Ser. No. 512,484
Claims priority, application Great Britain, Dec. 9, 1964, 50,091/64
Int. Cl. G01c 1/06, 9/02; G01b 11/26

U.S. Cl. 356-139

5 Claims



An optical system for precision reading of the angle between pointing devices vertically displaced from each other consisting of a scale associated with one pointing device, a common projection lens system for forming an image of the scale adjacent the second pointing device and a prism system associated with the second device for combining images of diametrically opposite parts of the scale image and presenting a combined image to an eyepiece.

3,516,749 REMOTE MEASURING DEVICES

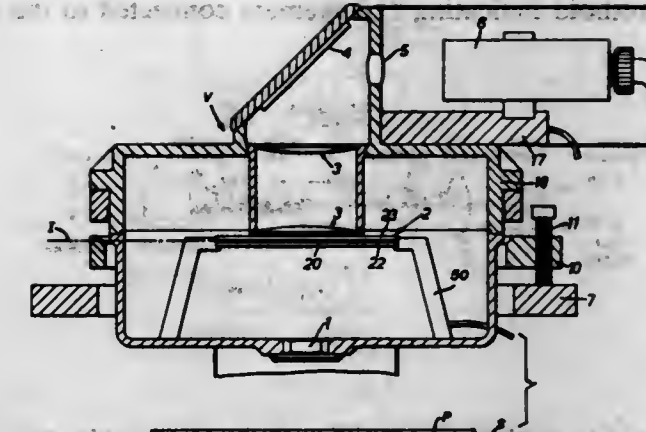
George Syke, Esher, England, assignor to The British Iron and Steel Research Association
Filed Dec. 30, 1966, Ser. No. 606,358
Int. Cl. G01b 11/02

U.S. Cl. 356-171

12 Claims

This invention is concerned with a system for determining the dimensions of a fault free rectangle which can be cut from a plate positioned on a shear approach table.

The system essentially comprises a lens system for providing an image of the plate, a cursor or mask device having respectively relatively movable cursor lines defining a rectangle or a rectangular aperture of variable size,



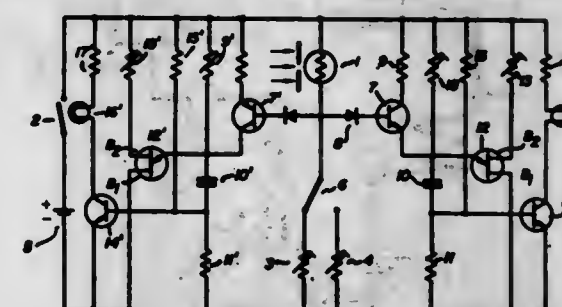
the cursor or mask device being positioned in the plane of the image so as to be superimposed thereon, means for viewing or scanning the image and cursor or mask device, and means for determining the dimensions of a fault free rectangle in the plate.

3,516,750 ELECTRONIC EXPOSURE METER USING TWO INDICATOR ELEMENTS

Helmut Schmitt, Wandenburg, Germany, assignor to P. Gossen & Co. G.m.b.H., Erlangen, Germany
Filed Jan. 2, 1968, Ser. No. 695,037
Claims priority, application Germany, June 6, 1967, G 50,278
Int. Cl. G01j 1/42, 1/44

U.S. Cl. 356-224

4 Claims



In an exposure meter, a two element transistor circuit is connected across a photo-resistor. The transistors possess oppositely conductive characteristics. At a predetermined resistance value of the photo-resistor, which is correlated with the balanced value of the meter, both transistors conduct equally. A pair of indicator lights are in the switching circuit of each transistor and both are on when both transistors conduct at the balanced value. When a deviation from the balanced value occurs in either direction, the transistor, the conductivity of which corresponds to the deviation produces a switching frequency with a unijunction transistor to turn the light on and off at the rate of the switching frequency, while the other light remains unaffected and stays on.

3,516,751 OPTICAL RADIATION PULSE CONTROL RECEIVER

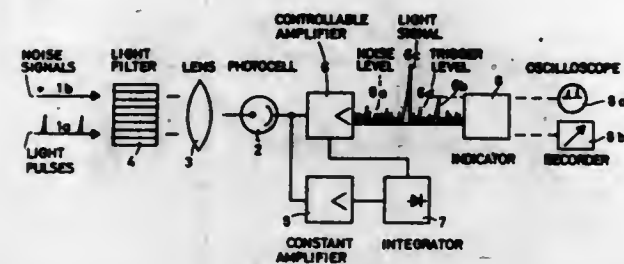
Frank Fraengel, Sueddorfer Landstr. 400, Hamburg-Rosen, Germany
Filed June 4, 1965, Ser. No. 461,282
Int. Cl. G01c 3/20, 3/08

U.S. Cl. 356-226

8 Claims

An arrangement for separating light signal pulses from background noise signals. A photosensitive element receives the mixture of the light signal pulses and the back-

ground noise signals, and converts these into corresponding electrical signals. The output of a photosensitive element is applied to both a constant gain amplifier and a controlled amplifier. The latter is controlled with the output from the constant gain amplifier, after rectification. A threshold indicating arrangement connected to the out-

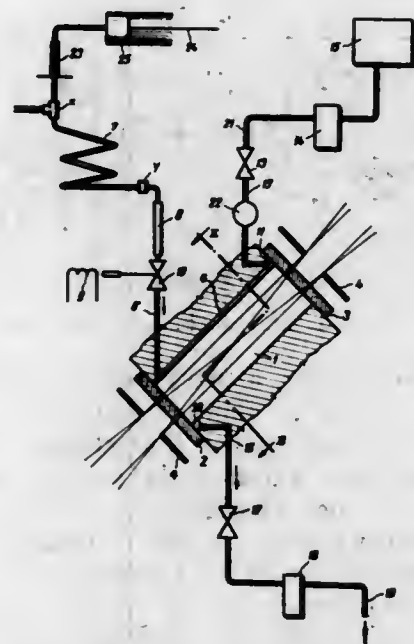


put of the controlled amplifier is set to indicate only signals above a predetermined threshold level. This level is made such that it is above the noise signal level, and thereby the indicating arrangement indicates only the light signal pulses, and excludes the background noise signals.

3,516,752 MEASURING CELL WITH GAS AND PARTICLE COLLECTION

Jiří Hrdina, Prague, Czechoslovakia, assignor to Československá akademie věd, Prague, Czechoslovakia
Filed July 6, 1966, Ser. No. 563,113
Claims priority, application Czechoslovakia, July 6, 1965, 4329/65
Int. Cl. G01n 1/10
U.S. Cl. 356-246

3 Claims



A flowcell for use in a photometric system includes an elongated inclined passageway for measuring light beams and for the fluid to be measured, said passageway being closed at each end by light permeable closure members. An entrance duct for the fluidal material to be measured leads into the passageway, an exit duct for measured fluidal material originates at the lowest portion of the inclined passageway, and a third outlet duct originating at the highest point of the passageway is attached to a source of a gaseous pressure medium. Control means govern in prearranged manner the said three ducts to separate their individual action. A groove may possibly extend along the highest generatrix of the passageway downward from the origin of the third outlet duct towards the opening of the entrance duct to conduct gaseous portions of the fluidal medium separated from its liquid portion.

3,516,753 WRITING INSTRUMENT AND PROCESS OF MAKING THE SAME

Clarence A. Dickey, Atlanta, Ga., assignor to Berol Corporation, Danbury, Conn., a corporation of Delaware
Filed Apr. 12, 1968, Ser. No. 720,825
Int. Cl. B43k 19/14; B29d 7/06
U.S. Cl. 401-96

1 Claim

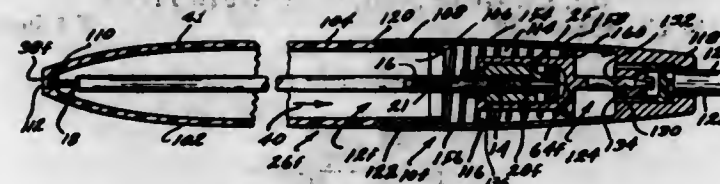


A writing instrument having a conventional cylindrical writing core, such as a rod of graphite, encased in polymerized water-extended polyester. A process of filling cavities with the uncured plastic emulsion from the bottom and inserting the writing core in the emulsion and curing the same.

3,516,754 SELF-PRESSURIZING, RETRACTABLE BALLPOINT PEN

Floyd W. Blanchard, 2348 Loma Vista Place, Los Angeles, Calif. 90039
Original application Mar. 17, 1967, Ser. No. 633,333, now Patent No. 3,415,603, dated Dec. 10, 1968. Divided and this application Sept. 26, 1968, Ser. No. 762,782
Int. Cl. B43k 24/08, 7/02
U.S. Cl. 401-101

5 Claims



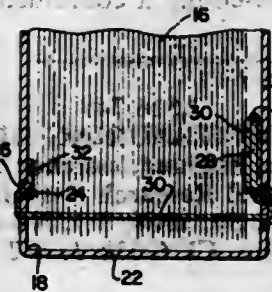
A self-pressurizing, ballpoint pen having a pressurizing member in fluid-communication with an ink reservoir for trapping and compressing air therein when a writing force seats the member against a seat which remains stationary during writing operations and which moves with the cartridge during retraction operations.

Axial movement of the cartridge during writing operations is limited by a stop means having one portion which reciprocates jointly with the cartridge and another portion which remains stationary. However, both portions move with the cartridge during expelling and retraction operations. The stop means is associated with the pressurizing member and seat to minimize additive manufacturing tolerances.

3,516,755 BINDER ASSEMBLY

Thomas R. Smith, 27A Brushy Hill Road, Newtown, Conn. 06470
Filed June 19, 1967, Ser. No. 647,013
Int. Cl. B42f 13/02, 3/00
U.S. Cl. 402-9

3 Claims



A binder assembly for retaining index cards or the like therein and including a backing member and a pair of

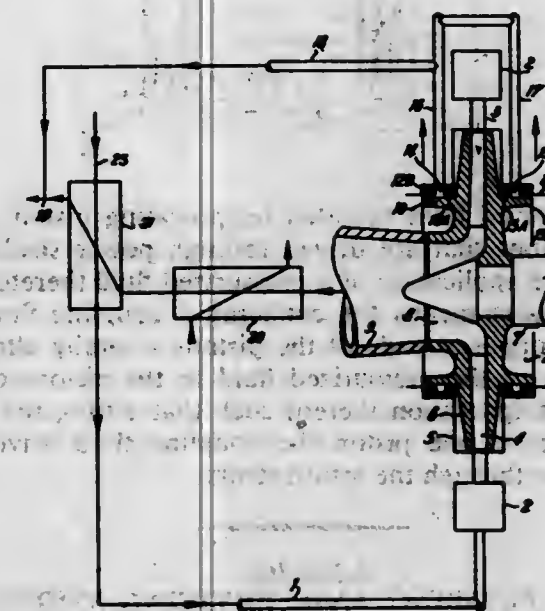
side members formed integral with the backing member and hinged with respect thereto, a support member interconnected to the side members and including a tension bar and strips joined thereto, the tension bar being foldable with respect to the strips to reduce the effective length of the support member and thereby vary the pivotal movement of the side members with respect to the backing member.

3,516,756 SEALING DEVICE WITH LEAKAGE GAS RECOVERY FOR CRYOGENIC GAS EXPANSION TURBINE

Pierre Destival, Jonarre, France, assignor to L'Air Liquide, Société Anonyme pour l'Étude et l'Exploitation des Procédés Georges Claude
Filed May 13, 1968, Ser. No. 728,551
Claims priority, application France, May 19, 1967, 107,046
Int. Cl. F01d 11/00, 25/22

U.S. Cl. 415-112

5 Claims



Sealing device with leakage gas recovery for cryogenic gas expansion reaction turbine, comprising at least two sealing systems between the chamber of the rotor and a chamber under a lower pressure separated by a chamber effecting the recovery of the leakage gas, either the exhaust gas circuit at a temperature corresponding to that between the turbine rotor and the bearings of its shaft, characterized in that the leakage gas recovery chamber is connected to a point on the circuit of the turbine exhaust gas where the latter is at a notably higher temperature than the temperature prevailing in the exhaust chamber, and preferably at a temperature equal to its own.

3,516,757 LABYRINTH SEAL FOR A HYDRAULIC ROTARY MACHINE

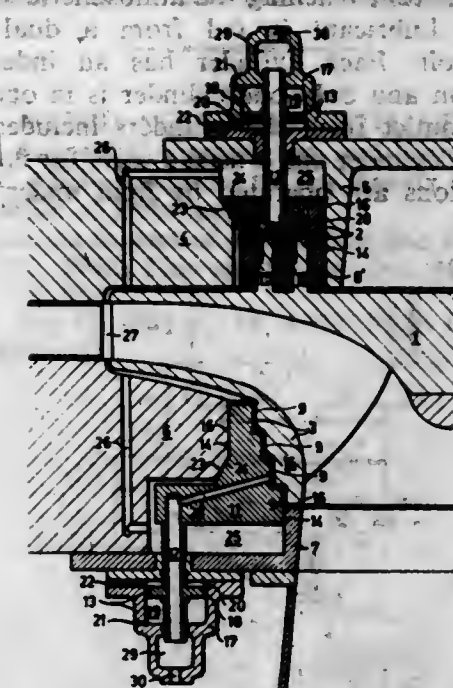
Kurt Baumann, Ravensburg, Germany, assignor to Escher Wyss Limited, Zurich, Switzerland, a corporation of Switzerland
Filed June 24, 1968, Ser. No. 739,335
Claims priority, application Switzerland, July 3, 1967, 9,435/67
Int. Cl. F01d 11/02

U.S. Cl. 415-112

8 Claims

A hydraulic rotary machine, the runner of which runs sometimes in water and sometimes in air has a labyrinth seal in which the relative position of the parts bounding the sealing gap on either side is variable from the posi-

tion intended for rotation of the runner in water, in which the width of the sealing gap is comparatively small

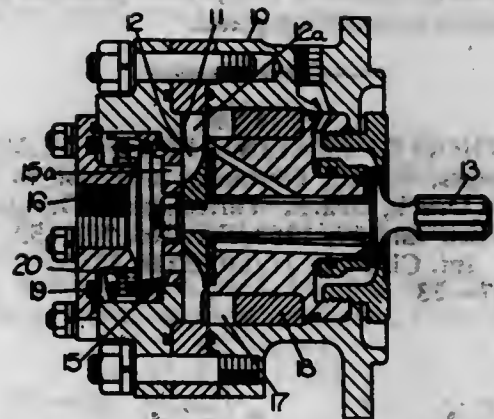


to a position with increased gap width intended for rotation of the runner in air.

3,516,758 LIQUID DISPLACEMENT PUMPS

Robert Thomas John Skinner, Kenilworth, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Continuation-in-part of application Ser. No. 557,043, June 13, 1966. This application June 4, 1968, Ser. No. 734,441
The portion of the term of the patent subsequent to Dec. 24, 1985, has been disclaimed
Int. Cl. F04d 15/00, 27/100
U.S. Cl. 415-126

4 Claims



A liquid displacement pump in which a body is provided with an interior cavity, a bladed rotor cavity, an inlet and an outlet disposed at respective angularly spaced positions in the cavity, and the side wall of the cavity defines a part annular recess adjacent to the rotor edge, and extending between the inlet and the outlet. Control means is actuable to vary the effective combined volume of the cavity and the recess which is available for the flow of liquid between the inlet and the outlet.

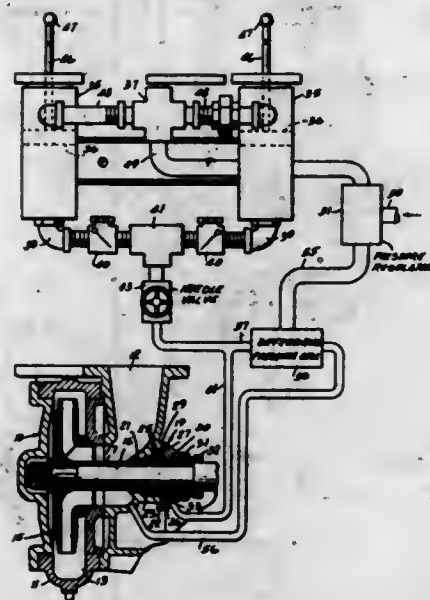
3,516,759 STUFFING BOX LUBRICATION SYSTEM

Walter D. Heston, R.D. 1, Sugarloaf, Pa. 18249
Filed Aug. 7, 1968, Ser. No. 750,862
Int. Cl. F04d 29/00; F01m 1/00; F16c 1/24
U.S. Cl. 415-176

9 Claims

Lubrication system for the stuffing box of a centrifugal pump. Lubricant is supplied under pressure at the central portion of the packing gland of the pump at a higher

pressure than pump inlet pressure, to insure that any leakage be directed towards the pump inlet and to keep contamination from reaching the atmospheric side of the stuffing box. Lubricant is fed from a dual cylinder grease reservoir. Each cylinder has an independently operable piston and only one cylinder is in operation at a time. The outlet from the cylinders includes a check valve for each cylinder and a needle valve for flow regulation. The pistons are operated by fluid under pressure,

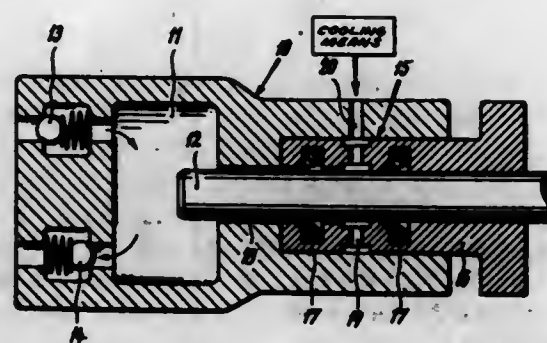


such as air, and the pressure of the operating fluid is controlled by a differential pressure cell connected between the pump inlet and the lubricant pressure line, supplying lubricant under pressure to the stuffing box. The pressure of lubricant entering the stuffing box is thus under the control of pump inlet pressure and varies as pump inlet pressure varies, to provide the required differential in pressure between pump inlet pressure and lubricant pressure in the packing gland.

3,516,760

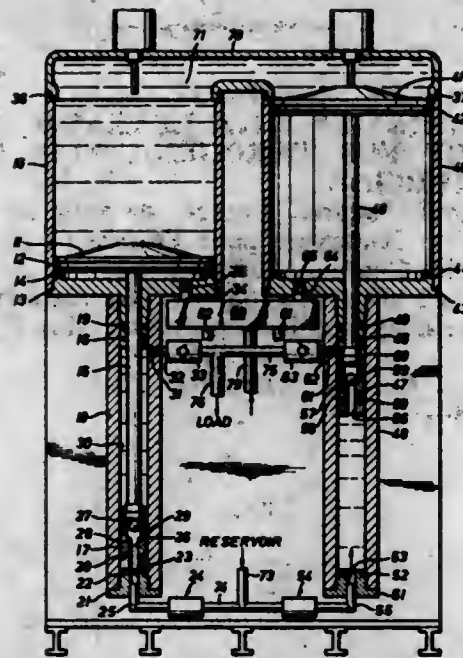
METHOD OF SEALING PISTON PUMPS

Willi Dettinger, Urach, Germany, assignor to Pumpenfabrik Urach, Urach, Württemberg, Germany
Filed Jan. 29, 1968, Ser. No. 701,453
Int. Cl. F04b 21/00; E21b 33/00
U.S. Cl. 417-53 8 Claims



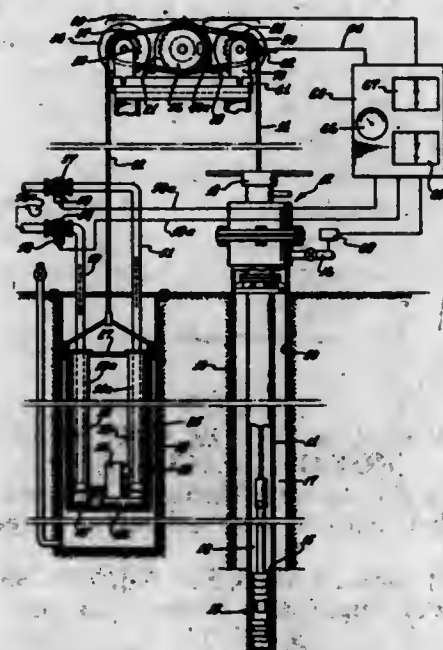
A method of scavenging and sealing corrodible parts of sliding surfaces of piston pumps, especially stuffing boxes, when conveying highly corrosive reaction liquids, especially carbamate, wherein a reaction participant, especially ammonia, is passed into the annular gap surrounding the pump piston adjacent to the pump chamber so as substantially to prevent the reaction liquid, especially carbamate, from coming in contact with the corrodible parts, especially those of a stuffing box.

3,516,761
FLUID ACTUATED HYDRAULIC PUMP
Elva J. Scroggins, Lafayette, La., assignor to Drilling Well Control, Inc., Houston, Tex., a corporation of Texas
Filed Oct. 10, 1968, Ser. No. 766,573
Int. Cl. F04b 17/00; F01l 25/02
U.S. Cl. 417-259 4 Claims



An improved fluid actuated reciprocating piston pump having pistons that are driven through power strokes by the selective application of a pressurized fluid thereto. The pump includes means for confining a coupling fluid between the opposite ends of the pistons whereby alternate application of the pressurized fluid to the pistons causes alternate reciprocation thereof such that during the powered stroke of one piston the coupling fluid drives the other piston through the return stroke.

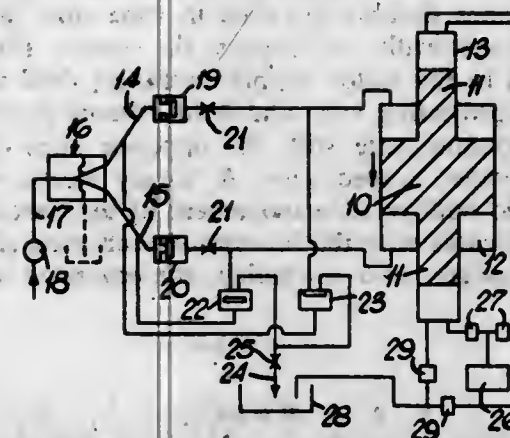
3,516,762
WELL PUMPING AND SERVICING SYSTEM
Donovan B. Grable, 2515 San Francisco Ave., Long Beach, Calif. 90806, and John M. Jackson, Box 387, Santa Ynez, Calif. 93460
Filed Jan. 9, 1969, Ser. No. 790,135
Int. Cl. F04b 47/00, 47/14, 9/02
U.S. Cl. 417-362 19 Claims



The disclosure concerns well head apparatus including a drum for spooling well cable to which pumping means in the well is attached; a counterbalancing assembly operatively connected to such apparatus and including a liquid reservoir positioned to be moved up and down

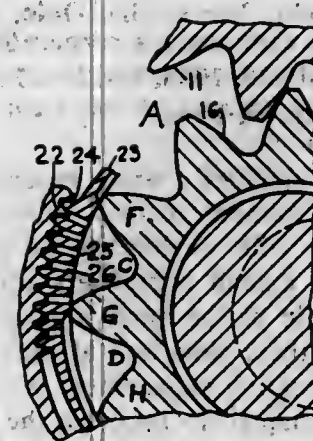
as the cable moves up and down in the well during pumping; and, means to adjust the quantity of counterbalancing liquid in the reservoir in compensating relation to variations in the load to be lifted in the well by the cable.

3,516,763
FLUID PRESSURE OPERABLE PUMPING APPARATUS
Stanley Michael Manton, Otton, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Nov. 21, 1968, Ser. No. 777,753
Claims priority, application Great Britain, Dec. 18, 1967, 57,327/67
Int. Cl. F15b 13/02
U.S. Cl. 417-403 4 Claims



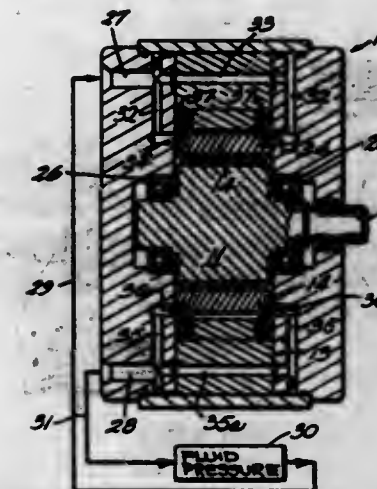
A fluid pressure operable pumping device comprising a double acting piston, a load sensitive fluidic bi-stable device for switching a source of pressure fluid alternately between a pair of conduits communicating respectively with the opposite ends of the cylinder containing the piston, a pair of non return valves located in said conduits respectively, a pair of control valves each valve having a control element which is actuated by a force developed by the fluid pressure applied to an inlet to prevent flow through a flow path of the valve, the flow path being open by a predominating force acting on the control element as a result of fluid pressure in the flow path, the inlets of the valves being connected respectively to said conduits upstream of said non return valves and the flow paths being connected respectively between the downstream sides of the non return valves and an outlet, the flow path of each valve being connected to the conduit with which its inlet is connected.

3,516,764
HYDRAULIC GEAR MECHANISMS
Finn Feroy, 3214 9th St. NE., Payallup, Wash. 98371
Filed Oct. 28, 1968, Ser. No. 771,084
Int. Cl. F04c 1/08, 5/00, 15/02
U.S. Cl. 418-19 4 Claims



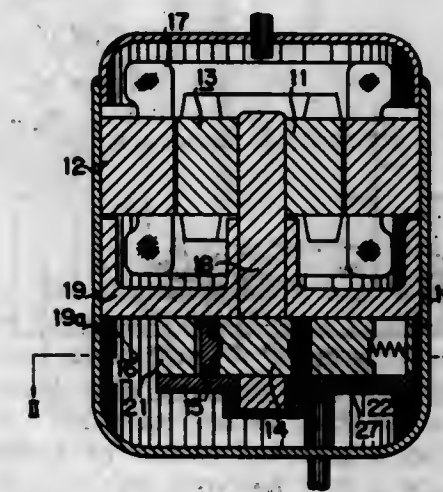
A gear pump or motor with clearance space around the gears so that the gears can never contact the housing, In a rotary compressor wherein a rotor supported by an eccentric is caused to roll along the inner periphery

3,516,765
FLUID ACTUATED ACTUATOR
George I. Boyadjiev, Farmington, and Kenneth W. Verge, Pontiac, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Continuation-in-part of application Ser. No. 523,111, Jan. 26, 1966. This application Oct. 30, 1967, Ser. No. 678,951
Int. Cl. F01c 1/10, 3/00; F04c 3/00
U.S. Cl. 418-61 30 Claims



A fluid actuated integrated motor-transmission unit in which an output gear and a concentric stationary gear coact with a driven eccentric ring gear that meshes therewith to provide for a direct drive of the output gear by driving the ring gear so that the axis thereof orbits about the output gear axis. The ring gear is driven by sequentially pressurizing and exhausting a series of fluid displacement chambers, and both self-commutating and externally commutated forms of the unit are disclosed.

3,516,766
ROTARY COMPRESSOR
Tuneo Monden, Tokyo, Masao Ozu, Yokohama-shi, and Makoto Watanabe, Kawasaki-shi, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed July 10, 1968, Ser. No. 743,719
Claims priority, application Japan, Dec. 8, 1967, 42/78,404
Int. Cl. F04c 1/02, 17/02
U.S. Cl. 418-63 1 Claim



of a hollow cylinder, a pair of annular grooves extending axially from the opposite end surfaces of the rotor are provided near the inner periphery of the rotor to permit elastic deformation of the rotor periphery.

3,516,767

POWER TRANSMISSION

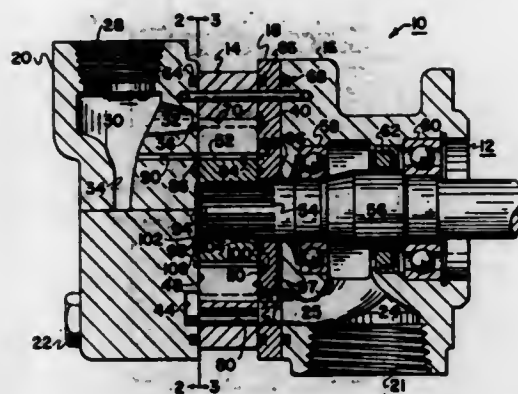
Edgar L. Perkins, Detroit, Mich., assignor to Sperry Rand Corporation, Troy, Mich., a corporation of Delaware

Filed Nov. 14, 1968, Ser. No. 775,350

Int. Cl. F04c 1/00, 3/00, 17/00

U.S. Cl. 418-31

10 Claims



A fluid pressure energy translating device of the sliding vane type having a stator with high and low pressure passages and a vane track with a vane carrying rotor rotatably mounted therein and encased between a pair of cheek plates; each cheek plate having a high pressure pool facing the rotor and means for varying the pressure in said pools inversely to the distance between the rotor and cheek plates for centering the rotor between said plates.

3,516,768

POWER TRANSMISSION

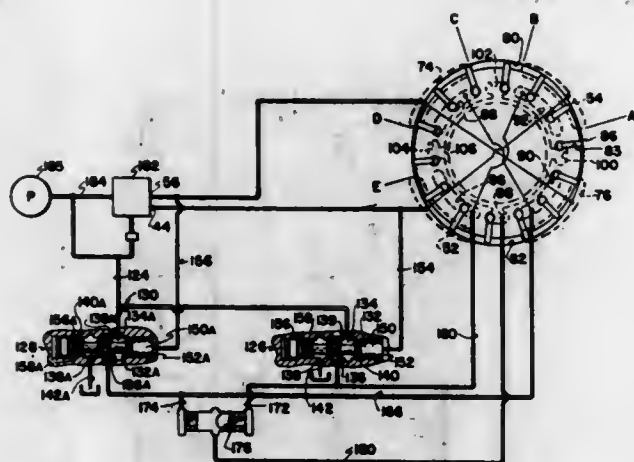
Ralph C. Bolz, Livonia, and Robert W. Jeffery, Franklin, Mich., assignors to Sperry Rand Corporation, Troy, Mich., a corporation of Delaware

Filed Nov. 1, 1968, Ser. No. 773,372

Int. Cl. F01c 3/02; F03c 3/00; F04c 3/00

U.S. Cl. 418-32

11 Claims



A fluid energy translating device having rotatably mounted therein a rotor with a plurality of slidably mounted vanes wherein valving means are provided to

sense the device operating pressures so as to provide a controlled pressure unbalanced condition between the inner and outer ends of said vanes throughout the entire rotary cycle of the device.

3,516,769

ROTARY VANE HYDRAULIC MOTOR

Martti Korhonen, Tasavallankatu 28, Kuopio, Finland

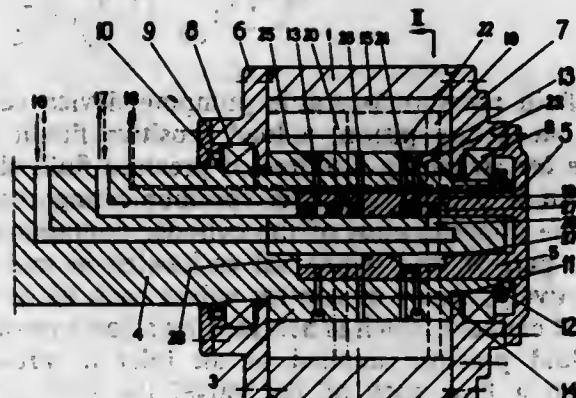
Filed Feb. 10, 1967, Ser. No. 615,096

Int. Cl. F01c 1/00, 3/00

U.S. Cl. 418-175

2 Claims

A rotary vane hydraulic motor comprising an annular rotor encircling a peripheral surface on a stator and defining therewith a plurality of chambers. A plurality of radial vanes slidably disposed in vane slots in the stator project outwardly to engage the rotor. Fluid supply passages in the stator supply operating fluid to one side of each projecting vane and fluid exhaust passages in the stator communicate with the opposite sides of the projecting vanes respectively. A rotary sleeve valve synchronized with relative movement of the stator and rotor communicates with the bottom of each vane slot through four passages, two of which are equipped with check



valves, and provides for relative rotation of the stator and rotor in either direction while supplying fluid under pressure to the bottom of each vane slot during movement of the coating vane through an individual chamber and serving to exhaust fluid from the bottom of the vane slot as the vane moves between adjacent chambers.

3,516,770

PUMP

Donald A. Schnacke, Brecksville, Ohio, assignor to The Weldon Tool Company, a corporation of Ohio

Filed July 25, 1968, Ser. No. 747,755

Int. Cl. F04c 1/16, 1/00

U.S. Cl. 418-240

6 Claims

A pump which includes a stator mounted in a housing with an annular chamber formed therebetween and the stator is provided with a plurality of angularly spaced blade slots which extend completely through the stator from a bore therein to the annular chamber and blades are positioned in these slots and at their inner ends are adapted to make sealing engagement with the surface of a rotor which is adapted to rotate in the bore. Inlet port means are provided on one side of each of the blades and outlet port means are provided on the opposite side of each of the blades. Pressurized fluid normally leaks be-

tween a blade and the blade slot from the outlet port means to the annular chamber so that pressurized fluid is contained in the annular chamber. A conduit or other



opening is provided in the stator which extends from the annular chamber to the clearance between the blade and the blade slot on the inlet port means side of the blade.

3,516,771

BURNER FOR SPECTROSCOPIC USE

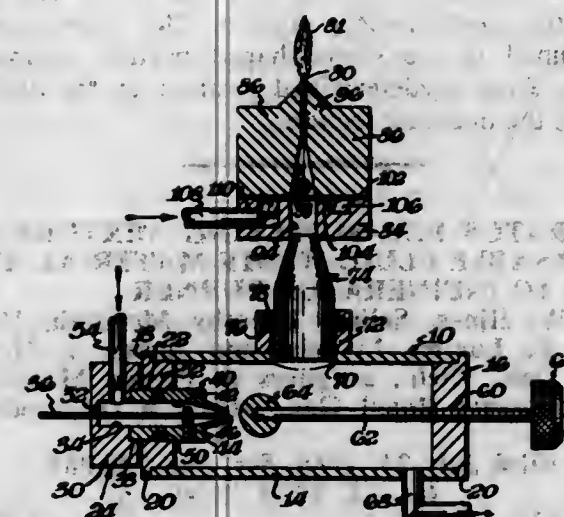
John F. Rendina, Kennett Square, Pa., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed Aug. 1, 1968, Ser. No. 749,434

Int. Cl. F23j 7/00

U.S. Cl. 431-126

11 Claims



A slot-type burner for spectroscopic use directs a stream of nebulized sample and combustion supporting gas horizontally toward a spoiler which creates a turbulent condition permitting the large sample droplets to fall from the stream. The finely nebulized droplets in the flow stream travel upwardly through a vertically oriented flow passage in the burner. The flow passage has an outlet slot for providing a narrow flame having an appreciable length. Upstream of the slot a restriction is formed in the flow passage. A combustible gas is introduced peripherally into the flow stream upstream of the restriction. The nature of the restriction is such that the gas velocity through it exceeds the burning velocity of the combustion gas. The volume of the flow passage between the restricted portion and the outlet slot is maintained small to reduce the effects of flashback.

3,516,772

OPAQUE LIGHT SOURCE

Robert F. Strauss, Morris Plains, N.J., assignor to

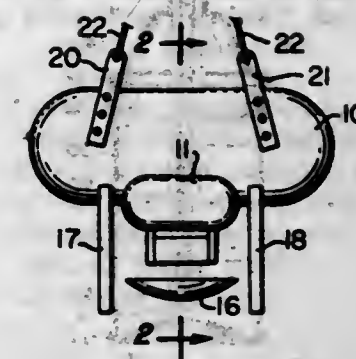
Astronomical International, Inc., New York, N.Y.

Filed Nov. 3, 1967, Ser. No. 680,390

Int. Cl. F23c 1/00

U.S. Cl. 431-158

15 Claims



Combustion temperatures are increased and light output enhanced in a light source using an opaque tubular combustion chamber of refractory material; burning gases are caused to flow around a rod inside the chamber as the gases pass to an exhaust nozzle.

3,516,773

BURNER

Robert B. Rosenberg, Evergreen Park, and Dennis H. Larson, Hickory Hills, Ill., assignors to Institute of Gas Technology, Chicago, Ill., a corporation of Illinois

Continuation of application Ser. No. 698,529, Jan. 17, 1968. This application Aug. 25, 1969, Ser. No. 852,823

Int. Cl. F23c 9/00

U.S. Cl. 431-284

4 Claims

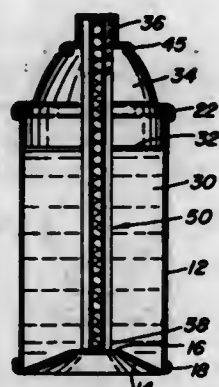


A gaseous fuel burner including a pilot burner section providing an inherently stable pilot flame unaffected by severe weather conditions or adverse operating conditions associated with applications involving high turn-down ratios. The pilot burner includes a distribution chamber defined by means including a generally cylindrical distribution ring provided with a plurality of discharge orifices. The fuel-air mixture emitted from the discharge orifices provides a stable pilot flame for ignition of the main burner fuel.

3,516,774
TORCH

Gregory W. Livingstone, La Grange, Ill., assignor, by mesne assignments, to Safety Flames Corporation, Northbrook, Ill., a corporation of Delaware
Filed June 5, 1968, Ser. No. 734,717
Int. Cl. F23d 3/18

U.S. Cl. 431—323

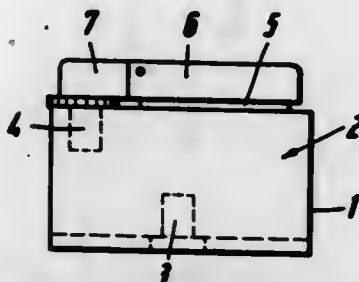


The disclosure describes a torch container having an elongated wick member comprising an absorbent core encased within a tubular support member extending from the bottom through an opening in the top of the container. The support member has an open or slotted side wall to allow access of the fuel to the absorbent core and is rigid to maintain the wick without loss in length due to combustion in a substantially axial spaced upright relationship within the container. A short vent tube is provided in the top end of the wick to allow entry of air to the container and to entrap vapors for instant lighting and a snap-on cover encases the extended end of the wick and encloses the top opening. The torch container and wick assembly are constructed of inexpensive materials so that the entire unit is disposable when the fuel contents are dissipated. In one embodiment a frangible and combustible plastic cap is provided between the snap-on cover and encompassing the end of the wick which is lighted to start the combustion process or may be broken off to open the torch for use. The plastic cap has a radial flange which is engaged between the matching curvatures of the rolled edge, top opening and the crimped-in edge of an overlying collar. Other embodiments are disclosed.

3,516,775
LIGHTER

Peter Rabe, Muhlheim am Main, Germany, assignor to Heinrich Maltner G.m.b.H., Offenbach am Main, Germany
Filed May 15, 1968, Ser. No. 729,221
Claims priority, application Germany, June 13, 1967, N 74,370
Int. Cl. F23d 13/24

U.S. Cl. 431—344



A fuel tank for gas lighters comprises a housing of synthetic plastic material which consists of two sections. Each section includes a peripheral wall portion and at least one transverse wall portion. The peripheral wall portions are joined along a line located in a predetermined plane and together define an internal fuel chamber. The transverse wall portions together define an internal partition extending transversely of the plane and provided

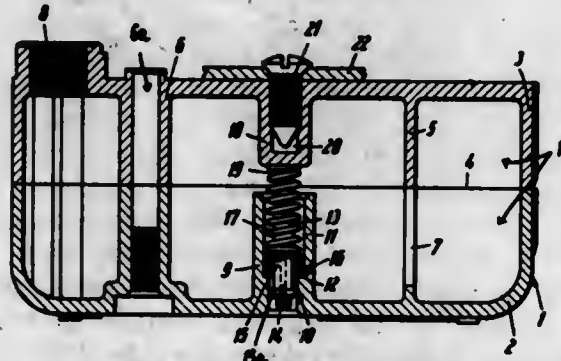
with a recess also extending transversely of the plane so that the two compartments into which the partition subdivides the fuel chamber, communicate with one another.

3,516,776
LIGHTER

Horst Dieterle, Frankfurt am Main, and Peter Rabe, Muhlheim am Main, Germany, assignors to Heinrich Maltner G.m.b.H., Offenbach am Main, Germany
Filed May 15, 1968, Ser. No. 729,222
Claims priority, application Germany, May 24, 1969, M 74,090
Int. Cl. F23d 21/00

U.S. Cl. 431—344

13 Claims



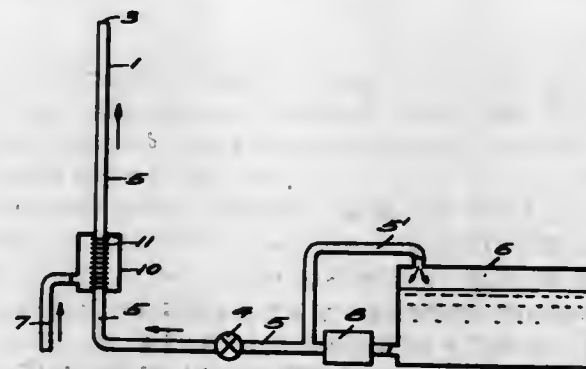
In a gas lighter a fuel tank consists of two hollow sections of synthetic plastic material which are adapted to be welded together so as to define an internal fuel chamber. One of the sections is provided interiorly with an abutment portion and the other section is provided interiorly with a substantially sleeve-shaped portion projecting across the chamber toward the abutment portion, the sleeve-shaped portion having an open first end facing the abutment portion and a second end communicating with the exterior of the tank. A valve assembly is received in the sleeve-shaped portion accessible from the exterior of the fuel tank and operable for closing and opening communication between the inner and outer ends of the sleeve-shaped portion. The valve assembly is maintained in the sleeve-shaped portion against displacement from predetermined position by the abutment portion of the one tank section.

3,516,777
APPARATUS FOR SUPPLYING MIXTURE OF BURNABLE FLUID WASTE MATERIAL AND AIR TO INCINERATOR BURNER

Eugene W. Hines, Saline, Timothy McGrath, Detroit, James E. Lorenz, Livonia, and James A. Herman, Royal Oak, Mich., assignors to Franco Manufacturing Company, Royal Oak, Mich., a corporation of Michigan
Filed July 26, 1968, Ser. No. 748,085
Int. Cl. F23d 13/40

U.S. Cl. 431—354

2 Claims



Combustible fluid waste, which may or may not contain particulate solid material suspended therein, is forced as a stream through an aerating device, so as to entrain therein a substantial amount of air, in the form of fine bubbles, and the resulting frothy mass is forced to and through a burner nozzle of an incinerator.

CHEMICAL

3,516,778
NAPHTHOQUINONE IMINE COMPOSITIONS AND METHOD FOR USING THE SAME

Walter H. Brunner, Easton, Pa., assignor to Clairol Incorporated, New York, N.Y., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 345,107, Feb. 17, 1964. This application June 9, 1964, Ser. No. 373,838
Int. Cl. A61k 7/12

U.S. Cl. 8—10.2

16 Claims

A method and a composition for dyeing living human hair on the head which involves a composition containing a tinctorial amount of a hair substantive naphthoquinone imine.

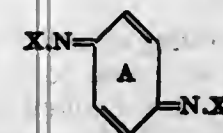
3,516,779
PROCESS FOR DYEING POLYOLEFINIC MATERIALS

Eiji Kotke, Toyonaka-shi, Ryozi Kuriyama and Seizo Naito, Ibaraki-shi, Hiroshi Sugiyama, Ashiya-shi, and Kunihiko Imada, Sakai-shi, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan
No Drawing. Filed Oct. 7, 1966, Ser. No. 584,972
Claims priority, application Japan, Oct. 14, 1965, 40/63,087; Nov. 15, 1965, 40/70,428
Int. Cl. D06p 1/32; 3/00

U.S. Cl. 8—32

10 Claims

The improvement in dip-dyeing polyolefin materials in a dye bath containing a compound represented by the general formula



wherein X is a halogen atom, and the nucleus A may be substituted by a halogen lower alkyl or lower alkoxy group, and an aromatic amine, or a benzene, naphthalene or quinoline derivatives, at least one of hydrogen atoms capable of being substituted of the benzene and naphthalene being substituted by hydroxy groups and the other hydrogen atoms being left unsubstituted or substituted with groups other than sulfonic acid group and primary amino groups, which comprises controlling the hydrogen ion concentration of the dye bath within a range of from pH 6 to pH 10 by addition to the bath of a buffer agent.

3,516,780
PROCESS FOR THE PRODUCTION OF WATER-INSOLUBLE AZO-DYESTUFFS ON TEXTILE MATERIAL OF CELLULOSE FIBERS OR PROTEIN FIBERS

Werner Kirat and Hans Hertel, Offenbach am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brunsing, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Continuation of application Ser. No. 360,779, Apr. 17, 1964. This application Oct. 10, 1968, Ser. No. 768,964
Claims priority, application Germany, Apr. 24, 1963, F 39,573
Int. Cl. C09b 29/02

U.S. Cl. 8—44

2 Claims

Production of water insoluble azo-dyestuffs on cellulose or protein textile materials by treating the textile material in an alkaline bath containing a coupling component, an antiazoate and a wetting or dispersing agent to fix the coupling component and thereafter contacting the textile material with an acid at a temperature below 40° C. to produce the dyestuff on the textile material.

3,516,781
NOVEL MODIFYING PROCESS

Ildo E. Penna, Palisades Park, N.J., and Armand L. Greenhall, New York, N.Y., assignors to J. P. Stevens & Co., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 13, 1967, Ser. No. 615,363
Int. Cl. D06m 9/00

U.S. Cl. 8—115.7

6 Claims

A one-step process for simultaneously modifying both components of cellulosic-proteinaceous blends comprising treating the blend with an acid catalyzed compatible mixture containing at least one protein modifying reagent and at least one cellulosic modifying reagent in the presence of catalyst and optional textile adjuvants, until a modifying amount of both reagents is taken up, and exposing said treated blend to an environment compatible to curing both the blend components, until modification of both components takes place.

3,516,782
PERMANENT CREASING OF WOOL-CONTAINING FABRICS

Stephen B. Sello, Cedar Grove, N.J., and Giuliana C. Tesoro, Dobbs Ferry, N.Y., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed June 30, 1967, Ser. No. 650,222
Int. Cl. D06m 3/02; 13/00

U.S. Cl. 8—127.6

10 Claims

A process for imparting permanent press properties to wool-containing fabrics comprising the steps of treating a shrinkproofed wool-containing fabric with an aqueous solution of either a sulfonium or ammonium compound in the presence of an alkaline catalyst; shaping the treated fabric in any desired manner and then setting the shape by heat-pressing the fabric.

3,516,783
PROCESS FOR REMOVING OZONE FROM OZONE-LOADED AIR

Paul Blanchard, Paris, France, assignor to Compagnie General des Eaux, Paris, France, a French body corporate
Filed Mar. 9, 1966, Ser. No. 532,952
Claims priority, application France, Mar. 12, 1965, 8,945; Feb. 28, 1966, 51,297
Int. Cl. B01d 53/00

U.S. Cl. 23—4

6 Claims



Ozone is removed from ozone-loaded air such as that escaping from the contact chambers of ozonization plants

treating drinking water by passing the air through a layer of activated hardwood charcoal in granular form having a pH of from 12 to 13 so that the pressure differential due to the passage of the air through the layer is lower than 200 mm. of water. The active granular material is maintained at a temperature within the range of about 15° C. to about 60° C.

3,516,784

METHOD OF PREPARING SOLUBLE IRON POLY- TUNGSTATE, AND PRODUCT THEREOF

Robert E. Dodds, Towanda, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware

No Drawing. Filed Sept. 19, 1967, Ser. No. 668,923

Int. Cl. C01g 41/00, 49/00

U.S. Cl. 23—51

15 Claims

A solid, stable, water-soluble, iron metatungstate, of the empirical formula



is prepared by contacting an aqueous solution of a metatungstate salt of a cation having a greater exchange potential than Fe^{+3} with a cation-exchange material on an Fe^{+2} cycle. The effluent aqueous solution is pre-concentrated by sparging with an inert gas and the solid iron metatungstate isolated from the solution by either freeze drying or evaporating under vacuum.

3,516,785

METHOD FOR SELECTIVE RECOVERY OF MAGNESIUM CHLORIDE FROM MIXED SALT SOLUTIONS

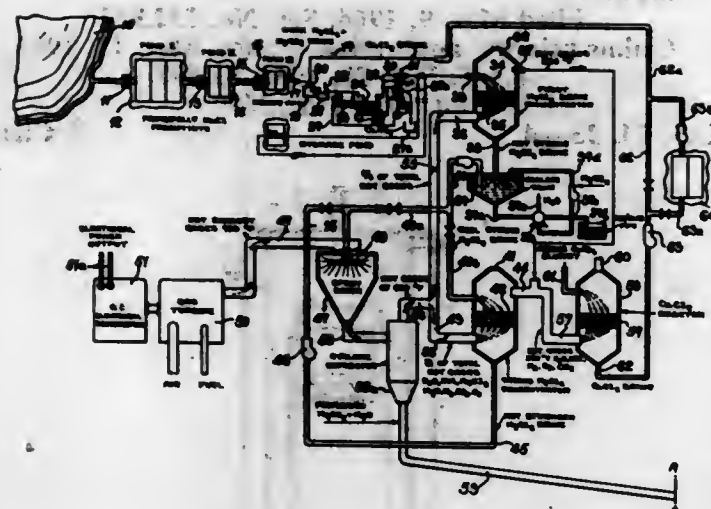
Rollin P. Smith, New Canaan, Conn., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

Filed June 14, 1967, Ser. No. 646,079

Int. Cl. C01f 5/26, 5/30, 5/32

U.S. Cl. 23—91

7 Claims



Process for recovery of magnesium chloride from sodium, potassium, magnesium, chloride and sulfate containing mixed salt solutions, by successive concentrations to precipitate predominantly first sodium salts and thence potassium-magnesium double salts, desulfating the mother liquor with calcium chloride and further concentrating to precipitate the potassium-magnesium double salt, carnallite, subjecting the resultant essentially magnesium chloride solution to further and/or final concentrations to dryness with gaseous heat, employing the heated HCl-con-

taining off-gases from said final concentration for said further concentrations and for reaction with said calcium carbonate to produce calcium chloride for said desulfating treatment.

3,516,786

METHOD OF PREPARING MICROCRYSTALLINE FAUJASITE-TYPE ZEOLITE

Philip K. Maher and Julius Scherzer, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Feb. 23, 1968, Ser. No. 707,460

Int. Cl. C01b 33/28

U.S. Cl. 23—113

4 Claims

This invention relates to the preparation of a novel small particle size molecular sieve zeolite using a novel water-miscible organic solvent crystallization medium. The disclosed microcrystalline molecular sieve has a particle size in the range of from 10 to 100 millimicrons and a surface area of at least 500 m²/g.

3,516,787

RECOVERY OF OIL AND ALUMINUM FROM OIL SHALE

Robert A. Van Nordstrand, Tulsa, Okla., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1966, Ser. No. 571,649

Int. Cl. C01f 7/06, 7/08, 7/14

U.S. Cl. 23—143

15 Claims

A process for separating oil and aluminum values from oil shale containing kerogens, sodium aluminum carbonate hydroxide, quartz and dolomite by retorting the shale at about 500° to 1200° F. to separate the oil, leaching the resulting spent shale with an alkaline solution at a temperature of up to about 220° F. to dissolve the aluminum values from the shale without substantial precipitation of SiO_2 and recovering the aluminum values as hydrous alumina from the alkaline solution.

3,516,788

BORIC OXIDE HAVING A LOW RATE OF MOISTURE PICK-UP

Lloyd L. Fusby, Los Angeles, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

Original application June 23, 1966, Ser. No. 563,015, now Patent No. 3,468,627, dated Sept. 23, 1969, which is a continuation-in-part of application Ser. No. 432,652, Feb. 15, 1965. Divided and this application Jan. 29, 1969, Ser. No. 794,946

Int. Cl. C01b 35/00

U.S. Cl. 23—149

10 Claims

Vitreous boric oxide is obtained by mixing sulfuric acid and an alkali metal and/or alkaline earth metal borate to form a feed mixture, heating this mixture at an elevated temperature of at least about 750° C. to form a two layer molten reaction product mixture, separating the layers while molten and then cooling the separated layers to obtain vitreous boric oxide and by-product metal sulfate as solid fused products. Solid vitreous boric oxide compositions containing a small amount, up to about 10%, of sodium, potassium and/or calcium oxide dissolved therein are also provided. Optionally, the product can also contain a minor amount of refractory oxide, such as aluminum, silicon, titanium and zirconium oxide, dissolved therein. The products have a low rate of moisture pick-up and possess improved grinding properties.

PROCESS FOR THE MANUFACTURE OF HYDROCYANIC ACID

Kurt Sennwald, 11 Gartenstrasse, and Wilhelm Vogt, 5 Dr. Krauss-Str., both of Knapack, near Cologne, Germany; Joachim Kandler, 10 Amseweg, Lechenich, Germany; and Gunter Sorbe, 37 Bielefelder Str., Lenzinghausen, near Herford, Germany

No Drawing. Continuation-in-part of application Ser. No. 227,732, Oct. 2, 1962. This application Jan. 25, 1968, Ser. No. 700,365

Claims priority, application Germany, Oct. 4, 1961, K 44,855

Int. Cl. C01c 3/02; B01j 11/32; C07c 12/12

U.S. Cl. 23—151

5 Claims

A catalytic process for manufacturing hydrocyanic acid from acetonitrile in the presence of oxygen or air at about 300–350° C. for about 0.5–50 seconds in the presence of $\text{Fe}_2\text{O}_3/\text{Bi}_2\text{O}_3/\text{MoO}_3/\text{P}_2\text{O}_5/\text{SiO}_2$.

3,516,790

PROCESS AND APPARATUS FOR PREPARING CHLORINE DIOXIDE

Gérald O. Waterland, Vancouver, British Columbia, Canada, assignor to Chemtech Engineering Ltd., Vancouver, British Columbia, Canada

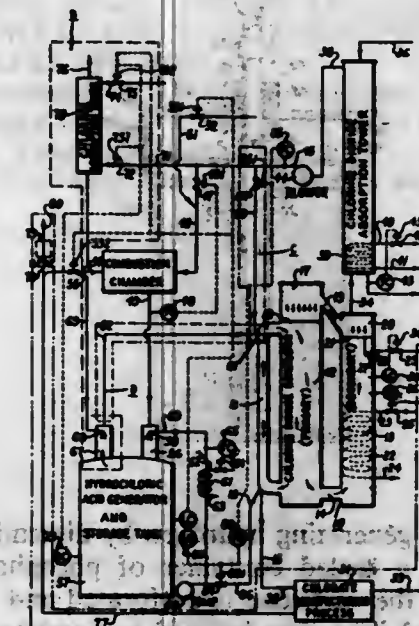
Filed Aug. 9, 1967, Ser. No. 659,547

Claims priority, application Canada, May 24, 1967, 991,056

Int. Cl. C01b 11/02, 11/26; B01j 7/02

U.S. Cl. 23—152

28 Claims



This invention provides an improvement in the previously known procedures for preparing chlorine dioxide by the reaction of an aqueous solution of an inorganic chlorate (e.g. sodium chlorate) with hydrogen chloride. The improvement involves two co-ordinated steps. The first step involves using an aqueous solution of hydrochloric acid as the hydrogen chloride. The second step involves sweeping the gaseous reaction products released from the reactant liquor by introducing a diluent gas near the gas-liquid interface of the reactant liquor.

The invention also provides a semi-cyclical procedure for producing the aqueous hydrochloric acid from the by-product chlorine produced while producing the chlorine dioxide.

The invention further provides a semi-cyclical procedure for producing the aqueous inorganic chlorate by electrolysis of an aqueous inorganic chloride, and using the hydrogen gas by-product of that reaction to react with the by-product chlorine produced while producing the

chlorine dioxide to prepare the aqueous hydrochloric acid.

The invention further provides a novel combination of component parts which may be used to carry out the processes of this invention.

The invention also provides novel control for the novel combination of component parts.

3,516,791

MICROPOROUS CARBON PREPARATION

Brian Evans, Rhonda, Wales, and Edward A. Flood, Ottawa, Ontario, Canada, assignors to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada

No Drawing. Filed Oct. 5, 1967, Ser. No. 673,013

Int. Cl. C01b 31/02

U.S. Cl. 23—209.1

9 Claims

Carbons having adsorptive and molecular sieve properties prepared from halogenated vinylidene hydrocarbon polymers (e.g. polyvinylidene chloride and fluoride) by contacting with a liquid ammonia solution of an amide of an alkali metal.

3,516,792

RECOVERY OF HALOGEN

William K. T. Gleim, Island Lake, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 634,073, Apr. 27, 1967. This application Nov. 12, 1968, Ser. No. 775,283

Int. Cl. C01b 9/04, 9/06

U.S. Cl. 23—216

4 Claims

A method for recovering halogen from a mixture of the hydride thereof with hydrogen and gaseous hydrocarbons. The halogen hydride-containing gaseous mixture is contacted, at elevated temperature, with a dioxide of manganese, to form the metallic halide. The oxidation of the metallic halide effects the release of the elemental halogen.

3,516,793

PROCESS FOR PURIFYING SULFIDE CONTAINING GASES AND THE RECOVERY OF SULFUR THEREFROM

Philippe Renaud, Neuilly-sur-Seine, France, assignor to Institut Français du Pétrole, des Carburants et Lubrifiants, Neuilly-Malmaison, Hauts-de-Seine, France

Filed Sept. 13, 1966, Ser. No. 579,165

Claims priority, application France, Sept. 18, 1965, 31,897

Int. Cl. C01b 17/04

U.S. Cl. 23—225

17 Claims

The recovery of sulfur from hydrogen sulfide containing gases by contacting such gases with a solution of an alkanolamine or morpholine in a monoalkyl ether of a polyhydric alcohol to absorb the hydrogen sulfide; and contacting the resultant solution with molecular oxygen to form elemental sulfur.

3,516,794

APPARATUS AND METHOD FOR DETERMINING THYROID FUNCTION

Daniel R. E. Marty, Rosalind Park, and John Flury, Princeton, N.J., assignors to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 14, 1964, Ser. No. 418,101

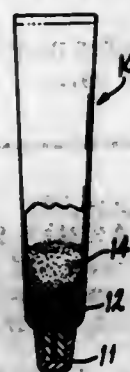
Int. Cl. G01n 31/04, 33/16; A61k 27/04

U.S. Cl. 23—238

6 Claims

Method, and apparatus, for determining thyroid function comprising passing a solution of blood serum and radioactive thyroxine or radioactive triiodothyronine onto

a mixture of an anion exchanger and inert diluent of cellulose, incubating the solution, squeezing the solution



from the anion exchanger, and measuring the percentage radioactivity remaining on the anion exchanger.

3,516,795

ANALYSIS OF ACRYLATE POLYMERS

Andrew G. Tsak, Laurel, and Thomas E. Ferlinton, Sandy Spring, Md., and Sheldon B. Markofsky, Cambridge, Mass., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Apr. 8, 1968, Ser. No. 719,693
Int. Cl. G01n 31/02, 33/18

U.S. Cl. 23-230

12 Claims

A process for quantitatively determining the concentration of parts per million quantities of water soluble acrylate polymers in aqueous systems by precipitating a cupric polyacrylate floc. The method of the invention includes the steps of adding cupric ions to an aqueous solution of acrylate polymer, said solution having been adjusted to a pH value above about 3 and up to about 8, and determining the amount of polymer from the floc formed in the solution mixture.

3,516,796

CARBONACEOUS PROCESS FOR SULFUR PRODUCTION

Le Roy F. Grantham, Colabenas, and Christian M. Larson, Roseda, Calif., assignors to North American Rockwell Corporation.
Original application May 15, 1967, Ser. No. 638,366.
Divided and this application Nov. 26, 1968, Ser. No. 775,173
Int. Cl. C01b 17/02

U.S. Cl. 23-225

5 Claims

A method for recovering sulfur from a molten salt mixture containing alkali metal sulfate or sulfite by reacting the alkali metal sulfate- or sulfite-containing molten solution with a carbonaceous material, preferably activated carbon, under reaction conditions favoring formation of sulfur and alkali metal carbonates in the molten salt.

3,516,797

CHEMICAL OXYGEN GENERATOR

Robert M. Bovard, Costa Mesa, Calif., and Milo R. Simmonds, Williamsburg, N.Y., assignors, by means of assignments, to Automatic Sprinkler Corporation of America, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 3, 1967, Ser. No. 627,962
Int. Cl. B01j 7/00; C01g 13/00

U.S. Cl. 23-281

11 Claims

Solid state combustible oxygen generating material for a chemical oxygen generator is disposed in a toroidal housing having an annular chamber with an ignition area about its inner periphery, the generating material being

formed in a ring having radially outwardly converging side faces to provide a peripheral generating face of substantially constant area as the generating material burns radially outwardly whereby a substantially constant oxygen



generating rate is maintained for the life of the generator. The housing and ring of generating material define a reservoir therebetween which serves to collect the generated oxygen.

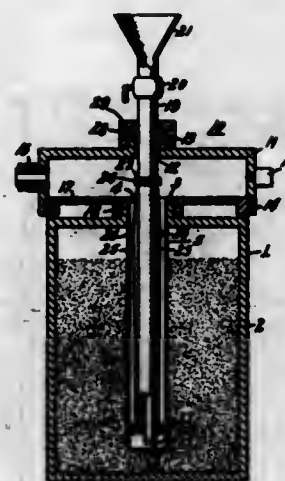
3,516,798

APPARATUS FOR HYDROGEN GENERATION

Robert E. Kegan, Bonford, Mass., assignor to General Electric Company, a corporation of New York
Original application June 25, 1965, Ser. No. 467,025, now Patent No. 3,369,868, dated Feb. 20, 1968. Divided and this application Sept. 20, 1967, Ser. No. 669,245
Int. Cl. B01j 7/02

U.S. Cl. 23-282

7 Claims



Apparatus for generating hydrogen by disarming a cartridge including a sealed container of phosphorus. The bursting tube of the cartridge is perforated and water introduced. Air and heat may be used to accelerate the reaction. When the phosphorus is completely consumed, the phosphoric acid which is formed as a reaction product may be reacted with metal scraps to produce additional hydrogen. Apparatus for the practice of the process utilizes an adaptor to sealably connect a housing to the cartridge casing. A tube which may have a funnel at its upper end and sealably and slidably extends through the housing so as to be able to pierce the bursting tube. The housing is provided with an outlet for the delivery of hydrogen.

3,516,799

LIQUID DEGASSING APPARATUS

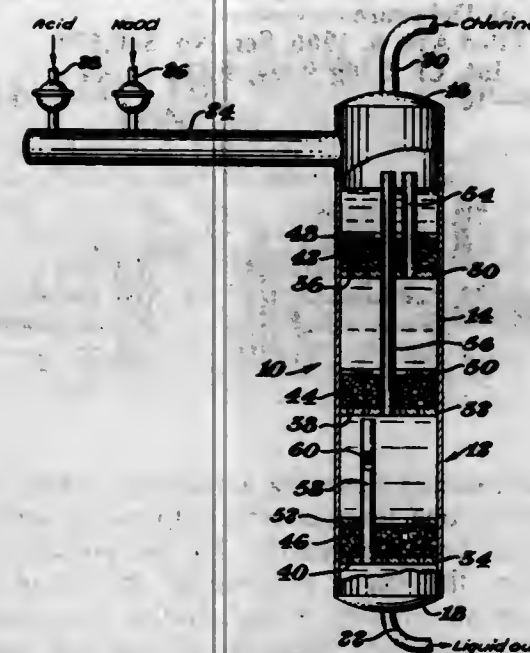
Ronald L. Dotson, Baton Rouge, La., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 2, 1967, Ser. No. 613,465
Int. Cl. B01d 19/00

U.S. Cl. 23-283

3 Claims

The invention concerns an apparatus for degassing liquids wherein the liquid to be degassed is passed through one or more porous filters (woven glass fiber

mass, for example) to separate the gas by means of the disruptive effect of a porous surface on the equilibrium of a gas dissolved in a liquid. Since separation may take



place at both the entry and exit surface of the filter, means are provided for bypassing gas separated at the exit surface through or around the filter.

3,516,800

SYNTHESIS REACTION APPARATUS EQUIPPED WITH MEANS FOR TEMPERATURE CONTROL OF CATALYST BED

Hisao Yamamoto, 2, 1811 Aza Tateyama, Oaza Ogushi, and Noboru Iwasa, 1, 330 Yuda, Oaza Ogushi, both of Ube-shi, Yamaguchi-ken, Japan
Filed Aug. 25, 1965, Ser. No. 482,415
Int. Cl. B01j 9/04

U.S. Cl. 23-288

1 Claim



A reactor having an inner cylinder disposed within an outer cylinder so as to provide an annular space between the cylinders. The inner cylinder is provided with a heat exchanger having a plurality of reaction gas tubes and a plurality of baffle plates, and with a reaction chamber having a plurality of catalyst tubes arranged in parallel and being longitudinally disposed therein. The reactor further includes a plurality of chambers formed by pairs of baffle plates installed perpendicularly to the axis of the inner cylinder in the spaces formed between the catalyst tubes and in the spaces between the catalyst tubes and the

inner cylinder. The spaces between the catalyst beds provide passages of unreacted gas for cooling the catalyst tubes. Cooling gas pipes are connected to the chambers from the outside and the diameter of the catalyst tubes is reduced at the zone passing through the chamber to form said spaces.

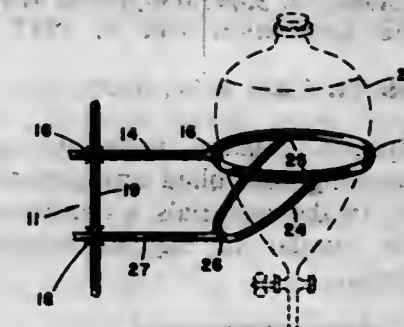
3,516,801

LABORATORY SUPPORT RING

Ramesh M. Shah, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
Filed July 17, 1967, Ser. No. 653,965
Int. Cl. B01l 9/00

U.S. Cl. 23-292

4 Claims



A laboratory support ring for supporting large and bulky separatory funnels and similar equipment in which the ring has an additional bifurcated supporting means for preventing sagging of the laboratory equipment.

3,516,802

CONTINUOUS PROCESS FOR THE SYNTHESIS OF DIFLUORAMINE

John R. Lovett, Edison, and Edwin A. Schmall, Springfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 21, 1960, Ser. No. 70,856
Int. Cl. C01c 1/16, 1/00

U.S. Cl. 23-356

3 Claims

1. The continuous process for making difluoramine, which comprises reacting tetrafluorohydrazine gas under about 1 atmosphere pressure at 0° to 100° C. with a liquid organo mercaptan selected from the group consisting of alkyl mercaptans having 1 to 20 carbon atoms per molecule and aryl mercaptans having 6 to 12 carbon atoms per molecule by contacting said gas with the liquid mercaptan to convert said gas to difluoramine gas in a contact time of about 5 to 100 minutes, the difluoramine gas having a flow rate of about 0.1 to 10 cc. per minute per 50 cc. of the liquid mercaptan thus contacted, and the molar ratio of the tetrafluorohydrazine to the mercaptan being 1:10 to 1:2, removing from the liquid mercaptan the gaseous product containing difluoramine gas as it is formed to minimize the time of contact of the difluoramine with the liquid mercaptan and with the organo disulfide product precipitated in the liquid mercaptan, and recovering the difluoramine product.

3,516,803

METHOD FOR THE PURIFICATION OF TRICHLOROSILANE

Herbert J. Moktan and De Wain Fyfe, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
No Drawing. Filed Oct. 6, 1966, Ser. No. 584,646
Int. Cl. C01b 33/08

U.S. Cl. 23-366

3 Claims

A method of purifying trichlorosilane by heating the impure trichlorosilane to a temperature just below its boiling point, maintaining this temperature for a sufficient period of time to allow evaporation of trichlorosilane vapors, and subsequently condensing the purified

vapors and collecting the condensate. This process is an improvement over conventional distillation techniques, since the latter cause bubbling of the trichlorosilane and corresponding entrainment of impurity-containing liquid droplets in the trichlorosilane distillate.

3,516,804

COINAGE MATERIAL

Robert Howard Trapp, deceased, late of Ringwood, N.J., by Gloria Worthington Trapp, executrix, Pittsburgh, Pa., and Howard Wayne Hayden, Jr., and Jere Hall Brophy, Suffern, N.Y., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application May 4, 1965, Ser. No. 453,570, now Patent No. 3,407,050, dated May 1, 1968. Divided and this application Sept. 6, 1967, Ser. No. 680,275

Int. Cl. C22c 9/04, 9/06

U.S. Cl. 29—190

2 Claims

Directed to special coinage materials comprising copper alloys containing controlled amounts of alloying elements providing in the materials a density-resistivity-permeability factor similar to that of standard silver alloy coinage material.

3,516,805

ELECTRODES FOR ELECTRIC RESISTANCE WELDING AND METHOD OF MANUFACTURE THEREOF

Yozo Nakamura, Saitamaken, and Yoshihisa Ozaki, Tokyo, Japan, assignors to Kabushiki Kaisha Nakao Netsukagaku Kenkyusho, Souka, Saitama Prefecture, Japan

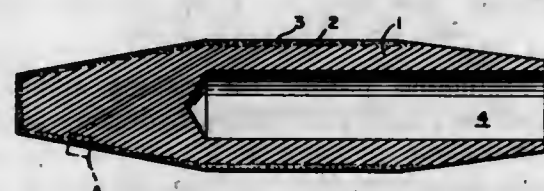
Filed Jan. 27, 1967, Ser. No. 612,144

Claims priority, application Japan, Jan. 31, 1966, 41/5,526

Int. Cl. C23c 9/00, 9/02, 13/00

U.S. Cl. 29—196.3

8 Claims



This disclosure relates to an electrode for resistance welding consisting of a copper base metal shaped in the form of an electrode and a layer of copper-zinc alloy formed on the whole surface of the said base metal by diffusion and impregnation, or consisting of the same base metal, the same layer of alloy and a further layer of metal selected from the group consisting of aluminum, chromium, nickel, titanium, silicon and beryllium formed on the outside of the said layer of alloy by diffusion and impregnation, the said electrode being resistant to the softening by the heat conducting from the welding part, and resistant to the occurrence of mush or twist of its tip when pressed and being provided with abrasion resistance, corrosion resistance, heat resistance or the like depending upon the metal or alloy of the outside layer.

3,516,806

FUEL OIL STABILIZER

Robert E. Malec, Chicago, Ill., assignor, by mesne assignments, to Armour Industrial Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,000

Int. Cl. C101 1/22

U.S. Cl. 44—72

3 Claims

Stabilization of fuel oils by the addition of 10 to 150 mg./liter of a secondary alkyl or cycloalkyl primary amine.

3,516,807
APPARATUS FOR PRODUCING HYDROGEN GAS BY THE PARTIAL OXIDATION OF A CARBONACEOUS FUEL CONTAINING HYDROGEN

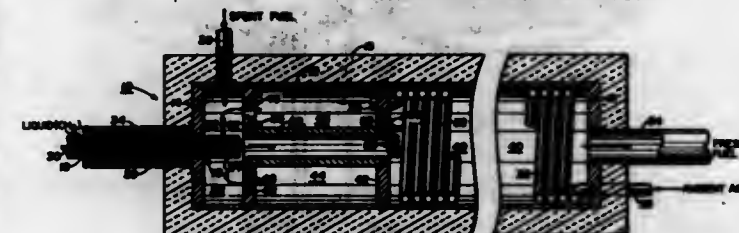
Barry R. West and Foster L. Gray, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Apr. 6, 1966, Ser. No. 540,577

Int. Cl. C10g 9/04; F23d 11/44

U.S. Cl. 48—107

3 Claims



A partial oxidizer featuring a jet pump which utilizes the pressure of one reactant stream to pump another reactant stream into the reactor. In one embodiment of the invention, the vapor pressure of the liquid fuel is used to draw air through a regenerative heat exchanger in the reactor and then inject the air and the vapors of fuel as a mixture into the reactor where it is partially oxidized. Provision is also made for recycling a portion of the spent fuel stream from the fuel cell and injecting the spent fuel along with the fuel-air mixture into the reactor so that carbon monoxide and water present in the spent fuel stream will prevent deposition of carbon as the product gases from the oxidation reaction are cooled in the heat exchanger and system.

3,516,808

PREPARATION OF CARBON DIOXIDE ACCEPTORS BY THE MELT PROCESS

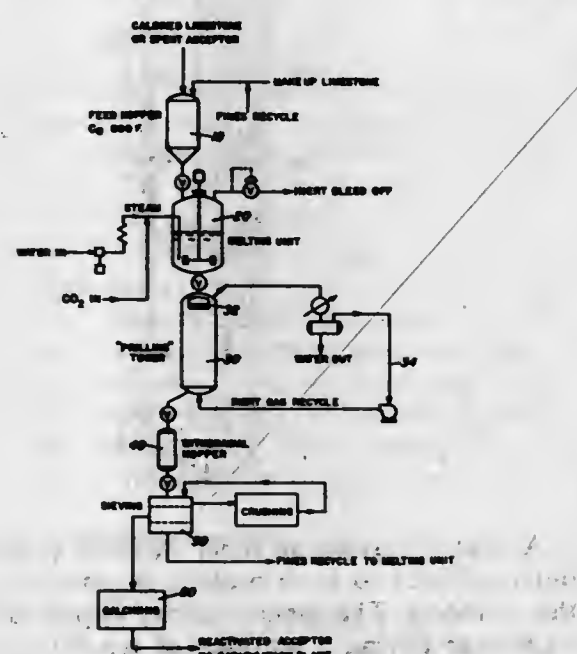
George P. Curran and Everett Gorin, Pittsburgh, Pa., assignors, by mesne assignments, of one-half each to Consolidation Coal Company, Library, Pa., and the United States of America as represented by the Secretary of the Interior

Filed July 19, 1968, Ser. No. 746,205

Int. Cl. C10k 1/00, 1/20

U.S. Cl. 48—197

10 Claims



Lime, which has become inactive for the purpose of removing undesirable CO₂ by-product from chemical reactions, is hydrated to Ca(OH)₂. The Ca(OH)₂ is then mixed with CaCO₃ and/or CaO, and the mix is heated to

a molten state in the presence of steam at an elevated pressure sufficiently high to prevent dehydration of Ca(OH)₂. After solidifying the melt, the Ca(OH)₂ therein is calcined to CaO, which is, at this point, an active material for removing undesirable CO₂.

3,516,809

APPARATUS FOR FORMING FIBERS AND CONTROL THEREFOR

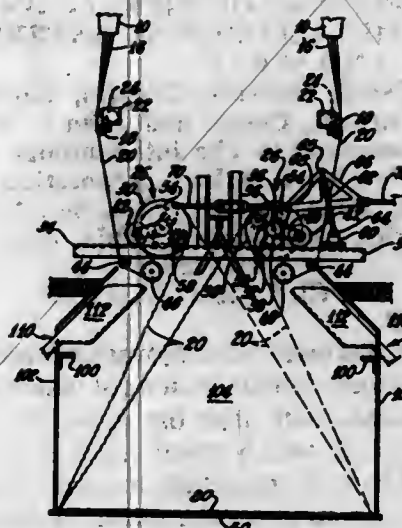
John T. Underwood, Lambertville, Mich., and Burton M. Palmer, Toledo, and Sheldon A. Canfield and Richard E. Pitt, Newark, Ohio, assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Original application Mar. 23, 1964, Ser. No. 356,690, now Patent No. 3,467,739, dated Sept. 16, 1969. Divided and this application Mar. 28, 1969, Ser. No. 840,567

Int. Cl. C03b 23/10, 29/00, 33/08

U.S. Cl. 65—9

8 Claims



The invention relates to a method of and apparatus for exercising control of a plurality of material processing units arranged to normally continuously and concomitantly deliver material onto a moving conveyor and wherein a detector senses impairment or failure of delivery of a normal complement of material from a unit, the detector being effective to modify the rate of movement of the conveyor to maintain substantially normal the size and character of the composite assemblage of the collected material and wherein the unit, which is impaired or fails to deliver its normal complement of material, is rendered ineffective and further delivery of material to the conveyor from such station interrupted until normal operation is restored.

3,516,810

GLASS-BONDED CRYSTALLINE MINERALS AND METHOD OF PRODUCTION

Kenneth H. Ivey, Langley Park, Md., Sidney J. Chastain, Knoxville, Tenn., and Hankiel R. Shell, Langley Park, Md., assignors to the United States of America as represented by the Secretary of the Interior

No Drawing. Continuation-in-part of application Ser. No. 613,055, Jan. 31, 1967. This application Dec. 3, 1968, Ser. No. 780,916

Int. Cl. C03c 3/22

U.S. Cl. 65—33

11 Claims

Glass or glass-producing constituents are mixed with raw materials suitable for synthesizing minerals such as mica, amphiboles and zirconia. The mixture is heated to a temperature at which crystals of the mineral will grow and at which the glass is in a viscous state. The glass and mineral must be substantially free of boron to prevent fluxing and dissolution of the mineral. The heated mixture is then molded into shape.

3,516,811

METHOD OF AND APPARATUS FOR COATING GLASSWARE RETAINING ITS HEAT OF FORMATION

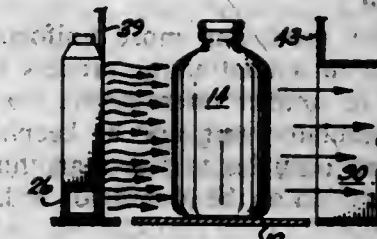
George L. Gatchet, Bainbridge Island, and Matthew J. Decker, Seattle, Wash., assignors to Indian Head, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 4, 1966, Ser. No. 584,244

Int. Cl. C03c 17/00, 25/02

U.S. Cl. 65—60

11 Claims



This invention relates to the selective external surface coating of glassware having body, neck, shoulder, and finish portions while said glassware retains therein its heat of formation. A fluid stream, comprising a heat decomposable metallic compound and air, is sprayed horizontally from a fixed first station. The glassware is moved past this fixed first station; and the fluid stream is caused to envelop and move in a laminar flow pattern in close proximity to the external surface of the glassware by the retaining action of a negative pressure outlet being aligned with the horizontal flow so as to coat the body portion, to limit the coating of the neck and shoulder portions, and to avoid all coating of the finish portion thereof. After coating one side of the glassware by the foregoing process, then the other side is similarly coated. Also, there is disclosed the use of two initially separate fluid streams, one of which comprises anhydrous stannic chloride and air dried to a relatively low dew point and the other stream comprising relatively wet air of larger volume and heated to an elevated temperature just prior to mixing with the first stream. Particular methods of heating are disclosed utilizing the heat of formation retained in the glassware, this heat being utilized in connection with a heat sensing element to control the operation of the apparatus.

3,516,812

TRIPLE GOB GLASS FEEDER

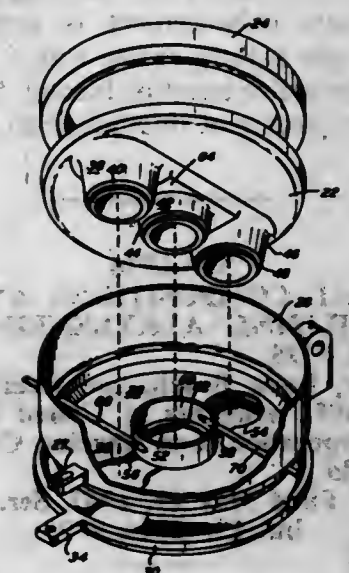
Joseph W. Donnelly and Robert S. Bracken, Vineland, N.J., assignors to Maul Bros. Inc., Millville, N.J., a corporation of New Jersey

Filed July 10, 1967, Ser. No. 652,179

Int. Cl. C03b 5/26

U.S. Cl. 65—327

7 Claims



A glass feeder is provided for feeding three streams of glass with cooling air around the center stream so that flow of all three streams is uniform.

3,516,813

METHOD FOR PRODUCTION OF PELLETED FERTILIZER WITH CONTROLLED FEED PARTICLE SIZE

Benjamin Gilbert Smith, 1228 E. McMillan St., Cincinnati, Ohio 45206
Continuation-in-part of application Ser. No. 459,816, May 28, 1965. This application July 1, 1968, Ser. No. 741,724

Int. Cl. C05

U.S. Cl. 71-64

5 Claims

A method for producing more uniform product size fertilizer pellets in a continuous process by suppressing the percentage of smaller intermediate size granules supplied to the granulator unit, and by keeping the ratio of small unattached particles to less than thirty percent by weight of any section of the granulator bed.

3,516,814

METHOD OF DEFOLIATING PLANTS WITH ORGANOMERCURIALS

John C. Wollensak, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Oct. 31, 1968, Ser. No. 772,358

Int. Cl. A01n 9/38

U.S. Cl. 71-70

2 Claims

Plants are defoliated and desiccated by contacting with a composition containing as an active ingredient organomercury compounds having the formula: $R-Hg-X$ wherein R is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl, and aralkyl groups having up to about 12 carbon atoms and X is a halogen.

3,516,815

SEED GERMINATION ENHANCEMENT

Emil P. Lira, Des Plaines, and Arthur H. Freytag, Mundelein, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Apr. 20, 1967, Ser. No. 632,186

Int. Cl. A01n 21/02

U.S. Cl. 71-77

14 Claims

The emergence of seedlings from sown seeds, especially seeds subjected to adverse environment (e.g., temperature and moisture) conditions, is enhanced by contacting the seeds, during the germination thereof, with benzoyl peroxide, halogenated benzoyl peroxides, t-butyl perbenzoate, or p-methane hydroperoxide. The enhancers of this invention are most conveniently applied to the seeds before sowing. In instances where the seeds are treated before sowing, maximum enhancement is generally obtained when the seeds are slightly coated with a suitable sticker, such as a surface active agent or lanolin, before the application of the enhancers of this invention.

3,516,816

HERBICIDAL COMPOSITIONS AND METHODS UTILIZING ALKYLENEIMINOUREA COMPOUNDS

Don L. Hunter, Long Beach, and Cecil W. Le Fevre, Anaheim, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed May 19, 1967, Ser. No. 639,654

Int. Cl. A01n 9/00

U.S. Cl. 71-88

10 Claims

Novel 1 - (2 - cyanophenyl) - 3 - alkyleneimino urea compounds are provided. The compounds are especially useful as herbicides and can be formulated to provide herbicidal compositions.

3,516,817

HERBICIDAL COMPOSITIONS AND METHODS UTILIZING ALKYLENEIMINOQUINAZOLINE-4-IMINO-2-ONE COMPOUNDS

Cecil W. Le Fevre, Anaheim, and Don L. Hunter, Long Beach, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed June 7, 1967, Ser. No. 644,115

Int. Cl. A01n 9/22

U.S. Cl. 71-92

10 Claims

3 - alkyleneiminoquinazoline-4-imino-2-one compounds having 4-7 carbon atoms in the alkyleneimino ring are provided. The compounds are especially useful as herbicides and can be formulated to provide herbicidal compositions. At low application rates the compounds are useful as selective herbicides such as in peanuts, corn, safflower and cotton.

3,516,818

FIRE REFINING OF NICKEL-CONTAINING METALLURGICAL INTERMEDIATES AND SCRAP

Charles E. O'Neill, Oakville, Ontario, Canada, Paul E. Queneau, Fairfield, Conn., and John S. Warner, Tappan, N.Y., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 29, 1968, Ser. No. 709,203

988,928

Int. Cl. C22b 1/12, 23/00

U.S. Cl. 75-23

20 Claims

A process is disclosed for recovering nickel or nickel-copper alloys from sulfide materials which can contain copper in amounts such that the nickel to copper ratio is at least about 3:7, which process includes surface blowing a turbulent bath of the sulfide material with a gas containing free oxygen to lower the sulfur content to less than about 4% and to introduce sufficient oxygen into the turbulent bath to react with the remaining sulfur and then subjecting the turbulent bath to a subatmospheric pressure of less than about 0.1 atmosphere to remove substantially all of the sulfur as sulfur dioxide.

3,516,819

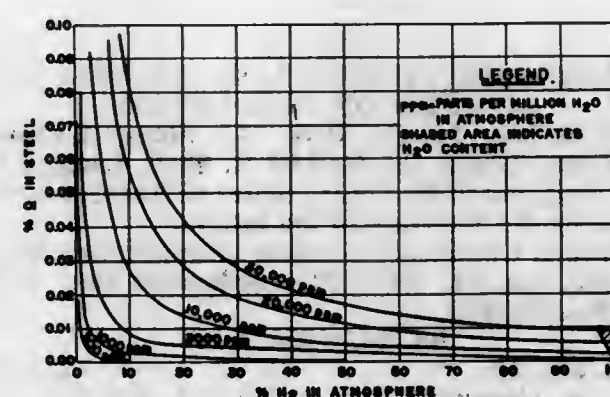
ENVIRONMENTAL CONTROL PROCESS FOR GASEOUSLY REMOVING OXYGEN FROM LIQUID METALS

Norman A. D. Parlee, Los Altos Hills, and William E. Mahlin, Oakland, Calif., assignors to Kaiser Industries Corporation, Oakland, Calif., a corporation of Nevada
Filed Nov. 25, 1966, Ser. No. 596,898

Int. Cl. C21c 7/06

U.S. Cl. 75-51

8 Claims



The use of a hydrogen containing innocuous gas stream to remove dissolved oxygen from molten metal. This can be made feasible only if certain very critical criteria are met. These criteria concern maintaining a rather specific ratio of water vapor concentration in the innocuous at-

mosphere to the percentage of hydrogen present and lowering the hydrogen vapor content of the circulating gas stream in the final stages to remove dissolved hydrogen from the molten metal.

3,516,820

COPPER SMELTING METHOD

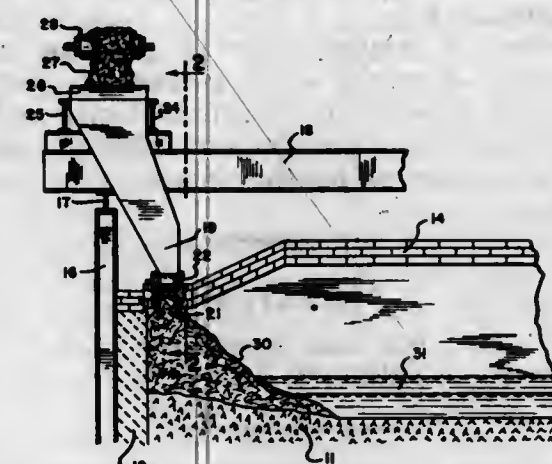
Arthur C. Bigley, Jr., White Pine, Mich., and Emil S. Kramlick, Anaconda, Mont., assignors to The Anaconda Company, New York, N.Y., a corporation of Montana

Filed Apr. 14, 1967, Ser. No. 631,066

Int. Cl. C22b 15/04

U.S. Cl. 75-74

2 Claims



Cupiferous charge materials are introduced substantially continuously into the smelting zone of a side charging reverberatory furnace through longitudinally extending slots formed in the furnace roof adjacent the two side walls of the furnace. The longitudinal slots extend substantially continuously the full length of the smelting zone, and feed hoppers having unimpeded openings that coincide with the longitudinal slots are disposed above the furnace. Charge material contained in the hoppers flows by gravity directly into the furnace to form a substantially continuous sloping bank of charge material disposed against each side wall of the furnace, the charge material substantially completely filling and thereby sealing the longitudinal slots formed in the furnace roof.

3,516,821

PROTECTIVE COVERING FOR MOLTEN METAL

Max Gerhard Neu, 285 Long Acre, Natchez, Birmingham 7, England

No Drawing. Filed Sept. 12, 1966, Ser. No. 578,480
Claims priority, application Great Britain, Sept. 14, 1965, 39,213/65; Nov. 24, 1965, 49,851/65

Int. Cl. C22b 9/10, 9/12, 15/14

U.S. Cl. 75-96

2 Claims

A very finely divided protective cover for molten metals, produced from easily handleable granules of a protective material such as carbon and a material such as vermiculite which, under the action of the heat of the molten metal, intumesces to disintegrate the granules.

3,516,822

SEPARATION PROCESS FOR NICKEL AND COBALT

Georges Bonniard, Metz, France, assignor to Institut de Recherches de la Siderurgie Francaise, Saint Germain-en-laye, Yvelines, and Bureau de Recherches Geologiques et Minieres, Paris, France

Filed Apr. 25, 1967, Ser. No. 633,468

Claims priority, application France, Apr. 29, 1966, 59,593

Int. Cl. C22b 23/04

U.S. Cl. 75-103

11 Claims

An ammonium carbonate solution containing dissolved nickel and cobalt is passed through a reaction tower

in which has been placed granular titanium phosphate. The cobalt is absorbed therein and the nickel is extracted in conventional manner from the ammonium carbonate solution passed out of the tower. An acid solution, particularly hydrogen chloride, is passed through the titanium phosphate in the tower to dissolve the cobalt, which is then recovered from the acid solution. The acid solution also causes the regeneration of the titanium phosphate. High yields, such as about 97% cobalt and 99.5% nickel can be obtained. Also, both metals are recovered in a high degree of purity.

3,516,823

NONMAGNETIC FERRONICKEL-CHROMIUM ALLOYS OF LOW THERMOELASTIC COEFFICIENT

Xavier Waché, Sauvigny-les-Bols, France, assignor to Societe Metallurgique d'Imphy, Paris, France, a company of France

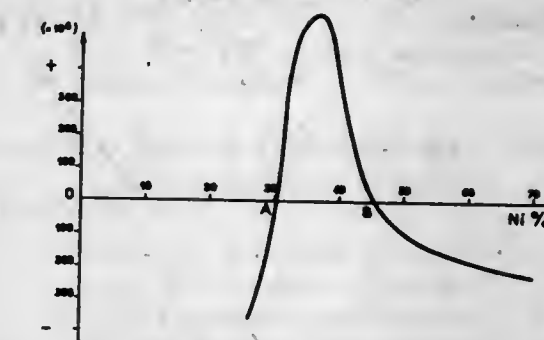
Filed July 12, 1967, Ser. No. 652,771

Claims priority, application France, July 21, 1966, 70,386

Int. Cl. C22c 39/20

U.S. Cl. 75-128

1 Claim



A nonmagnetic alloy having a zero or approximately zero thermoelastic coefficient including by weight 26 to 29% nickel and 5 to 8.5% chromium, the remainder being iron and possibly small percentages of carbon, silicon, manganese and tungsten. Balance springs obtained from this alloy are used for watches.

3,516,824

FERROUS ALLOY CONTAINING NICKEL COBALT AND CHROMIUM

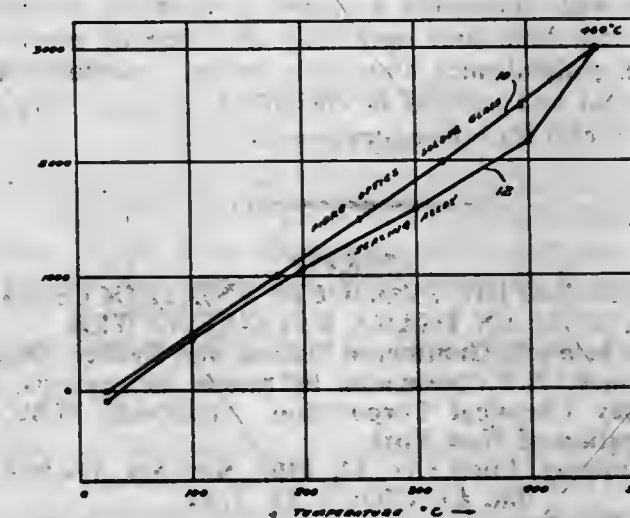
Arnold J. Gottlieb, Colonia, and George A. Majesko, Glen Ridge, N.J., assignors to Wilbur B. Driver Company, a corporation of Delaware

Filed Apr. 30, 1968, Ser. No. 725,279

Int. Cl. C22c 39/08

U.S. Cl. 75-128

5 Claims



An alloy used in forming glass to metal seals and the like and containing, as major constituents, nickel, cobalt, chromium and iron.

3,516,825 SOLDER FOR SOLDERING OR BRAZING CAST IRON

Andrei Nikolaevich Shashkov, Lomonosovsky prospekt 23, kv. 550; Gnesa Abramovna Asimovskaya, Metrostrovskaya ulitsa 3/14, kv. 44; and Inna Ivanovna Ilina, Perovskaya ulitsa 51, kv. 20, all of Moscow, U.S.S.R. No Drawing. Filed Dec. 21, 1967, Ser. No. 692,292
Int. Cl. C22c 9/02, 9/04, 9/06

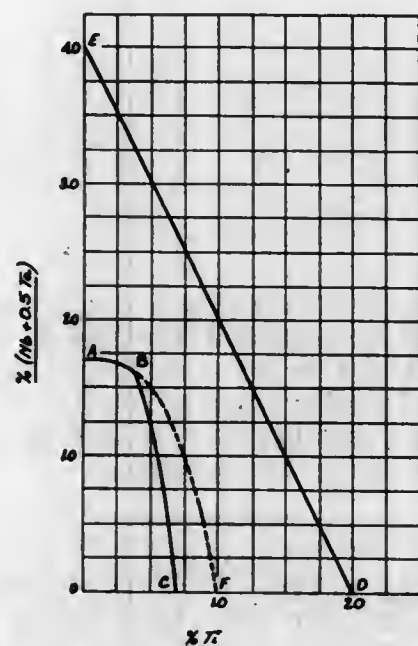
U.S. Cl. 75—134 1 Claim
A solder for soldering and brazing cast iron consisting of 48–50% Cu, 0.8–1.0% Sn, 9.5–10.5% Mn, 3.5–4.5% Ni, 0.15–0.25% Al and the remainder Zn.

3,516,826 NICKEL-CHROMIUM ALLOYS

David Marshall Ward, Birmingham, Paul Isidore Fontaine, Solihull, and Michael John Fleetwood, Berkhamsted, England, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 14, 1968, Ser. No. 752,549
Claims priority, application Great Britain, Aug. 18, 1967, 38,280/67

Int. Cl. C22c 19/04
U.S. Cl. 75—171 13 Claims



Nickel-chromium-iron alloys having high strength at elevated temperatures combined with corrosion-resistance and structural stability contain from 30.8 to 60% nickel together with controlled amounts of titanium, niobium and/or tantalum, and optionally also one or more of tungsten, molybdenum, aluminum, boron, zirconium, rare earth metal and yttrium in controlled amounts. The alloys are useful for boiler superheater tubes.

3,516,827 PHOTOGRAPHIC PRODUCTS AND PROCESSES USING AN IMAGE RECEIVING WEB

Seymour Schreck, Huntington Station, and Reuben Siegel, Commack, N.Y., assignors, by mesne assignments, to Townley Chemical Corporation, Amityville, N.Y., a corporation of New York

No Drawing. Filed Oct. 24, 1965, Ser. No. 504,999
Int. Cl. G03c 1/48, 5/54

U.S. Cl. 96—29 9 Claims
Processes comprising vacuum deposition of precipitation nuclei on the surface of substrate permeable to monobath developer to render the substrate capable of forming a reverse visible image by contact with an exposed silver

halide emulsion, such substrates capable of forming reverse visible images, and processes for forming reverse visible images on such substrates.

3,516,828 PRODUCTION OF PRINTING PLATES

Josef Georg Floas, Ludwigshafen (Rhine), Rudolf Brodt, Weinheim an der Bergstrasse, Herbert Henkler, Darmstadt, and Hugo Strehler and Hans Wilhelm, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 28, 1967, Ser. No. 663,511
Int. Cl. G03c 1/68

U.S. Cl. 96—35.1 2 Claims
Production of printing plates by exposing plates or sheets made of mixtures of polyamides, p-xylylene-bisacrylamide or p-xylylene-bismethacrylamide and photoinitiators and/or polymerization inhibitors to light through a negative or positive and removing the unexposed areas.

ERRATUM

For Class 96—36 see:
Patent No. 3,516,346

3,516,829
PHOTOGRAPHIC ACTIVATOR SOLUTION
Robert George Clarke, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 16, 1966, Ser. No. 534,648
Int. Cl. G03c 5/26

U.S. Cl. 96—50 3 Claims
Aqueous activator solutions for colloid transfer systems contain aluminate, zincate, plumbate, chromate, molybdate, or stannate ions and gelatin softener, for example, 3 g. to about 50 mg. of sodium aluminate per liter of solution and sodium salicylate and advantageously free formaldehyde.

3,516,830 PHOTOGRAPHIC SILVER HALIDE EMULSIONS AND ELEMENTS

Thomas E. Whiteley, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 17, 1965, Ser. No. 488,254
Int. Cl. G03c 1/04

U.S. Cl. 96—67 12 Claims
High contrast photographic silver halide emulsions having a binding agent of aqueous silver halide peptizer and a water-insoluble polymeric vinyl compound and containing a water-soluble block copolymer comprising blocks of polyoxyethylene and polyoxypropylene are disclosed. In photographic elements containing such emulsions, the water-soluble block copolymer can be in a layer other than the emulsion layer.

3,516,831 MULTICOLOR PHOTOGRAPHIC ELEMENTS CONTAINING BOTH 4-EQUIVALENT AND 2-EQUIVALENT COLOR-FORMING COUPLERS

Wilfred L. Wolf and Clark Beckett, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 27, 1967, Ser. No. 634,104
Int. Cl. G03c 1/76

U.S. Cl. 96—74 14 Claims
Multicolor photographic elements which contain double-coated differentially color sensitive color-forming

units in which each color-forming unit contains a faster silver halide emulsion layer that receives light image exposure before a slower silver halide emulsion layer have increased photographic speed and improved image definition when an appropriate 4-equivalent color-forming coupler is incorporated in the faster emulsion layer and an appropriate 2-equivalent color-forming coupler is incorporated in the slower emulsion layer of at least the first color-forming unit in the element to receive exposing light.

3,516,832 PHOTOGRAPHIC ARTICLES AND MATERIALS USEFUL IN THEIR MANUFACTURE

Howard F. Earhart, Frederick J. Jacoby, and Clemens B. Starck, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1966, Ser. No. 596,803
Int. Cl. G03c 1/76

U.S. Cl. 96—87 1 Claim
This development relates to film materials that are especially adapted for use as photographic film units in film packs which in turn are preferably adapted for development outside the camera. The photographic films for this invention are comprised of a black film base having on one surface thereof a layer containing spherical polymeric beads, carbon black and low viscosity cellulose nitrate (to provide improved adhesion to the film base). Optionally, on the other surface is a white layer containing titanium dioxide pigment and low viscosity cellulose nitrate, a gel sub layer, and finally a photographic emulsion. This particular application is directed to the photographic film element.

3,516,833 PHOTOGRAPHIC MATERIAL CONTAINING A HYDROPHILIC COLLOID AND A SUCROSE ESTER

Walter Hagge and Mathieu Quaedvlieg, Leverkusen, Rudolf Heusch, Cologne-Stammheim, Konrad Hebbel, Leverkusen, and Richard Schiffmann, Cologne-Flittard, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 9, 1964, Ser. No. 336,648
Claims priority, application Germany, Jan. 26, 1963, A 42,180

Int. Cl. G03c 1/38
U.S. Cl. 96—114.5 7 Claims
This invention relates to silver halide photographic elements having at least one layer comprising a hydrophilic colloid and a sucrose ester of an aliphatic monocarboxylic acid having at least 8 carbon atoms.

3,516,834 IONIZING RADIATION SENSITIVE PHOTOGRAPHIC ELEMENT COMPRISING FOAMED GELATIN-SILVER HALIDE EMULSION

Roger G. L. Audran, Vitry-sur-Seine, Philippe F. Delest, Paris, and Maurice Vigé, Vincennes, France, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 18, 1966, Ser. No. 535,343
Int. Cl. G03c 1/02, 1/72

U.S. Cl. 96—114 5 Claims
This invention relates to new photosensitive, silver halide elements having a cellular structure and to processes for making said elements. In one aspect of this invention, the cellular structure is a gelatin foam which has preferably been hardened.

3,516,835 COATING COMPOSITIONS COMPRISING ALPHA-SULFO LOWER ALKYL ESTER OF A C₇ TO C₁₁ FATTY ACID

E. Scudder Mackay, Binghamton, N.Y., and Raymond L. Mayhew, Summit, and George M. Gantz, Upper Saddle River, N.J., assignors to GAF Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 29, 1965, Ser. No. 505,738
Int. Cl. G03c 1/38

U.S. Cl. 96—114.5 13 Claims
Coating compositions, suitable for use in light-sensitive photographic elements, which comprise a water-permeable colloid, e.g., gelatin, and as a coating aid, a small amount of at least one alpha-sulfo lower alkyl ester of a fatty acid having from 7 to 18 carbon atoms.

ERRATUM

For Class 99—14 see:
Patent No. 3,516,349

3,516,836 FRUIT CONTAINING BAKING MIXES

Richard A. Shea, Burnsville, Minn., assignor to The Pillsbury Company, Minneapolis, Minn., a corporation of Delaware

No Drawing. Filed Dec. 23, 1966, Ser. No. 604,163
Int. Cl. A21d 2/00, 13/08

U.S. Cl. 99—94 24 Claims
Partially dehydrated fruit pieces are encapsulated with a coating having a melting point from about 95° to about 180° F. and which protects the fruit pieces from a loss or gain of moisture. Baking mixes containing the protectively coated partially dehydrated fruit pieces are adapted to provide a baked product wherein the fruit pieces have a taste and texture similar to freshly cut baked fruit pieces. Baking temperatures effectively remove the protective coating and the partially dehydrated fruit pieces are then fully hydrated.

3,516,837 FLAMMABLE MIXTURE UTILIZED IN SERVING OF FOOD

Samuel Klein, 135 Eastern Parkway, Brooklyn, N.Y. 11238

No Drawing. Filed Aug. 11, 1966, Ser. No. 571,698
Int. Cl. A23i 1/22

U.S. Cl. 99—144 6 Claims
A non-potable highly flammable solution, for serving foods enveloped in flames containing fruit juices, wine, spice, alcohol and sufficient salt to render the solution non-potable.

3,516,838 INTERMEDIATE MOISTURE FOODSTUFFS CONTAINING REDUCED POLYSACCHARIDES

Robert N. Du Puis, Chappaqua, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed July 14, 1966, Ser. No. 565,094
Int. Cl. A23i 3/34; A23b 1/14

U.S. Cl. 99—150 6 Claims
Intermediate moisture food products, and processes for treating the same comprising incorporating into said intermediate moisture products, water soluble reduced edible polysaccharides of partial starch hydrolyzates and partially depolymerized rearranged starch in which the aldehyde groups have been at least partially converted to methylol groups.

3,516,839

TRANSPARENT MAGNESIA-ALUMINA SPINEL AND METHOD

Charles A. Bruch, Paoli, Pa., assignor to General Electric Company, a corporation of New York
Filed Sept. 1, 1967, Ser. No. 665,154
Int. Cl. C04b 33/00

U.S. Cl. 106—39 5 Claims
Spinel is a hard, strong material which has not heretofore been available in transparent form. Transparent spinel may be produced in a hydrogen atmosphere by a process comprising (1) melting either relatively pure spinel or a mixture of relatively pure alumina and magnesia in a proportion of 45–85 mole percent alumina; (2) holding the melt above its liquidus temperature for a period sufficiently long to permit its homogenization and degasification; and (3) allowing the melt to solidify sufficiently rapidly to prevent the formation of solid equilibrium mixtures at low temperatures.

3,516,840

PRODUCTION OF CERAMIC BODIES

Walter H. Gitzen, Belleville, and George MacZura, East St. Louis, Ill., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Original application Oct. 22, 1964, Ser. No. 405,851, now Patent No. 3,432,313, dated Mar. 11, 1969. Divided and this application Oct. 31, 1968, Ser. No. 772,431

The portion of the term of the patent subsequent to Mar. 11, 1986, has been disclaimed
Int. Cl. C04b 35/10

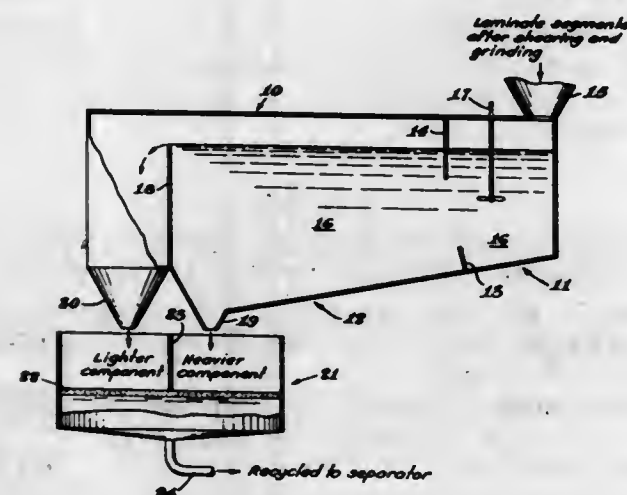
U.S. Cl. 106—65 2 Claims
A mixture adapted for making ceramic articles, said mixture composed of 20–80% alumina particles having a median particle size of 2.5–6 microns and 80–20% alumina particles having a median size of about 1 micron.

3,516,841

SEPARATING AND RECLAIMING OF COMPONENTS FROM METALLIC-PLASTIC LAMINATE STRUCTURES

Gerrit Haveman, Amsterdam, Noordholland, Netherlands, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Original application Mar. 14, 1963, Ser. No. 265,217, now Patent No. 3,335,966, dated Aug. 15, 1967. Divided and this application Feb. 20, 1967, Ser. No. 661,483
Int. Cl. C08f 27/04; C08g 53/22

U.S. Cl. 106—193 6 Claims



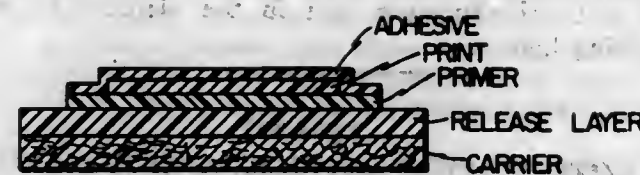
The present invention relates to a method of converting an aluminum-plastic laminate structure into an aluminum oxide-filled plastic raw material which can be used for fabricating other products.

3,516,842

HEAT TRANSFER LABEL

John J. Klinker, Jr., and Robert N. Sensel, Jr., Cincinnati, Ohio, assignors to Diamond International Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1966, Ser. No. 545,543
Int. Cl. B41m 3/12; B32f 33/00

U.S. Cl. 117—3.4 12 Claims



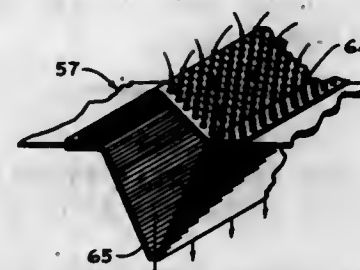
A four-layer heat transfer decalcomania carried by a natural kraft backing and transferable to a plastic bottle is provided. The label includes a wax-like heat-release layer of a low-molecular weight polyethylene wax having a saponification number between 15 and 23, an unoxidized wax having a corona treated surface, or a blend of 20–40% ethylene-vinyl acetate copolymer and 80–60% paraffin wax having a melting point of 150–155° F.

3,516,843

DIAZO PAPER SENSITIZING PROCESS

Benjamin A. Knowlton, Jr., 1301 Sanford Drive, Columbia, S.C. 29206
Filed Sept. 26, 1962, Ser. No. 226,213
Int. Cl. B44d 1/48; G03c 11/06

U.S. Cl. 117—34 4 Claims



A continuous coating process wherein one side of the paper is coated with a diazotype precoat solution and dried, the precoat paper is overcoated with a diazo solution and partially dried, and then the paper is wetted on the uncoated side and dried. The drying steps utilize intermittent jets of hot air directed forcefully against the treated surface in narrow strips. The major portion of dissipated drying air is reheated and recirculated to the air jets with a portion being replaced to keep the moisture content below saturation. An excess of coating and wetting solutions is applied at each treating station and thereafter removed by air knives.

3,516,844

COATING OF GELATIN SILVER HALIDE PHOTOGRAPHIC EMULSIONS

John Frank Paddy, Jordans, near Beaconsfield, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 27, 1967, Ser. No. 656,322
Claims priority, application Great Britain, July 28, 1966, 33,921/66

Int. Cl. G03c 1/00, 1/38, 1/74
U.S. Cl. 117—34 7 Claims

In manufacture of photographic papers and the like wherein a photographic silver halide emulsion is coated on a baryta surface, coating speeds can be substantially increased by including in the baryta layer a surface active agent which is a condensation product of an alkylene oxide with a straight chain or branched chain alcohol or an alkyl phenol.

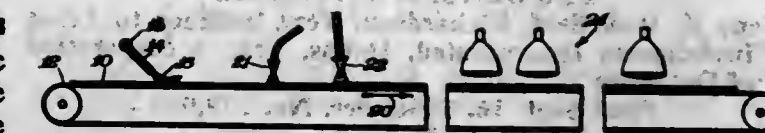
3,516,845

RECORD SHEET SENSITIZED WITH SALT MODIFIED KAOLIN-PHENOLIC MATERIAL

Bruce W. Brackett, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
No Drawing. Filed Jan. 24, 1967, Ser. No. 611,249

Int. Cl. B41m 5/22 7 Claims
U.S. Cl. 117—36.2

Paper coating compositions containing kaolin, phenolic resins, and salts of class 2B metals such as zinc chloride are disclosed. The addition of the salts enhances the color activation by kaolin-phenolic resin and the fade resistance of the colored form of normally colorless chromogenic compounds. The useful metal salts are those exhibiting a valence of 2, and in order of merit are salts of the 2B metals, i.e., zinc, cadmium, and mercury; divalent tin; the 2A metals, i.e., calcium, magnesium and strontium; and the transitional metals, e.g., manganese, cobalt and nickel. The effective metallic compounds useful in making the coating composition of this invention and in making paper coatings containing kaolin-phenolic resin are the halide, nitrate, sulfate, and acetate reaction products of metals taken from the group consisting of zinc, cadmium, mercury, calcium, magnesium, strontium, barium, manganese, cobalt, nickel, and divalent tin.



ple layers with intervening drying. In situ reduction is effected by final curing at about 250 to 475° F. Dispersions can have relatively low water content. Alternative coating technique uses coating mixture thickened to keep it from soaking in, and does not require preheating of surface.

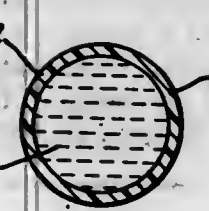
3,516,848

PROCESS AND SOLUTION FOR SENSITIZING SUBSTRATES FOR ELECTROLESS PLATING

Donald Gardner Foulke, Watchung, Plainfield, and Atkin Simonian, Fort Lee, N.J., assignors to Sel-Rex Corporation, Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 18, 1965, Ser. No. 497,504

Int. Cl. C23c 3/00, 17/00 4 Claims
U.S. Cl. 117—47

The invention relates to an improved process of catalyzing substrates preparatory to plating by the electroless process and is characterized by the step of catalyzing said substrate by treating it with an aqueous solution of alkali gold sulfite.



A sheet material is provided containing microcapsules filled with water-insoluble organic liquid, the shell of the microcapsule being of a water-insoluble urea-formaldehyde product produced by polymerization for at least one hour by acid catalysis of a urea-formaldehyde precondensate in an aqueous solution maintained substantially free of wetting agents and at a pH within the range of about 1 to 5 during polymerization.

3,516,847

COATING CEMENTITIOUS ARTICLES

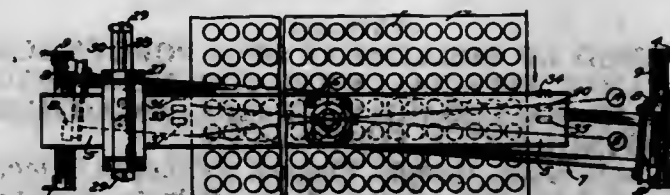
Ludwig K. Schuster, Dresher, and Singkata Tongyai, Warrington, Pa., assignors to Pennwalt Corporation, a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 434,214, Feb. 23, 1965, now Patent No. 3,421,934. This application Feb. 7, 1966, Ser. No. 525,663

Int. Cl. C03c 25/00 9 Claims
U.S. Cl. 117—46

Cementitious articles like asbestos-cement panels have surface coated with very thin layer of resin containing in situ reduced chromic acid or water-soluble dichromate of

A spray coating apparatus for coating rows of glass containers travelling on a conveyor. The spray moves laterally across the conveyor in both directions during the spraying operation. The spray is kept between the container rows on both passes by a pivotal mounting of its support. The support is pivoted or turned at the end of each traverse by having the spray device contact microswitches. The spray device may mount two spray heads which move between adjacent rows of containers and which simultaneously coat the front and back portions of the containers in one row and one side of the containers in flanking rows. Separate photoelectric means



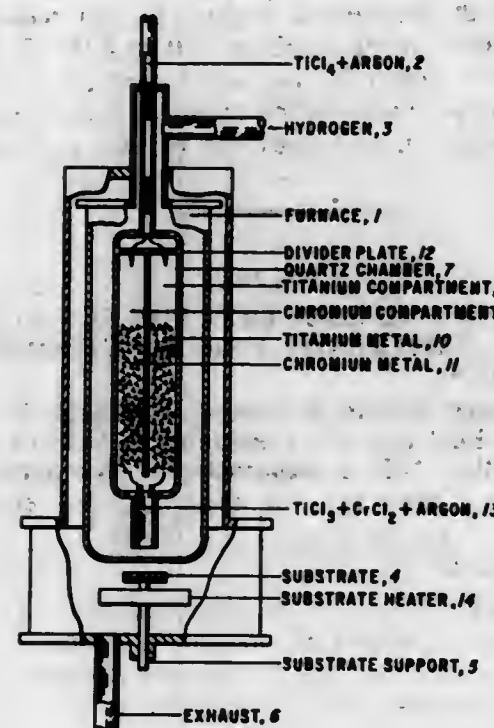
initiate the travel of the spray device and sense obstructions in the empty rows to turn off the spray during its travel.

3,516,850 PROCESS FOR METAL COATING A HYDROGEN PERMEABLE MATERIAL

Gene F. Wakefield, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Sept. 16, 1966, Ser. No. 579,963
Int. Cl. C23c 11/02, 17/00
U.S. Cl. 117-95

5 Claims



A method of vapor depositing metals on a substrate by reducing titanium and chromium halides with hydrogen under controlled conditions to chemically vapor deposit titanium and chromium alloys on the substrate. Alternatively, the invention encompasses depositing one or more metals upon a given substrate surface by reducing halides of these metals with hydrogen, the hydrogen being diffused through the substrate.

3,516,851 METHOD OF TREATMENT OF A POROUS SUBSTANCE, ESPECIALLY TREATMENT OF SEMI-SOLID WALLBOARD WITH FIRE- AND OTHER EXTINGUISHING SUBSTANCES

Anjal Anils Kalla, Helsinki, Finland, assignor to Heinolan Faneritehdas, Zachariassen & Co., Helsinki, Finland

Filed Aug. 15, 1967, Ser. No. 660,804
Claims priority, application Finland, Apr. 25, 1967, 1,209/67

Int. Cl. B50c 1/00

U.S. Cl. 117-111

6 Claims

A method for the treatment of fibreboard with a protective substance selected from the group consisting of flame resistant, rot and mould resistant substances and insecticides.

The method comprises impregnating the fibreboard with a solution of the protective substance by using presses, at least one press surface thereof being provided with a porous cushion, into which said solution is impregnated, and from which said solution is absorbed under pressure into said fibre board.

3,516,852 ADHESIVE STRIP

Edward W. Janssen, Rossville, Village, and Jerome A. Pieterick, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Continuation-in-part of application Ser. No. 384,447, July 22, 1964. This application Oct. 2, 1967, Ser. No. 674,053

Int. Cl. C09j 7/02, 7/04
U.S. Cl. 117-122

7 Claims



Adhesive strip providing an easy-opening feature for a metal can in that the adhesive strip hermetically seals the can but is easily peeled away with the fingertips to open the can. The key to the invention is the adhesive which both continuously resists a dead load shear such as is exerted by the vapors in a can of coffee and also provides a peel resistance within the desired range of 2½ to 6½ pounds per ½-inch width.

3,516,853 PROCESS FOR FLAMEPROOFING POLYMERIC MATERIALS

Giuliana C. Tesoro, Dobbs Ferry, N.Y., and Wing-Kai Lee, Hackensack, and Kelvin B. Domova, Newark, N.J., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 490,658, Sept. 27, 1965. This application Oct. 17, 1967, Ser. No. 675,789

Claims priority, application Great Britain, Feb. 21, 1967, 8,145/67

Int. Cl. C09d 5/18; D06m 13/44
U.S. Cl. 117-136

13 Claims

A method for flameproofing polymeric material through treating said material with a solution of tris(1-aziridinyl) phosphine oxide and a nitrogen containing phosphonate, and cellulosic material impregnated with the insoluble product formed by co-reacting tris(1-aziridinyl) phosphine oxide and a nitrogen containing phosphonate.

3,516,854 ORGANOSILICON WATER-REPELLENCY AGENT AND METHOD OF APPLYING A WATER-REPELLENT COATING

James W. Curry, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

No Drawing. Filed July 6, 1967, Ser. No. 651,358
Int. Cl. B44d 1/46; C07f 7/04

U.S. Cl. 117-161

9 Claims

A water-repellency agent comprising a n-alkyltri-(n-alkoxy)silane, having the general formula:



where R is an alkyl radical having between 6 and 18 carbon atoms and R' is an alkyl radical having between 4 and 6 carbon atoms, for example, n-octadecyltri-(n-hexyloxy)silane and a method of applying a water-repellent coating to an article, such as paper, by applying a solution of the n-alkyltri-(n-alkoxy)silane in an unreactive solvent, such as benzene, to the article, drying the article to evaporate the solvent and heat-curing the coating formed on the article by evaporation of the solvent for about 10 minutes at about 350° F. Also, the use of 1,3-di-n-octyl-1,1,3,3-tetraethoxydisiloxane as a water-repellency agent and the method of applying the disiloxane by the above steps is detailed.

3,516,855 METHOD OF DEPOSITING CONDUCTIVE IONS BY UTILIZING ELECTRON BEAM

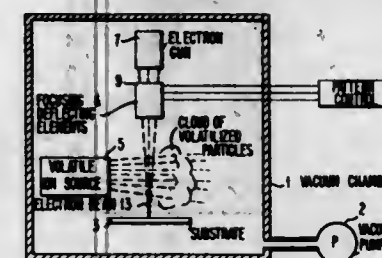
Frederick M. Goll, Reading, Pa., and Edwin C. Baldwin, Endicott, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed May 29, 1967, Ser. No. 642,013

Int. Cl. B44d 1/18; C23c 13/02

U.S. Cl. 117-212

4 Claims



A method of making an electrical conductive device of the printed circuit type in which metallic ions are supplied to lay down a conductive pattern at predetermined locations on a non-conductive substrate by the utilization of an electron beam which attracts and deposits positively ionized conductive particles along the path of the beam impinging on the non-conductive substrate.

3,516,856 METHOD OF SEALING THE ENDS OF ELECTRICAL COMPONENTS

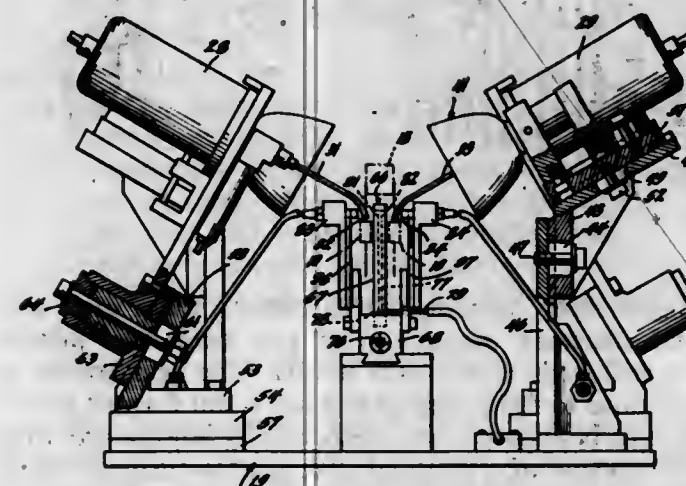
Wilhelm Emil Albert Schmidt, Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed June 15, 1967, Ser. No. 646,360

Int. Cl. B44d 1/18

U.S. Cl. 117-212

3 Claims



A method of sealing the ends of electrical components which may be adversely affected by the heating thereof. A plurality of components are held in parallel relationship with one end facing upwardly and a bead of sealing material, such as an epoxy, is successively deposited on each end thereof. The beads of sealing material are then heated by a radiant energy source to soften and liquefy the beads so that each bead flows over the entire end surface of the component and about a terminal lead extending from the end. The radiant energy is focused so that it impinges only on the end of the component. Additionally, the body of the component is shielded from the radiant energy source so that it is not deleteriously heated during the softening of the bead of sealing material. Facilities are provided for holding a plurality of components and for successively dispensing a first and a second bead of sealing material on the ends of each component.

3,516,857 PALLADIUM-SILVER-CERAMIC CONTACTS

Oliver A. Short, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Mar. 25, 1965, Ser. No. 442,668, now Patent No. 3,413,240, dated Nov. 26, 1968. Divided and this application Apr. 23, 1968, Ser. No. 723,597

Int. Cl. H01b 1/02; B44d 1/18

U.S. Cl. 117-212

6 Claims

Electrical circuit elements having electrical contacts prepared from compositions comprising, in critical proportionate amounts, (A) a substance in finely divided form from the group consisting of metallic palladium, palladium oxide and palladium/silver alloys, (B) finely divided silver, and (C) finely divided ceramic binder.

3,516,858 SELF-BONDING MAGNET WIRE AND PROCESS FOR PREPARING SAME

Andrew F. Fitzhugh, Wilbraham, and James A. Snelgrove, Monson, Mass., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 14, 1967, Ser. No. 660,190

Int. Cl. B44d 1/14; B32b 15/08

U.S. Cl. 117-218

8 Claims

Disclosed herein are self-bonding magnet wires comprising a metal conductor coated with a self-fluxing base enamel prepared from a blocked isocyanate resin which in turn is coated with a self-bonding enamel which comprises a polyvinyl acetal based composition which contains at least 0.5 part by weight per hundred parts of resin component of an amine component selected from the group consisting of primary and secondary amines.

3,516,859 METHOD OF PRODUCING INSULATED ELECTRICAL CONDUCTOR

Heinz Gerland and Werner Gotze, Berlin, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed Sept. 12, 1967, Ser. No. 667,204

Claims priority, application Germany, Sept. 13, 1966, S 105,822

Int. Cl. B44d 1/14; H01b 3/30; B32b 15/08

U.S. Cl. 117-218

3 Claims



Insulated electrical conductor includes a central core of electrically conductive material, a coating of sintered foamed pulverulent thermoplastic material surrounding the core, and a coating of sintered non-foamed pulverulent thermoplastic material surrounding the first-mentioned coating.

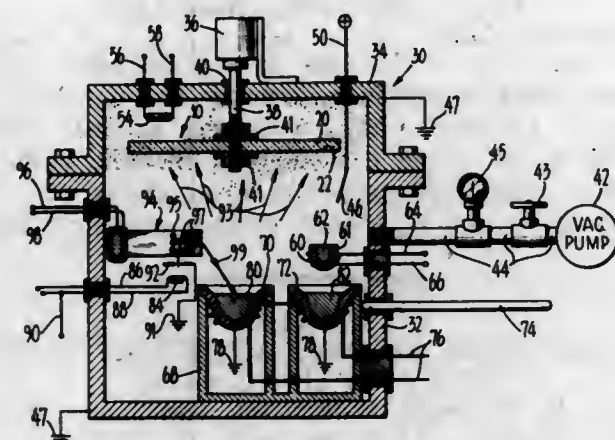
Method of producing the insulated electrical conductor includes coating a conductor with a foamed liquid dispersion of pulverulent thermoplastic material, heating the coating to temperature at which the dispersing liquid evaporates and the remaining foamed pulverulent thermoplastic material coating the conductor is sintered, coating in turn the coating of sintered foamed material with a non-foamed liquid dispersion of the pulverulent thermoplastic material and heating the coating of non-foamed material to temperature at which the dispersing liquid evaporates and the remaining non-foamed material is sintered.

3,516,860 METHOD OF FORMING A MAGNETIC RECORDING MEDIUM

Charles A. Simmons, Liverpool, N.Y., assignor to The Singer Company, a corporation of New Jersey
Filed Aug. 31, 1967, Ser. No. 664,835
Int. Cl. G11b 5/72

U.S. Cl. 117-236

2 Claims



A magnetic recording disk having a glass substrate, a bonding layer, a magnetizable thin film, and an abrasion resistant coating. Each layer is deposited on the glass substrate by a vapor deposition method carried out in vacuum.

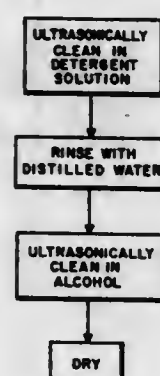
3,516,861 GLASS DOSIMETER WASHING TECHNIQUE AND APPARATUS

Cirel K. Menkes, San Francisco, and Maynard A. Tasem, South San Francisco, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Mar. 10, 1967, Ser. No. 623,188
Int. Cl. B08b 7/04

U.S. Cl. 134-1

1 Claim



A method and apparatus for removing without the application of heat surface contaminants from small glass dosimeters. The method comprises the steps of ultrasonically cleaning the dosimeters in a detergent solution, rinsing the cleaned dosimeters with distilled water, ultrasonically cleaning in alcohol and drying the dosimeters by passing cool air over the dosimeters.

3,516,862 RECHARGEABLE ALKALINE-ZINC CELL WITH POROUS MATRIX CONTAINING TRAPPING MATERIAL TO ELIMINATE ZINC DENDRITES

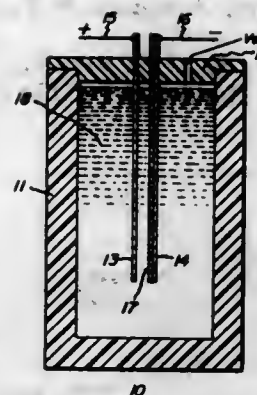
Willem J. van der Grinten, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 1, 1968, Ser. No. 717,499
Int. Cl. H01m 43/02

U.S. Cl. 136-30

8 Claims

A rechargeable alkaline-zinc cell has a positive electrode, a zinc negative electrode, an alkaline electrolyte,

and a chemically inert porous matrix with a trapping material in the form of microscopic particles which is incorporated into the negative electrode or is positioned



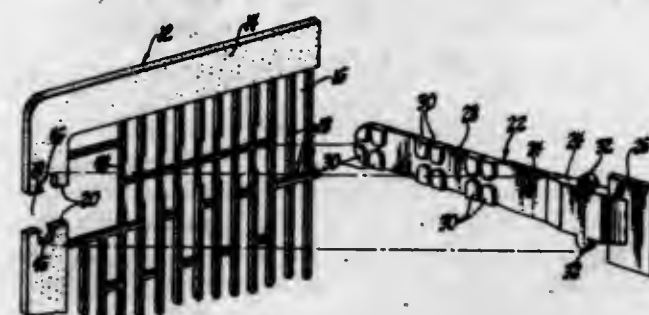
adjacent the negative electrode. A process is described for generating electrical energy from such a rechargeable alkaline-zinc cell.

3,516,863 BATTERY PLATE STRUCTURE

Norman L. Willmann, Anderson, and Jerry L. Helms, Muncie, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 22, 1968, Ser. No. 699,395
Int. Cl. H01m 35/04

U.S. Cl. 136-58

7 Claims



A lightweight, nonconductive battery plate grid and terminal structure therefor. The grid comprises principally a grid body and a grid border. The grid border is discontinuous to the extent that it has a slot formed therein. The slot boundaries are mechanically interlocked with the head portion of a terminal structure by means of complementary cooperating members in the slot and on the head. The terminal structure preferably has an extension such as a stem portion which extends into and mates with the grid body. A groove or slot may be formed in the grid body to assist in the mating of the stem or extension with the grid body. The grid is preferably coated with a conductive material prior to pasting with active material.

3,516,864 BATTERY GRID AND TERMINAL THEREFOR

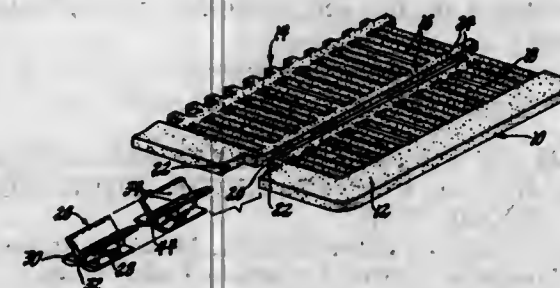
Norman L. Willmann, Anderson, and Ellis G. Wheadon, Yorktown, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 20, 1967, Ser. No. 684,151
Int. Cl. H01m 35/04

U.S. Cl. 136-58

8 Claims

A nonconductive battery grid and terminal therefor, which grid includes an elongated slot for receiving and retaining the terminal. The terminal is comprised of a deformable, preferably fusible, material and has a base

portion and an interlocking portion. The interlocking portion extends into and through the slot and is deformed into interlocking engagement with the boundaries of the slot. The terminal is preferably fused to itself. The grid



is preferably coated with a conducted material, e.g., lead. Various terminals are disclosed which have interlocking portions which include bifurcated members, bifurcated and flared members, sectioned members with alternately deformable leaves, and elongated rivet-like members.

3,516,865 ELECTROCHEMICAL CELL INCLUDING IRON- CHROMIUM ALLOY CONDUCTOR CONNECTED TO CATHODE

Craig S. Tedmon, Jr., Scotia, and Donald W. White, Burnt Hills, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Filed Aug. 30, 1967, Ser. No. 664,271
Int. Cl. H01m 27/04

U.S. Cl. 136-86

3 Claims

The use of iron-chromium alloys is disclosed as an electrical conductor in an electrical device, for example as a lead wire in a high temperature fuel cell, normally operating at temperatures in excess of 500° C. in an oxidizing atmosphere. Alloy compositions may range from between about Fe-15% Cr to about Fe-85% Cr with small amounts of alloying agents (up to about 2 wt. percent each alloying agent, such as yttrium, hafnium, zirconium and thorium, used) being added to those iron-chromium alloys containing greater than about 45 weight percent chromium content, where there is need to improve oxidation resistance and resistance to nitrication.

In addition a process for the fabrication of iron-chromium alloys containing more than 27% chromium is described.

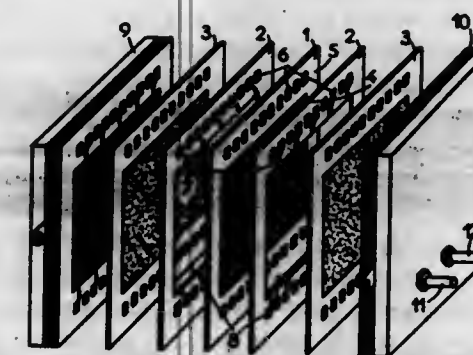
3,516,866 COMPACT FUEL CELL BATTERY

Bernard Warszawski, Paris, France, assignor to Societe Generale de Constructions Electriques et Mecaniques (Alsthom), Paris, France, a corporation of France
Filed Feb. 26, 1968, Ser. No. 708,444
Claims priority, application France, Feb. 24, 1967, 2,733

Int. Cl. H01v 27/26, 27/00

U.S. Cl. 136-86

2 Claims



Electrolyte which is fortified with oxidizing type and reducing type reagents, respectively, is applied to the face

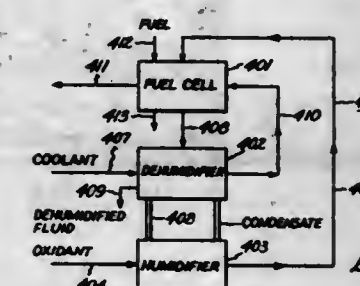
of stacked electrodes by forming openings in the various elements of which the battery consists (electrodes, spacer members, and semi-permeable diaphragms), which, when stacked together form supply and removal ducts for connection to electrolyte. Notches or slits connect the openings in the spacer members with a central window at locations intermediate the openings so that electrolyte applied through the ducts (formed of the stacked elements) will wash over the face of the electrodes, to be removed by similar slits communicating with other openings, forming, in the stack, a removal duct.

3,516,867 FUEL CELL SYSTEM WITH DEHUMIDIFIER AND HUMIDIFIER

Joseph P. Dankese, Dorchester, Mass., assignor to General Electric Company, a corporation of New York
Original application Sept. 25, 1964, Ser. No. 399,494, now Patent No. 3,432,357, dated May 11, 1969. Divided and this application Jan. 10, 1968, Ser. No. 714,385
Int. Cl. H01m 27/14

U.S. Cl. 136-86

2 Claims



A power generating system utilizing a humidifier and dehumidifier with each of the fuel cells, as well as the humidifiers and dehumidifiers including a perforated, corrugated sheet to enhance uniform distribution of a stream of fluent material such as fuel or oxidizer.

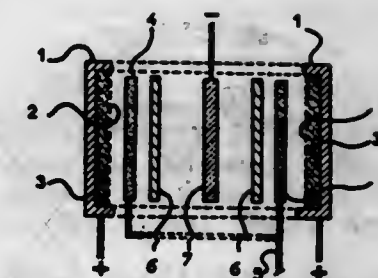
3,516,868 ELECTRIC BATTERIES WITH THERMAL ACTIVATION

Claude Nee, Antony, Claude Pathe, Clamart, and Claude Charnay, Chilly-Mazardin, France, assignors to Nord-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France, a joint-stock company of France
Filed Oct. 2, 1967, Ser. No. 672,123
Claims priority, application France, Oct. 11, 1966, 79,561

Int. Cl. H01m 17/06; C06c 1/00

U.S. Cl. 136-90

13 Claims



Method of thermal activation of electric batteries having a fusible electrolyte, comprising bringing up the cell to a temperature equal to or higher than the melting temperature of the electrolyte, by means of a pyrotechnic mixture enclosed in the cell between the anode and the cathode. The pyrotechnic mixture contains zirconium and

barium chromate and the residues, after reaction, participate in the electro-chemical process. The activation time is of the order of 0.2 second.

3,516,869

DEFERRED-ACTION BATTERY

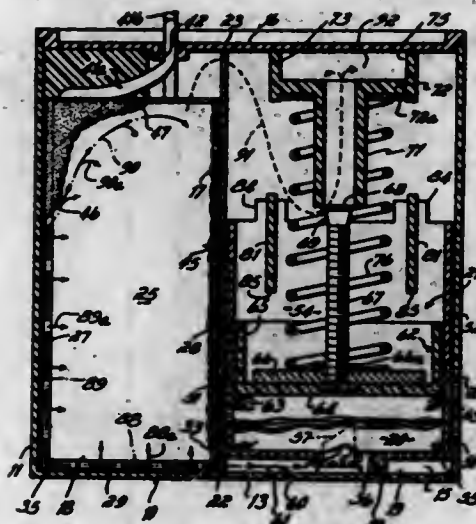
Edward P. Broglio, Joplin, Mo., assignor to Eagle-Picher Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Dec. 13, 1968, Ser. No. 783,520

Int. Cl. H01m 21/10

U.S. Cl. 136—114

11 Claims



A deferred-action battery including a battery case having a partition in the interior thereof dividing the case into a first chamber in which spaced parallel planar electrodes are disposed normal to the partition and a second chamber in which is located a rupturable electrolyte-containing sack and including a selectively operable activating assembly for rupturing the sack and causing released electrolyte to flow from the second chamber to the first chamber and thereby activate the battery.

3,516,870

SAFETY VALVE FOR ELECTRIC STORAGE CELLS
Lutz Horn, Erlangen, and Fritz Philipp, Hagen-Haspe, Germany, assignors to Varta Aktiengesellschaft, Frankfurt am Main, Germany

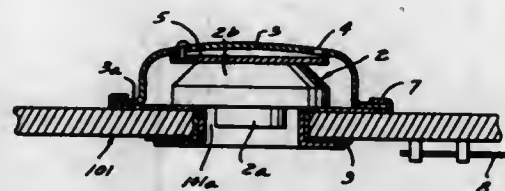
Filed Oct. 13, 1967, Ser. No. 675,080

Claims priority, application Germany, Oct. 19, 1966, V 19,544

Int. Cl. H01m 1/06; B65d 51/16

U.S. Cl. 136—178

3 Claims



An electric storage cell whose housing has a cover provided with a circular opening for the stem of a valve member whose head overlies the outer end of the opening and is biased to sealing position by a leaf spring connected to a cap whose marginal portion is coupled to the outer side of the cover, either directly by upsetting a collar at the outer side of the cover or by means of a coupling sleeve which is anchored in the cover and has

an edge portion bent over the marginal portion of the cap. The latter has a gas evacuating aperture and extends only slightly beyond the cover, i.e., just enough to permit movement of the valve member to open position when the pressure of gas in the housing exceeds a predetermined value.

One terminal of the cell is welded to the inner side of the cover.

3,516,871

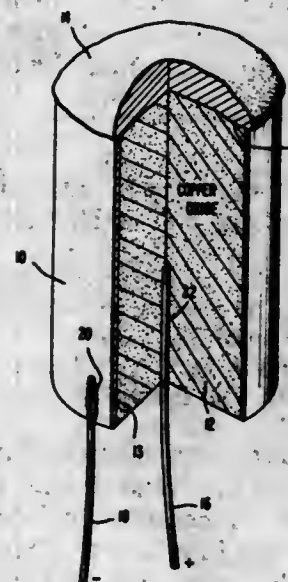
METHOD OF PRODUCING ELECTRIC CURRENT UTILIZING A COPPER OXIDE THERMOELECTRIC GENERATOR

Arlin C. Lewis, Columbia Falls, Mont., assignor to Gloria B. Lewis, Columbia Falls, Mont.
Filed Mar. 18, 1968, Ser. No. 713,665

Int. Cl. H01r 1/16

U.S. Cl. 136—201

1 Claim



A thermo-electric generator that generates an electric current of relatively high density has a copper oxide core within a casing of a dissimilar metal having a sealed end. The copper oxide core is formed within the conductive metal casing by melting pure copper in a highly oxidizing flame and casting it within the casing followed by melting pure copper without oxidation and casting it on the copper oxide core to form a sealing head.

3,516,872

SPRING LOADED THERMOCOUPLE WITH A FLARED TIP

Stephen L. Klassen, Saddle Brook, N.J., assignor to Thermo Electric Co., Inc., Saddle Brook, N.J., a corporation of New Jersey

Filed Nov. 10, 1966, Ser. No. 593,525

Int. Cl. H01r 1/02

U.S. Cl. 136—221

3 Claims



A spring-loaded thermocouple is disclosed, comprising a metal hollow member having a shank portion inserted into an end of a metal shell, a pair of thermocouple

wires extending through the shell and into the hollow member, and a solder alloy connecting the ends of the wires to each other and to the hollow member.

3,516,873

SPRING-LOADED THERMOCOUPLE

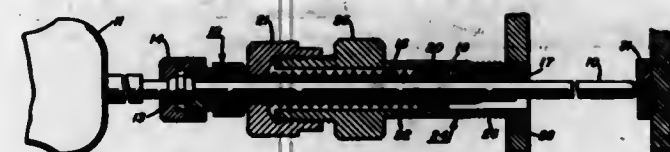
William S. Bonkowski, Clifton, and Nunzio Ralph Corallo, East Paterson, N.J., assignors to Thermo Electric Co., Inc., Saddle Brook, N.J., a corporation of New Jersey

Filed Apr. 13, 1967, Ser. No. 630,715

Int. Cl. H01r 1/02, 1/04, 1/06

U.S. Cl. 136—221

4 Claims



A thermocouple has a stem insertable into an adapter which is attachable to a tubular fitting for the measurement of the temperature of a fluid under pressure. Fluid-tight seals are provided between the stem and adapter and between the adapter and fitting.

3,516,874

METHOD OF INCREASING THE FATIGUE LIFE OF METAL PARTS

James H. Maker and George W. Kurasz, Bristol, Conn., assignors to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 624,989, Mar. 22, 1967. This application May 1, 1969, Ser. No. 821,059

Int. Cl. C23b 3/06; C21d 7/06

U.S. Cl. 148—4

3 Claims

Method of increasing the fatigue life of a metal part made of a hard alloy or steel by subjecting it to the steps of electrolytic polishing and surface compression, such as by shot peening.

3,516,875

PROCESS FOR COATING FERROUS SURFACES

Werner Rausch, Sternbach, Taunus, and Han Yong Oel, Hans-Joachim Eiler, and Herbert Liehl, Frankfurt am Main, Germany, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed June 7, 1967, Ser. No. 644,069

Claims priority, application Germany, June 11, 1966, 1,521,876

Int. Cl. C23f 7/10

U.S. Cl. 148—6.15

5 Claims

A process for phosphatizing ferrous metal surfaces using a zinc phosphate coating solution accelerated with nitrate or nitrate-nitrite accelerators, wherein lead, in the form of a water and/or phosphoric acid soluble compound is added to the phosphatizing solution. The incorporation of the lead in these phosphatizing baths results in an acceleration of the oxidizing action of the nitrate or the nitrate-nitrite accelerators on the divalent iron in the bath, thus converting the dissolved iron in the bath to the trivalent state and maintaining the solution substantially free of divalent iron. Additionally, the presence of the lead in the solution increases the amount of nitrite regenerated from the nitrate in the bath, thus maintaining sufficient nitrite ion concentration in the bath to keep the bath sufficiently free of divalent iron without the necessity for replenishing nitrite in the bath. Desirably, the lead is added in an amount of at least about 20 milligrams per liter, preferably in the form of lead nitrate, lead acetate, lead oxide, or lead carbonate.

3,516,876

AUTOMATIC CONTROL METHOD

Dieter Hauße, Killarstown, Germany, assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

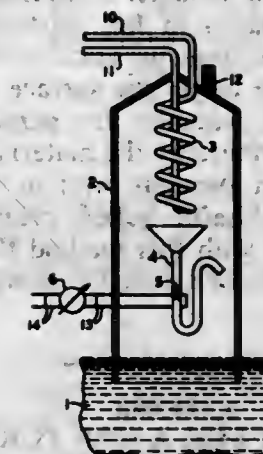
Filed Mar. 20, 1967, Ser. No. 624,576

Claims priority, application Germany, Mar. 25, 1966, 1,598,784

Int. Cl. C23f 7/08, 7/18

U.S. Cl. 148—6.15

6 Claims



A method for automatically controlling nitrite in acidic metal treating solutions, such as acidic phosphatizing solutions. The control is effected by vaporizing water and nitroso gases from the phosphatizing bath and condensing this mixture on a cold surface. The electrical conductivity of the condensate is measured and the measured value is transformed into an electrical impulse which operates a metering pump to effect the addition of nitrite to the phosphatizing bath as is required to bring the nitrite content up to the desired level.

3,516,877

PROCESS FOR PRODUCING CORROSION-RESISTANT COATING ON ARTICLE OF ALUMINUM ALLOY, AND PRODUCT

Pandells Papadimos, Riverside, and Kornel Bernath, Cucamonga, Calif., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 19, 1968, Ser. No. 706,675

Int. Cl. C23f 7/06

U.S. Cl. 148—6.27

10 Claims

A chemical conversion process for producing a protective coating on articles of aluminum alloy, having substantially the same resistance as iron to corrosion from NaOH, carbonates, bicarbonates, sulfates and chlorides. The coating is a firmly adherent mixture of oxides of iron and manganese, together with complex aluminum-iron oxides, and is produced by wetting the articles, either by bath or spray, with an aqueous solution of NaOH and KMnO₄ under time and temperature conditions to produce the desired chemical reaction. The articles are then wetted with a second aqueous solution containing FeSO₄ and NaHCO₃ for about one minute.

3,516,878

ULTRA-HIGH-STRENGTH PRESSURE VESSEL

Donald J. Sandstrom and Delman A. Law, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Jan. 13, 1967, Ser. No. 609,718

Int. Cl. B01j 3/00; C21d 9/00

U.S. Cl. 148—142

5 Claims

A prestressed lamellar pressure vessel wherein the prestressing is accomplished by placing a semiaustenitic precipitation hardenable stainless steel sphere within a martensitic stainless steel sphere (to close tolerances) and heat treating.

3,516,879

PROCESS OF FORMING PARTICLES IN A CRYOGENIC PATH

T. O. Paine, Deputy Administrator of the National Aeronautics and Space Administration, with respect to an invention of Robert H. Globus, Pasadena, Calif.
Filed June 13, 1968, Ser. No. 736,848
Int. Cl. C06d 5/00

U.S. Cl. 149—1

8 Claims

A method and apparatus for producing fine particles of less than one micron diameter comprising gasifying the substance to be produced in fine particles, maintaining the substance in the gaseous state while injecting it through a small orifice below the surface of a cold, preferably cryogenic bath, whereby fine particles of the material are produced. Preferably the material in the gaseous state is diluted with an inert gas prior to its injection into the cryogenic bath. Useful gelled propellants can be formed in accordance with this method through the production of fine particles of a reactive component in a cryogenic propellant.

3,516,880

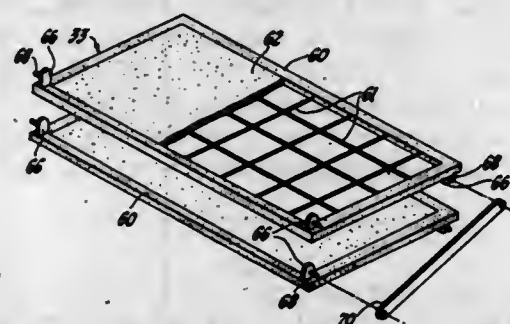
FUEL UNIT FOR A GAS TURBINE POWER PLANT

Douglas Johnson, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 12, 1966, Ser. No. 601,206
Int. Cl. C06b 19/00

U.S. Cl. 149—2

11 Claims



A gas turbine power plant of the recuperative closed circuit type for such uses as torpedo propulsion. The motive fluid is heated by an exothermic reaction of the thermite type. The reaction material is embodied in a chain of plates fed successively through a reaction chamber. The plates embody a refractory metal frame and contain a reinforcing and diluting content of quartz fibers.

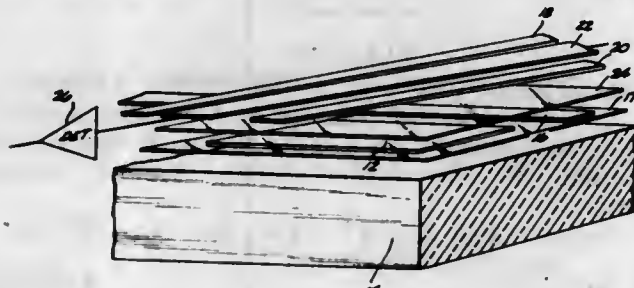
3,516,881

METHOD OF ETCHING A MAGNETIC ELEMENT FOR INCREASE IN COERCIVITY

William W. Powell, Manhattan Beach, and Thomas J. Ammons, Canoga Park, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,788
Int. Cl. C23f 1/00; H01f 1/04; C22c 39/36
U.S. Cl. 156—17

10 Claims



A magnetic memory element including a thin film member of anisotropic magnetic material having a surface which is slightly etched in a mild etching solution and a method for etching the element.

3,516,882

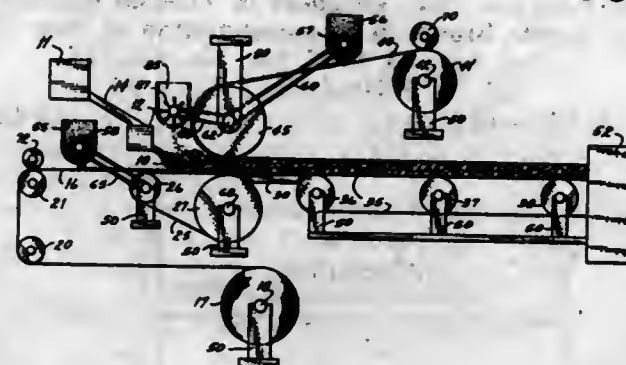
METHOD FOR MANUFACTURE OF GYPSUM WALLBOARD

Robert G. Cummisford, Crystal Lake, Ill., assignor to The Celotex Corporation, Tampa, Fla., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,630
Int. Cl. B32b 13/00, 31/00

U.S. Cl. 156—39

6 Claims



A gypsum board is made without starch in the core by the application of dry starch at the interface between the gypsum slurry and the cover sheets. The starch may be applied to the slurry-contacting surface of each sheet or as a layer on the upper face of the slurry and on the slurry-contacting face of the lower cover sheet.

3,516,883

PROCESS FOR PREPARING COMPOSITE SHEET MATERIAL

Lee R. Harper, Media, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 1, 1967, Ser. No. 613,121
Int. Cl. B32b 3/00

U.S. Cl. 156—77

15 Claims

Leather-like sheet materials and the like are prepared by applying to a suitable substrate a layer of a liquid polymeric coating composition, exposing said layer to an air stream having sufficient velocity and humidity to cause at least the uppermost portion of the layer to coagulate, and then subjecting the polymeric layer to a bathing and drying procedure whereby it becomes a solidified microporous structure.

3,516,884

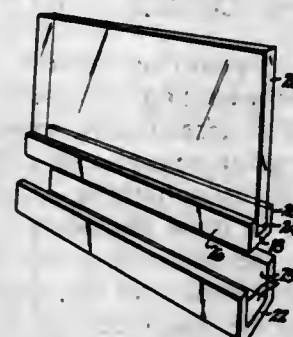
METHOD OF BEDDING PANELS INTO FRAMES USING AN ADHESIVE COATED PREFORM

Victor L. Heeter and Howard J. Shockey, Elkhart, Ind., assignors to Excel Corporation, Elkhart, Ind., a corporation of Indiana

Filed Mar. 28, 1966, Ser. No. 537,993
Int. Cl. C03c 27/04; C09j 5/06

U.S. Cl. 156—106

2 Claims



The method of bedding panels into frames is accomplished by first applying curable adhesive material to both sides of a flexible bedding strip. The bedding strip is then applied to a marginal edge of a panel. The marginal edge of the panel is then inserted into the recess of a frame to thereby place the bedding strip in contact with the interior surface of the frame. The adhesive material on the strip is then caused to cure. The bedding strip is thus bonded to the panel edge and to the frame to result in a bed for the panel in the frame.

3,516,885

METHOD OF MAKING A BONDED FILTER ROD FOR SMOKING ARTICLES

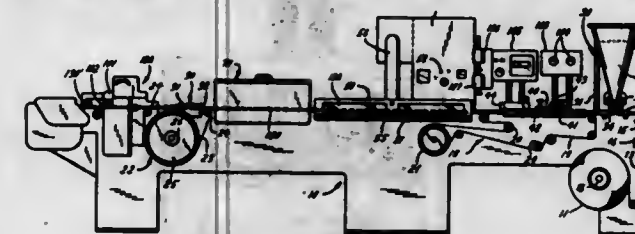
John H. Sextone, Middletown, and George H. Hilgartner, Jr., Louisville, Ky., assignors to Brown & Williamson Tobacco Corporation, Louisville, Ky., a corporation of Delaware

Original application Feb. 3, 1965, Ser. No. 430,142, now Patent No. 3,400,032, dated Sept. 3, 1968. Divided and this application Apr. 10, 1968, Ser. No. 740,007

The portion of the term of the patent subsequent to Sept. 24, 1985, has been disclaimed
Int. Cl. B32b 31/28; A24f 7/04

U.S. Cl. 156—203

3 Claims



A method of forming a bonded adsorbent filter element of uniform cross-section wherein a maximum area of bonded adsorbent is presented to the smoke stream. The method including the steps of depositing a particulate mixture of adsorbent and binder on a paper web, forming the web and mixture into a rod-shaped form, and subjecting the mixture to a high voltage, high frequency heating operation so that the binder becomes tacky thereby to bond the adsorbent particles. Thereafter, the bonded rod is cooled.

3,516,886

MULTI-WEB LAMINATED EXTRUSION PROCESS

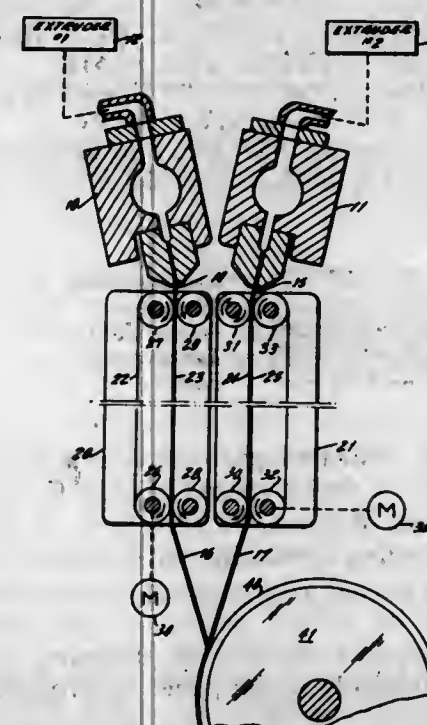
John J. Quackenbush and Herbert O. Corbett, Bridgeport, Conn., assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

Filed Dec. 14, 1966, Ser. No. 602,114

Int. Cl. B29c 17/02

U.S. Cl. 156—244

6 Claims



Two webs of thermoplastic material are individually extruded and are guided by respective web guides toward a common chill roll. The two webs are laminated at the chill roll to form a single web. Webs of other material, such as paper or screening, are passed between the two webs before they are laminated and are encapsulated between the two plastic films after lamination. Alternatively, a single plastic web and a web of some other material, such as fabric or paper, is passed through the spaced web guides for laminating a single plastic layer atop the surface of the non plastic web.

ERRATUM

For Class 156—249 see:
Patent No. 3,517,106

3,516,887

METHOD FOR HEAT-SEALING PLASTIC FILM

Elwyn David Jones, Beloeil, Quebec, Canada, assignor to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed June 3, 1968, Ser. No. 733,997

Claims priority, application Great Britain, June 22, 1967, 28,825/67

Int. Cl. B29c 19/02

U.S. Cl. 156—272

1 Claim



A method for heat-sealing plastic film employing a coaxial sealer bar constituted by an elongated heating element insulated from a surrounding external tubular metallic sheath. The rate of heat transfer through the insulation is less than through the external metallic sheath. The coaxial sealer bar can be operated at higher temperatures than solid metallic bars permitting an increased rate of making heat seals.

3,516,888

METHOD OF MOUNTING STONES IN A FOAM PLASTIC PANEL

Wilburn E. Bahner, 103 Avondale, Apt. 3, Houston, Tex. 77006

Filed Sept. 28, 1966, Ser. No. 582,623

Int. Cl. B32b 31/00; C09j 5/02

U.S. Cl. 156—298

1 Claim

A wallboard formed of dense polystyrene foam having natural stones glued to the outer surface, a glue being employed containing a solvent which will dissolve the surface of the foam adjacent each stone being mounted, embedding the stone in the material.

3,516,889

APPARATUS FOR MAKING FLUTED PACKAGES

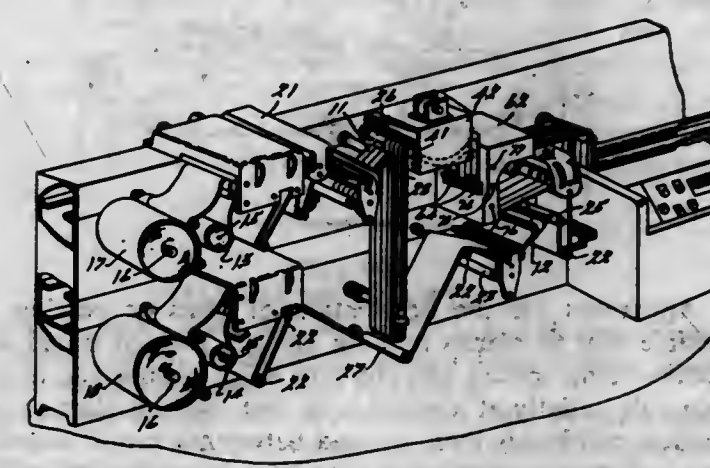
Ira D. Boynton, Lexington, Carmelo A. Di Maggio, Waltham, and James W. Healy, Wakefield, Mass., assignors, by mesne assignments, to Diamond Crystal Salt Company, St. Clair, Mich., a corporation of Michigan

Filed Oct. 20, 1965, Ser. No. 498,663

Int. Cl. B31f 1/20; B32b 31/00

U.S. Cl. 156—357

18 Claims



The packaging machine cuts sheets from two rolls into front and back strips which are formed into fluted packages which are sealed at the bottom readily to receive filling material producing a plurality of the formed strips in a single operation.

3,516,890

MULTIPLE FILM TABBING APPARATUS

Albert F. Gallistel, Wayzata, and Myrel T. Tierney, Richfield, Minn., assignors to Pako Corporation, Minneapolis, Minn., a corporation of Minnesota

Filed May 22, 1967, Ser. No. 640,268

Int. Cl. G03d 13/00

U.S. Cl. 156-505

8 Claims



Apparatus for simultaneously securing the free ends of several film strips to a plastic tab, the tab being used to lead the film strips through a commercial photographic roller processor. A plastic tab is temporarily held in fixed position such that one edge of the tab partially underlies the free ends of five strips of film. Each film strip is positioned and individually clamped within film guideways such that they extend perpendicular to the edge of the tab. When a taping assembly is moved from left to right, a length of pressure sensitive tape from a tape dispenser tapes the films to the tab, a knife on the bottom of the taping assembly being used to cut the tape when the assembly reaches the right side of the machine. As the taping assembly is returned to its initial position on the left side of the machine, a lever mechanism is semi-automatically released, permitting the tab and films to be removed as a unit.

3,516,891

APPARATUS FOR APPLYING FILM TO BLANKS

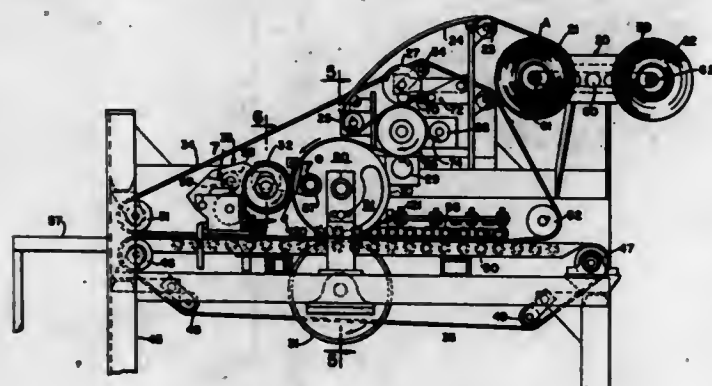
Anthony S. Hubin, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Nov. 23, 1965, Ser. No. 509,389

Int. Cl. B32b 31/00

U.S. Cl. 156-521

8 Claims



Apparatus for the application of films or patches of flexible film to blanks moving along a path of travel, the blanks being spaced and the film being supplied to a suction roll initially at a speed such that the film slips on the suction roll but is then grasped between a nip of the suction roll and a stencil roll. The film is accelerated to the speed of the suction roll and the acceleration is such as to cause film breakage along a previously partially severed line transversely of the film to provide a film path. Liquid adhesive applied to the stencil roll is transferred to the film and then serves to secure the film to a blank.

3,516,892

TAPE STRIP FABRICATION AND HANDLING

Michael M. Becka, Watertown, and Allen C. Harriman, Brockton, Mass., assignors to Jacob S. Kamborian, West Newton, Mass.

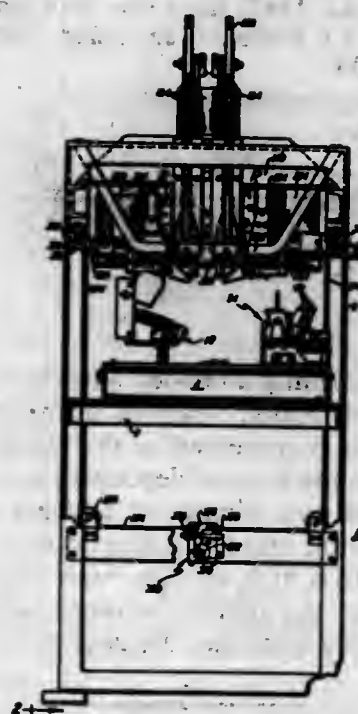
Original application May 9, 1966, Ser. No. 548,446

Divided and this application Nov. 18, 1968, Ser. No. 776,482

Int. Cl. B32b 31/18

U.S. Cl. 156-522

8 Claims



An apparatus for fabricating a length of pressure sensitive tape having non-adherent backing strips adhered thereto and for positioning the length of tape above a workpiece to which it is to be attached.

3,516,893

DECORATIVE LAMINATED PANEL AND METHOD OF MAKING THE SAME

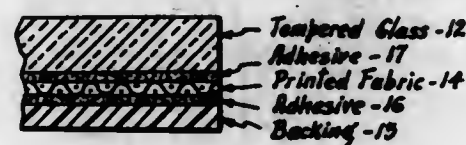
Anthony J. Gerard, 409 E. 64th St., New York, N.Y. 10021

Filed May 3, 1967, Ser. No. 635,748

Int. Cl. B44f 1/06; B32b 19/06

U.S. Cl. 161-6

7 Claims



A decorative laminated panel having a design printed sheet of acetate fabric interposed between and adhesively bonded to a sheet of tempered glass and a backing sheet, the adhesive bonding containing an ingredient which produces at least a partial solvent effect on the acetate fabric while retaining its printed design in application to the glass. The tempered glass may be shattered, either prior to or after its assembly in the panel, to produce a mosaic effect.

3,516,894

FLOOR CONSTRUCTION

David K. Slosberg, Yardley, Pa., assignor to American Blitrite Rubber Co., Inc., Trenton, N.J., a corporation of Delaware

Filed Apr. 27, 1966, Ser. No. 545,730

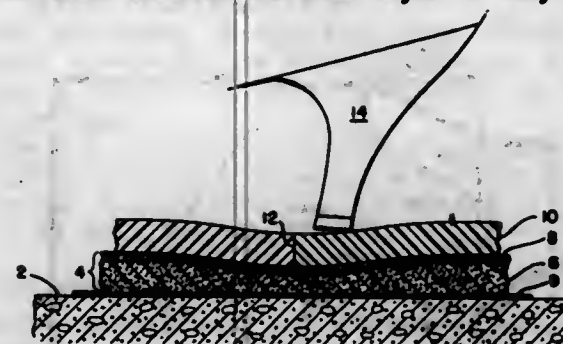
Int. Cl. B22b 3/10, 31/00; E04b 15/16

U.S. Cl. 161-39

2 Claims

The disclosure concerns floor construction which includes a base member of wood or concrete. A laminated layer comprising a lower layer of plasticized sponge vinyl

and an upper layer of acrylonitrile rubber saturated asbestos felt is adhered to the base with a hard-setting rubber latex adhesive. A wear layer of vinyl rubber or



vinyl asbestos is adhered to the asbestos felt layer by an adhesive. It is also contemplated that said wear layer be in the form of a plurality of tiles or sheets.

3,516,895

AIRCRAFT SKIN LAMINATES

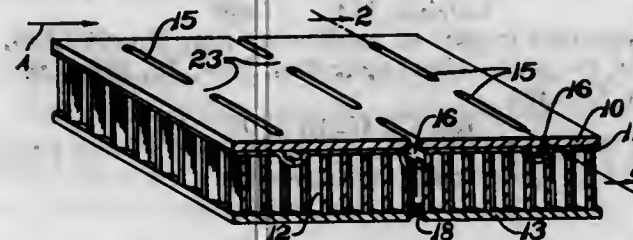
Richard E. Hartman, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Feb. 3, 1964, Ser. No. 341,940

Int. Cl. B32b 3/12

U.S. Cl. 161-68

2 Claims



This disclosure relates to the manufacture of rigid lightweight honeycomb laminates with slotted external surfaces which are useful as airfoil skins for aircraft. The disclosure includes both a new slotted laminate structure and a method of making the new laminate.

3,516,896

FABRIC WITH ELASTIC WARP, TREATED FOR THE PURPOSE OF IMPROVING SPEED

Jean-Leon Laurent, 20 Rue Auguste Comte, Lyon, France

Filed Sept. 20, 1966, Ser. No. 580,790

Claims priority, application France, May 31, 1966, 47,341

Int. Cl. D03d 11/00, 13/00, 15/00

U.S. Cl. 161-77

2 Claims

A one-way stretch fabric has a smooth outer face and an inner insulating face and is constituted by elastic warp threads double-faced with satin-woven smooth hot-pressed weft threads on the outer surface and high-bulk insulating weft threads such as wool on the inner surface.

3,516,897

ADHESIVE FOR BONDING A REINFORCING ELEMENT TO A RUBBERY COMPOSITION

John G. Brodnyan, Langhorne, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 27, 1966, Ser. No. 589,806

Int. Cl. C08g 37/38; C08c 9/16; B26b 25/10

U.S. Cl. 161-92

8 Claims

This invention relates to an improved adhesive for bonding a reinforcing element of textile materials, such as tire cord, to rubber and other elastomers. More particularly, it relates to an improved adhesive consisting of a mixture of a polymer latex comprising carboxylate and hydroxyl group functionality with a blended phenolic-aldehyde-rubber latex (R/F/L).

3,516,898

HARD FACED PLASTIC ARMOR

Richard L. Cook, Phoenix, Ariz., assignor to Goodyear Aerospace Corporation, Akron, Ohio, a corporation of Delaware

Continuation-in-part of application Ser. No. 268,765, Mar. 28, 1963. This application June 23, 1966, Ser. No. 560,927

Int. Cl. B32b 1/12, 17/10

U.S. Cl. 161-93

5 Claims



A hard faced plastic armor plate laminate is provided which can be either clear or opaque. The facing layer is laminated to a base by a flexible adhesive. The facing layer is a very hard material taken from a group including alumina ceramic, boron carbide ceramic, and silicon carbide ceramic. The base is preferably a resin impregnated glass fabric that tends to delaminate with a force absorbing action over a wide area upon impact.

3,516,899

BONDED NONWOVEN FABRIC

Robert H. Saunders, Chadds Ford, Pa., assignor to Hercules Incorporated, a corporation of Delaware

No Drawing. Original application May 18, 1963, Ser. No. 456,812, now Patent No. 3,420,724. Divided and this application July 11, 1968, Ser. No. 760,372

Int. Cl. D04h 1/54

U.S. Cl. 161-148

3 Claims

Nonwoven fabrics are prepared which comprise light colored fibers of a synthetic thermoplastic polymer, bonded together by fused dark areas of the same thermoplastic polymer. A preferred synthetic polymer is polypropylene. The fibers can be either oriented or unoriented staple.

3,516,900

GAS ACTIVATED BONDING OF POLYAMIDES

William C. Mallon, Chapel Hill, N.C., and Henry E. Harris, Savannah, Ga., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Continuation-in-part of application Ser. No. 528,699, Feb. 16, 1966. This application June 17, 1968, Ser. No. 737,507

Int. Cl. D04h 1/04

U.S. Cl. 161-150

27 Claims

Touching polyamide shaped structures, such as filaments, films, small pellets or granules and the like are autogenously bonded together along their contiguous surfaces by the absorption and subsequent desorption of an activating gas such as a hydrogen halide to form products including bonded, nonwoven fabrics, porous pellicles and the like.

3,516,901

FOAM RUBBER ARTICLE

Russell E. Fultz, Lake Junaluska, N.C., and Reuben Wolk, Dayton, Ohio, assignors to Dayco Corporation, Dayton, Ohio, a corporation of Delaware

Original application Oct. 23, 1963, Ser. No. 318,364, now Patent No. 3,393,258, dated July 16, 1968. Divided and this application Mar. 27, 1967, Ser. No. 655,684

Int. Cl. B32b 5/14; B29d 27/00; B29h 8/00

U.S. Cl. 161-160

4 Claims

This invention relates to a molded unitary article of foam rubber having dissimilar densities in different portions thereof, said portions separated by a strip of cellular elastomeric material bonded thereto.

3,516,902

SPHERULES OF 2-(N-MORPHOLINOTHIO)BENZOTHAZOLE

Claude Bonneau, Villeneuve St. Georges, France, assignor to Rhone-Poulenc S.A., Paris, France, a French body corporate
No Drawing. Filed July 13, 1967, Ser. No. 653,013
Claims priority, application France, July 19, 1966, 69,918

Int. Cl. B32b 5/16

U.S. Cl. 161—168 2 Claims
2-(N-morpholinothio)benzothiazole, useful as a vulcanisation accelerator for elastomers, is made in a novel spherular form with rigid skin and friable core by granulation of the molten compound containing a small amount of volatile solvent.

3,516,903

NOVEL MODACRYLIC FIBER

Wilford Donald Jones, Jenkintown, Pa., James Peter Baldino, Westmont, N.J., and Sidney Melamed, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Oct. 17, 1966, Ser. No. 586,929

Int. Cl. D01f 7/00

U.S. Cl. 161—175 2 Claims
A novel modacrylic fiber containing at least 45% vinylidene chloride, 45% acrylonitrile and no more than 5% of other copolymerizable monomers, all parts by weight, said fiber having a skin wherein the chlorine and nitrogen content are each at least 20% less than in the core of the fiber.

3,516,904

HEAT TRANSFER DECALCOMANIA FOR APPLICATION TO PLASTIC BOTTLES MADE FROM A LAMINATE OF A POLYAMIDE ADHESIVE, A PRINTED LAYER, AND A WAX LIKE HEAT RELEASE LAYER

John J. Klinker, Jr., Cincinnati, Ohio, assignor to Diamond International Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 7, 1966, Ser. No. 540,855

Int. Cl. B32b 27/30, 27/34

U.S. Cl. 161—227 7 Claims
A four-layer heat transfer decalcomania label for plastic bottles is provided, carried, prior to transfer, by a paper backing. The label includes a wax-like heat-release layer, a primer and protective coating, a design print which may be of several individual layers, and an overprint adhesive layer. After transfer, a permanent label is obtained which is resistant to scraping, abrasion, weathering, and the action of solvents and detergents.

3,516,905

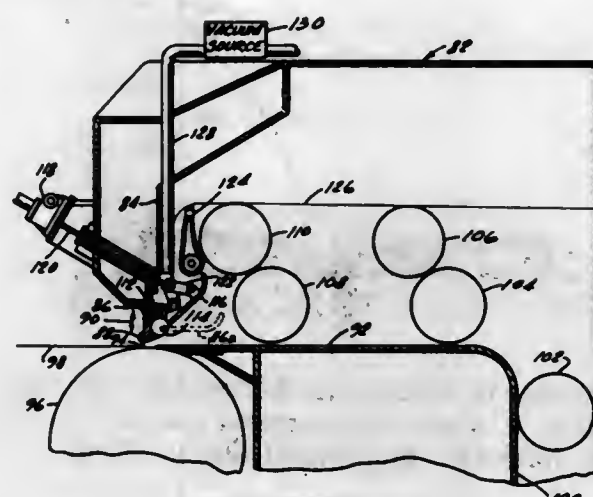
HEADBOX OVERFLOW AND RECIRCULATION SYSTEM

Louis E. Dennis, Clinton, and Edward D. Beachler, Beloit, Wis., assignors to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 26, 1967, Ser. No. 633,753

Int. Cl. D21f 1/02

U.S. Cl. 162—337 6 Claims
A headbox for a paper making machine which includes an overflow control device which is mounted in the cross machine direction and cooperable with a trough positioned in the headbox and adjacent the slice. The slice is formed by a movable wall portion of the headbox. Movement of the wall also moves the trough, a portion of which engages a pivotally mounted foil. The foil serves to maintain a uniform overflow characteristic of the stock flowing into the trough while movement of

the slice varies the flow characteristic of the stock onto a forming surface. Also, a recirculating system is employed to maintain stock flow through the headbox at a desired rate.

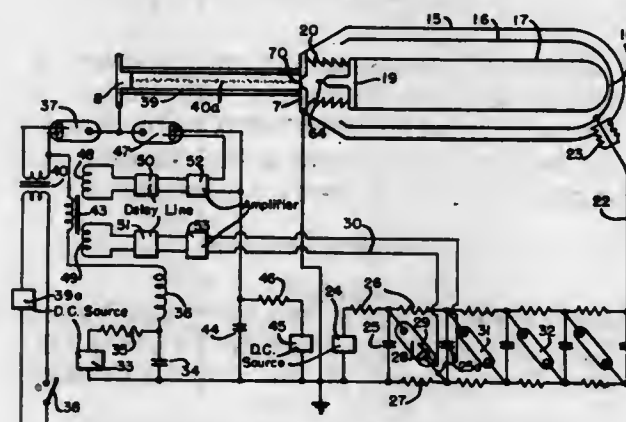
**3,516,906
PRODUCTION OF NUCLEAR REACTIONS BY HIGHLY CONCENTRATED ELECTRON BEAMS**

Willard H. Bennett, 5500 N. Hills Drive, Raleigh, N.C. 27609
Continuation-in-part of application Ser. No. 569,549, July 19, 1966. This application Nov. 28, 1966, Ser. No. 597,392

Int. Cl. G21b 1/00

U.S. Cl. 176—11

4 Claims



The invention resides in a method of producing fragments of a nuclear reaction process in which a metal whose number on the Periodic Table of Elements is at least as high as 73, is bombarded with a beam of electrons, which has been concentrated by directing a beam of electrons into the self-magnetic field of a pinched discharge, and whose intensity is so great that it raises the temperature of the metal so rapidly and to such a high degree as to produce nuclear reaction products.

3,516,907

METHOD FOR PRODUCING 5'-MONONUCLEOTIDES

Heinrich Kirchhoff, Mannheim-Altenhof, Gerhard Pfleiderer, Frankfurt am Main, and Kurt Holle, Mannheim-Waldhof, Germany, assignors to Zellstoffabrik Waldhof, Mannheim-Waldhof, Germany
No Drawing. Filed Jan. 31, 1962, Ser. No. 170,257
Claims priority, application Germany, Feb. 4, 1961, Z 8,532

Int. Cl. C12d 13/06

U.S. Cl. 195—28 19 Claims
5'-mononucleotides produced by reacting nucleic acid with a 5'-phosphodiesterase extracted from a fruit, plant leaf, tuber, plant root or beet.

3,516,908

PROCESS FOR THE PREPARATION OF HEXAHYDROINDANE DICARBOXYLIC ACID DERIVATIVES

Shohel Hayakawa, Hyogo Prefecture, Yoshiko Kanematsu, Kyoto-shi, and Takashi Fujiwara, Hyogo Prefecture, Japan, assignors to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Continuation-in-part of application Ser. No. 708,453, Nov. 20, 1967, which is a division of application Ser. No. 478,735, Aug. 10, 1965. This application Oct. 29, 1968, Ser. No. 771,611

Int. Cl. C12d 1/02

U.S. Cl. 195—51 4 Claims
4α(2-carboxyethyl)-5-oxo-(1α-hydrogen- or 1α-hydroxyl)-7αβ-methyl-3αα-hexahydroindane-carboxylic acids and lower alkanolic acids, which are prepared by one-step fermentative degradation of the bile acids or their homologues, are useful as cholesterol lowering agents.

3,516,909

FERMENTATIVE BIOSYNTHESIS OF TETRACYCLINE ANTIBIOTICS

Harlow Bishop, Nanuet, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Continuation-in-part of application Ser. No. 624,132, Mar. 20, 1967. This application Aug. 8, 1967, Ser. No. 659,005

Int. Cl. C12d 9/18

U.S. Cl. 195—102 8 Claims
This disclosure describes a process for the production of tetracycline antibiotics by cultivating a tetracycline antibiotic-producing strain of a species of the genus Streptomyces in a substantially triglyceride oil-free medium containing oleyl alcohol.

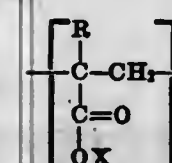
3,516,910

REMOVING AND INHIBITING SCALE IN BLACK LIQUOR EVAPORATORS

William C. Engman, Atlanta, Ga., and Walter W. Clark, Jacksonville, Fla., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed May 12, 1967, Ser. No. 637,908

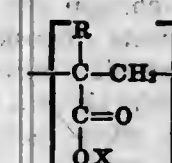
Int. Cl. B01d 3/00

U.S. Cl. 203—7 8 Claims
In black liquor evaporation processes, the black liquor is treated with a water-soluble polymer having repeated units with the formula:



R is an alkyl group having from 1 to 3 carbons, and X is H, NH₄, Na or K. Polymer concentrations of from 1 to 500 p.p.m. inhibit scaling on evaporator surfaces, and concentrations of above 300 p.p.m. remove scale from evaporator surfaces.

In summary, the process of this invention is a method for inhibiting deposit formation on metal surfaces of an evaporator used for the processing of black liquor comprising the step of treating said black liquor at any point prior to completion of said processing with a deposit inhibiting concentration of a water-soluble polymer having repeated units with the formula:



wherein R is an alkyl group having from 1 to 3 carbons, and X is H, NH₄, Na or K, having a molecular weight of

from 1,000 to 200,000. Deposits can be removed by adding the water-soluble polymer in scale-removing concentrations to the black liquor.

3,516,911

ELECTROSENSITIVE RECORDING MATERIAL

John H. Hopps, Jr., South Merrimack, N.H., assignor to Nashua Corporation, Nashua, N.H., a corporation of Delaware

Filed Dec. 1, 1967, Ser. No. 687,965

Int. Cl. B41m 5/20

U.S. Cl. 204—2 12 Claims
A dry electrosensitive recording sheet consists of a substrate of a metal which forms a dark oxide and a topcoat containing a light colored metallic oxide which is electrically reducible to a color contrasting dark lower oxide. An electrochemically inert additive is preferably included in the topcoat to increase its conductivity.

3,516,912

RADIATION POLYMERIZATION OF ETHYLENE USING CARBON DIOXIDE AS REACTION MEDIUM

Tsutomu Kagiya, Kyoto-shi, and Suetoshi Machi, Wachihiro Kawakami, Miyuki Hagiwara, and Yoshihiko Hosaki, Takasaki-shi, Japan, assignors to Japan Atomic Energy Research Institute, Tokyo, Japan

Filed Mar. 3, 1967, Ser. No. 620,488

Claims priority, application Japan, Apr. 19, 1966, 41/24,374

Int. Cl. C08f 1/16

U.S. Cl. 204—159.22 6 Claims
The present disclosure is directed to use of carbon dioxide as reaction medium in polymerization of ethylene in the presence of an ionizing radiation as the reaction promoter, and in particular, a method to carry out the above-mentioned polymerization continuously by means of tubular reactor.

3,516,913

ELECTRODEPOSITION OF HEAT-HARDENABLE WATER-DISPERSIBLE HYDROXY-FUNCTIONAL HYDROPHYLIC RESINS OF LOW ACID VALUE AND MIXTURES THEREOF WITH WATER-INSOLUBLE AMINOPLAST RESINS

Kazuo Sekimatsu and Edward A. Gauger, Jr., Chicago, and Lester A. Henning, Arlington Heights, Ill., assignors to De Soto, Inc., Chicago, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 615,048, Feb. 10, 1967. This application Apr. 28, 1967, Ser. No. 634,480

Int. Cl. B01k 5/02; C23b 13/00

U.S. Cl. 204—181 43 Claims
Aqueous dispersions especially adapted to be electrodeposited at the anode to form corrosion resistant coatings after baking to cure the same are formulated based on water-dispersible hydroxy-functional hydrophyllic resins having an acid number of from about 8 to about 70 and which are preferably formed by esterifying a part of the carboxy functionality of a carboxy-functional resin with an epoxide, preferably a monoepoxide, to reduce the acid number and to generate hydroxy functionality remote from the linear backbone of the resin. The resin is produced as a solution in water-miscible organic solvent by reaction in the presence of an alkaline catalyst which causes preferential reaction with the carboxy groups to take place. The resin solution is dispersed in water with the aid of a nitrogenous base, such as ammonia or an amine and the dispersed resin is heat-hardening per se. Cure is preferably effected using a water-insoluble heat-hardening benzoguanamine-formaldehyde resin which deposits in direct proportion to its concentration and which increases the resistivity of the film which is deposited.

Electrodeposition at a pH above 8.5 is particularly contemplated and the electrodeposition bath may be replenished with amine deficient resin in water-miscible solvent solution.

3,516,914

ALUMINUM MASKING OF ACTIVE COMPONENTS DURING TANTALUM/NITRIDE SPUTTERING

John A. Hall, Jr., Warminster, Pa., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 26, 1968, Ser. No. 708,375

Int. Cl. C23c 15/00

U.S. Cl. 204—192

1 Claim

A process for sputtering tantalum nitride resistors on silicon wafers having active components formed therein includes masking of the active components with evaporated aluminum during the tantalum nitride sputtering and etching.

3,516,915

SPUTTERING TECHNIQUE

Edward H. Mayer, Plaistow, N.H., and Robert J. Moore, Center Valley, Pa., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Original application Dec. 14, 1964, Ser. No. 418,142.

Divided and this application May 1, 1968, Ser. No. 725,779

Int. Cl. C23c 15/00

U.S. Cl. 204—192

3 Claims

Thin films evidencing a high degree of uniformity over a large area are obtained by cathodic sputtering techniques utilizing a system including an electrically isolated substrate holder wherein the configuration of the Dark Space is closely controlled.

3,516,916

GALVANIC CELL OF EQUIPMENT FOR DETERMINING THE OXYGEN CONCENTRATION OF A GAS MIXTURE OR VAPOR MIXTURE

Karl Ackermann, deceased, late of Mannheim, Germany, by Karl Siebert, representative, Donauerschlingen, Germany, assignor to Badische Anilin- & Soda Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

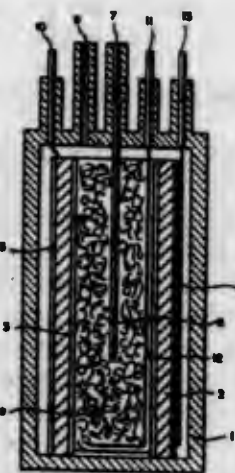
Filed Aug. 24, 1966, Ser. No. 574,823

Claims priority, application Germany, Aug. 24, 1965, 1,598,070

Int. Cl. G01n 27/46, 27/54

U.S. Cl. 204—195

9 Claims



Galvanic cell for measuring oxygen concentration in an oxygen-containing gas or vapor mixture by measurement of current produced through reduction of oxygen at the cathode and embodying a hollow anode, a porous diaphragm within the hollow anode a packing of loose metal particles having a large surface area substantially

filling the space enclosed by the porous diaphragm, a film of electrolyte on the metal particles, and pipe means to introduce said mixture into the packing for flow thereof through the loose metal particles.

3,516,917

CATHODE PROTECTION DEVICE

Alexandre Maurin, 16 Rue de Varize, Paris 16^e, France

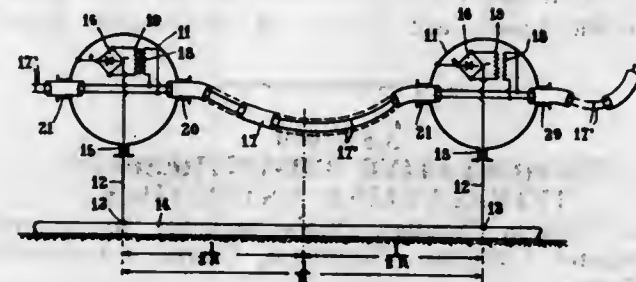
Filed Sept. 12, 1966, Ser. No. 578,817

Claims priority, application France, Sept. 11, 1965, 1,462,276; Nov. 16, 1965, 89,053; Dec. 15, 1965, 89,491

Int. Cl. C23f 13/00

U.S. Cl. 204—196

14 Claims



A cathode protection device for an immersed structure which is characterized in that it comprises a series of elementary protection D.C. sources fed in parallel from a single current source, in that each elementary current source is located within a water-tight immersed enclosure, the outer wall of the enclosure acting as or carrying a current outlet, and that said enclosure comprises two current lead-ins, one for the wires feeding the current source and the other for permitting the negative connection for protecting the structure, this other lead-in being therefore connected thereto.

3,516,918

ALKALI METAL CHLORATE CELL

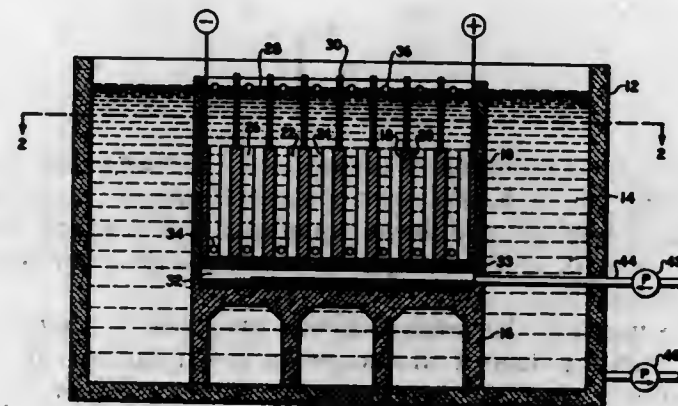
Morris P. Grotheer, John E. Currey, and Edward H. Cook, Jr., Lewiston, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Filed Nov. 30, 1965, Ser. No. 510,617

Int. Cl. B01k 3/00; C01b 11/26

U.S. Cl. 204—266

5 Claims



A method for the production of alkali metal chlorate in an electrolytic cell having an anode and a cathode separated by a porous diaphragm into an anode and cathode compartment comprising imposing a decomposition voltage between said electrodes, introducing an acidified solution of alkali metal chloride into the anode compartment, feeding a separate alkali metal chloride solution into the cathode compartment, passing the chlorine formed at the anode and the alkali metal hydroxide formed at the cathode to a mixing zone and therein

effecting the reaction of chlorine and alkali metal hydroxide to produce hypochlorite and subsequently alkali metal chlorate.

3,516,919

APPARATUS FOR THE SPUTTERING OF MATERIALS

Francois Gaydon, Balzers, and Rudolf Jenne, Triesenberg, Liechtenstein, assignors to The Bendix Corporation, Rochester, N.Y., a corporation of Delaware

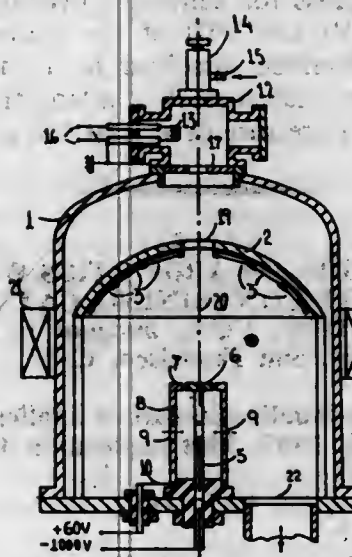
Filed Dec. 16, 1966, Ser. No. 602,398

Claims priority, application Switzerland, Dec. 18, 1965, 17,502/65

Int. Cl. C23c 15/00

U.S. Cl. 204—298

1 Claim



The present invention relates to an apparatus for the sputtering of materials by means of a low voltage electrical discharge. The improvement consists of providing a hot cathode separate and spaced from the material to be sputtered and closely surrounding the material to be sputtered by an anode. This physical arrangement, aided by a magnetic field, provides an improved sputtering rate and permits the sputtering process to proceed under lower pressures.

3,516,920

SPUTTERING APPARATUS

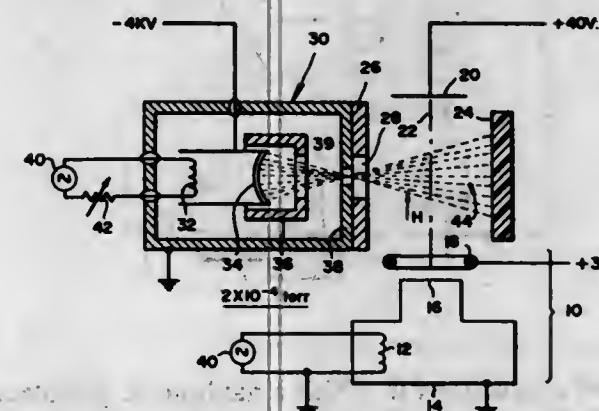
Emil C. Maly, Jr., Needham, and Robert M. Oman, Wellesley, Mass., assignors to National Research Corporation, Newton Highlands, Mass., a corporation of Massachusetts

Filed June 9, 1967, Ser. No. 644,923

Int. Cl. C23c 15/00

U.S. Cl. 204—298

3 Claims



Dielectric targets are sputtered by neutralizing positive ion collection at the target using a separate source of

electron bombardment instead of the conventional radio frequency voltage source connected to the target. The apparatus can also be utilized for sputtering conductive targets with the usual high voltage connector going to the electron source instead of the target.

3,516,921

APPARATUS FOR MAGNETIC STIRRING OF DISCHARGE PLASMA IN CHEMICAL SYNTHESIS

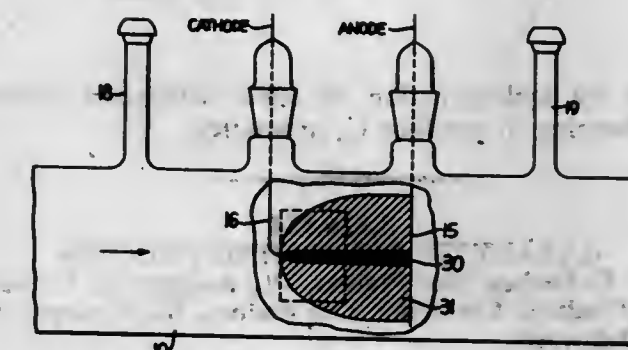
Jean P. Manson and Daniel J. Davies, Milwaukee, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Mar. 26, 1968, Ser. No. 716,192

Int. Cl. H05h 1/02

U.S. Cl. 204—311

3 Claims



A process and apparatus for chemical synthesis in the gas phase in conventional electrical glow discharge apparatus whereby the glow discharge plasma, between the discharge electrodes, is subjected to a magnetic field oscillating at a frequency of at least one-half cycle per residence time of the gas between the electrodes.

3,516,922

METHOD OF INHIBITING CORROSION

Willard F. Anzilotti, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 9, 1966, Ser. No. 532,899

Int. Cl. C23f 11/02

U.S. Cl. 208—47

8 Claims

An improved corrosion inhibitor, and its use in an effective amount, for protecting ferrous metal exposed to hydrocarbons containing hydrogen sulfide and water, said inhibitor consisting essentially of a mixture of an alkyl monoamine of 1 to 10 carbon atoms, for example isopropylamine, and a substantially neutral salt of an alkyl monoamine of 2 to 18 carbon atoms, for example, 2-ethylhexylamine, and a mixed mono- and dialkyl ester of orthophosphoric acid wherein said alkyl groups contain 4 to 18 carbon atoms, for example, mixed mono- and dioxotridecyl phosphate.

3,516,923

PROCESS FOR UPGRADING PROPYLENE

Merritt C. Kirk, Jr., Thornton, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Sept. 27, 1968, Ser. No. 763,063

Int. Cl. C10g 39/00; C07c 5/04

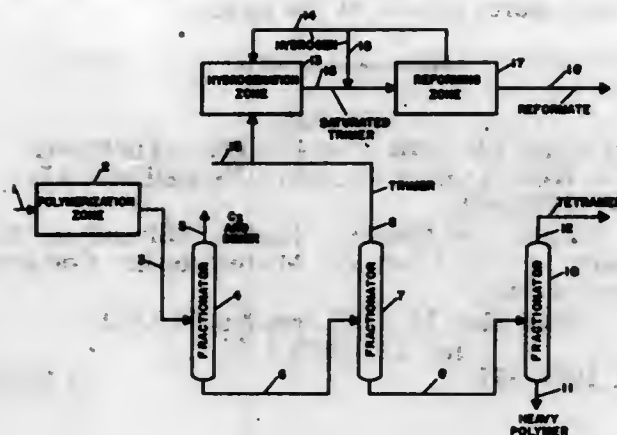
U.S. Cl. 208—49

6 Claims

This specification discloses a process for upgrading propylene into useful hydrocarbon products. In the process propylene is contacted with a phosphoric acid polymerization catalyst at polymerization temperatures to produce both trimer and tetramer products. The tetramer

is useful in the manufacture of detergent alkylate. The trimer is upgraded into a high octane gasoline com-

openings at least 5 A. in diameter and a hydrogenating component selected from the group consisting of Group VI and VIII metals and oxides thereof, and recovering a product having a reduced wax content.



ponent by hydrogenation to effect saturation followed by reforming to produce C₈ aromatics.

3,516,924

CATALYTIC REFORMING PROCESS

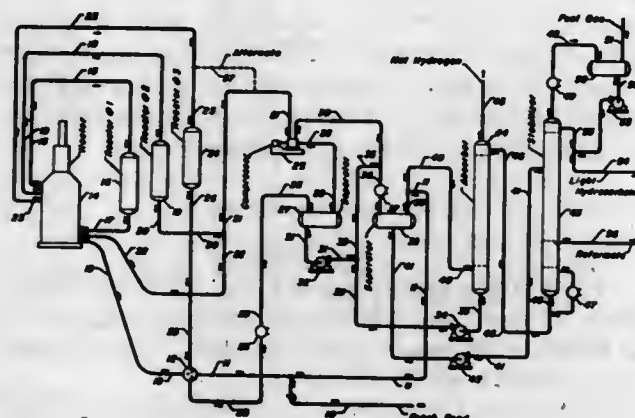
James T. Forbes, Des Plaines, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 19, 1968, Ser. No. 722,700

Int. Cl. C10g 35/08

U.S. Cl. 208—65

8 Claims



Method and process for the catalytic reforming of hydrocarbons in the presence of hydrogen, preferably, to produce high quality gasoline boiling range products. The recycle hydrogen gas is split into several fractions; one portion is compressed to a low pressure and returned to the reaction zone; another portion is compressed to a high pressure and returned at least in part to the reaction zone.

3,516,925

CATALYTIC CONVERSION OF HYDROCARBONS

Paul Anthony Lawrence, Stanwell, Robert William Aitken, Camberley, and Robert Neil Bennett, Ashford, England, assignors to The British Petroleum Company Limited, London, England, a company of England

Filed Feb. 25, 1965, Ser. No. 435,245

Claims priority, application Great Britain, Mar. 10, 1964, 10,028/64

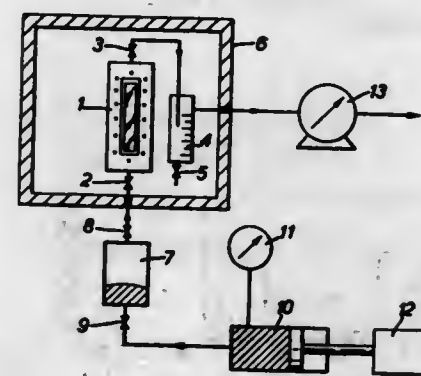
Int. Cl. C10g 13/02

U.S. Cl. 208—111

2 Claims

2. A process for the selective conversion of wax-like hydrocarbons in waxy petroleum feedstocks which comprises contacting said feedstocks at a temperature of 450–950° F. and at elevated pressure in the presence of hydrogen with a decationised crystalline mordenite having pore

A method is described in which a naphthenic petroleum feedstock boiling above 300° C. and of low n-paraffin content (desirably having a cloud point of less than –30° F.) is contacted with a gas at super-critical temperature and pressure. Naphthenes are absorbed into the gas phase and may be extracted therefrom.



3,516,928

METHOD OF PREPARATION OF LUBRICATING OILS

William Ronald King, Walton-on-Thames, and William Llewelyn Thomas, Englefield Green, Egham, England, assignors to The British Petroleum Company Limited, London, England, a corporation of England

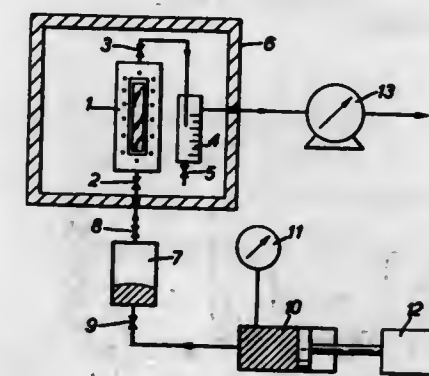
Filed Feb. 21, 1967, Ser. No. 617,593

Claims priority, application Great Britain, Feb. 22, 1966, 7,684/66

Int. Cl. B01d 17/00

U.S. Cl. 208—308

2 Claims



3,516,927

HYDROGENATION OF AROMATICS WITH METAL PHOSPHATE-CONTAINING CATALYSTS

Joseph Jaffe, Berkeley, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 671,994, Oct. 2, 1967. This application July 18, 1969, Ser. No. 843,207

Int. Cl. C07c 5/10, 5/14

U.S. Cl. 208—143

3 Claims

Aromatics hydrogenation process using a catalyst comprising alumina, silica, a component selected from nickel and compounds thereof and cobalt and compounds thereof, a component selected from molybdenum and compounds thereof and tungsten and compounds thereof, and a component selected from titanium phosphate and zirconium phosphate.

3,516,926

CATALYST SULFIDING WITH CARBON DISULFIDE

Joseph R. Davis, Jr., Wallingford, Pa., John D. Tice, Wilmington, Del., and Robert L. Benner, Upper Chichester, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed May 10, 1968, Ser. No. 728,355

Int. Cl. C10g 23/02; B01j 11/74

U.S. Cl. 208—143

9 Claims

A sulfiding process for sulfactive hydrogenation catalysts of Groups VI and VIII of the Periodic Table by passing carbon disulfide dissolved in a carrier oil and hydrogen over the catalyst stock at a temperature of 350° to 550° F. under a pressure of at least 400 p.s.i.g.

3,516,929

ROTATING BIOLOGICAL CONTACTOR IN A COMBINED SEWER

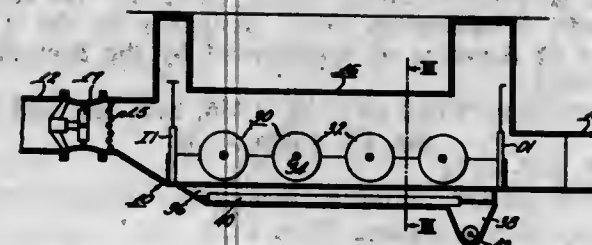
Fredrick M. Welch, Oconomowoc, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Nov. 12, 1968, Ser. No. 774,681

Int. Cl. C02c 1/02

U.S. Cl. 210—17

17 Claims



A sewage treatment apparatus and method in accordance with which a rotating biological contactor is positioned within a combined sewer which carries both storm water and domestic and/or industrial waste. In a preferred form of the invention, a plurality of sewage flow channels are provided, with a rotating biological contactor apparatus being provided in each channel to act upon the sewage flowing therein. Means are provided for sequentially filling the respective channels during dry weather conditions and for discharging the channels in at downstream direction with a flush action. Means are also provided for permitting passage of sewage and storm water through all of the channels simultaneously under storm flow conditions.

3,516,930

METHOD OF TREATING LIQUID WASTE EFFLUENT

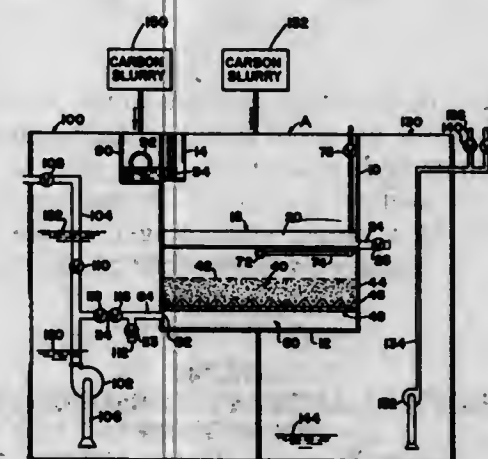
David S. Ross, Lorain, Ohio, assignor to Hydro-Clear Corporation, Avon Lake, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 633,458, Apr. 25, 1967. This application Aug. 4, 1969, Ser. No. 847,346

Int. Cl. B01d 15/06

U.S. Cl. 210—32

13 Claims



A method of treating liquid waste effluent containing large solids and dissolved and/or colloidal substances, which method involves introducing activated carbon in a body of effluent above a particulate filter bed and creating current above the surface of the bed to hold the activated carbon particles in suspension so they can absorb the dissolved and/or colloidal substances.

3,516,931

PROCESS OF TREATING ACID MINE WATER

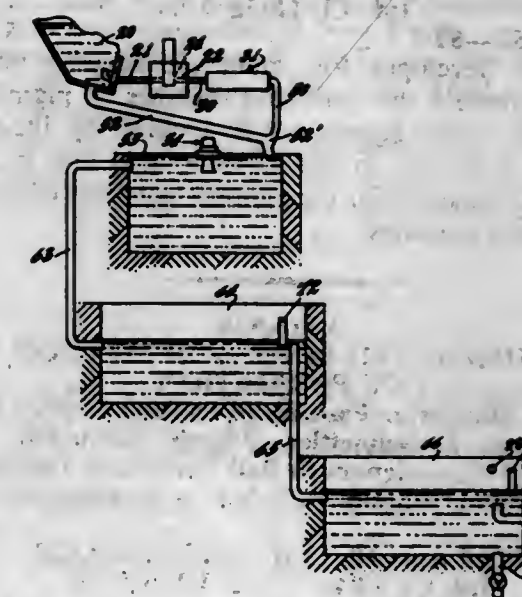
Joseph J. Birch, Johnstown, Pa., assignor to Barnes & Tucker Company, Haverford, Pa., a corporation of Pennsylvania

Filed Oct. 18, 1968, Ser. No. 768,714

Int. Cl. C02b 1/30, 5/04

U.S. Cl. 210—46

5 Claims



Water treatment for acid mine water which comprises first adding alkaline reactant such as lime in powdered form, carrying the mixture of water and powdered reactant through a rotating bed of limestone in the presence of air, thus adding calcium carbonate particles to the water, combining the water thus treated with raw acid mine water, aerating the mixture and allowing a flocculant precipitate or floc of ferric hydroxide and alumina to separate out.

3,516,932

CLARIFICATION OF WATER

Ross M. Hedrick, St. Louis, and David T. Mowry, Brentwood, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 230,701, June 8, 1951. This application June 4, 1962, Ser. No. 199,659

Int. Cl. B01d 21/01; C02b 1/20; C02c 5/02

U.S. Cl. 210—53

16 Claims

1. The method of clarifying an aqueous suspension of solid inorganic particles which is in flocculated condition due to the presence of inorganic salts which comprises adding to the suspension a polyacrylamide.

3,516,933

SURFACE-MODIFIED METALS IN COMPOSITES AND BEARINGS

George Inglis Andrews, Richmond, and Aleksander Jerzy Groszek and Rodney Ernest Witheridge, London, England, assignors to The British Petroleum Company Limited, London, England, a corporation of England

No Drawing. Filed Mar. 28, 1968, Ser. No. 717,832

Claims priority, application Great Britain, Apr. 5, 1967, 15,335/67

Int. Cl. C10m 5/02, 5/22, 5/24

U.S. Cl. 252—12

1 Claim

Composites which are made from a metal, solid lubricant or a polymeric matrix, especially PTFE, and which contain also an ultra-fine metal prepared by grinding a metal in an organic liquid in the presence of load-carrying additive or fatty acid or ester are harder and wear better than corresponding composites containing ordinary metal powder.

3,516,934

LIQUID DEVELOPER FOR ELECTROSTATIC IMAGES

Kenneth A. Metcalf, Fulham Park, South Australia, and William H. Lowe, Beaumont, South Australia, Australia, assignors to The Commonwealth of Australia, % The Acting Secretary, Department of Supply, Melbourne, Victoria, Australia
No Drawing. Filed July 9, 1963, Ser. No. 293,853
Claims priority, application Australia, July 12, 1962, 19,937/62

Int. Cl. G03g 9/04

U.S. Cl. 252—62.1

5 Claims

A liquid developer for latent electrostatic images is disclosed wherein the clumping together of pigment particles from larger aggregates is avoided by including a resin that is soluble in the carrier liquid and is selected to be a wetting agent for the pigment particles which thereby coats said particles.

3,516,935

COMPACTED BODY AND METHOD OF FORMATION

Frank R. Monforte, Passaic Township, Morris County, and Frank J. Schnettler, Morris Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Apr. 10, 1967, Ser. No. 629,629

Int. Cl. C04b 33/02; F26b 5/06

U.S. Cl. 252—62.56

13 Claims

Bodies of a wide range of materials including ceramics and alloys are prepared by compacting particulate matter produced by freeze drying. This freeze drying procedure includes atomizing a solution of the desired composition, freezing, and removing solvent by sublimation.

3,516,936

LOSSY MATERIAL FOR ANTENNA DECOUPLING

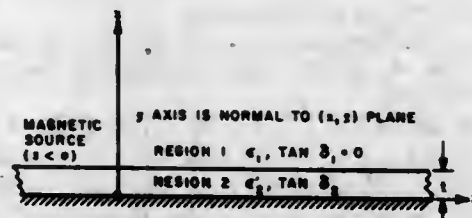
Alvin E. Henderson, Arlington, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed July 27, 1967, Ser. No. 656,992

Int. Cl. H01b 3/00, 1/06

U.S. Cl. 252—63.2

2 Claims



A moldable lossy material that can be bonded to any surface for accomplishing RF attenuation between two RF sources in the same ground plane, and consisting of a mixture of a modified epoxy, filler-hardener, graphite, hydrogenated naphtha and carbon

3,516,937

SUSTAINED ACTION DETERGENT PRODUCT CONTAINING ENCAPSULATED SODIUM TRIPOLYPHOSPHATE

Julian R. Story, Wheaton, Aaron B. Herrick, La Grange, and Eric Jungermann, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 15, 1967, Ser. No. 638,566

Int. Cl. C11d 9/14, 3/22, 3/066

U.S. Cl. 252—110

7 Claims

A light duty detergent composition in the form of granules or a tablet, providing a lotion-like feel when dissolved in water and having sustained cleaning action.

The composition includes an anionic or non-ionic detergent, a fatty alkanolamide or amine oxide suds booster, and sodium tripolyphosphate, a portion of the tripolyphosphate being encapsulated by a polymeric film forming material relatively insoluble to water.

3,516,938

DISPLACING ORGANIC LIQUIDS FROM SOLID SURFACES

William A. Zisman, Silver Spring, Md., and Marianne K. Bennett, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Oct. 18, 1966, Ser. No. 588,259

Int. Cl. C09d 9/00

U.S. Cl. 252—171

7 Claims

A nonaqueous liquid surface-active composition for displacing liquid organic films from solid surfaces. The composition is a solution of a silicone solute in a pair of volatile co-solvents in which the solute and one of the co-solvents are active displacing agents. The solute may be a low molecular weight dimethyl silicone, a liquid linear polyoxyalkylated dimethyl silicone or a fluoro-silicone. The co-solvent which is an active displacing agent is a volatile liquid perfluoroalkane or fully fluorinated bromo- or chloroalkane. The other co-solvent is an aliphatic naphtha.

3,516,939

VITREOUS COMPOSITION FOR MEASURING NEUTRON FLUENCE

Ryosuke Yokota and Yuhel Muto, Yokohama-shi, Saburo Nakajima, Kawasaki-shi, and Kiyoshi Fukuda, Yokohama-shi, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan

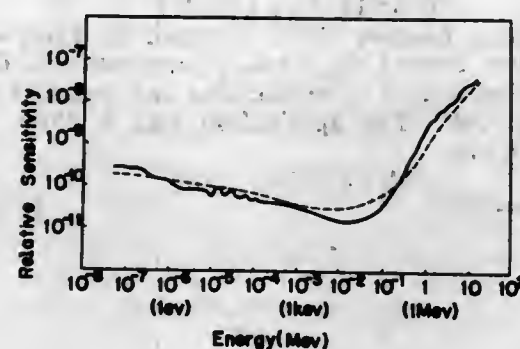
Filed Jan. 15, 1968, Ser. No. 697,825

Claims priority, application Japan, Jan. 17, 1967, 42/2,909; Nov. 18, 1967, 42/73,901

Int. Cl. C09k 3/00

U.S. Cl. 252—301.1

5 Claims



A vitreous composition sensitive to the neutron fluences which comprises an alkali metal metaphosphate, a metal metaphosphate and an oxide of fissile material. When the vitreous composition is exposed in neutron fluences and then treated by a proper etching agent, there are formed a number of recesses on the surface of the vitreous composition.

3,516,940

EUROPIUM ACTIVATED BaO·MgO·P₂O₅ PHOSPHORS

Costas C. Lagos, Danvers, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

No Drawing. Filed Dec. 15, 1967, Ser. No. 690,739

Int. Cl. C09k 1/36

U.S. Cl. 252—301.4

9 Claims

Divalent europium is used as an activator in

BaO·MgO·P₂O₅

phosphors. In the preferred phosphor compositions, the ratio of Ba atoms to Mg atoms can vary from about 2:1 to 1:2 and the ratio of Ba and Mg atoms to P atoms from

about 3:2 to 3:4. Under ultraviolet excitation, the emission of phosphors within the range of the preferred compositions can vary from purple through blue to yellow. Activation by manganese and divalent europium produces an additional emission band in the red region of the spectrum.

3,516,941

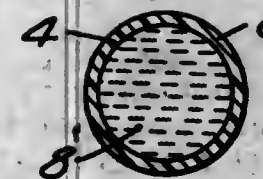
MICROCAPSULES AND PROCESS OF MAKING

Gale W. Matson, Minneapolis, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Continuation-in-part of application Ser. No. 175,394, Feb. 26, 1962. This application July 25, 1966, Ser. No. 567,723

Int. Cl. B01j 13/02

U.S. Cl. 252—316

9 Claims



Microcapsules are provided, each comprising an organic liquid fill enclosed by a strong, impermeable shell of urea-formaldehyde polymer. The microcapsules are produced by dispersing and maintaining the fill material as finely-divided particles in an aqueous, water-soluble urea-formaldehyde precondensate solution substantially free of carboxymethylcellulose and other wetting agents while polymerizing the precondensate by acid-catalysts for at least one hour in a pH range of about 1 to about 5. The microcapsules are particularly adapted for their incorporation, either as coatings on or as inclusions within, papers and other sheet materials.

3,516,942

PROCESS FOR DRYING CAPSULE WALLS OF HYDROPHILIC POLYMERIC MATERIAL

Joseph A. Scarpelli, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

No Drawing. Filed Sept. 27, 1966, Ser. No. 582,257

Int. Cl. B01j 13/02

U.S. Cl. 252—316

3 Claims

A process is provided wherein water-swollen capsule walls of hydrophilic polymeric material are shrunk and dried. The process includes immersion of capsules having water-swollen walls in anhydrous hygroscopic glycol liquid. Such immersion causes withdrawal of the water from the capsule walls and results in individual capsules having dry, rigid walls.

3,516,943

REPLACEMENT OF CAPSULE CONTENTS BY DIFFUSION

Carl Brynko and Gerald M. Olderman, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio

No Drawing. Continuation of application Ser. No. 148,736, Oct. 30, 1961. This application Dec. 6, 1966, Ser. No. 599,648

Int. Cl. A23d 3/04; A23i 1/26; B01j 13/02

U.S. Cl. 252—316

11 Claims

A process is disclosed for manufacturing, en masse, minute gelatin-walled capsules containing a liquid material introduced into the capsules by diffusion through the capsule walls. In a preferred embodiment, original, oily, capsule content is replaced by a substitute liquid,

miscible with water and with the original oily content, by suspending the capsules in the substitute liquid to accomplish exchange of the original material with the substitute liquid.

3,516,944

CARBON NITROGEN BACKBONE CHAIN COPOLYMERS AS GELLING AGENTS

Morton H. Litt, Morristown, and Sorrell Roth, Irvington, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 4, 1967, Ser. No. 607,152

Int. Cl. B01j 13/00; C10f 7/00; A23d 3/00

U.S. Cl. 252—316

9 Claims

Combinations of 2-substituted-oxazolines and dihydro oxazine copolymers with a polar liquid such as water, ethylene or propylene glycol or ethanolamine are gelling agents for nonpolar organic liquids and low melting solids.

3,516,945

METHOD OF CHANGING THE THERMOCHROMIC TRANSITION TEMPERATURE OF SILVER MERCURIC IODIDE AND COPPER MERCURIC IODIDE

Lies N. Flamm, Goleta, Calif., and Marvin J. Kornblum, Washington Township, Westwood, N.J., assignors to Singer-General Precision, Inc., a corporation of Delaware

No Drawing. Filed Sept. 22, 1967, Ser. No. 669,693

Int. Cl. G01n 33/00

U.S. Cl. 252—408

7 Claims

The method of changing the thermochromic transition temperature in material selected from the group consisting of silver mercuric iodide and copper mercuric iodide by the partial ionic substitution on the mercuric iodide side of the material by an element of a lower period in the same group, said element being cadmium when the substitution is made of the mercury element and said element being selected from the halide group consisting of chlorine and bromine when the substitution is made of the iodide element.

3,516,946

PLATINUM CATALYST COMPOSITION FOR HYDROSILATION REACTIONS

Frank J. Modic, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Sept. 29, 1967, Ser. No. 671,558

Int. Cl. C07f 7/02; C08g 47/02

U.S. Cl. 252—429

4 Claims

Platinum compound-organocyclopolyloxane catalyst compositions are prepared by reacting a platinum chloride-olefin complex with a cyclic alkylvinylsiloxane under conditions which remove the olefin from the reaction mixture to produce a new composition useful in reacting a first siloxane containing Si—H groups with a second siloxane containing silicon-bonded vinyl or allyl radicals. The reaction between such siloxanes is useful in the preparation of silicone elastomers and potting compositions.

3,516,947

CATALYSTS HAVING STABLE FREE RADICALS CONTAINING SULFUR

Zdzislaw F. Dudzik, Eastview, Ontario, Canada, assignor to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada

No Drawing. Filed May 4, 1967, Ser. No. 635,991

Int. Cl. B01j 11/74; C10g 11/06

U.S. Cl. 252—439

14 Claims

Process for impregnating siliceous crystalline materials as silica, silicates and aluminosilicates with sulphur-containing free radicals to provide catalysts for hydrocarbon conversion processes and lazurite-type gem stones.

3,516,948

NEUTRON-ABSORBING GRAPHITIC PRODUCT AND METHOD OF PREPARATION

Jean Cledat, Moselle, Michel Moreau, Clichy, and Jean Rappeneau, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France

No Drawing. Filed Mar. 14, 1968, Ser. No. 712,955
Claims priority, application France, Mar. 24, 1967, 100,327

Int. Cl. G21f 1/00

U.S. Cl. 252-478

12 Claims

The process consists in mixing powders of graphite and of boron nitride, dehydrated boron calcite or rare earth metal oxides, adding 15-30% of tar by weight, compacting the mass into articles and heating at a temperature of from 1000° C. to 1200° C. (to 1150° C. if boron calcite is used) for a time sufficient to coke the tar.

3,516,949

COPPER/VANADIUM OXIDE COMPOSITIONS

Lewis C. Hoffman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Oct. 10, 1966, Ser. No. 585,246, now Patent No. 3,440,182, dated Apr. 22, 1969. Divided and this application Oct. 31, 1967, Ser. No. 679,550

Int. Cl. H01b 1/02

U.S. Cl. 252-514

4 Claims

Noble metal metalizing compositions comprising (a) a noble metal powder, (b) an inorganic binder powder and (c) a V_2O_5 additive powder to improve the solderability, conductivity and/or adhesion properties of fired metalizings thereof on ceramic substrates, components (a), (b) and (c) being present in specified proportions; also, electrical conductor elements made using such compositions. The V_2O_5 additive may be a copper/vanadium oxide composition containing Cu_2O and V_2O_5 in specified proportions, which oxide composition is preferably in a fusion-reacted form. Such copper/vanadium oxide composition may also serve as the inorganic binder in the metalizing composition, although its use in physical admixture with a glass powder is preferred. When V_2O_5 per se is used as the additive, it should be employed in admixture with a glass powder.

3,516,950

FOAMED POLYMERS

Geoffrey Arthur Haggis, Manchester, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Continuation of application Ser. No. 543,820, Apr. 20, 1966. This application Feb. 25, 1969, Ser. No. 804,363

Claims priority, application Great Britain, Apr. 15, 1966, 18,116/65

Int. Cl. C08g 22/46

U.S. Cl. 260-2.5

15 Claims

A process for the manufacture of rigid polymeric foams characterized by the presence therein of an isocyanurate ring structure, said process comprising forming a reaction mixture containing a simple organic polyisocyanate, a catalyst for the polymerization of isocyanates, a blowing agent and, optionally, an amount of a hydroxy compound having a molecular weight not exceeding 300 sufficient, together with any other active hydrogen containing materials present in the reaction mixture, to react with not more than 60% of the isocyanate groups initially present in the polyisocyanate.

3,516,951

ROOM TEMPERATURE VULCANIZING SILICONE RUBBER FOAM

Ronald L. Smith, Ballston Lake, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 18, 1967, Ser. No. 691,127

Int. Cl. C08g 31/10, 31/30, 53/08

U.S. Cl. 260-2.5

7 Claims

Room temperature vulcanizing silicone rubber foams stable in the absence of moisture but convertible to cured foams upon exposure to atmospheric moisture are prepared by mixing a fluid organopolysiloxane having silicon-bonded hydrogen atoms with a bis-(trialkylsilyl) acid amide, such as bis-(trimethylsilyl)acetamide and a tin salt of an organic carboxylic acid.

3,516,952

CURABLE AND CURED EPOXY-CARBOHYDRATE POLYETHER RESIN COMPOSITIONS

Hyman M. Molotsky, Chicago, and Edward L. Karraker III, La Grange, Ill., assignors to CPC International Inc., a corporation of Delaware

No Drawing. Filed Apr. 3, 1967, Ser. No. 627,619

Int. Cl. C08b 25/00, 25/02

U.S. Cl. 260-9

35 Claims

Covers epoxy resin compositions derived from reacting an uncured epoxy resin and a carbohydrate polyether, which compositions have both the desired strength and flexibility as cured coatings or for other uses. Also covers a method of preparing these coatings by curing the reactive epoxy resin and carbohydrate polyether. Lastly, covers coating compositions made up from the reaction product of an epoxy resin, a carbohydrate polyether and an isocyanate and a method of preparing said compositions by curing the just mentioned three ingredients.

3,516,953

GRANULAR, FREE-FLOWING, SYNTHETIC THERMOSETTING AMINOPLAST RESIN MOLDING COMPOSITION CONTAINING DEFIBERIZED ALPHA-CELLULOSIC PULP OF A CERTAIN FIBER LENGTH WHEREIN SAID FILLER IS SUBSTANTIALLY THE SOLE FILLER PRESENT

Ernest Herbert Wood, 2267 Shipman Ave., Stamford, Conn. 06902

No Drawing. Filed Mar. 25, 1968, Ser. No. 715,575

Int. Cl. C08g 51/18

U.S. Cl. 260-17.3

6 Claims

A granular, free-flowing, synthetic thermosetting resin molding composition comprising an aminoplast thermosetting resin and a filler uniformly dispersed therethrough wherein said filler is a defiberized alpha-cellulosic pulp having a fiber length between about 1 and 6 mils and said fibers being substantially knot free and wherein said filler is substantially the sole filler present.

3,516,954

NOVEL COMPOSITIONS FOR PREPARING POLYURETHANE COATINGS

Uwe Ploog, Dusseldorf, Werner Stein, Erkrath-Unterbach, and Joachim Barnstorf, Hilden, Rhineland, Germany, assignors to Henkel & Cie., G.m.b.H., Dusseldorf, Hohenhausen, Germany, a corporation of Germany

No Drawing. Filed Oct. 12, 1967, Ser. No. 674,725

Claims priority, application Germany, Feb. 10, 1967, H 61,817

Int. Cl. C08g 22/08

U.S. Cl. 260-18

9 Claims

Novel compositions for preparing flexible polyurethane coatings having a high chemical and mechanical resistance comprised of a polyisocyanate and an aliphatic-cycloaliphatic polyhydroxyl containing component formed by

hydrogenation of an adduct of a phenol compound, added to a compound selected from the group consisting of an unsaturated alcohol having 10 to 48 carbon atoms, adducts thereof with ethylene oxide or propylene oxide, unsaturated carboxylic acids of 10 to 48 carbon atoms and esters thereof with aliphatic alcohols of 1 to 4 carbon atoms, and the polyurethane coatings produced therewith.

3,516,955

CURABLE COMPOSITIONS CONTAINING AN EPOXY, AN UNSATURATED POLYESTER, AND A POLYMERIZABLE VINYL MONOMER

David D. Taft, Minneapolis, Minn., assignor to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

No Drawing. Filed May 31, 1966, Ser. No. 553,623

Int. Cl. C08f 21/04; C09d 3/68

U.S. Cl. 260-22

10 Claims

A composition which comprises:

- an epoxy component;
- an unsaturated polyester having an acid value of at least 50; and being the esterification reaction product of polycarboxylic acid and polyhydric alcohol wherein the ratio of carboxyl groups to hydroxyl groups before esterification is from 1:1 to 3:1; the polycarboxylic acid being a mixture of polycarboxylic acids comprised of 5-90 mole percent copolymerizable ethylenically unsaturated polycarboxylic acid and at least 5 mole percent hexachloroendomethylene tetrahydrophthalic acid; and
- a polymerizable vinyl monomer such as styrene.

These compositions find utility as decorative or protective coatings for substrates such as those of wood, metal, etc.

3,516,956

SPINNABLE COMPOSITIONS COMPRISING A FIBER FORMING POLYAMIDE, A FIBER FORMING POLYESTER AND A SPINNING AID

Ora Lee Reedy, Richmond, Ian C. Twilley, Petersburg, and Norman B. Rainer, Richmond, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed July 29, 1966, Ser. No. 568,725

Int. Cl. D01d 1/02

U.S. Cl. 260-22

18 Claims

Wax-like derivatives of saturated straight-chain carboxylic acids containing between about 12 and about 22 carbon atoms are incorporated into a spinnable composition comprising a fiber-forming polyamide having dispersed therein about 10 to 50 percent by weight of a fiber-forming polyester. These wax-like derivatives (e.g., metallic salts, amides, and acylated hydrazines) have melting points above about 100° C. and mold release indices of greater than about 25 when incorporated into pure nylon-6. They are incorporated into the spinnable composition to the extent of between about 0.05 and about 0.6 percent by weight and serve to inhibit the formation of drips in the vicinity of spinneret orifices and reduce the occurrence of breaks or wraps during drawing of the spun filaments.

3,516,957

THERMOPLASTIC POLYESTER COMPOSITION CONTAINING ORGANIC ESTER MOLD RELEASE AGENT

Theodore F. Gray, Jr., and Max L. Carroll, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 29, 1968, Ser. No. 725,205

Int. Cl. C08g 17/40, 39/02

U.S. Cl. 260-22

10 Claims

Thermoplastic composition comprising a linear crystallizable polyester having a melting point above about 150° C., e.g. poly(ethylene terephthalate), poly(1,4-cyclo-

hexanedimethylene terephthalate), or poly(1,4-butylene terephthalate), and a small percentage of an ester of an organic acid having from 10 to 27 carbon atoms and an alcohol having from 1 to 10 carbon atoms, e.g. methyl stearate or pentaerythritol tetrastearate. Articles molded from the thermoplastic composition release quite readily from the mold or shaping surface during consecutive molding cycles. Such articles have good surface characteristics which are especially smooth when the composition contains a small percentage of a nucleating agent. Uniform surfaces gloss of molded articles is achieved by the conjoint presence of a synergistic agent such as an alkali metal salt or alkaline earth metal salt of an organic acid having 10 to 25 carbon atoms, e.g. sodium stearate; talc and asbestos are also synergistic agents. The thermoplastic compositions and molded articles can advantageously contain up to 50% by weight of glass fibers based on the total weight of the admixture.

3,516,958

NEW OIL MODIFIED THERMOSETTING RESINS

Daniel J. Carlick, Berkeley Heights, N.J., assignor to Inmont Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 861,443, Dec. 23, 1959. This application Jan. 17, 1966, Ser. No. 520,864

Int. Cl. C09d 3/30, 3/60

U.S. Cl. 260-23.7

5 Claims

An oil modified thermosetting resin comprising the product of the reaction at a temperature of 500 to 600° F. of a mixture of a homopolymeric cyclopentadiene resin having more than 5 repeating units per molecule produced by the catalyzed addition polymerization of cyclopentadiene and a member selected from the group consisting of semi-drying oils and drying oils in a volatile organic solvent. Such resins are particularly useful in air dried lacquers, varnishes and paints. Films formed of them have great flexibility and consequently provide excellent coatings for the inside of cans.

3,516,959

SOLID POLYMER COMPOSITIONS HAVING FLAME RETARDANT AND DRIP RESISTANT PROPERTIES AND ADDITIVE COMPOSITIONS FOR IMPARTING SAID PROPERTIES THERETO

Donald Moore Jonas, Great Dunmow, England, assignor to Berk Limited

No Drawing. Filed Dec. 14, 1965, Ser. No. 513,858
Claims priority, application Great Britain, Dec. 18, 1964, 51,680/64

Int. Cl. C09k 3/28; C08h 9/06; C08k 1/84

U.S. Cl. 260-28

5 Claims

A composition comprising an admixture of at least one flame retardant with an organophilic cation modified clay is disclosed. This composition is used as an additive for imparting flame-retardancy and drip resistant properties to combustible synthetic thermoplastic polymers, such as polystyrene, polyethylene, polypropylene, nylon and the like, which drip when heated beyond their softening points. The polymer composition containing the additive is also disclosed.

3,516,960

POLYVINYL ALCOHOL COMPOSITIONS WITH IMPROVED OXYGEN BARRIER PROPERTIES

Joseph G. Martin, Ludlow, and Norman I. Mowry, Springfield, Mass., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 18, 1968, Ser. No. 714,047

Int. Cl. C08f 45/58, 45/62

U.S. Cl. 260-33.4

15 Claims

Disclosed herein are improved polyvinyl alcohol compositions with improved oxygen barrier properties which

where Ar is an arylene moiety are prepared in tractable, fusible, high-molecular-weight form amenable to fabrication into useful articles by reacting an aromatic diamine having the formula H_2NArNH_2 with an aromatic dialdehyde having the formula $OHCArCHO$ in a monofunctional Schiff-base, which serves as a reaction medium and moderator. The reaction mixture is heated slowly to 250 to 300° C. to produce a fusible, black polymer. Heating to higher temperatures removes the monofunctional Schiff base and converts the polymer to an infusible material having a very high degree of thermal stability.

3,516,972

PROCESS FOR THE PREPARATION OF POLY-AMIDES IN FINELY DIVIDED FORM

Wolfgang Wolfes, Witten-Bommern, and Gustav Renckhoff, Witten (Ruhr), Germany, assignors to Chemische Werke Witten G.m.b.H., Witten (Ruhr), Germany
No Drawing. Filed Mar. 30, 1967, Ser. No. 626,949
Claims priority, application Germany, Apr. 1, 1966, D 49,755

Int. Cl. C08g 20/20

U.S. Cl. 260—78

8 Claims

The present disclosure relates to a process for the preparation of copolyamides of terephthalic and isophthalic acid with aliphatic dicarboxylic acids, said copolyamides being in finely divided form. More particularly, the present disclosure concerns a process for the preparation of copolyamides which comprises reacting a diester of an acid selected from the group consisting of isophthalic acid, terephthalic acid, and substituted derivatives thereof with the reaction product of an aliphatic dicarboxylic acid and an organic diamine. The resultant copolyamides are suitable for coating metals, for example, by a fluidized bed coating process. They are also suitable for use in injection molding and extruding processes.

3,516,973

PROCESS FOR THE POLYMERIZATION OF β -LACTONES

Rikitaro Kato, Tokorozawa-shi, and Syotchi Nagato and Juro Suzuki, Saitama, Japan, assignors to Daicel Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Mar. 25, 1968, Ser. No. 715,539

Claims priority, application Japan, Apr. 1, 1967, 42/20,641

Int. Cl. C08g 17/017

U.S. Cl. 260—78.3

6 Claims

A process for polymerizing β -lactones so as to obtain a colorless product in high yield at relatively low temperatures by polymerizing or copolymerizing α,α -disubstituted β -lactones in the presence of a catalyst consisting of an alkali or alkaline earth metal salt of an imide.

3,516,974

ACRYLONITRILE COPOLYMERS CONTAINING SULFONIC ACID GROUPS

Heinrich Rinkler, Dormagen, Rudolf Braden, Odenthal-Scheuren, and Gunther Nischk, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 30, 1967, Ser. No. 679,216

Claims priority, application Germany, Nov. 5, 1966, F 50,613

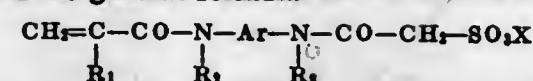
Int. Cl. C08f 3/76

U.S. Cl. 260—79.3

10 Claims

The invention relates to acrylonitrile copolymers which have a good affinity to basic dyes and which contain as a

comonomer ethylenically unsaturated sulfonic acid compounds of the general formula



wherein R_1 , R_2 , and R_3 represent hydrogen or a C_1 to C_4 alkyl radical and X represents hydrogen, a NH_4 group, an alkali metal or an organic ammonium group. The copolymers are produced by copolymerizing acrylonitrile, said ethylenically unsaturated sulfonic acid compound and optionally an additional copolymerizable compound in a fluid medium in the presence of a radical forming catalyst system.

3,516,975

ETHYLENE-VINYL ACETATE POLYMERS PREPARED WITH POLYOXYALKYLENE COMPOUNDS

Edmund R. Meincke, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 744,654, July 15, 1968. This application Oct. 25, 1968, Ser. No. 770,804

Int. Cl. C08f 1/09, 15/02

U.S. Cl. 260—80.8

14 Claims

Interpolymers of ethylene and vinyl acetate, which may contain small amounts of other copolymerized material, e.g., acrylic acid, are improved in tensile strength and caused to have higher molecular weight by incorporating progressively as the polymerization proceeds into the monomer system a small amount, e.g., about 1 to 5% by weight, based on 100 parts by weight total of the ethylene and vinyl acetate, of a water-soluble polyoxyalkylene compound containing at least 15 oxyethylene units, e.g., polyethylene polyols or ethers of polyethylene polyols and the like.

3,516,976

LOW TEMPERATURE ACRYLIC POLYMERIZATION

Arnold Hofer, Muttens, and Ernst Lautenschlager, Basel, Switzerland, assignors to SCM Corp., Cleveland, Ohio, a corporation of New York

No Drawing. Filed May 11, 1966, Ser. No. 549,156

Claims priority, application Switzerland, May 14, 1965, 6,780/65

Int. Cl. C08f 3/64, 3/66, 3/68

U.S. Cl. 260—89.5

8 Claims

There is presented an improved redox system useful for polymerizing vinyl compounds and consisting essentially of a lipophilic organic vanadium compound and a mercaptan. Also shown is an improvement in process for polymerizing vinyl compounds which consists essentially of contacting a sirup thereof with said redox system. The process is particularly useful in the presence of molecular oxygen at modest operating temperature.

3,516,977

PROCESSABILITY OF ELASTOMERS HAVING A NARROW MOLECULAR WEIGHT DISTRIBUTION

Emmett Burton Reinhold, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 431,445, Feb. 9, 1965. This application May 15, 1967, Ser. No. 638,658

Int. Cl. C08d 5/00

U.S. Cl. 260—94.7

1 Claim

Less than one part of a polyfunctional aromatic amine is incorporated into a rubbery composition containing a

synthetic elastomer with a narrow molecular weight distribution, the purpose of said amine being to improve the processing characteristics of the composition. The amine, N,4-dinitroso-N-methyl aniline, can be used with polymers such as polybutadiene, styrene-butadiene rubber and butyl rubber which have been prepared, for example, by the solution polymerization of a suitable monomer.

3,516,978

POLYMERIZATION OF OLEFINIC COMPOUNDS AND CATALYSTS THEREFOR

Edward H. Mottas, 350 Claymont Drive, Ballwin, Mo. 63011, and Morris R. Ort, 1018 Edgeworth, Kirkwood, Mo. 63122

No Drawing. Filed Mar. 6, 1967, Ser. No. 620,670

Int. Cl. C08f 1/28, 3/06

U.S. Cl. 260—94.9

16 Claims

A chemical method is described for making olefin, e.g., ethylene, polymerization catalysts. In this method, an alloy of a non-transition metal, e.g., aluminum, and a transition metal, e.g., manganese or vanadium, is reacted with a methylene dihalide, e.g., CH_2Cl_2 , using as an initiator a small amount of, e.g., an aluminum and methylene dibromide reaction product, excluding moisture from the reaction. The catalyst activity can be promoted by water and other electron donor compounds.

3,516,979

HETEROGENEOUS 1:2 METAL COMPLEXES OF MONOAZO DYES

Jacky Dore and Reinhard Neier, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed July 7, 1966, Ser. No. 563,361

Claims priority, application Switzerland, July 9, 1965, 9,669/65

Int. Cl. C09b 45/14, 45/16, 45/20

U.S. Cl. 260—145

8 Claims

Heterogeneous 1:1 metal complexes of monoazo dyes, at least one of which is a phenyl-azo-naphthalene dye the naphthalene nucleus of which bears an amino group in one of the 5-, 6-, 7- and 8-positions and also bears the sole sulphonic acid group in the complexes, are useful for dyeing leather, animal fibers and polyamide fibers and for pigmenting plastics and resins.

3,516,980

HETEROGENEOUS 1:2 COBALT OR CHROMIUM COMPLEX AZO DYESTUFFS

Jacky Dore and Reinhard Neier, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Sept. 21, 1966, Ser. No. 580,890

Claims priority, application Switzerland, Oct. 1, 1965, 13,596/65

Int. Cl. C09b 45/16, 45/20

U.S. Cl. 260—145

10 Claims

Heterogeneous 1:2 cobalt or chromium complex azo dyes are suitable for the coloration of surface coatings, such as nitrocellulose and vinyl lacquers. They have better fastness to light, washing and milling than the next comparable previously known dyes. Each monoazo

dye of the heterogeneous metal complex azo dyes contains two groups capable of metal complex formation; one of the monoazo dyes has directly bound to an azo nitrogen a 6-halo-4-sulfonaphthyl-1, the 2-position of which is bound through an oxygen bridge to the metal, and each other of the monoazo dyes has (a) a ring carbon of a benzene ring directly bound to an azo nitrogen and (b) a carbon ortho to the ring carbon bound to said metal through a bridge selected from the group consisting of an oxygen bridge and a carboxy bridge, any further substituent on the benzene ring being non-water-solubilizing.

3,516,981

MONO AZO REACTIVE DYESTUFFS

Henri Rist, Arlesheim, Raymond Gmst, Birsfelden, and Gerd Hoesle, Liestal, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Continuation-in-part of application Ser. No. 319,979, Oct. 30, 1963. This application Mar. 3, 1967, Ser. No. 620,253

Claims priority, application Switzerland, Nov. 13, 1962, 13,259/62; Sept. 10, 1963, 11,131/63

Int. Cl. C09b 62/08; D06p 1/09

U.S. Cl. 260—153

6 Claims

Water soluble reactive cotton dyestuffs dyeing green and olive shades and containing an azodyestuff molecule and an anthraquinone dyestuff molecule bond to a halogeno triazine nucleus.

3,516,982

MONOAZO DYES CONTAINING A 2-NITRO DIPHENYLAMINE

Peter Dimroth and Kurt Mayer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed July 7, 1966, Ser. No. 563,381

Claims priority, application Germany, July 16, 1965, 1,544,379

Int. Cl. C09b 29/08; D06p 1/02

U.S. Cl. 260—206

6 Claims

Disperse azo dyes derived from an aniline diazo component and a 2-nitro-diphenyl-amine coupling component, useful for dyeing synthetic polyester fibers.

3,516,983

TREATMENT OF XANTHOMONAS HYDROPHILIC COLLOID AND RESULTING PRODUCT

George T. Colegrove, San Diego, Calif., assignor to Kelco Company, San Diego, Calif., a corporation of Delaware

No Drawing. Filed Jan. 11, 1968, Ser. No. 697,034

Int. Cl. C07c 47/18

U.S. Cl. 260—209

15 Claims

Process for purifying a Xanthomonas hydrophilic colloid containing proteinaceous impurities in aqueous media by maintaining the pH of the media above about 8.0, preferably above about 10.0, adding an alkali metal hypochlorite to the mixture, preferably at a concentration of about 0.25 to 2.0 percent, then adjusting the pH of the media to slightly acidic, and adding a lower alcohol to precipitate the Xanthomonas hydrophilic colloid.

ERRATUM

For Class 260—210 see:
Patent No. 3,517,269

3,516,984

PROCESS FOR MANUFACTURING O- β -HYDROXY-ETHYL ETHERS OF RUTIN

Pierre Combar, Nyon, Switzerland, assignor to
Zyma S.A., Nyon, Switzerland

No Drawing. Continuation-in-part of application Ser. No. 439,946, Mar. 15, 1965. This application Nov. 6, 1967, Ser. No. 681,025

Claims priority, application Switzerland, Mar. 26, 1964, 4,014/64

Int. Cl. C07c 47/18

U.S. Cl. 260—210

5 Claims

Ethers of O- β -hydroxyethyl-rutin are produced in a two-step process with a greatly reduced quantity of solvent as compared to the known processes. In the first step, one mole of rutin, two moles of sodium hydroxide, and two moles of ethylene chlorohydrin are mixed in a medium which is at least 80% by volume of ethanol. In the second step, at least one mole of sodium hydroxide and at least one mole of ethylene chlorohydrin are added to the reaction mixture obtained by the first step.

3,516,985

INDOLE RIBOFURANOSIDES

Edward Walton, Scotch Plains, and Frederick W. Holly, Cranford, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 547,414, May 4, 1966. This application June 28, 1968, Ser. No. 741,196

Int. Cl. C07c 95/04

U.S. Cl. 260—211.5

10 Claims

Novel 4-substituted indole ribofuranosides are prepared by condensing a 1,2,3,5-tetra-O-acyl-D-ribofuranose with a 4-substituted indoline to form a 2,3,5-tri-O-acyl-D-ribofuranosyl 4-substituted indoline intermediate, which is then oxidized to produce the corresponding indole. The acyl groups are then removed by basic solvolysis. The 4-substituted indole ribofuranosides are useful as screening agents for ultraviolet rays.

3,516,986

ESTERS OF 2-(ω -ALKYLENEIMINO)URAMIDO) BENZOIC ACID

Don L. Hunter, Long Beach, Kiyoshi Kitasaki, Garden Grove, and Robert F. Crawford, La Mirada, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Nov. 15, 1966, Ser. No. 594,353

Int. Cl. C07d 29/24

U.S. Cl. 260—239

12 Claims

This invention comprises novel esters of 2-(ω -alkyleneimino)uramido)benzoic acid in which the alkylene group has from 4 to 7 carbon atoms. The compounds, which are especially useful as herbicides, can be prepared by reacting the isocyanate of the corresponding ester of anthranilic acid with an N-aminoalkyleneimine.

3,516,987
1-METHYLSULFONYL-7-METHOXY-2,3,4,5-TETRA-HYDRO-1H-1-BENZAZEPINE

Charles M. C. Koo, Philadelphia, and Thomas W. Pattison and David R. Herbst, King of Prussia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Original application Apr. 25, 1966, Ser. No. 544,681, now Patent No. 3,458,498, dated July 29, 1969. Divided and this application Jan. 15, 1969, Ser. No. 821,526

Int. Cl. C07d 41/08

U.S. Cl. 260—239

1 Claim

2,3,4,5-tetrahydro-7-methoxy-1-(methylsulfonyl)-1H-1-benzazepine, useful as diuretic, hypoglycemic, anti-bacterial, and anti-convulsant.

3,516,988

1,4 BENZODIAZEPINE-2-ONES HAVING A CARBOXYLIC ACID ESTER OR AMIDE GROUP IN THE 3-POSITION

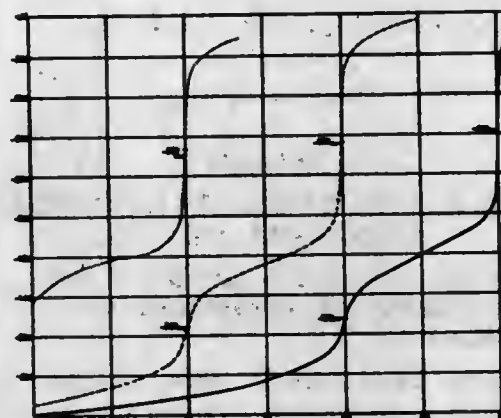
Josef Schmitt, 6 Rue Sentier des Garennes, Val-de-Marne, L'Hay-les-Roses, France

Continuation of application Ser. No. 463,613, June 14, 1965. This application Feb. 19, 1968, Ser. No. 706,713
Claims priority, application France, June 15, 1964, 978,360; Apr. 12, 1965, 12,886

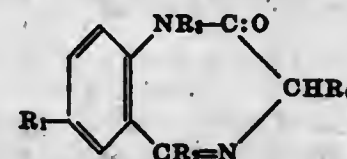
Int. Cl. C07d 53/06

U.S. Cl. 260—239.3

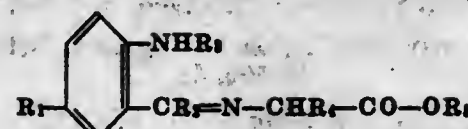
15 Claims



Novel benzodiazepine having the formula



in which R₁ is a hydrogen or halogen atom or a trifluoromethyl, lower alkyl, lower alkoxy, nitro or amino group, R₂ is a furyl, a thienyl, cyclohexyl, a lower alkyl group or a phenyl group which may be substituted by a halogen atom or by a trifluoromethyl, nitro, lower alkoxy or lower alkyl group, and R₃ is a hydrogen atom or a lower alkyl group, and R₄ is a lower carbalkoxy, carbamoyl, an N-loweralkylcarbamoyl, an N,N-diloweralkylcarbamoyl, an N-(diloweralkylaminoalkyl)carbamoyl, a group having the formula—COOCat in which Cat is a cation of an alkali metal or a semication of an alkaline earth metal are prepared by treating an ortho-aminoarylketimine having the formula



in which R₁, R₂, R₃, and R₄ are as defined above and R₅ is a lower alkyl group or, when R₄ is a carbamoyl or —COOCat group, a cation of an alkali metal or semication of an alkaline earth metal, but excluding the case in which R₄ is —COOCat and R₅ is —Cat, with an an-

hydrous lower aliphatic acid or with an anhydrous mineral acid, or, when R₁ is —COOCat and R₂ is —Cat, with a dilute aqueous solution of an acid salt, in particular potassium dihydrogen orthophosphate, in substantially equimolar proportion or with a weak acid.

3,516,989

INTERMEDIATES FOR TOTAL SYNTHESIS OF IBOGA ALKALOIDS AND MEANS OF PREPARATION

Stephen I. Sallay, Wynnewood, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 2, 1967, Ser. No. 671,966

Int. Cl. C07d 41/04, 41/06, 41/08

U.S. Cl. 260—239

18 Claims

This invention is concerned with new and novel derivatives of iboga alkaloids which are pharmacologically efficacious as central nervous system stimulants. Further, this invention relates to new and novel intermediates for the preparation of iboga alkaloids and their new and novel derivatives by a totally synthetic, commercially applicable process.

3,516,990

13-ALKYL-5 α -GONANEDIYL-BIS(N-ALKYL-N-HETEROCYCLIC HALIDES)

Daniel M. Teller, King of Prussia, George H. Douglas, Chester, and Herchel Smith, Wayne, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 17, 1966, Ser. No. 586,949

Int. Cl. C07c 173/00

U.S. Cl. 260—239.5

5 Claims

3- and 16- or 17-bis-quaternary ammonium salts of racemic and optically active 1-steroids are prepared and found to be physiologically active as muscle-relaxing agents.

3,516,991

CHEMICAL PROCESS

Bradford H. Walker, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Sept. 19, 1968, Ser. No. 760,986

Int. Cl. C07c 167/20

U.S. Cl. 260—239.5

3 Claims

A 3-enol ether or enamine of 4-androstene-3,17-dione, 4,9(11)-androstadiene-3,17-dione or 11 β -hydroxy-androst-4-ene-3,17-dione is alkylated with an organometallic reagent such as alkyl magnesium halide or alkyl lithium reagent to produce the corresponding 17 α -alkyl-17 β -hydroxyl compound by an improved process. The reaction is first induced to proceed to a point of stalling. A lower alcohol, followed by organometallic reagent, is then added to induce the reaction to proceed further. The steps of adding alcohol and organometallic reagent can be repeated until the unconverted 17-ketone reaches a desired minimum.

3,516,992

3-(2-AMINO-5-HALO-5-ALKYL- AND 5-ALKOXY-BENZOYL) BENZENE SULFONAMIDES

Stanley C. Bell, Narberth, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 18, 1967, Ser. No. 609,999

Int. Cl. C07c 143/78; A61k 27/00

U.S. Cl. 260—239.7

5 Claims

3-(2-amino-5-halo-5-alkyl- and 5-alkoxybenzoyl) benzenesulfonamides (I) are obtained by treating 2-amino-5-halo-5-alkyl- or 5-alkoxybenzophenones with chlorosulfonic acid, then with ammonia. Compounds I and monoacylamino derivatives thereof have depressant, anti-amebic and antiviral properties.

3,516,993

BENZYLIDENE-SUBSTITUTED NITROGENOUS HETEROCYCLIC COMPOUNDS

William J. Houlihan, Mountain Lakes, and Robert E. Manning, Parsippany, N.J., assignors to Sandoz-Wander, Inc., a corporation of Delaware

No Drawing. Filed Mar. 15, 1967, Ser. No. 623,214

Int. Cl. C07d 41/00

U.S. Cl. 260—240

9 Claims

The compounds are benzylidene-substituted derivatives of 1H-2,3,4,5,6,7-hexahydrobenzazonines; 1,2,3,4,5,6,7,8-octahydro-3-benzazecines, and 5,6,8,13-tetrahydrodibenz [c,f]azonines, respective examples of which are 7-benzylidene-9,10-dimethoxy-3-methyl-1H-2,3,4,5,6,7-hexahydro-3-benzazonine; 8-(p-chlorobenzylidene)-3-methyl-1,2,3,4,5,6,7,8-octahydro-3-benzazecine and 13-benzylidene-2,3-dimethoxy-7-methyl-5,6,8,13-tetrahydrodibenz [c,f]azonine. The compounds are useful as anti-inflammatories. In preparing said compounds a suitable intermediate, i.e. a 10b-benzyl-substituted 1,2,3,5,6,10b-hexahydropyrrolo[2,1-a]isoquinoline; a 11b-benzyl-substituted 1,2,3,4,6,7-hexahydro-11bH-benzo[a]quinolizine or a 12b-benzyl-substituted-5,6,8,12b-tetrahydroisindolo [1,2-a]isoquinoline, is converted to a quaternary ammonium halide thereof, by treatment with a lower hydrocarbon halide, e.g. CH₃I, which is then subjected to an elimination reaction by heating with an alkali metal lower alkoxide, e.g. NaOCH₃.

3,516,994

5-NITRO-2-FURALDEHYDE 1-(LOWER-ALKYL)-3-CARBOXY-1,4-DIHYDRO-4-OXO-1,8-NAPHTHYRIDINE-7-HYDRAZONE

George Y. Leshner, Schodack, N.Y., assignor to Sterling Drug, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 2, 1967, Ser. No. 671,958

Int. Cl. C07d 31/42

U.S. Cl. 260—240

2 Claims

5-nitro-2-furaldehyde 1-(lower-alkyl)-3-carboxy-1,4-dihydro-4-oxo-1,8-naphthyridine-7-hydrazones, having antibacterial properties, are prepared by reacting 5-nitro-2-furaldehyde with a 1-(lower-alkyl)-3-carboxy-7-hydrazino-1,4-dihydro-4-oxo-1,8-naphthyridine.

3,516,995

BENZALHYDRAZONES

William J. Houlihan and Robert E. Manning, Mountain Lakes, N.J., assignors to Sandoz-Wander, Inc., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 743,985, July 11, 1968, which is a continuation-in-part of application Ser. No. 682,490, Nov. 13, 1967, which in turn is a continuation-in-part of application Ser. No. 666,956, Sept. 11, 1967. This application Feb. 27, 1969, Ser. No. 803,061

Int. Cl. C07d 49/34

U.S. Cl. 260—240

6 Claims

Novel benzalhydrazones, e.g., 2,6-dichlorobenzaldehyde-2-imidazolin-2-yl-hydrazone, useful as hypotensives.

3,516,996

1-ALKYLTHIAZOLO[2,3-c][1,2,4]BENZOTHIADIAZINE-2-CARBOXYLIC ACID, 5,5-DIOXIDE ESTERS

Peter H. L. Wei, Upper Darby, and Stanley C. Bell, Penn Valley, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 681,902, Nov. 9, 1967. This application Feb. 12, 1968, Ser. No. 704,505

Int. Cl. C07d 93/32

U.S. Cl. 260—243

5 Claims

This invention is concerned with 1-alkylthiazolo[2,3-c][1,2,4]benzothiadiazine-2-carboxylic acid, 5,5-dioxide esters which are pharmacologically active as antidiarrheal agents.

3,516,997

3,7-DISUBSTITUTED CEPHALOSPORIN COMPOUNDS AND PREPARATION THEREOF

Tadayoshi Takano, Hirakata, Masaru Kurita, Takatsuki, Hiroo Nikaido, Ikeda, Masashi Mera, Amagasaki, Nobukiyo Konishi, Kyoto, and Ritsuko Nakagawa, Akashi, Japan, assignors to Fujisawa Pharmaceutical Co., Ltd., Osaka, Japan

No Drawing. Filed Apr. 12, 1968, Ser. No. 721,082
Claims priority, application Japan, Apr. 15, 1967, 42/23,971; Oct. 24, 1967, 42/68,429; Oct. 28, 1967, 42/69,510

Int. Cl. C07d 99/24, 99/10

U.S. Cl. 260—243

24 Claims

The 3,7-disubstituted cephalosporin compounds of this invention are novel 7-acylated amino-3-(thiolated methyl)ceph-3-em-4-carboxylic acids. They exhibit antibacterial activity against gram-positive and gram-negative bacteria.

3,516,998

4-AMINO-2-ARYL-7-ALKYLAMINO-6-PTERIDINECARBOXAMIDINES

Thomas S. Osden, Richmond, Va., and Arthur A. Santilli, Havertown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

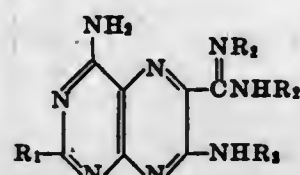
No Drawing. Filed Sept. 22, 1966, Ser. No. 581,154

Int. Cl. C07d 87/40

U.S. Cl. 260—247.5

6 Claims

A compound of the formula



wherein R₁ is phenyl, halophenyl, alkyl- or alkoxy-phenyl, trifluoromethylphenyl, thienyl; R₂ is hydrogen, lower alkyl, lower alkoxy (X), di(lower)alkylamino (X), lower alkylthio (X), morpholino (X), piperidino (X), and N-(lower)alkylpiperazino (X), wherein X is alkylene; R₃ is lower alkyl. The compounds exhibit anti-inflammatory and anti-bacterial activity.

3,516,999

BENZIMIDAZOLE DERIVATIVES

Hideo Kano, Kyoto-shi, Shiro Takahashi, Suita-shi, Ryosuke Kido, Toyonaka-shi, and Katsumi Hirose, Nishinomiya-shi, Japan, assignors to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Filed Mar. 24, 1967, Ser. No. 625,610

Int. Cl. C07d 49/38

U.S. Cl. 260—247.5

22 Claims

1-(tertiary-aminoalkoxy)-benzimidazoles being unsubstituted or substituted by a lower alkoxy group at the 2 position and unsubstituted or substituted by a member selected from the group consisting of a lower alkyl, a lower alkoxy, a nitro and a halogen at the 4-, 5-, 6-, or 7-position, being prepared by an interaction of a corresponding benzimidazole-1-oxide with a reactive ester of (tertiary-amino)-alkanol, and having strong analgesic, anti-inflammatory, antipyretic and antitussive activities with a low toxicity.

3,517,000

ALPHA-AMINOMETHYL BENZYL ALCOHOLS

William F. Bruce, Havertown, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Original application Oct. 22, 1965, Ser. No. 502,370. Divided and this application Aug. 8, 1968, Ser. No. 751,027

Int. Cl. C07d 87/40

U.S. Cl. 260—247.5

5 Claims

Aralkylamines are prepared by the reaction of styrene oxide with certain alicyclic, lower alkoxyalkyl, amino-

(lower)-alkyl, aralkyl, and morpholino(lower)alkyl(hydroxyaralkyl) amines for a relatively short period of time. The products are pharmacologically active as anti-convulsants.

3,517,001

NITROGEN-CONTAINING ORGANOSILICON MATERIALS

Abe Berger, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

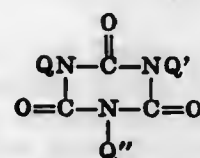
No Drawing. Filed Sept. 20, 1967, Ser. No. 669,284

Int. Cl. C07d 55/38

U.S. Cl. 260—248

4 Claims

Silicon substituted isocyanurates of the formula,



can be made by effecting addition of a silicon hydride to an aliphatically unsaturated isocyanurate, where Q is selected from monovalent organosilicon radicals, Q' is selected from Q radicals, monovalent saturated hydrocarbon radicals, halogenated monovalent saturated hydrocarbon radicals, monovalent aliphatically unsaturated hydrocarbon radicals and halogenated monovalent aliphatically unsaturated hydrocarbon radicals, and Q'' is selected from Q or Q' radicals. These materials can be employed as primers for promoting the adhesion of silicone rubber to various substrates.

3,517,002

POLYISOCYANATES CONTAINING ISOCYANURATE GROUPS

Herbert L. Heiss, New Martinsville, Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Nov. 17, 1966, Ser. No. 595,046

Int. Cl. C07d 55/38

U.S. Cl. 260—248

3 Claims

Novel isocyanurate compositions are prepared by polymerizing a mixture of tolylene diisocyanate and hexahydroxytolylene diisocyanate. The isocyanurate compositions are particularly useful in the preparation of urethane coatings.

3,517,003

THIOL-SUBSTITUTED s-TRIAZINES

Reginald T. Wragg, Tamworth, England, assignor to The Dunlop Company Limited, London, England, a British company

No Drawing. Filed Oct. 9, 1967, Ser. No. 673,968

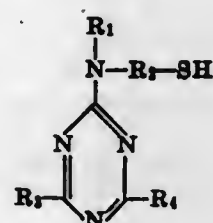
Claims priority, application Great Britain, Oct. 27, 1966, 48,158/66

Int. Cl. C07d 55/22

U.S. Cl. 260—249.6

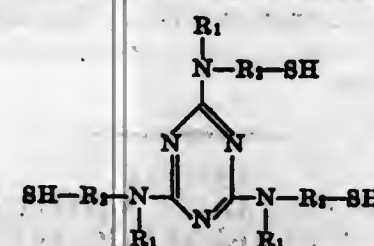
7 Claims

An s-triazine of the general formula



where R₁ is hydrogen or an alkyl, alkene or aromatic radical, which may be substituted, R₂ is alkylene, alkenylene, dipropylene thioether, or a poly(propylene sulphide) group, R₃ and R₄ may be the same or different and are

selected from —N(R₁)—R₂—SH or a reactive substituent such as OR₁, SH, Cl, NH.NH₂, NH₂ or NH.R₁. Preferably the s-triazine has the general formula



of which the following is a specification.

3,517,004

BRIDGED 1,5-DIAZACYCLODECANES

William J. Houlihan, Mountain Lakes, N.J., assignor to Sandoz-Wander, Inc., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 566,719, July 21, 1966. This application Oct. 27, 1967, Ser. No. 678,528

Int. Cl. C07d 51/46

U.S. Cl. 260—251

5 Claims

Bridged 1,5-diazacyclodecanes, e.g., 9-(p-methoxyphenyl)-1,5-diazabicyclo[4.3.1]decane, are prepared from 1,5-diazabicyclononanes and are useful as antidepressants.

3,517,005

CERTAIN 2- AND 4-SUBSTITUTED QUINAZOLINES

Timothy H. Cronin, Niantic, and Hans-Jurgen E. Hess, New London, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 590,494, Oct. 31, 1966. This application Oct. 26, 1967, Ser. No. 678,191

Int. Cl. C07d 51/48

U.S. Cl. 260—256.4

10 Claims

Substituted 6,7-dialkoxyquinazolines, 4-(6,7-dialkoxyquinolin-4-yl)-piperazine-1-carboxylic acid, esters and 1-amino-6,7-dialkoxyisoquinolines and their pharmaceutically-acceptable acid addition salts. Compounds manifest bronchodilator activity and anti-hypertensive response with minimal adverse effects upon administration to afflicted subjects.

3,517,006

PROCESS FOR THE PURIFICATION OF 6-HALOGENOPURINE

Yasuo Fujimoto and Masao Naruse, Tokyo-to, Japan, assignors to Kyowa Hakko Kogyo K.K. (Kyowa Fermentation Industry Co., Ltd.), Tokyo-to, Japan, a corporation of Japan

No Drawing. Filed Jan. 19, 1966, Ser. No. 534,932
Claims priority, application Japan, Jan. 20, 1965, 40/2,535

Int. Cl. C07d 57/38

U.S. Cl. 260—254

5 Claims

A process for recovering 6-halopurine from the reaction mixture produced by reacting hypoxanthine with a halogenating agent in the presence of a tertiary amine base by extraction with alcohol.

3,517,007

5-ACETAMIDO-4-PYRIMIDINECARBOXAMIDES, 5-ACETAMIDO-4-PYRIMIDINECARBOXYLIC ACID HYDRAZIDES AND RELATED COMPOUNDS

Dong H. Kim, Wayne, and Arthur A. Santilli, Havertown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1968, Ser. No. 719,237

Int. Cl. C07d 51/42

U.S. Cl. 260—256.4

19 Claims

This invention is concerned with 5-acetamido-4-pyrimidinecarboxamides, 5-amino-4-pyrimidinecarbox-

amides, 5-acetamido-4-pyrimidinecarboxylic acid hydrazides and 5-amino-4-pyrimidinecarboxylic acid hydrazides which are pharmacologically active as anti-convulsant agents.

3,517,008

1-ALKYL-6-SUBSTITUTED ISOXAZOLO[3,4-d]PYRIMIDIN-3(1H)-ONES

Dong H. Kim, Wayne, and Arthur A. Santilli, Havertown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1968, Ser. No. 719,239

Int. Cl. C07d 99/02

U.S. Cl. 260—256.4

10 Claims

This invention concerns 1-alkyl-6-substituted isoxazolo[3,4-d]pyrimidin-3(1H)-ones which are valuable intermediates in the preparation of 4-hydroxy(lower)alkyl-amino-N,2-disubstituted-5-pyrimidinecarboxamides which are pharmacologically active as central nervous system depressants.

3,517,009

4-HYDROXY(LOWER)ALKYLAMINO-N,2-DISUBSTITUTED-5-PYRIMIDINECARBOXAMIDES

Dong H. Kim, Wayne, and Arthur A. Santilli, Havertown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1968, Ser. No. 719,240

Int. Cl. C07d 51/42

U.S. Cl. 260—256.4

10 Claims

This invention is concerned with 4-hydroxy(lower)alkylamino-N,2-disubstituted-5-pyrimidinecarboxamides which are pharmacologically active as central nervous system depressants.

3,517,010

5-ACETAMIDO-4-PYRIMIDINECARBOXYLIC ACIDS AND RELATED COMPOUNDS

Dong H. Kim, Wayne, and Arthur A. Santilli, Havertown, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1968, Ser. No. 719,241

Int. Cl. C07d 51/42

U.S. Cl. 260—256.4

9 Claims

This invention concerns 5-acetamido-4-pyrimidinecarboxylic acids, 5-acetamido-4-pyrimidinecarboxylic acid esters and 5-amino-4-pyrimidinecarboxylic acid esters which are pharmacologically active as central nervous system depressants. Further, this invention relates to 5-(2,2,2-trifluoroacetamido)-4-pyrimidinecarboxylic acid esters which are useful intermediates in the preparation of their corresponding 5-amino-4-pyrimidinecarboxylic acid esters.

3,517,011

N-AMIDINO-4-AMINO-2-SUBSTITUTED 5-PYRIMIDINECARBOXAMIDE

Dong H. Kim, Wayne, Arthur A. Santilli, Havertown, and Scott J. Childress, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1968, Ser. No. 719,242

Int. Cl. C07d 51/42

U.S. Cl. 260—256.4

6 Claims

This invention concerns N-amidino-4-amino-2-substituted-5-pyrimidinecarboxamides which are useful as anti-amebic agents.

3,517,012

1,4-DIAZA-BICYCLO-(4,4,0)BENZO-(1,2,h)-DECANE COMPOUNDS

Gilbert Regnier, Sceaux, Roger Carnevali, La Haye-Roses, and Jean-Claude Le Douarec, Suresnes, France, assignors to Societe en nom Collectif Science Union et Cie, Societe Francaise de Recherche Medicale, a French society

No Drawing. Filed May 17, 1967, Ser. No. 639,053
Claims priority, application Great Britain, May 25, 1966, 23,367/66

Int. Cl. C07d 57/22

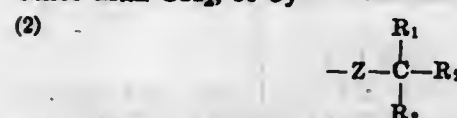
U.S. Cl. 260—268 7 Claims
1,4-diazabicyclo (4,4,0) benzo (1,2,h) decane compounds substituted, in position 4, either by:

(1) —Y—Ar

wherein:

Y is a linear or branched polymethylene chain, having 1 to 4 carbon atoms, inclusive, optionally containing an ethylenic double bond; and

Ar is halophenyl, trifluoromethylphenyl, lower-alkylphenyl, hydroxyphenyl, lower-alkoxyphenyl, methylene- or ethylene-dioxyphenyl, and can be phenyl when Y is other than CH₂, or by



wherein:

Z is a linear or branched polymethylene chain, having 0 to 4 carbon atoms, inclusive;

R₁ is hydrogen, hydroxy or phenyl,
R₂ is phenyl or cyclohexyl or lower-alkylphenyl, and
R₃ is phenyl, halophenyl, trifluoromethylphenyl, lower-alkylphenyl or lower-alkoxyphenyl.

These compounds possess parasympatholytic, anticholinergic, spasmolytic and antiserotonin properties.

3,517,013

ANTHRAPYRIDONE AND ANTHRAQUINONE DYES CONTAINING 1 OR 2 β-SULFATO-, β-THIOSULFATO- OR β-VINYLETHYLSULFONYLALKANOYL-N-METHYLENEAMINE GROUPS

Takashi Akamatsu, Ashiya-shi, Hirohito Kenmochi, Toyonaka-shi, Hideaki Suda, Osaka, and Seiji Hotta, Mimosa-shi, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Mar. 22, 1965, Ser. No. 441,912

Claims priority, application Japan, Mar. 24, 1964,

39/16,278; 39/16,279; Mar. 27, 1964, 39/16,848,

39/16,849; Apr. 1, 1964, 39/18,201; Apr. 2, 1964,

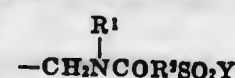
39/18,442; Feb. 25, 1965, 40/10,819; Mar. 1, 1965,

40/11,974; Mar. 6, 1965, 40/13,008, 40/13,009

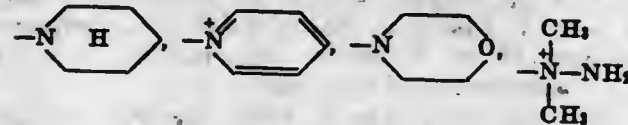
Int. Cl. C09b 62/72, 62/74, 62/76

U.S. Cl. 260—278

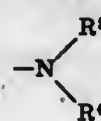
1 Claim
Anthraquinone reactive dyes containing one or two reactive groups having the formula,



wherein R¹ means hydrogen atom, an alkyl having 1 or 2 carbon atoms; R² means an alkylene having 1 or 2 carbon atoms; and Y means β-sulfatoethyl, vinyl, β-thio-sulfatoethyl or —CH₂CH₂Z wherein Z means



or



wherein R³ means hydrogen atom or an alkyl having 1 to 3 carbon atoms; R⁴ means hydrogen atom, an alkyl having 1 to 3 carbon atoms or amino.

The dye may be employed for dyeing, especially, wool, polyamide fiber, silk or cotton with excellent fastness to light and moisture.

3,517,014

METHOD OF PREPARING 8-HYDROXYQUINOLINE-3-CARBOXYLIC ACIDS

George Y. Lesher, Schodack, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 697,301, Jan. 12, 1968. This application June 16, 1969, Ser. No. 833,737

Int. Cl. C07d 33/48

U.S. Cl. 260—287 12 Claims

The process which comprises the steps of reacting a 3-carboxy-8-(R—CH₂)-7-R₁-1,7-naphthyridinium salt with an aqueous alkaline medium and acidifying the alkaline reaction mixture, thereby producing an 8-hydroxy-7-R-quinoline-3-carboxylic acid, wherein R is hydrogen, lower-alkyl having from one to five carbon atoms inclusive or phenyl-X where X is alkylene having from one to four carbon atoms inclusive, and R₁ is lower-alkyl or lower-alkenyl. The 8-hydroxyquinoline-3-carboxylic acids produced by the process are useful as antibacterial agents, e.g., 7-benzyl-4,8-dihydroxy-6-methylquinoline-3-carboxylic acid.

3,517,015

TETRAHYDRO-ISOQUINO[2,1-d][1,4]BENZODIAZEPINES

Hans Ott, Basel-Land, Switzerland, assignor to Sandoz-Wander, Inc., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 549,441, May 12, 1966. This application Mar. 10, 1969, Ser. No. 805,832

Int. Cl. C07d 53/06

U.S. Cl. 260—288 16 Claims

The invention discloses tetracyclic compounds which are tetrahydro-isoquino[2,1-d][1,4]benzodiazepines having pharmacological effect on the central nervous system and useful, for example, as anti-depressants. Also disclosed is a preparation of said tetracyclic compounds and intermediates useful in such preparation, for example, the compounds which are 1-(halophenyl)-2-(2-alkoxy-2-iminoethyl)-1,2,3,4-tetrahydroisoquinoline dihydrochlorides which may be reacted with ammonia or a strong base or an appropriately substituted primary amine to obtain the tetracyclic compounds.

3,517,016

N-(β-ALKOXY-β-PHENYLETHYL)-PIPERIDINE DERIVATIVES

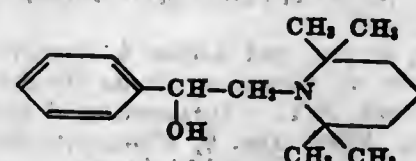
Andrea Pedrazzoli and Leone Dall'Asta, Milan, Italy, assignors to Societe d'Etudes de Recherches et d'Applications Scientifiques & Medicales E.R.A.S.M.E., Paris, France, a French society

No Drawing. Filed Apr. 18, 1967, Ser. No. 631,613
Claims priority, application Great Britain, Apr. 21, 1966, 17,534/66

Int. Cl. C07d 29/24

U.S. Cl. 260—294.3 2 Claims

A novel derivative of 2,2,6,6-tetramethyl-piperidine having the formula:



esters thereof and acid addition salts of said derivative and said esters. The compounds of the invention have

antihistaminic, parasympatholytic, sympatholytic, ganglioplegic, myolytic, local anesthetic and, in particular, analgesic, antiinflammatory, antipyretic and psychotropically tranquillizing properties.

3,517,017

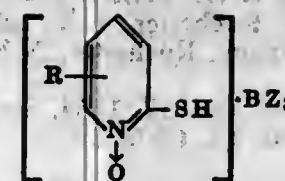
BORON-CONTAINING SALTS OF 2-MERCAPTOPYRIDINE-N-OXIDES

Rudiger D. Haugwitz, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia
No Drawing. Filed Mar. 6, 1969, Ser. No. 804,995

Int. Cl. C07d 31/50

U.S. Cl. 260—294.8

3 Claims
Boron-containing salts of 2-mercaptopyridine-N-oxides having the formula



wherein R is hydrogen, halogen, alkyl or alkoxy and Z is halogen, alkyl or aryl are described. These salts, which are useful biocides, are prepared by reacting the appropriate trisubstituted boron compound with a 2-mercaptopyridine-N-oxide.

3,517,018

FORMALDEHYDE ADDUCTS OF 2-MERCAPTOPYRIDINE-N-OXIDE

Rudiger D. Haugwitz, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed July 3, 1968, Ser. No. 742,160

Int. Cl. C07d 31/50

U.S. Cl. 260—294.8

1 Claim
The invention relates to formaldehyde adducts of 2-mercaptopyridine-N-oxide and 2,2'-dithiopyridine-1,1'-dioxide. The adducts of this invention are effective biocides against a broad spectrum of bacteria and fungi. The adducts are prepared by reacting the appropriate adduct with formaldehyde, preferably an excess, and recovering the adduct. Gentle heating is usually employed to accelerate the reaction rate.

3,517,019

CERTAIN 2-SUBSTITUTED AMINO QUINOLIZINIUM COMPOUNDS

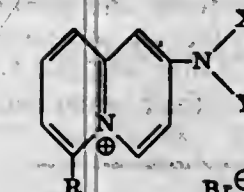
Robert James Alaimo, Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of Delaware

No Drawing. Filed Aug. 21, 1967, Ser. No. 662,192

Int. Cl. C07d 31/42, 31/50

U.S. Cl. 260—294.8

33 Claims
A series of 2-substituted quinolizinium compounds of the formula:



wherein R is hydrogen or methyl; X is hydrogen, ethoxyethyl, amino or allyl; Y is hydrogen, ethoxyethyl, 2-(5-ethyl-2-pyridyl)ethyl, allyl or



in which Z is 2-lower alkoxy, 3,4-dimethoxy, 4-dilower-alkylamino, 4-methylmercapto, 2,4-dimethoxy, 4-lower

alkoxy, 4-allyloxy, 4-propynyloxy, 3,4-dimethyl, 2-methoxy-5-methyl, hydrogen, 2,4,6-trimethoxy, 4-phenoxy, 4-methoxy-2-methyl, 3-chloro, 3-(1-hydroxyethyl), 4-bromo, 5-chloro-2,4-dimethoxy, 2,5-diethoxy or 4-cyclopentyloxy are anthelmintic agents.

3,517,020

CERTAIN 1-(3'-NICOTINOYL)-2-LOWERALKYLTHIO-BENZIMIDAZOLES

Marcel K. Eberle, Madison, N.J., assignor to Sandoz-Wander, Inc., a corporation of Delaware

No Drawing. Filed Nov. 1, 1967, Ser. No. 679,609

Int. Cl. C07d 31/50

U.S. Cl. 260—294.8

2 Claims
This disclosure pertains to certain 2-loweralkylthio-benzimidazoles, e.g., 2-methylthio-1-(3'-nicotinoyl)-benzimidazole. These compounds are useful as anti-inflammatory agents.

3,517,021

4-AMINO-3-CYANOPYRIDINES AND METHODS OF PREPARATION

John F. Marschik, Summit, and Paul N. Rylander, Newark, N.J., assignors to Engelhard Minerals and Chemicals Corporation, Newark, N.J., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 508,561, Nov. 18, 1965. This application May 20, 1968, Ser. No. 730,649

Int. Cl. C07d 31/46

U.S. Cl. 260—294.9

7 Claims
A method for the preparation of 4-amino-3-cyanopyridines by the catalytic dehydrogenation of 4-imino-3-cyanopiperidines over a palladium dehydrogenation catalyst in the presence of a nitro compound as hydrogen acceptor and optionally in the presence of a minor amount of an aliphatic carboxylic acid.

3,517,022

CERTAIN 2-CARBAMOYL-1,2-BENZISO-THIAZOLONES

George A. Miller, Glenade, Sheldon N. Lewis, Willow Grove, and Andrew B. Law, Levittown, Pa., assignors to Rohm and Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 621,786, Mar. 9, 1967. This application Oct. 3, 1967, Ser. No. 672,426

Int. Cl. C07d 91/10

U.S. Cl. 260—304

9 Claims
Disclosed herein are novel 2-substituted benzisothiazolones wherein the substituents are alkyl and monosubstituted carbamoyl radicals. These compounds exhibit a broad spectrum of biocidal properties and are particularly effective for the control of microorganisms, such as, bacteria, fungi and algae.

3,517,023

DERIVATIVES OF α-AMINO-BENZYL-PENICILLIN

Leonard Bruce Crast, Jr., North Syracuse, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 5, 1967, Ser. No. 671,911

The portion of the term of the patent subsequent to Jan. 13, 1987, has been disclaimed

Int. Cl. C07d 99/14, 99/16

U.S. Cl. 260—306.7

4 Claims
6-[D-(—)-α-amino-α-(3,5-dichloro-4-hydroxyphenyl)-acetamido] penicillanic acid and 6-[D-(—)-2,2-dimethyl-4-(3,5-dichloro-4-hydroxyphenyl)-5-oxo-1-imidazolidinyl] penicillanic acid and the salts thereof are new synthetic compounds of value as antibacterial agents and in the treatment of bacterial infections.

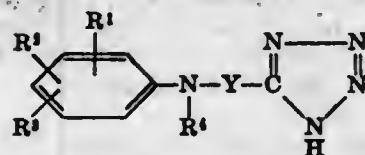
3,517,024

ANILINOALKYL-TETRAZOLES

Ronald L. Buchanan, Fayetteville, and Richard A. Partyka, Liverpool, N.Y., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 7, 1966, Ser. No. 555,689
The portion of the term of the patent subsequent to Aug. 22, 1984, has been disclaimed

Int. Cl. C07d 55/56

U.S. Cl. 260—308 12 Claims
Anilinoalkyl-tetrazoles of the formula



wherein R¹, R², R³, R⁴ and Y are described below possess hypocholesterolemic activity and are useful for lowering blood cholesterol level.

3,517,025

2-(o-NITROSOPHENYL)-2,1,3-BENZOTRIAZOLE
Rudolph Anthony Carboni, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 21, 1967, Ser. No. 634,056

Int. Cl. C07d 55/04

U.S. Cl. 260—308 1 Claim
This invention relates to 2-(o-nitrosophenyl)-2,1,3-benzotriazole and a process for its manufacture.

3,517,026

PORPHIN SYNTHESIS

Richard G. Yalman, Yellow Springs, Ohio, assignor to the United States of America as represented by the Secretary of the Department of Health, Education, and Welfare
No Drawing. Filed Oct. 27, 1966, Ser. No. 589,842

Int. Cl. C09b 47/00

U.S. Cl. 260—314 7 Claims
Porphins are prepared by heating the reactants, pyrrole and an aldehyde, dissolved in a solvent, under pressure to the critical temperature of the solvent.

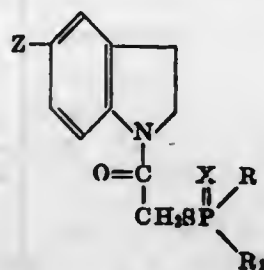
3,517,027

INDOLINE PHOSPHATES USEFUL AS INSECTICIDES

Theodore Largman, Morristown, and Peter E. Newallis, Overland Park, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 16, 1968, Ser. No. 698,114

Int. Cl. C07d 27/38

U.S. Cl. 260—326.11 9 Claims
A new class of indoline phosphates and phosphonates which are useful as insecticides having the following formula:



wherein X represents oxygen or sulfur; R represents an alkoxy group having 1-5 carbon atoms; R₁ represents a lower alkyl or alkoxyl group having 1-5 carbon atoms; and Z represents F, Cl, Br, I, NO₂, CH₃CO, CN or H.
The above compounds are prepared by reacting ammonium salts of phosphoric acid esters with N-chloroacetylindolines.

3,517,028

1-BENZOYL-2-METHYL-3-INDOLYLACETIC ACID DERIVATIVES

John Martin Chemerda, Watchung, and Meyer Sletzing, North Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed July 26, 1967, Ser. No. 656,024

Int. Cl. C07d 27/56

U.S. Cl. 260—326.16 3 Claims
The invention relates to novel 1-p-chlorobenzoyl-2-methyl-3-indolyl methanol or 3-indolyl halomethyl compounds. These compounds are useful in the preparation of potent anti-inflammatory products.

3,517,029

CYCLIC POLYMETHYLENE MONOTHIOL-CARBONATES AND THEIR PREPARATION

Dee Lynn Johnson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 17, 1964, Ser. No. 390,213

Int. Cl. C07d 89/06

U.S. Cl. 260—327 13 Claims
Cyclic polymethylene monothiolcarbonates and hydrocarbyl mercaptoalkylcarbonates are prepared by contacting a mercaptoalkanol with a carbonate diester in the presence of a catalytic amount of a catalytically active salt of thorium. Novel compounds such as 5-(hydroxymethyl)ethylene monothiolcarbonate, trimethylene monothiolcarbonate and tetramethylene monothiolcarbonate are obtained.

3,517,030

OXETYL TOSYLATES AND HALOOXETANES

Sheldon L. Clark, Murray Hill, N.J., and Roger J. Polak, Mount Carmel, and John A. Wojtowicz, East Haven, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed June 14, 1966, Ser. No. 557,376

Int. Cl. C07d 3/00

U.S. Cl. 260—333 5 Claims
Oxetyl tosylates prepared by reacting a hydroxyoxetane and tosyl chloride are subsequently reacted with an alkali metal halide to yield the corresponding halooxetane. Polymers can be prepared from the halooxetanes by copolymerization with butadiene monoxide.

3,517,031

1,5-BENZOXEPIN- AND BENZODIOXEPIN-3-ONES AS FLAVOR AND ODORANT AGENTS

John J. Beerebo, Old Lyme, and Donald P. Cameron and Charles R. Stephens, New London, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 15, 1966, Ser. No. 572,206

Int. Cl. C07d 13/00

U.S. Cl. 260—333 5 Claims
A series of benzoxepine-3-ones and benzodioxepin-3-ones, prepared by a novel synthesis, are useful as flavor and odorant agents for foods and perfumes, respectively. Preferred embodiments include new benzodioxepin-3-ones like 6- and 7-methyl-3,4-dihydro-2H-1,5-benzodioxepin-3-one, both of value for their watermelon-like taste and odor.

3,517,032

TRIOXIDES

Nicholas A. Milas, Belmont, and Grigorios G. Arzoumanidis, Cambridge, Mass., assignors to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts
No Drawing. Filed Dec. 9, 1965, Ser. No. 512,799

Int. Cl. C07c 73/00; C07d 19/00

U.S. Cl. 260—338 4 Claims
Organic trioxides may be prepared by dehydrating an organic hydroperoxide, such as by reacting the hydro-

peroxide with triphenyl phosphine dichloride in the presence of triphenyl phosphine oxide. The compounds are characterized by a trioxy group having the structure O—O—O in which an oxide atom is connected to a carbon atom of an organic group which may be terminal groups such as di-tert-butyl-oxide or di-lauroyl-trioxide or a cyclical structure such as 4-4-7-7 tetramethyl-1,2,3-trioxo-cycloheptane. The organic trioxides are useful as catalysts for the polymerization of unsaturated monomers such as vinyl esters and halides.

3,517,033

PROCESS FOR THE PRODUCTION OF ε-CAPROLACTONE AND ITS ALKYL DERIVATIVES

Otto Weilberg, Neu Isenburg, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
No Drawing. Filed Sept. 7, 1966, Ser. No. 577,584

Claims priority, application Germany, Sept. 25, 1965, D 48,296
Int. Cl. C07d 9/00

U.S. Cl. 260—343 8 Claims
ε-Caprolactone and lower alkyl substituted ε-caprolactones are prepared by reacting the corresponding cyclohexanone with an aliphatic percarboxylic acid of 2-4 carbons using water as the solvent. The process results in good yields and less by-product formation than when organic solvents are employed.

3,517,034

SYNTHESIS OF 4-OXA STEROIDS

Gerald W. Krakower, Elizabeth, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 5, 1968, Ser. No. 710,651

Int. Cl. C07d 7/24, 9/00

U.S. Cl. 260—343.2 7 Claims
This invention relates to novel 4-oxa steroids that possess anti-estrogenic activity. The intermediates of this invention which are also novel are prepared by reacting a 17-acylated pregnane with a peracid. This intermediate can then be heated to form the end desired products.

3,517,035

2-OXA-5β-CYANOANDROSTANE DERIVATIVES

Seymour D. Levine, North Brunswick, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed June 18, 1968, Ser. No. 737,840

Int. Cl. C07d 7/24, 7/46

U.S. Cl. 260—343.2 6 Claims
This disclosure relates to androstanes having an oxygen atom in the 2-position and a cyano substituent at the 5-position. These compounds possess anti-androgenic activity.

3,517,036

HYDROXY, ACYLOXY AND 11-KETO-1,3,5(10),7-ESTRATETRAENES

Patrick A. Diani, Westfield, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 15, 1966, Ser. No. 594,372

Int. Cl. C07c 169/10

U.S. Cl. 260—397.3 6 Claims
Hydroxy, acyloxy and 11-keto-1,3,4(10),7-estratetraenes are prepared from 19-nor-Δ^{4,7}-androstadienes by a two-step process, entailing initially the hydroxylation or ketonization of the androstadiene to yield hydroxy or 11-keto 19-nor-Δ^{4,7}-androstadiene intermediates, which

are new compounds, and then the 1-dehydrogenation of these new intermediates to yield the final products. The estratetraenes are antigonadotropic agents.

3,517,037

4-AMINO-2-HALO-5-(2-HALO-α-HYDROXY-5-SULFAMOYL-BENZYL) BENZENESULFONAMIDES

Stanley C. Bell, Penn Valley, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 12, 1968, Ser. No. 704,579

Int. Cl. C07c 143/80

U.S. Cl. 260—397.7 6 Claims
This invention is concerned with 4-amino-2-halo-5-(2-halo-α-hydroxy-5-sulfamoylbenzyl)benzenesulfonamides which are pharmacologically active as central nervous system depressants.

3,517,038

CARBOXYALKYLSILOXANE ESTERS OF CASTOR OIL AND CASTOR OIL DERIVATIVES

Norman G. Holdstock, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Dec. 1, 1967, Ser. No. 687,119

Int. Cl. C07c 143/90

U.S. Cl. 260—400 11 Claims
Carboxyalkylsiloxanes are joined to a castor oil derivative through an ester linkage. A compound within the scope of the disclosure is made by reacting castor oil with a chloroacylpropyldimethylsilyl end-stopped siloxane having the formula:



Compositions within the scope of the disclosure are useful in auto polishes.

3,517,039

PROCESS FOR PREPARING ACYLATED UREA DIISOCYANATES

Kuno Wagner, Leverkusen, Ernst Melsert, Leverkusen-Schlebusch, and Gerhard Memmicken, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed May 23, 1966, Ser. No. 551,916

Claims priority, application Germany, May 24, 1965, F 46,137

Int. Cl. C07c 69/00

U.S. Cl. 260—404.5 11 Claims
Acylated urea polyisocyanates are prepared by reacting an organic diisocyanate with an organic monocarboxylic acid containing more than one carbon atom at a temperature of from about 90° C. to about 190° C. These products may be used in the manufacture of heat resistance foam plastics or polyurethane elastomers.

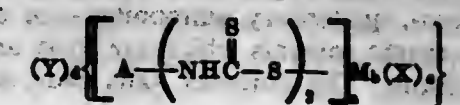
3,517,040

ONIUM SALTS OF BIS-DITHIOCARBAMATE TRANSITION METAL CHELATES

Sheldon N. Lewis, Willow Grove, and George A. Miller, Glenide, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Dec. 2, 1966, Ser. No. 598,599

Int. Cl. C07f 3/06, 3/08, 15/04

U.S. Cl. 260—429 18 Claims
This invention is concerned with new compositions of matter which are metal chelates of ammonium and phosphonium salts of alkylene and phenylene bis-dithiocarbamates. They conform to the general structure



wherein Y stand for certain defined ammonium and phosphonium groups,

A is alkylene or phenylene,

M is at least one of cadmium, cobalt, copper, iron, manganese, nickel and zinc ions,

X is an anion which complexes with the metal M and a, b, c and d are integers.

3,517,041

(ALKYL AMINO ALKYLENE) ALKYL SILYLALKYLENE MALONIC ACID, ESTER DERIVATIVES AND ACID ADDITION SALTS

John L. Scharr, Dayton, and William E. Weesner, Kettering, Ohio, assignors to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

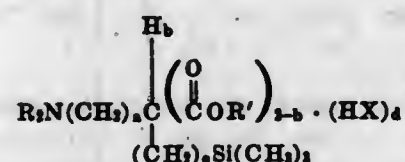
No Drawing. Filed Feb. 23, 1968, Ser. No. 707,436

Int. Cl. C07f 7/10

U.S. Cl. 260-448.2

7 Claims

The organosilicon compounds represented by the formula



wherein R is lower alkyl, R' is hydrogen or lower alkyl, a and c are integers of from 1 to 5, b is either 0 or 1, d is either 0 or 1, and X is halogen of atomic weight greater than 25. The compounds are useful as herbicides and insecticides.

3,517,042

TRIALKYL-SILYL (SUBSTITUTED) METHYLALKALIMETAL COMPOUNDS

Donald J. Peterson, Springfield Township, Hamilton County, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 26, 1967, Ser. No. 693,884

Int. Cl. C07f 7/02

U.S. Cl. 260-448.2

4 Claims

(1) A process for the conversion of carbonyl compounds to the corresponding olefins using trialkylsilyl-organometallic compounds, and (2) novel trialkylsilyl-organometallic compounds prepared for use in the conversion of said carbonyl compounds.

3,517,043

METHOD FOR THE PREPARATION OF SALTS OF ORGANOFLUOSILICIC ACIDS IN NONAQUEOUS SOLVENTS

Richard Muller and Christian Dathe, Radebeul, and Dieter Mrocz, Dresden, Germany, assignors to Institut für Silikon- und Fluorcarbon-Chemie, Radebeul, near Dresden, Germany

No Drawing. Continuation of application Ser. No. 443,165, Mar. 26, 1965. This application July 29, 1968, Ser. No. 750,712

Int. Cl. C07f 7/12

U.S. Cl. 260-448.2

2 Claims

Method of producing salts of low molecular weight hydrocarbon fluorosilicic acids which comprises reacting low molecular weight hydrocarbon trifluorosilanes with an ammonium-, quaternary ammonium-, or alkali metal fluoride in organic solvents which are inert under the reaction conditions. The complex salts thus obtained are

useful agents in chemical reactions e.g. separations, arylations, alkylations and reductions.

3,517,044

PROCESS FOR OBTAINING THIOCARBAMATOHALOALKANES

Bernard Pfingfelder, Artix, France, assignor to Société Anonyme dite: Société Nationale des Pétroles d'Aquitaine, a corporation of France

No Drawing. Continuation-in-part of application Ser. No. 462,719, June 9, 1965. This application Dec. 28, 1967, Ser. No. 694,872

Int. Cl. C07c 155/08; A01n 9/12

U.S. Cl. 260-455

9 Claims

A process for obtaining 1-thiocarbamato-2-monohaloalkanes by treatment of 1-thiocyanato-2-hydroxy-alkanes with an aqueous halo hydracid.

3,517,045

HYDROXYALKYL QUATERNARY AMMONIUM ETHERS AS ANTISTATIC AGENTS

Peter Vincent Snel, Middlesex, and Frank Joseph Arthen, Jr., Franklin Township, Somerset County, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

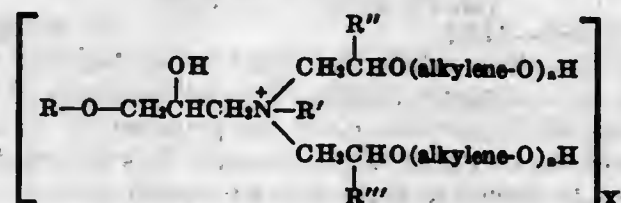
No Drawing. Original application Oct. 15, 1965, Ser. No. 496,705. Divided and this application June 7, 1968, Ser. No. 742,117

Int. Cl. C07c 141/06

U.S. Cl. 260-459

3 Claims

Stable polymeric compositions having improved antistatic properties are obtained by incorporating in a polymeric composition a hydroxyalkyl quaternary ammonium ether of the formula:



wherein R is aliphatic of from 8-19 carbon atoms or cycloalkyl of 5-6 carbons which may have alkyl substituents of 1-19 carbons; R' is lower alkyl of 1-3 carbon atoms; R'' and R''' are individually either hydrogen or lower alkyl of 1-4 carbon atoms; "alkylene" has 2-3 carbons; n is a number between zero and ten; and X is an anion.

3,517,046

PROCESS FOR ISOMERIZING CIS-1,2-DICYANOCYCLOBUTANE

Goro Inoue and Makoto Honda, Tokyo, and Takashi Kobayashi, Sakuma, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan

Filed July 5, 1967, Ser. No. 651,253

Claims priority, application Japan, July 12, 1966, 41/45,070; June 14, 1967, 42/37,616

Int. Cl. C07c 121/00

U.S. Cl. 260-464

5 Claims

Process for liquid phase isomerizing cis-1,2-dicyanocyclobutane to trans-1,2-dicyanocyclobutane which comprises heating cis-1,2-dicyanocyclobutane in a rectification-type reactor at a temperature ranging from 80 to 340° C. under atmospheric or subatmospheric pressure to convert at least a part thereof to trans-1,2-dicyanocyclobutane and removing the resulting trans-1,2-dicyanocyclobutane continuously from the reaction system.

3,517,047

LINEAR ALIPHATIC α-CYANOALDEHYDES AND PREPARATION THEREOF

Masaji Ohno and Norio Naruse, Kamakura-shi, Japan, assignors to Toyo Rayon Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Apr. 11, 1966, Ser. No. 541,534

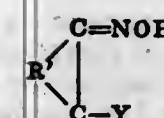
Claims priority, application Japan, June 3, 1965, 40/32,447; Sept. 24, 1965, 40/58,069; Sept. 30, 1965, 40/59,462

Int. Cl. C07c 87/04, 121/34, 131/00

U.S. Cl. 260-465.9

4 Claims

Linear α-cyanoaldehydes of the general formula NC-R-CHO wherein R is a straight chain saturated hydrocarbon of 4-10 carbon atoms; or R is a decadienyl radical; and a process for the preparation of aliphatic linear α-cyanoaldehydes of the general formula NC-R'-CHO which comprises reacting five to twelve-membered alicyclic α-substituted oximes of the general formula



wherein R' is a straight chain saturated hydrocarbon radical from 3-10 carbon atoms, or decadienyl radical; and Y is a substituent selected from the group consisting of alkoxy and amino groups with a phosphorus halide or a sulfur halide so as to cause ring cleavage.

3,517,048

PREPARATION OF METHIONINE-NITRILE

Jozef A. Thoma, Sittard, and Joseph A. M. J. Coenen, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed July 6, 1967, Ser. No. 651,404

Claims priority, application Netherlands, July 14, 1966, 6609885

Int. Cl. C07c 121/42

U.S. Cl. 260-465.5

5 Claims

A process for the preparation of γ-methylmercapto-α-aminobutyronitrile from β-methylmercapto-propionaldehyde by reaction with a cyanide in the presence of ammonia, whereby the use of carefully controlled reaction condition eliminates criticality in the water content of the ammonia reaction medium, is disclosed. The reaction temperature is maintained between 0 and 60° C., the weight ratio of ammonia-water in the liquid medium during the reaction is greater than 1:1, and the reaction conditions are maintained until more than 0.9 mole of the nitrile per mole of aldehyde starting material have been formed. The nitrile so produced may be hydrolyzed to produce methionine.

3,517,049

ISOLATION OF L-α-(E,4-DIMETHOXYBENZYL)-α-ALANINE METHYLESTER

Lazlo A. Szatyl, Mannheim, and Richard Cyrus, Ludwigshafen (Rhine), Germany, assignors to Knoll A.G. Chemische Fabriken, Ludwigshafen (Rhine), Germany

No Drawing. Filed May 2, 1967, Ser. No. 635,399

Int. Cl. C07c 101/08

U.S. Cl. 260-471

1 Claim

Extraction of the hypotensively active L-antimer of racemic α-(3,4-dimethoxybenzyl)-α-alaninemethyl ester by treatment of the racemate with dibenzoyl-L-tartaric acid in combination with an inorganic acid such as hydrochloric acid to form the more difficultly soluble L-antimer-dibenzoyl-L-hydrogen tartrate, separation and acid hydrolysis thereof.

3,517,050

ESTER AND AMIDE DERIVATIVE OF (3-TRIFLUOROMETHYLPHENOXY)(4-HALOPHENYL)ACETIC ACID

William A. Bolhofer, Frederick, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 3, 1966, Ser. No. 583,937

Int. Cl. C07c 69/76

U.S. Cl. 260-473

12 Claims

Esters and amides of (3-trifluoromethylphenoxy)(4-halophenyl)acetic acid which are prepared by treating a (3-trifluoromethylphenoxy)(4-halophenyl)acetyl halide with an appropriate alcohol or amine. The products thus obtained reduce the concentration of cholesterol, triglycerides and other lipids in blood serum.

3,517,051

PHENOXY SUBSTITUTED PHENYLACETIC ACIDS

William A. Bolhofer, Frederick, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 429,107, Jan. 29, 1965, which is a continuation-in-part of application Ser. No. 353,579, Mar. 20, 1964. This application Oct. 3, 1966, Ser. No. 583,940

Int. Cl. C07c 65/00, 69/76, 103/26

U.S. Cl. 260-473

14 Claims

(Phenoxy)phenylacetic acid products and the salts, esters and amide derivatives thereof, wherein the phenoxy nucleus is substituted by a single moiety and the phenyl ring may be optionally substituted by one or two nuclear substituents. The instant products are prepared by treating an alkali metal salt of an appropriately substituted phenol with an ester of a phenylhaloacetic acid to afford a (phenoxy) phenylacetic acid ester which, if desired, may be hydrolyzed to the desired acid by treatment with an aqueous solution of a base and then with an acid to afford the corresponding (phenoxy)phenylacetic acid product. The products of the process reduce the concentration of cholesterol and other lipids in blood serum.

3,517,052

RESINS FROM BARK

Theodorus Gerardus Brandts and Joseph Alois Lichtenberger, Grand'Mere, Quebec, Canada, assignors to Consolidated Paper (Bahamas) Limited, a corporation of Bahamas

No Drawing. Continuation-in-part of application Ser. No. 127,507, July 28, 1961. This application July 6, 1966, Ser. No. 563,090

Int. Cl. C07c 69/88

U.S. Cl. 260-473.5

9 Claims

1. The process of preparing a purified aldehyde-reactive resin-forming bark derivative from bark material which comprises extracting bark selected from the group consisting of white spruce, red spruce, black spruce, balsam fir, jackpine, white pine, red pine, and eastern hemlock, with an aqueous solution of an alkali, at a temperature not greater than 95° C., separating the extracted material from the insoluble bark residue to yield an alkaline bark extract containing aldehyde-reactive material and aldehyde-unreactive material, part of said aldehyde-unreactive material being in the form of high molecular weight polysaccharide-type compounds, and part of said aldehyde-reactive material being combined with aldehyde-unreactive material, heating said bark extract at an alkaline pH at a temperature of at least 140° C. and for a time of at least 5 minutes and sufficient to liberate in solution said aldehyde-reactive material from chemical combination with said aldehyde-unreactive material and to essentially degrade said high molecular weight polysaccharide-type compounds to lower molecular weight

material, lowering the pH of the heated bark extract to precipitate aldehyde-reactive material, and separating the precipitated aldehyde-reactive material from the aldehyde-unreactive material.

3,517,053

PREPARATION OF COLOR-IMPROVED METHYL ESTERS OF NAPHTHALENEDICARBOXYLIC ACIDS

Donald H. Antonsen, Upper Saddle River, N.J., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 17, 1966, Ser. No. 565,859

Int. Cl. C07c 67/06, 69/76

U.S. Cl. 260—475

10 Claims

This application discloses a process of preparing high purity, color-improved methyl esters of naphthalenedicarboxylic acids which comprises esterifying a naphthalenedicarboxylic acid with an alcohol containing 2 to 6 carbon atoms to produce a diester, treating a solution of the diester by a chromatographic absorption to remove impurities from the solution and to improve the color of the solution, and transesterifying the diester with methanol to produce the dimethyl ester of the naphthalenedicarboxylic acid. The ester product of this process is characterized by high purity and improved color.

3,517,054

PROCESS FOR PREPARING MONOACETIN FROM PROPYLENE

Arthur D. Ketley, Silver Spring, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Dec. 5, 1967, Ser. No. 688,012

Int. Cl. C07c 67/00, 67/04

U.S. Cl. 260—491

8 Claims

In abstract, this invention is directed to a process for preparing monoacetin from propylene, said process comprising forming allyl acetate from propylene by catalytically reacting gaseous propylene with acetic acid vapor in the presence of a catalyst and gaseous oxygen, separating the allyl acetate, and forming monoacetin by dissolving the allyl acetate in an acid selected from the group consisting of formic acid and acetic acid, treating the resulting solution with hydrogen peroxide and recovering the monoacetin, all as recited hereinafter.

3,517,055

ANTI-FIBRINOLYTIC AGENT

Larry J. Loeffler, North Wales, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 28, 1968, Ser. No. 708,770

Int. Cl. C07c 61/12, 101/04

U.S. Cl. 260—514

1 Claim

The compound of the structural formula



having anti-fibrinolytic properties and being capable of counteracting certain hemorrhagic conditions and other disorders resulting from a pathological fibrinolytic state in patients.

3,517,056

PROCESS FOR THE PRODUCTION OF 2,3,6-TRICHLOROPHENYLACETIC ACID

Joseph F. DeGaetano, Montvale, N.J., assignor to Tenneco Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Aug. 12, 1965, Ser. No. 479,306

Int. Cl. C07c 51/08

U.S. Cl. 260—515

8 Claims

Trichlorophenylacetic acid that contains at least 75 percent of the 2,3,6-isomer is prepared by a process in which trichlorotoluene that contains 60–70% of 2,3,6-trichlorotoluene is chlorinated until an average of about 1.1 to 1.5 atoms of chlorine has been introduced into the side chain to form a chlorination mixture that contains a major amount of trichlorobenzyl chloride, this mixture is cyanated to convert the trichlorobenzyl chlorides therein to trichlorobenzyl cyanides, and the trichlorobenzyl cyanides are hydrolyzed to trichlorophenylacetic acids.

3,517,057

PREPARATION OF OPTICALLY ACTIVE AMINO ACIDS

Seemon H. Pines, Murray Hill, Sander Karady, Elizabeth, and Meyer Sletzing, North Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 21, 1967, Ser. No. 669,392

Int. Cl. C07c 101/08, 101/72

U.S. Cl. 260—519

10 Claims

A process is described for the preparation of α -alkyl- β -phenyl serines and alanines, which comprises the condensation of an unsubstituted or substituted benzene with a 4-alkyl- (or aralkyl)oxycarbonyl-2,4-dialkyl-oxazol-5-one followed by reduction to a serine derivative or to an alanine derivative.

3,517,058

PREPARATION OF BETA-MERCAPTO-PROPIONIC ACID

Jozef A. Thoma, Vaals, Jules P. J. Ponnert, Spaubeek, and Joseph A. M. J. Coenen, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed June 20, 1966, Ser. No. 558,578

Claims priority, application Netherlands, July 3, 1965, 6508594

Int. Cl. C07c 149/00

U.S. Cl. 260—526

2 Claims

Process for the preparation of beta-mercaptopropionic acid from acrylic acid by reacting acrylic acid with a molar excess of liquid hydrogen sulfide in the presence of an organic base, in an equivalent amount in excess of the acrylic acid.

3,517,059

PREPARATION OF METHACRYLIC ACID

Theodor Volker, Fribourg, Switzerland, and Erika Schindelmann, born Pichler, Dachau, near Munich, Germany, assignors to Lonza Ltd., Gampel, Valais, Basel, Switzerland

No Drawing. Filed Oct. 24, 1966, Ser. No. 588,730

Claims priority, application Switzerland, Nov. 25, 1965, 16,243/65

Int. Cl. C07c 51/32, 51/28

U.S. Cl. 260—533

7 Claims

Methacrylic acid can be continuously prepared from the reaction mixture obtained by the oxidation of isobutylene with dinitrogen tetroxide in the presence of nitric acid by removing free nitric acid from said reaction mixture, heating the residue dissolved in acetic acid in a polar organic reacting medium, whose boiling point is above 160° C. to a temperature of at least 160° C. and continuously removing the methacrylic acid being formed therein.

3,517,060

CARBORANE COMPOUNDS

Burton Peter Block, Wayne, and Gerd Helmut Dahl, King of Prussia, Pa., assignors to Pennwalt Corporation, a corporation of Pennsylvania

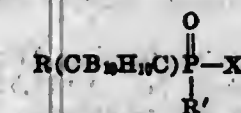
No Drawing. Filed Feb. 8, 1966, Ser. No. 525,853

Int. Cl. C07f 9/34, 9/36

U.S. Cl. 260—543

5 Claims

Carborane compounds,



wherein R is H, lower alkyl or aryl, R' is R(CB₁₀H₁₀C), halogen, alkyl or aryl, and X is halogen or di- or tri-alkylamino are useful as high energy propellants.

3,517,061

5H-1,4-BENZODIAZEPIN-5-ONES

Arthur A. Santilli, Havertown, Pa., and Thomas S. Osdene, Richmond, Va., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

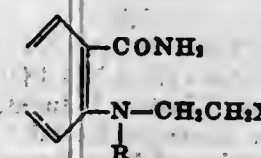
No Drawing. Original application Oct. 23, 1965, Ser. No. 504,130, now Patent No. 3,457,258, dated July 22, 1969. Divided and this application Jan. 23, 1969, Ser. No. 823,204

Int. Cl. C07c 103/22

U.S. Cl. 260—558

5 Claims

The invention is concerned with compounds of the formula



wherein X is chloro or hydroxy and R is lower alkyl or phenyl (lower) alkyl. These compounds are intermediates to 5H-1,4-benzodiazepin-5-ones which exhibit anti-inflammatory, CNS depressant, anti-convulsant and analgesic activity.

3,517,062

PROCESS FOR THE PREPARATION OF SUBSTANTIALLY PURE 4,4'-DIAMINODIPHEN- YLMETHANE

Eugene L. Powers, New Martinsville, W. Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed Aug. 5, 1966, Ser. No. 570,476

Int. Cl. C07c 85/08

U.S. Cl. 260—570

5 Claims

A method for preparing an aromatic primary amine having at least 96% of the diamine content present as the 4,4'-isomer is disclosed which comprises reacting aniline with formaldehyde in proportions of from about 1.4 to about 6 mols of aniline per mol of formaldehyde, in the presence of at least enough acid catalyst to maintain the system in a single organic phase, at a temperature of about 110° C. to about 160° C. for less than 30 minutes.

3,517,063

HYDROGENATION OF DINITROTOLUENE TO TOLYLENE DIAMINE

Beverly R. Nason, Bridgeville, Pa., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Continuation of application Ser. No. 268,353, Mar. 27, 1963. This application Sept. 22, 1965, Ser. No. 496,228

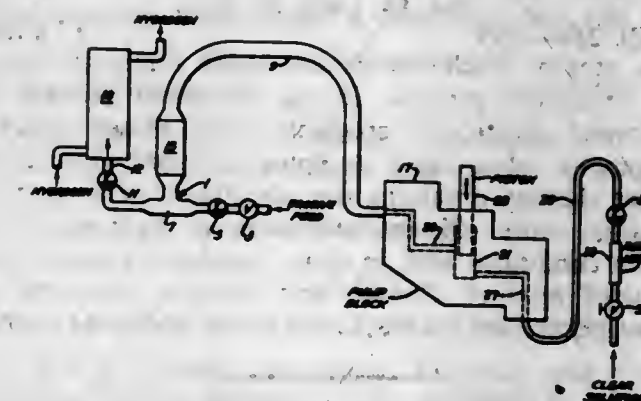
Int. Cl. C07c 85/10

U.S. Cl. 260—580

4 Claims

A method of supplying an organic nitro-compound-Raney nickel slurry under high pressure to a continuous hydrogenator which comprises sequentially (1) introducing a slurry of the organic nitro-compound-Raney nickel

in an inert diluent into a first feed zone, (2) introducing under high pressure a further quantity of said inert diluent into said first feed zone thereby conveying said slurry in said first feed zone to a second feed zone connected di-



rectly to said hydrogenator under high pressure, (3) maintaining the high pressure in said second feed zone substantially constant and (4) relieving the pressure in said first feed zone and continuously repeating the sequence of steps set forth.

3,517,064

PROCESS FOR THE PREPARATION OF TRIALKYLHYDRAZINES

Henri Sidi, Paramus, N.J., assignor to Tenneco Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Oct. 25, 1967, Ser. No. 677,867

Int. Cl. C07c 109/02

U.S. Cl. 260—583

5 Claims

Trialkylhydrazines are prepared by the hydrogenation of alkylidenedialkylhydrazines in the presence of noble metal and Raney nickel hydrogenation catalysts.

3,517,065

PREPARATION OF KETENES

Harold Crosbie Fielding, Northwich, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Feb. 19, 1968, Ser. No. 706,676

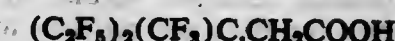
Claims priority, application Great Britain, Mar. 9, 1967, 11,084/67

Int. Cl. C07c 49/22; C08f 15/18

U.S. Cl. 260—585.5

1 Claim

The novel highly fluorinated ketene described as (perfluoro-1-methyl-1-ethyl-propyl) ketene, is made by removing the elements of water from the perfluoroalkyl-substituted acetic acid



(derived from tetrafluoroethylene pentamer) or the elements of hydrogen chloride from its acid chloride. The preferred method is to heat the acid with phosphorus pentoxide at 100°–200° C. The ketene is a liquid B.P. 107°–108° C. and is a useful intermediate for the preparation of surfactants and compounds possessing useful oil- and water-repelling properties suitable for application to textiles and leather. For example it reacts with methoxy-polyethylene glycols to give non-ionic surfactants; with polyvinyl alcohol or hydroxyalkyl acrylates to give monomers that polymerize to give compounds possessing these useful properties; and with polyethylene imine in situ on textiles.

3,517,066

ROSENMUND PROCESS

Harvey Gurien, Maplewood, David Paul Wagner, Clifton, and Albert Israel Rachlin, Verona, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 22, 1968, Ser. No. 715,178
Int. Cl. C07c 47/52

U.S. Cl. 260—599

17 Claims

The present disclosure relates to an improved Rosenmund reduction process. In the improved process, the Rosenmund reaction is conducted in a closed vessel in the presence of an acid acceptor at super atmospheric pressure thereby obtaining the advantages of faster reaction time, more efficient utilization of hydrogen, safer reaction conditions and, in some instances, greater yields of desired product. Conventional solvents, catalysts and catalyst regulators are employed in the improved process.

3,517,067

SYNTHESES OF QUATERNARY PHOSPHONIUM SALTS

Max H. Stern, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 11, 1964, Ser. No. 343,963
Int. Cl. C07f 9/54; C07c 13/28; C07e 1/00

U.S. Cl. 260—606.5

19 Claims

Process for making a quaternary phosphonium salt such as retinyl triphenyl phosphonium chloride by reacting an ester such as an ester of retinol with a hydrosalt of a tertiary phosphine. The hydrosalt can be formed in situ by the reaction of a tertiary phosphine with an acid such as hydrogen chloride. These compounds are useful as intermediates in the synthesis of, for example, a cortenoid compound useful as a feed additive for poultry for pigmenting poultry skin and eggs.

3,517,068

VINYL ETHYL ETHER OR THIOETHER SULFONES
Albert C. Perrino, Cranston, R.I., assignor to I.C.I./Organics/Inc., Providence, R.I., a corporation of Rhode Island

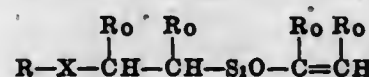
No Drawing. Original application May 1, 1963, Ser. No. 277,129. Divided and this application Sept. 11, 1967, Ser. No. 674,038

Int. Cl. C07c 147/04; D06m 13/32, 13/38

U.S. Cl. 260—607

8 Claims

A vinyl ethyl sulfone having one of the formulae:



in which R_0 is hydrogen, R is a member of the group consisting of straight-chain alkyl groups having 10–18 carbon atoms, branched alkyl groups having 10–16 carbon atoms and alkyl phenyl groups in which the alkyl group has 9–12 carbon atoms, and X is a member of the group consisting of oxygen and sulfur. The compounds are useful in treating cellulosic textiles to render them permanently water repellent and resistant to water-borne stains and to provide a soft, pleasing hand.

3,517,069

PROCESSES FOR PREPARING 4-(LOWER ALKOXY)-4'-TRIFLUOROMETHYLBIPHENYLS

Frederick Louis Bach, Mountvale, N.J., and Elliott Cohen and Philip John Kohlbrenner, Pearl River, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed May 13, 1968, Ser. No. 728,844
Int. Cl. C07c 43/20

U.S. Cl. 260—612

5 Claims

This disclosure describes processes for the preparation of 4-(lower alkoxy)-4'-trifluoromethylbiphenyls by the

aromatization of the corresponding 1-(4'-trifluoromethylphenyl)-4-(lower alkoxy)-1-cyclohexenes.

3,517,070

HYDROQUINONE COMPOUNDS

Urs Gloor, Riehen, Rudolf Ruegg, Bottmingen, and Ulrich Schwieter, Reinach, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

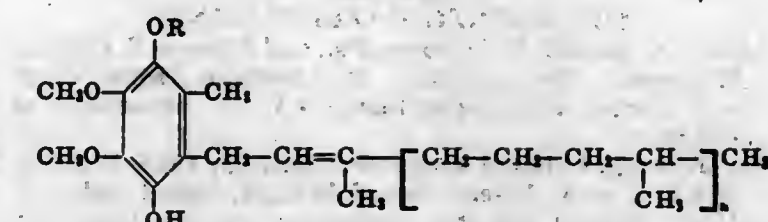
No Drawing. Original application Aug. 3, 1959, Ser. No. 831,027, now Patent No. 3,118,914, dated Jan. 21, 1964. Divided and this application Feb. 14, 1963, Ser. No. 258,609

Claims priority, application Switzerland, Aug. 7, 1958, 62,670/58; Aug. 28, 1958, 63,369/58
Int. Cl. C07c 43/20

U.S. Cl. 260—613

2 Claims

1. Compounds represented by the general formula



wherein R is hydrogen and n represents a number from 0 to 9, inclusive.

3,517,071

THREE-DIMENSIONAL POLYCYCLIC BISPHENOL POLYCARBONATES AND POLYESTERS

John R. Caldwell and Winston J. Jackson, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Original application July 1, 1963, Ser. No. 292,139, now Patent No. 3,317,466. Divided and this application Apr. 14, 1967, Ser. No. 654,286

Int. Cl. C07c 39/16; C07d 5/32

U.S. Cl. 260—619

15 Claims

New bisphenols [such as 4,4'-(2-norbornylidene)di-phenol, etc.] containing a saturated polycyclic three-dimensional structure which includes a saturated bicyclic atomic-bridged hydrocarbon ring member are disclosed which can be used to prepare new polymers having improved temperature properties and solubility in volatile solvents.

3,517,072

HIGH PURITY 2,6-XYLENOL

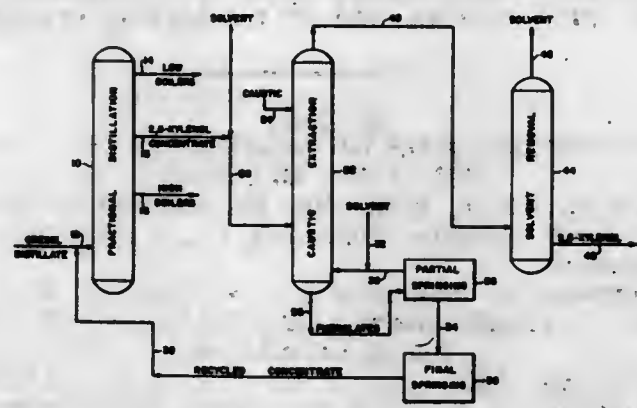
Eneo C. Moroni, Bethel Park, and Martin B. Neuworth, Pittsburgh, Pa., assignors, by mesne assignments, to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Delaware

Filed Oct. 28, 1963, Ser. No. 319,399

Int. Cl. C07c 39/06, 37/28

U.S. Cl. 260—621

5 Claims



1. The process of obtaining 2,6-xyleneol in high yield and purity which comprises obtaining a cresol distillate

3,517,074

PREPARATION OF DINITROCRESOLS

Mendel T. Gordon and Ernest Frank Silverman, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 10, 1967, Ser. No. 637,360

Int. Cl. C07c 79/28

8 Claims

Process for the direct nitration of ortho or para cresol in acetic acid within the temperature range of from 25° to 55° C.

3,517,075

NITRATION OF PHENOL USING RECYCLE ACID

John David Callister, Runcorn, England, and Clayton George Carille, Stockton, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 3, 1967, Ser. No. 650,624

Int. Cl. C07c 79/26

U.S. Cl. 260—622

9 Claims

The problem of tar build-up in the process of nitrating phenol to produce predominantly p-nitrophenol comprising adding the phenol to a mixed acid solution having defined concentrations of H_2SO_4 , HNO_3 , and HNO_2 acids, separating the precipitated nitrophenol product, reconstituting the spent acid solution and recycling it to the nitration step of the process, is effectively counteracted by the addition of a defined minor proportion of a carboxylic acid of a defined type, such

3,517,073

SYNTHESIS OF A HYDROXY GROUP-CONTAINING POLYCYCLIC AROMATIC FUSED RING COMPOUND

Donald L. Fields, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

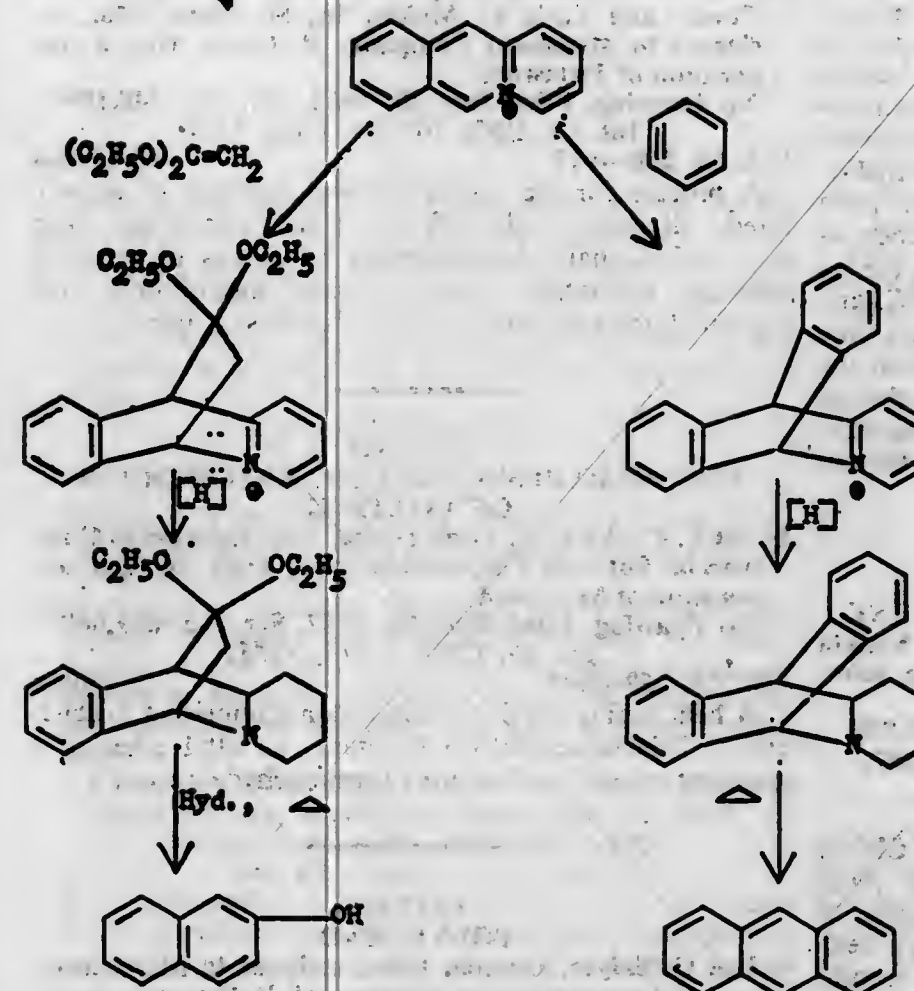
No Drawing. Filed June 13, 1967, Ser. No. 645,637

Int. Cl. C07c 37/00

U.S. Cl. 260—621

4 Claims

2-naphthol or anthracene is obtained from a 4a-azoniaanthracene salt by condensation of the salt with 1,1-diethoxyethylene or bonzyne, respectively, hydrogenation of the product to form at least a tetrahydroanthracene, and hydrolysis, or thermolysis, respectively, as is illustrated by the equations:



Substituted derivatives are obtained by employing appropriately substituted 4a-azoniaanthracene salts, ketene acetals and benzynes as starting materials. as acetic acid, to the reconstituted mixed acid solution prior to recycle thereof to the nitration step of the process.

3,517,076

THERMAL HYDRODEALKYLATION OF ALKYL AROMATIC HYDROCARBONS

William G. Juhl, Seabrook, Tex., and Walter R. Knox and Russell E. Koons, St. Louis, and Frederick E. Rosenberger, Des Peres, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Feb. 14, 1966, Ser. No. 527,049
Int. Cl. C07c 3/08, 7/00, 15/00

U.S. Cl. 260-672

6 Claims

A process for the concurrent hydrodealkylation of a mixture of alkyl naphthalene hydrocarbons and toluene comprising introducing said mixture in vapor phase concurrently with hydrogen and a non-aromatic ring substituted aromatic hydrocarbon selected from the group consisting of tetralin, alkyl-substituted tetralins, indan, alkyl-substituted indans, indene, alkyl-substituted indenenes and mixtures thereof, into a reaction zone in the absence of a catalyst and under conditions which result in substantial backmixing within the reaction zone, the temperature within the reaction zone being 1100 to 1500° F. and the pressure 350 to 1000 p.s.i.g. An effluent is withdrawn from the reactor containing naphthalene hydrocarbons of lower molecular weight than those in the feed and benzene.

3,517,077

PROCESS FOR PRODUCING BENZENE BY THE HYDRODEALKYLATION OF CUMENE BOTTOMS

Massimo Simonetta, Milan, Italy, assignor to Societa Italiana Resine S.p.A., Milan, Italy, an Italian joint-stock company

No Drawing. Filed Sept. 13, 1968, Ser. No. 759,797

Claims priority, application Italy, Sept. 20, 1967,

20,653-A/67, Patent 811,814

Int. Cl. C07c 3/00, 3/58

U.S. Cl. 260-672

3 Claims

A process for producing benzene, methane, and ethane by thermal dealkylation in the presence of hydrogen, at elevated temperature and pressure, comprising feeding to a dealkylation reactor a cumene bottoms product obtained from a cumene synthesis product resulting from the reaction of benzene and propylene, supplying hydrogen to the reactor in an amount whereby the molar ratio of hydrogen to the said bottoms product, reckoned as di-isopropylbenzene is from 6:1 to 20:1, operating the reactor at a temperature of from 600° C. to 800° C. and at a pressure of from 30 to 70 atm., with a contact time of from 0.5 to 50 seconds, recovering benzene from the normally liquid reaction products obtained from the reactor, and recovering methane and ethane from the normally gaseous reaction products obtained from the reactor.

3,517,078

PREPARATION OF BENZENE FROM TOLUENE

Massimo Simonetta, Milan, Italy, assignor to Societa Italiana Resine S.p.A., Milan, Italy, an Italian joint-stock company

No Drawing. Filed Sept. 13, 1968, Ser. No. 759,799

Claims priority, application Italy, Sept. 20, 1967,

20,654-A/67, Patent 811,815

Int. Cl. C07c 3/00, 3/58

U.S. Cl. 260-672

4 Claims

Hydrodealkylation of toluene is synergized by polyisopropylbenzenes available as distillation residues of cumene manufacture. Economical disposal of such residues with recovery of their benzene values is accomplished by dealkylation of 0.5-20% blends in toluene.

The invention relates to the preparation of benzene by dealkylation of toluene in the presence of hydrogen.

Various hydrodealkylation processes can be used, in which hydrogen and alkyl-aromatic hydrocarbons are contacted in a reaction zone at high temperature and pressure.

3,517,079

HYDROCARBON SEPARATIONS

Rodney D. Beckham, Bridgeton, George D. Davis, Creve Coeur, and Earle C. Makin, Jr., St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 29, 1968, Ser. No. 748,201

Int. Cl. C07c 7/10

U.S. Cl. 260-674

20 Claims

A process for the separation and recovery of vinyl aromatic hydrocarbons from admixture with alkyl aromatic hydrocarbons by means of selective complex formation using cuprous fluoroborates or cuprous fluorophosphates as the complexing agent. Means for stabilizing cuprous fluoroborate and cuprous fluorophosphate complexing agents also are provided.

3,517,080

HYDROCARBON SEPARATIONS

Rodney D. Beckham, Bridgeton, George D. Davis, Creve Coeur, and Earle C. Makin, Jr., St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 29, 1968, Ser. No. 748,200

Int. Cl. C07c 107/00; C10g 5/02

U.S. Cl. 260-677

20 Claims

A process for the separation of olefin hydrocarbons according to structure and type by contacting a mixture of at least two olefin hydrocarbons of different structure or type with a complex of a cuprous fluoroborate or cuprous fluorophosphate.

3,517,081

HYDROCARBON SEPARATIONS

Rodney D. Beckham, Bridgeton, George D. Davis, Creve Coeur, and Earle C. Makin, Jr., St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 29, 1968, Ser. No. 748,199

Int. Cl. C07c 107/00; C10g 5/02

U.S. Cl. 260-677

18 Claims

A process for the separation and recovery of unsaturated aliphatic hydrocarbons from admixture with saturated aliphatic hydrocarbons by means of selective complex formation using cuprous fluoroborate and cuprous fluorophosphate as the complexing agent.

3,517,082

PHENOLIC RESIN COATING AND PROCESS OF COATING

Lloyd E. Cockerham, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed June 26, 1967, Ser. No. 649,009

Int. Cl. C08g 37/18, 37/32

U.S. Cl. 260-840

5 Claims

A heat curing coating composition comprising 1-aza-5-ethyl-3,7-dioxabicyclo[3.3.0]octane, an allyl ether of a methylol phenol and a urea-formaldehyde resin.

3,517,083

POLYBLENDS

Ival O. Salyer, Dayton, Ohio, assignor to Monsanto Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 778,587, Dec. 8, 1958. This application Dec. 12, 1961, Ser. No. 158,872

Int. Cl. C08f 29/24

U.S. Cl. 260-878

19 Claims

Vinyl chloride polymer compositions having improved impact strength are provided by blends of 1-50 parts by

3,517,086

NUCLEATED BLEND OF POLYPROPYLENE, POLYETHYLENE, AND ETHYLENE/PROPYLENE COPOLYMER

Kenzo Shirayama and Tadakatsu Kitamura, Niihama-shi, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Jan. 23, 1967, Ser. No. 610,737

Int. Cl. C08f 37/18

U.S. Cl. 260-897

15 Claims

Polypropylene composition excellent in impact strength, rigidity and in transparency consisting of a ternary mixture of 65-96% by weight of crystalline polypropylene, 2-30% by weight of solid polyethylene, and 2-20% by weight of a substantially amorphous ethylene-propylene copolymer, and 0.01-5 parts by weight per 100 parts of the ternary mixture of an aromatic sulfonic acid compound or an organic carboxylic acid compound.

3,517,084

GRAFT COPOLYMERS WITH A BACKBONE OF AN ACRYLIC ESTER AND BENZYL ACRYLATE

Pierre Tellier and Edouard Grimaud, Oullins, France, assignors to Ugine Kuhlmann, Paris, France, a French company

No Drawing. Filed Apr. 10, 1968, Ser. No. 720,405

Claims priority, application France, Apr. 10, 1967,

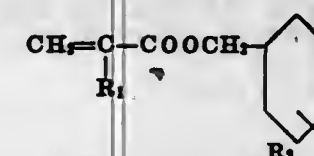
102,080; Apr. 17, 1967, 102,931

Int. Cl. C08f 15/18, 15/40, 19/10

U.S. Cl. 260-881

15 Claims

A graft copolymer is produced by grafting (a) a polymer of 70 to 100 parts by weight of methyl methacrylate copolymerized with 0 to 30 parts by weight of one or more copolymerizable monomers or (b) a polymer of 60 to 100 parts by weight of at least one vinyl aromatic monomer copolymerized with 0 to 40 parts by weight of at least one ethylenic nitrile, the amount of the vinyl aromatic monomer and the ethylenic nitrile in the polymer being 100 parts by weight and with 0 to 30 parts by weight of one or more copolymerizable monomers on an interpolymeric chain of 80 to 99 parts by weight of at least one acrylic ester of a lower aliphatic alcohol having 1 to 8 carbon atoms polymerized with 1 to 20 parts by weight of at least one ester having the following formula



wherein R₁ and R₂ each is a hydrogen atom or a methyl group, in the interpolymeric chain the combination of the acrylic ester and the cyclic ester being 100 parts by weight, and with 0 to 30 parts by weight of one or more copolymerizable monomers. The interpolymeric chain which forms the backbone is 5 to 75% by weight of the graft copolymer.

3,517,085

DYEABLE COMPOSITIONS COMPRISING POLY-OLEFIN AND N-VINYL CARBAZOLE-ETHYLENE COPOLYMER

Isaji Taniguchi, Ken-ichi Maemoto, and Yoshiharu Tatsu-kami, Niihama, and Yoshio Kobayashi, Tomohide Yasumura and Reizo Yamadera, Shiga-gun, Japan, assignors to Sumitomo Chemical Co., Ltd., Higashi-ku, Osaka, and Toyo Spinning Co., Ltd., Kita-ku, Osaka, Japan

No Drawing. Filed Feb. 17, 1965, Ser. No. 433,454

Claims priority, application Japan, Feb. 21, 1964,

39/9,696; May 12, 1964, 39/26,822

Int. Cl. D06p 3/02, 5/08

U.S. Cl. 260-895

5 Claims

1. A mouldable polyolefin composition comprising a polyolefin that is a polymer of an α-monolefin containing from 2 to 6 carbon atoms and a copolymer of ethylene and N-vinyl carbazole, said copolymer having an ethylene monomer content of 99-50 mol percent, said copolymer being blended with the polyolefin in an amount of 0.1-30% by weight based on the polyolefin, and said copolymer having an intrinsic viscosity of 0.1 to 4 dl./g. as measured in xylene at 120° C.

3,517,088

BIS-PHOSPHOROAMIDES, BIS-PHOSPHONOAMIDES, AND PHOSPHONO-PHOSPHOROAMIDES

Arnold D. Gutman, Pinole, and Ashley H. Freiberg, Santa Clara, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

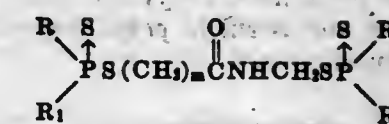
No Drawing. Continuation-in-part of application Ser. No. 390,208, Aug. 17, 1964. This application July 20, 1967, Ser. No. 654,692

Int. Cl. C07f 9/02; A01n 9/36

U.S. Cl. 260-928

6 Claims

Bis-phosphoroamides, bis-phosphonoamides and phosphono-phosphoroamides of the general formula



in which m is the integer 1 or 2, R and R₂ are independently selected from the group consisting of lower alkyl and lower alkoxy, R₁ and R₂ are independently selected lower alkoxy groups. The sum of the carbon atoms in R, R₁, R₂, and R₃ being a maximum of 12. Included in this invention is a method of preparing, using and applying said compositions. The compounds are particularly valuable for their insecticidal and miticidal properties. Representative compounds are: 3-(O,O-diethylphosphorodithiyl)-N-(O,O-diethylphosphorodithiyl)-methyl)propionamide, 3-(O,O-diethylphosphorodithiyl)-N-(O,O-dimethylphosphorodithiylmethyl)propionamide, and 2-(O-ethyl-ethylphosphonodithiyl)-N-(O,O-diethylphosphorodithiylmethyl)acetamide.

3,517,089

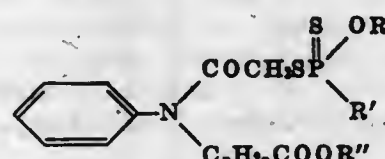
N-PHENYL-N-ALKYL ESTER PHOSPHATE ACETAMIDES

Peter E. Newalls, Overland Park, Kans., Pasquale Lombardo, Chevy Chase, Md., and Francis A. Spano, Millington, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 20, 1967, Ser. No. 647,321
Int. Cl. C07f 9/24; A01n 9/36

U.S. Cl. 260-942

10 Claims

N-phenyl-N-alkyl ester phosphate acetamides useful as insecticides of the general formula:



where

R=alkyl radical having 1-5 carbon atoms

R'=alkyl or alkoxy radical having 1-5 carbon atoms

R''=alkyl radical having 1-5 carbon atoms

n=an integer varying from 1-6

The above compounds are prepared by reacting ammonium salts of phosphoric acid diesters with N,N-disubstituted chloroacetamides.

3,517,090

UNSATURATED PHOSPHONATES

Lester Friedman, Beachwood Village, Ohio, assignor to Weston Chemical Corporation, New York, N.Y., a corporation of New Jersey

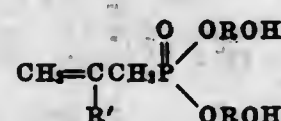
No Drawing. Continuation-in-part of applications Ser. No. 145,749, Oct. 17, 1961, and Ser. No. 129,529, Aug. 7, 1961. Division of applications Ser. No. 371,079, May 28, 1964, now Patent No. 3,442,827; Ser. No. 371,122, May 28, 1964, now Patent No. 3,245,051; and Ser. No. 467,694, June 28, 1965, now Patent No. 3,359,348. This application Nov. 15, 1967, Ser. No. 683,134

Int. Cl. C07f 9/08

U.S. Cl. 260-953

5 Claims

Phosphonates having the formula



where R' is hydrogen or methyl and R is alkylene-oxy-alkylene or alkylene polyoxyalkylene are prepared by reacting allyl or methallyl chloride with a tris-diethylene glycol phosphite or a tris-dipropylene glycol phosphite. The phosphonates are useful in preparing polyesters and nonburning polyurethanes.

3,517,091

METHOD OF MAKING DENTAL PARTS

Irving A. Ellman, Auerbach Lane, Lawrence, N.Y. 11559

No Drawing. Filed Mar. 27, 1967, Ser. No. 625,969

Int. Cl. B29c 1/02, 1/04; A61c 13/00

U.S. Cl. 264-16

8 Claims

A method in dental restoration for making a dental model in which the mold surfaces of a stone model are soaked in a low viscosity epoxy solution to impregnate the pores thereof, and then the epoxy hardened to form in effect an epoxy model integral and precisely coextensive with the stone which forms a network filler within it. The resultant model has very hard mold surfaces with excellent resistance to indentation and abrasion and will not soften when wet.

3,517,092

PROCESS FOR PREPARING HIGH-DENSITY ISOTROPIC GRAPHITE STRUCTURES

George R. Peterson, Andersonville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Apr. 15, 1968, Ser. No. 721,144
Int. Cl. C01b 31/04

U.S. Cl. 264-29

9 Claims

A high density, isotropic graphite structure comprising essentially 100 percent graphite is prepared by wet-blending graphite flour having an average particle size no greater than -5 micron with pitch, forming an isotropic graphite structure which has a density within the range of 1.70-1.95 gms./cc. from this admixture, heating the graphite structure in a confining graphite die to an elevated temperature to carbonize the pitch and remove essentially all volatile materials while maintaining the density at a value within the range of 1.70-1.95 gms./cc., conducting a series of repetitive steps of impregnating the graphite structure with pitch by isostatic pressing at a pressure of at least 4500 p.s.i. at 200° C., heating the impregnated structure while submerged in pitch to an elevated temperature to carbonize the pitch and remove essentially all volatile materials, thereby raising the density of the graphite structure to at least 1.95 gms./cc. and thereafter heating the structure to 3000° C., to fully graphitize the structure.

3,517,093

METHOD FOR PRODUCING LEAD ZIRCONATE-TITANATE TRANSDUCER MATERIALS BY SLIP CASTING

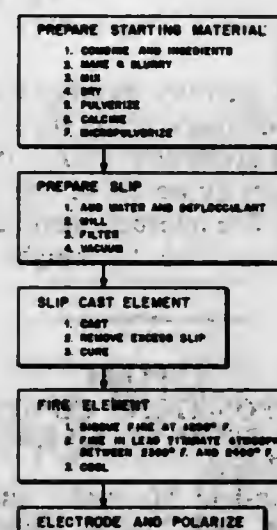
Joseph J. Wentzel, Warminster, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed June 28, 1967, Ser. No. 650,159

Int. Cl. C04b 35/64, 33/28, 35/00

U.S. Cl. 264-61

1 Claim



A process for slip casting electromechanical transducers of lead zirconate-titanate comprising the steps of: combining lead oxide, zirconium dioxide, titanium dioxide and a doping ingredient such as niobium pentoxide or strontium niobate to produce a micro pulverized powder; combining water and deflocculant with the powder to produce a slip having a viscosity of between 500 to 700 centipoises; slip casting the element by pouring the slip into a mold; bisque firing the cast element to a temperature of 1200° to calcine the lead zirconate-titanate; and after cooling firing the element in an atmosphere charged with lead titanate powder to a temperature of approximately 2400° F. to maturity; electroding and polarizing the element to provide an improved electromechanical transducer.

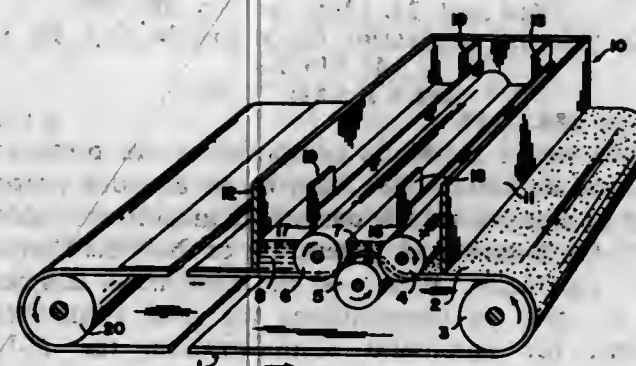
3,517,094

METHOD OF FILLING A FLEXIBLE MOLD

Norman Forrest, Byram, Conn., assignor to Tenneco Chemicals, Inc., a corporation of Delaware
Filed Sept. 24, 1967, Ser. No. 671,323
Int. Cl. B29d 7/08

U.S. Cl. 264-167

7 Claims



A mold filling method comprising sequentially compressing and then releasing at least twice a flexible, endless molding belt having an exposed textured surface provided with molding cavities. The releasing steps are carried out while the exposed surface of the flexible, endless mold belt is positioned below the surface of a reservoir of a liquid plastic molding material.

3,517,095

EXTRUSION PROCESS

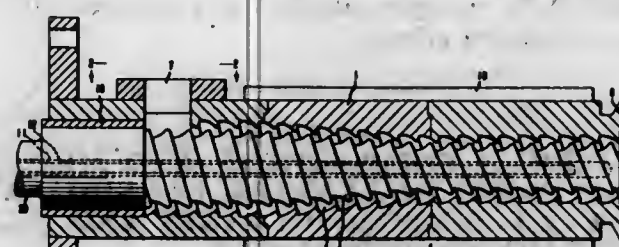
Gordon Beale Dunnington and Reuben Thomas Fields, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Original application Aug. 14, 1963, Ser. No. 302,037, now Patent No. 3,325,865, dated June 20, 1967. Divided and this application Dec. 1, 1966, Ser. No. 598,267

Int. Cl. B28b 3/22; B29b 1/04; B29f 3/02

U.S. Cl. 264-176

2 Claims



A process which comprises the steps of continuously compacting finely divided plastic material to form a tubular structure having threads on both its inner and outer surfaces, advancing and fragmenting the plastic tubular structure, advancing the fragmented plastic into a melting zone, mixing the plastic material to raise its temperature above its melting point, and withdrawing molten plastic from the melting zone.

3,517,096

SPINNING OF PLASTICIZED ELASTOMERIC BLOCK COPOLYMER

John O. Wood, Tamworth, and Philip B. Young, Birmingham, England, assignors to The Dunlop Company Limited, London, England, a British company

Filed Aug. 28, 1967, Ser. No. 663,627

Claims priority, application Great Britain, Sept. 6, 1966, 39,673/66

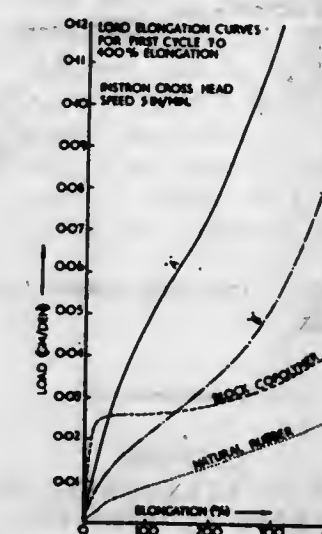
Int. Cl. D01f 7/02

U.S. Cl. 264-176

7 Claims

A process for producing an elastic thread from a thermoplastic block copolymer having the general formula A-(B-A)_n in which A represents a non-elastomeric

polymer block, B represents an elastomeric polymer block and n is an integer of from 1 to 10, comprising incorporating a solvent for the block copolymer therein in an



amount sufficient only to plasticize the block copolymer, and spinning the plasticized block copolymer through a spinneret to obtain an elastic thread.

3,517,097

METHOD FOR FORMING AND CURING CONTINUOUS ELASTOMERIC STRIP

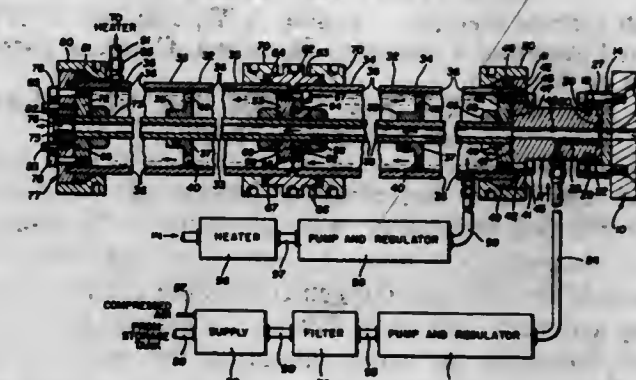
Ronald G. Mizell, Muncie, Ind., and Daryl D. Cerny, Greenville, Ohio, assignors to Ball Corporation, a corporation of Indiana

Filed Nov. 23, 1966, Ser. No. 596,582

Int. Cl. B29c 1/04, 25/00; B29g 2/00

U.S. Cl. 264-177

7 Claims



A continuous method of forming uncured elastomers and accurately maintaining the desired shape while curing wherein the elastomer is externally lubricated and confined under pressure while being heated to cure the elastomer, and preferred apparatus for carrying out the method.

3,517,098

PROCESS OF FILM STRETCHING OVER GROOVED BAR

Ole-Bendt Rasmussen, Copenhagen, Denmark, assignor to Phillips Petroleum Company, a corporation of Delaware

Original application July 6, 1964, Ser. No. 380,599

Divided and this application May 13, 1968, Ser. No. 728,607

Claims priority, application Denmark, Nov. 19, 1963, 5,412/63

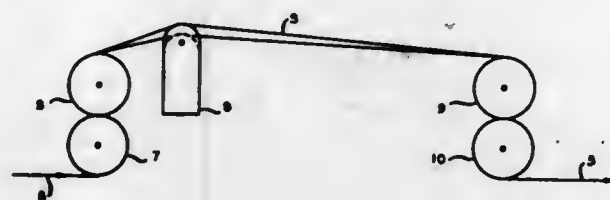
Int. Cl. B29c 17/02; B29d 7/24

U.S. Cl. 264-283

8 Claims

Polyolefin film is pre-stretched over a grooved bar at about 20° C. to form a network of shearing lines. The

stretching may be repeated. The pre-stretched film is subjected to regular stretching to about 400% of the original



length to fully orient. Crystalline mono-1-olefins are preferred film materials.

3,517,099

PRODUCTION OF A CYCLOSERINE-O-CARBAMYL-D-SERINE COMPOSITION

Jay A. Firth, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed June 10, 1968, Ser. No. 735,514

Int. Cl. A61k 21/00

U.S. Cl. 424-123

4 Claims

A process for the production of a cycloserine-O-carbamyl-D-serine composition from a fermented beer containing them by adding a protein source to the beer, adjusting the pH to within 11.2 to 11.8, readjusting the pH to within the range of 8.2 to 8.8, and recovering the composition, which has known utility as a growth promoter when given orally.

3,517,100

ISOLATION OF NYSTATIN

Joseph Gerald Renella, Tappan, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 2, 1968, Ser. No. 741,848

Int. Cl. A61k 21/00

U.S. Cl. 424-123

5 Claims

This disclosure describes a process for recovering highly purified crystalline nystatin from a *Streptomyces noursei* fermentation mash by adding to the whole harvest mash an aliphatic oxygen-containing organic solvent having a density less than 1.0 and a definite but limited mutual solubility in water, agitating the resulting mixture whereby a nystatin-containing organic solvent-water emulsion upper phase and an aqueous lower phase are formed, separating the nystatin-containing emulsion upper phase and recovering highly purified crystalline nystatin therefrom.

3,517,101

CRYSTALLIZATION OF NYSTATIN

Robert Carlyle Esse, Pearl River, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 2, 1968, Ser. No. 741,911

Int. Cl. A61k 21/00

U.S. Cl. 424-123

10 Claims

This disclosure describes a process for recovering highly purified crystalline nystatin from a suspension of impure nystatin in a liquid phase consisting essentially of water and a water immiscible organic solvent by adding a diluting solvent to the suspension, adjusting the pH of the resulting mixture to about 2.5 to effect solubilization of the nystatin, clarifying the mixture by filtration, adjusting the pH of the filtrate to about 7.0, and recovering the resulting precipitate of crystalline nystatin therefrom.

3,517,102 OXYTETRACYCLINE ANTIBIOTIC COMPOSITIONS EMPLOYING N-(BETA-OXYETHYL) PIPERAZINE OR N-N'-BIS-(BETA-OXYETHYL) PIPERAZINE AND MAGNESIUM CHLORIDE

Ivan Rolovich, Naples, and Pasquale Sorrentino, Capua, Italy, assignors to Pierrel S.p.A., Milan, Italy, an Italian body corporate

Filed Sept. 24, 1965, Ser. No. 489,850
Claims priority, application Great Britain, Oct. 19, 1964, 42,573/64

Int. Cl. A61k 21/00

U.S. Cl. 424-227

6 Claims

Stable liquid antibiotic compositions are prepared by dissolving oxytetracycline base in an aqueous propylene glycol or glycerol vehicle containing magnesium chloride and N-(beta-oxyethyl) piperazine or N-N'-bis-(beta-oxyethyl) piperazine. Either of the piperazine compounds may be used in compositions for oral administration whereas, for parenteral administration, the N-N'-bis-(beta-oxyethyl) piperazine compound is used. Sodium sulphoxylate may be used as an antioxidant.

3,517,103

METHODS AND COMPOSITIONS OF RESERPINE ALKALOIDS WITH ANTIDEPRESSANTS FOR TREATING HYPERTENSION

John H. Biel, Milwaukee, Wis.
(522 Green Bay Road, Lake Bluff, Ill. 60044)

No Drawing. Filed June 28, 1965, Ser. No. 467,773

Int. Cl. A61k 27/00

U.S. Cl. 424-244

9 Claims

Disclosed are pharmaceutical compositions comprising in combination a reserpine alkaloid of the group consisting of alseroxylon, deserpidine, rescinnamine, reserpine and syrosingopine with an anticholinergic-inducing antidepressant of the group consisting of imipramine, desmethylinipramine, amitriptyline, nortriptyline and protriptyline. A diuretic can be included in the compositions. The compositions are useful for treating hypertension. The reserpine alkaloid lowers the blood pressure. The antidepressant agent counteracts depression induced by the reserpine alkaloid and enhances its blood pressure lowering effect.

3,517,104

FUNGICIDAL COMPOSITIONS AND METHODS EMPLOYING DIALKYLITIN, 1,4-ENDOALKYL- ENE-2,3-DIHYDROPHTHALATES AND -1,2,3,6- TETRAHYDROPHTHALATES

Pasquale P. Minieri, 69-12 32nd Ave.,
Woodside, N.Y. 11377

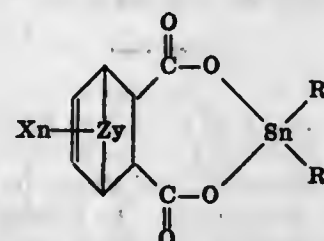
No Drawing. Continuation-in-part of application Ser. No. 620,251, Mar. 3, 1967. This application May 28, 1969, Ser. No. 828,755

Int. Cl. A01n 9/00

U.S. Cl. 424-288

10 Claims

Living plants are protected against attack by fungi by applying to them a fungicidal amount of an organotin compound having the structural formula



wherein each R represents phenyl or an alkyl group having from 4 to 8 carbon atoms; X represents an alkyl group having from 1 to 4 carbon atoms, an alkenyl group having from 4 to 8 carbon atoms, halogen, or phenyl; Z represents methylene, ethylene, chloromethylene, or chloroethylene; y represents an integer in the range of 0 to 1; and n represents an integer in the range of 0 to 4.

3,517,105

METHOD OF TREATING HYPERPIGMENTATION John J. Miskel, East Orange, Edward R. Neary, Teaneck, and Walter Schlesinger, Westfield, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 6, 1966, Ser. No. 540,501

Int. Cl. A61k 27/00

U.S. Cl. 424-315

5 Claims

A method of treating hyperpigmentation comprises applying topically to a hyperpigmented area a pharmaceutical formulation comprising from 0.1 to about 10.0% by weight of a member selected from the group consisting of p-aminobenzene-sulfonic acid and the alkali metal and alkaline earth metal salts thereof. Specifically described are pharmaceutical formulations comprising as depigmenting agent p-aminobenzene-sulfonic acid or the sodium or potassium salt thereof.

3,517,106

PICTURE MOUNTING MEANS AND METHODS AND MATERIALS THEREFOR

Marston Chase, 1330 New Hampshire Ave. NW.,
Washington, D.C. 20036

Filed Dec. 15, 1967, Ser. No. 690,858

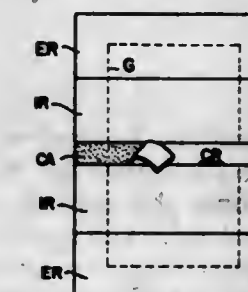
Int. Cl. B32b 31/04

U.S. Cl. 156-249

16 Claims

Methods and materials for mounting illustrations, clippings, pictures, and the like (hereinafter referred to as pictures) in accurate position on mounting boards, picture-album pages, and like supports, or between two sheets of transparent plastic, by making use of pressure-sensitive adhesive mounts that include a base with a layer of adhesive on one or both surfaces and with a release sheet overlying the adhesive, the release sheets of the present invention having guide lines thereon in some forms of the invention and having cuts therethrough to provide a plurality of release sheet sections that can be removed selectively, the release sheet material being suf-

ficiently thick where a center section is removed so that one or more sections can be removed and the picture to be mounted can be moved about on the remainder of the release sheet without adhesively contacting the exposed adhesive until the picture is accurately positioned on the mount, at which time the picture is pressed into contact with the exposed adhesive, and the remainder of the release sheet is removed and the picture is progressively pressed into adhesive contact with the remainder of the adhesive in a direction away from the previously exposed adhesive to provide a wrinkle-free bubble-free bond. If it is desired to secure a picture to a support such as an album page, a mount with adhesive on both surfaces is



used, and after the picture is adhered to the mount a section of the release sheet on the other side of the mount is removed and the composite picture and mount is arranged on the support so only the remainder of the release sheet touches the mount and the composite picture and mount is accurately located and held in position while the exposed adhesive is pressed into adhering contact with the support thereby fixing the position of the picture on the support and thereafter the remainder of the release sheet is removed and the composite picture and mount is progressively pressed into adhering contact with the support in a direction away from the previously exposed adhesive.

ELECTRICAL

3,517,107

ELECTRODE ASSEMBLIES

William Edward Baybutt, Lathom, Ormskirk, England, assignor to Pilkington Brothers Limited, Liverpool, England, a corporation of Great Britain

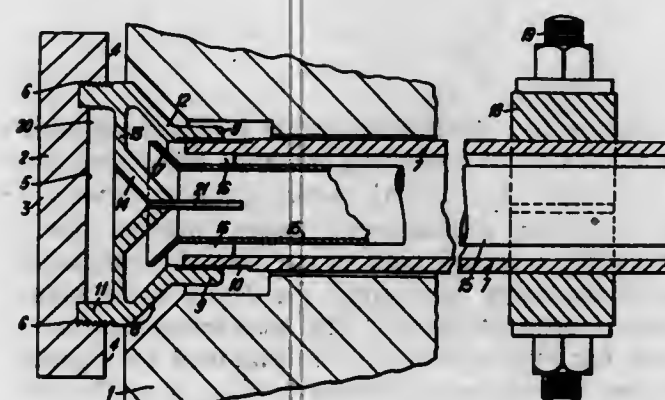
Filed Feb. 29, 1968, Ser. No. 709,317

Claims priority, application Great Britain, Mar. 17, 1967, 12,740/67

Int. Cl. H05b 7/06, 7/10; C03b 5/02

U.S. Cl. 13-18

10 Claims



A heat conducting support member is secured to the back of an electrode plate, for use in an electric glass melting furnace, by a heat conducting joint which is nearer to an edge than the centre of the electrode plate.

3,517,108

NAVIGATION SIGNAL SIMULATOR

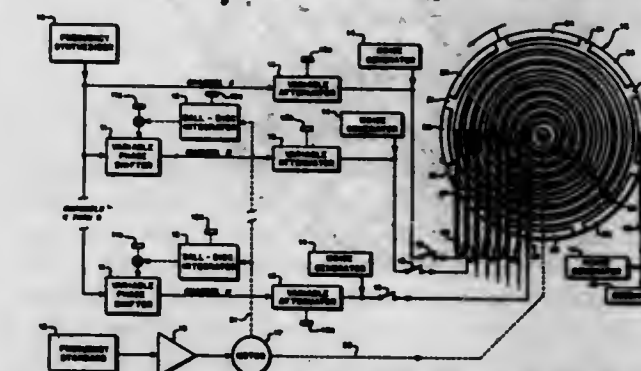
William F. McCarthy, Abington, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 30, 1967, Ser. No. 665,202

Int. Cl. G09b 9/02

U.S. Cl. 35-10.2

10 Claims



Apparatus for simulating the transmitted signals which an OMEGA navigation system receiver station would receive when in an aircraft, ship or other vessel and including a plurality of electrical channels, each of which simulates a VLF signal of an OMEGA transmitter. The phase and rate of change thereof, amplitude, and noise content of each VLF signal can be varied. A constant speed signal commutator, driven by a frequency controlled synchronous motor, sequentially samples the respective channels.

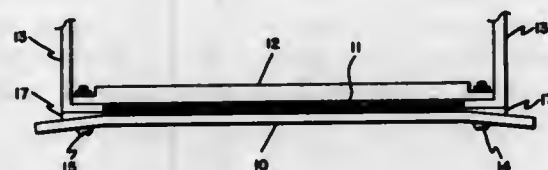
3,517,109

RADIO-FREQUENCY SHIELDED ENCLOSURE
T. O. Falne, Acting Administrator of the National Aeronautics and Space Administration, with respect to an invention of Hinland Young, Fountain Valley, Calif.

Filed Dec. 12, 1968, Ser. No. 783,378
Int. Cl. H05k 9/00

U.S. Cl. 174—35

2 Claims



A method and apparatus for improvement of radio frequency shielding of enclosures by bowing of instrument panels to overcome the natural tendency of the panels to bow outward between the points of attachment along their sides. Tapered shims are inserted behind the sides of a panel covering an enclosure opening, to mechanically bow the panel and to contain electro-magnetic waves, at the sides of the panel. When the attaching bolts are tightened the convex inside surface of the bowed panel exerts a force along the top and bottom of the panel against a radio frequency interference gasket, which in turn exerts a counter force against the panel. These opposing forces straighten the bow in the panel so as to cause a portion of the panel touching the chassis to form a planar surface exerting uniform contact pressure on the radio frequency interference gasket, along the top and bottom of the enclosure opening.

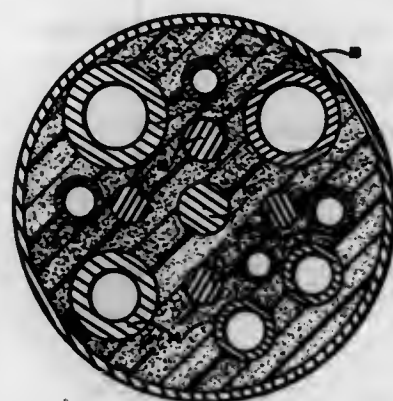
3,517,110

FLEXIBLE UNDERWATER RISER CONTAINING ELECTRICAL CONDUCTORS AND MATERIAL CONDUITS

George W. Morgan, Anaheim, Calif., assignor to North American Rockwell Corporation

Filed Apr. 1, 1968, Ser. No. 717,540
Int. Cl. H01b 7/00; H02g 9/12; B63b 21/52
U.S. Cl. 174—47

4 Claims



A flexible underwater riser capable of sustaining high environmental loads by means of a high tensile strength central core member. A plurality of material conduits and electrical conductors are situated about the central core member and a flexible protective sheath bundles the conduits together. The spaces between the conduits and conductors within the sheath may be filled with an elastomeric filler to provide an integral characteristic to the riser structure, and to isolate and insulate said conduits and conductors against mutual abrasion and temperature variations.

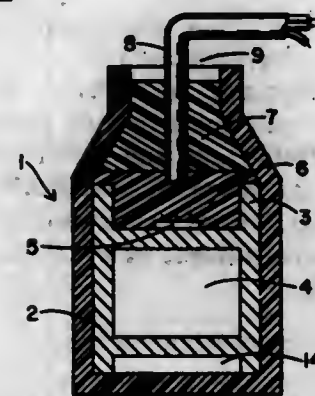
3,517,111

ENCAPSULATED ELECTRONIC COMPONENTS AND METHOD OF MAKING SAME
William F. Johnson, Hickory, N.C., assignor to Superior Continental Corporation, Hickory, N.C., a corporation of Delaware

Filed Mar. 12, 1968, Ser. No. 712,473
Int. Cl. H05k 5/06

U.S. Cl. 174—52

23 Claims



Disclosed herein is a container used for housing electronic components and a method of making same, the container being used in service either buried in the ground or exposed to the atmosphere. Basically, this housing is a plastic covered metal container having on the inside thereof an electronic circuit, the electronic circuit being in electrical connection with a terminal connector, which is affixed to an outside surface of the metal container. A plastic (crosslinked) case or sheath having an open top and a volume that is greater than the metal container, surrounds the metal container. A junction is formed by connecting an electrical conductor with the terminal connector and this junction is surrounded by a polyolifinic grease-like material. Disposed on top of this grease is a polyurethane foam material that at least partially fills that volume of the plastic container not occupied by the metal container, electrical conductor, grease, and terminal connector.

3,517,112

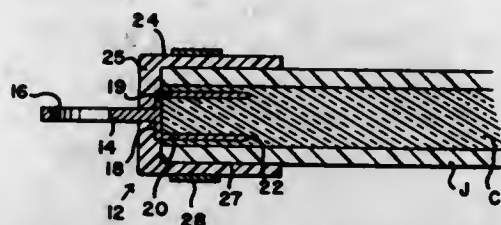
ELECTRICAL TERMINAL CONNECTOR FOR SODIUM CABLE

Frederick William Wahl, Middletown, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Continuation-in-part of application Ser. No. 564,798, July 13, 1966. This application Sept. 6, 1967, Ser. No. 665,835

Int. Cl. H01r 5/10; 11/20
U.S. Cl. 174—75

17 Claims



A connector for sodium-like cable is disclosed which features a housing of insulating material telescoped over the end of cable. The housing carries a center conductive structure including a thin metal sleeve member having a sharp leading edge adapted to cut into the conductive material of the cable and permit the device to be manually installed on a cable end. The sleeve member serves to provide back-up against forces developed by a metallic crimping or clamping ferrule applied over the outside of the housing. The sleeve member is in one version made to include spring portions loaded radially by insertion of the member into cable and/or by the deformation resulting from the application of the ferrule. In another version the sleeve member includes spring portions loaded axially upon insertion of the member into the cable. In all versions the crimping or clamping ferrule is separated from the sleeve member by the in-

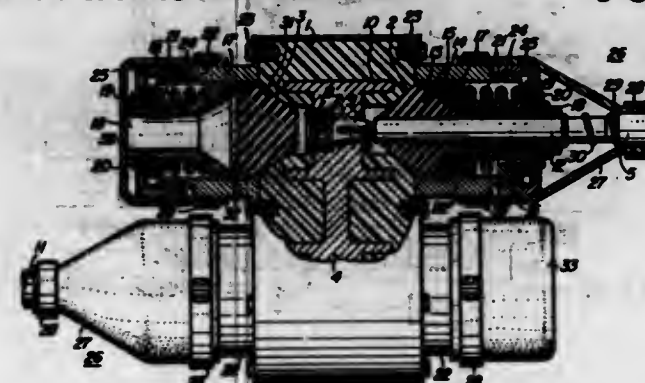
ulating housing to minimize heating of the ferrule by conduction from the interface between the sleeve member and the cable.

CABLE INSERTION UNIT FOR USE IN ELECTRIC CABLE JOINT AND TERMINAL

Takahisa Ono, Tokyo, and Nobuo Masumoto, Masayuki Yoshioka, Yoshio Hamada, Chuki Ikeda, and Kimio Sato, Hitachi-shi, Japan, assignors to Hitachi Cable, Ltd., Tokyo, Japan, a corporation of Japan
Filed Sept. 30, 1968, Ser. No. 763,798
Claims priority, application Japan, Oct. 5, 1967, 42/64,266

Int. Cl. H02g 15/04
U.S. Cl. 174—75

3 Claims



An electric cable insertion unit having pressing means comprising a tubular pressing element provided with a coil spring bearing portion, a spring backing member slidably mounted on the pressing element, a coil spring compressed between the bearing portion and the backing member, and a supporting element normally supporting the backing member against the force of the coil spring. The pressing means assembled as an integral part is used to force intimately a reinforcing insulation member mounted over a core of the electric cable into a cable insertion opening in an insulator block thereby facilitating assembling and disassembling of a cable joint or cable terminal.

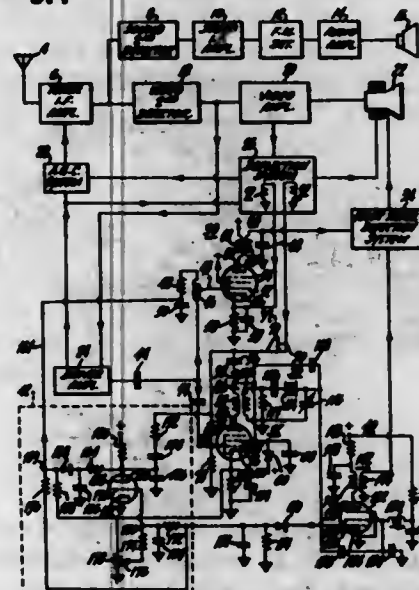
3,517,114

COLOR KILLER AND AUTOMATIC CHROMA CONTROL CIRCUITS

David H. Carpenter, Indianapolis, Ind., assignor to RCA Corporation, a corporation of Delaware
Filed Mar. 6, 1967, Ser. No. 620,728

Int. Cl. H04n 9/48
U.S. Cl. 178—5.4

5 Claims



A chrominance amplifier receives an automatic gain control voltage and a color killer voltage at a common input terminal.

To avoid interaction between the color killer circuit, which functions to render the chrominance amplifier in-

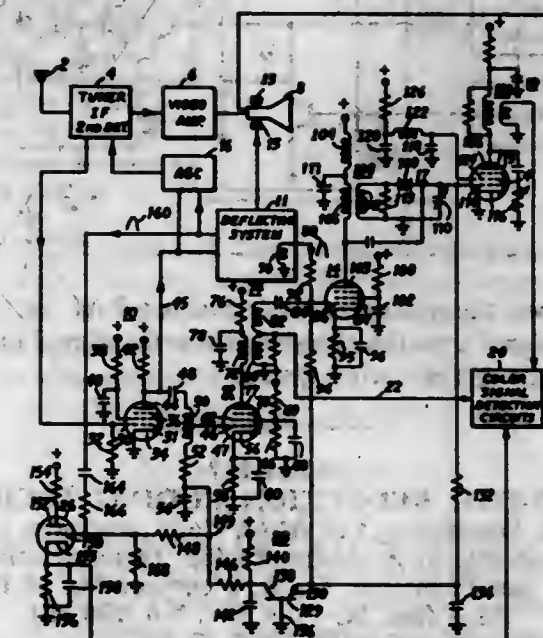
operative for the absence of burst, and the automatic chroma control circuit (A.C.C.), which functions to control the gain of the chrominance amplifier as a function of burst magnitude; a unidirectional current conduction device is biased so that a threshold between A.C.C. operation and killer operation is provided.

3,517,115

AUTOMATIC CHROMA CONTROL CIRCUIT
Donald H. Willis, Indianapolis, Ind., assignor to RCA Corporation, a corporation of Delaware
Filed May 29, 1967, Ser. No. 641,922

U.S. Cl. 178—5.4

8 Claims



In either closed loop or open loop A.C.C. circuits, the A.C.C. voltage derived from the color synchronizing bursts at the output of the burst amplifier is modified by noise induced voltage at the input of the burst amplifier. The noise induced voltage at the input of the burst amplifier is applied to the A.C.C. circuit to compensate for the adverse changes in the A.C.C. voltage due to noise applied to the burst amplifier.

3,517,116

ARRANGEMENT FOR CONVERTING A PAL COLOR TELEVISION SIGNAL TO AN NTSC COLOR SIGNAL

John L. Rennick, Elmwood Park, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware

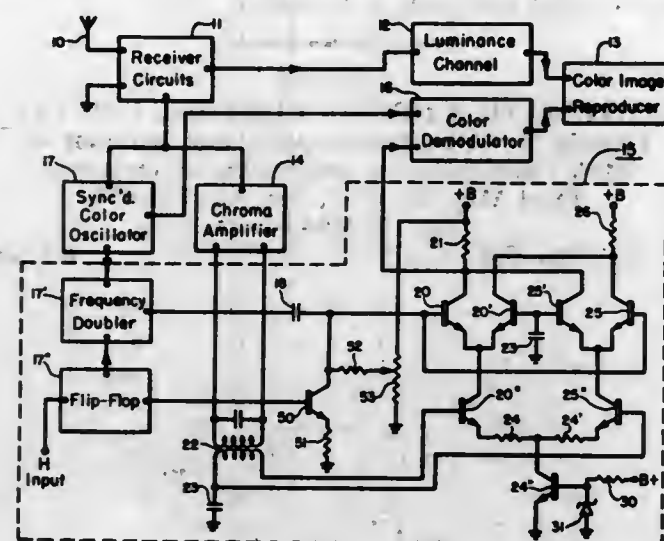
Continuation-in-part of application Ser. No. 629,764, Apr. 10, 1967. This application July 21, 1967, Ser. No. 655,103

Int. Cl. H04n 5/02
U.S. Cl. 178—5.4

11 Claims

A PAL color receiver includes a balanced type of amplitude modulator to which is supplied the chroma subcarrier signal which, in the PAL system, has a color phase sequence that alternates in successive image line intervals. A second signal, having a frequency twice that of the fundamental or subcarrier frequency of the chroma signal, is also applied to the modulator but only during every other line interval. The modulator is unbalanced in all line intervals in which only the chroma signal is present and therefore the chroma signal is repeated without change to the output circuit of the modulator during such intervals. During intervening line intervals in which the double frequency signal is also present, the modulator is balanced and there is developed in the same output circuit only the modulation product of the two applied signals. The modulation product is a phase-altered chroma signal in which the color phase sequence is reversed relative to that exhibited by the original chroma subcarrier signal in the same line inter-

vals. Consequently, there is derived from the single output circuit of the modulator a modified chroma subcarrier signal in which the color phase sequence is the same in every line interval.



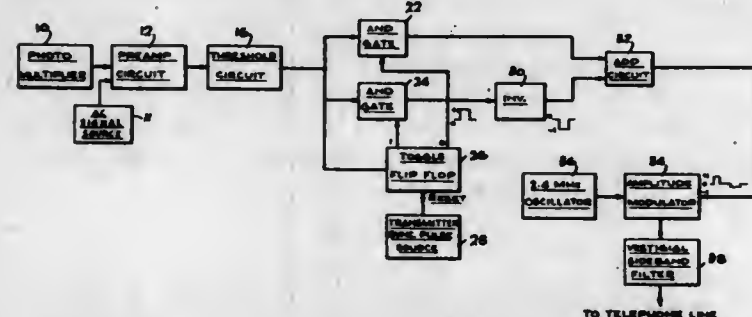
In short, the arrangement converts a PAL chroma subcarrier signal into the chroma subcarrier signal characteristic of the NTSC color system.

3,517,117

BANDWIDTH REDUCTION CODING TECHNIQUE
James R. Woodbury, Los Altos, Calif., assignor, by mesne assignments, to Southern Pacific Transportation Company, San Francisco, Calif., a corporation of Delaware
Filed Jan. 24, 1968, Ser. No. 700,081
Int. Cl. H04n 7/12

U.S. Cl. 178-6

7 Claims



This invention provides a technique for enabling bandwidth reduction to be achieved in the transmission of facsimile signals, of the type obtained in scanning input copy. The analog signal derived by scanning at a transmitter is converted to an unclocked two level analog pulse train and then is converted into a three level analog pulse train wherein every alternate pulse signal is phase inverted. The three level analog pulse train is then transmitted over a communication channel to a receiver. The receiver includes equipment for restoring and utilizing the received signals.

3,517,118

CRT LINE-BY-LINE TRACKER WITH AUTOMATICALLY CORRECTING BEAM DEFLECTION CIRCUIT

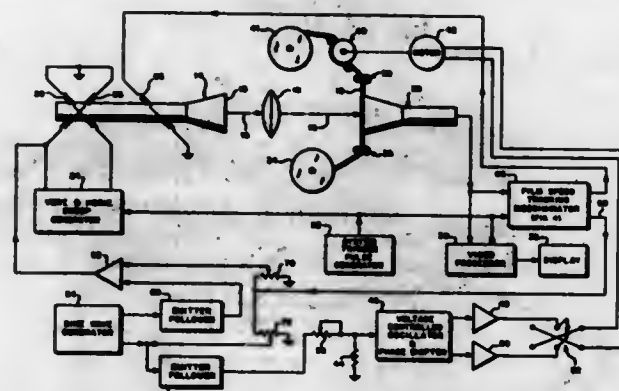
Elvin E. Herman, Pacific Palisades, and William H. Proud, Los Angeles, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 17, 1966, Ser. No. 588,271
Int. Cl. G11b 7/00; H04n 5/86

U.S. Cl. 178-6.7

5 Claims

Apparatus for displaying information stored on film in a succession of closely spaced, parallel, intensity modulated tracks each having an initial constant intensity segment enabling a flying spot scanner, a photomultiplier tube

and a signal processing discriminator to collectively provide for each track an error signal indicative of the degree and sense of any deviation of the scan path of the flying spot from each particular track with error signal is used not only to alter the transport speed of the film but also to deflect the location of the scan path in a direction to reduce the deviation. The discriminator causes the spot to be deflected first to one side and then to the other side of the constant intensity segment of each track and responds to the portion of the photomultiplier tube output signal



occurring during the spot deflection process to provide the above-indicated error signal. Additionally, a signal generator providing a sinusoidally oscillating signal of relatively low frequency such as 2 c.p.s. is applied to sinusoidally vary the transport speed of the film simultaneously with successive deflections in the locations of transverse scanning paths in order to cause successive displacements of the path over the screen of the flying spot scanner cathode ray tube thereby reducing phosphor fatigue while scanning each track in succession.

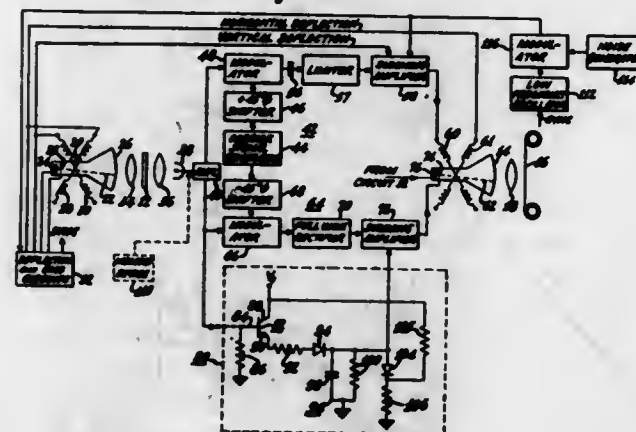
3,517,119

DEVICE FOR PRODUCING LINE HALFTONE IMAGES SIMILAR TO THE IMAGES PRODUCED BY THE WOODCUT TYPE METHOD OF PRINTING

Richard J. Klenoch, Trenton, N.J., assignor to RCA Corporation, a corporation of Delaware
Filed Feb. 23, 1967, Ser. No. 617,958
Int. Cl. H04n 5/84

U.S. Cl. 178-6.7

2 Claims



The electronic halftone image generator generates halftone images by producing on the face of a cathode ray tube scanlines that have varying widths that are a function of the tones in a continuous tone original image. Such a line halftone image is obtained by modulating each scanline by an alternating modulating signal whose amplitude depends on the tones in a continuous tone image. The

frequency of the modulating signal is selected to cause the scanning beam spot to merge on successive cycles of the modulating signal so as to cause the amplitude of the modulating signal to effectively determine the varying widths of the scanlines. An undulating effect is produced in the scanlines by providing a lower frequency oscillator and superimposing the lower frequency oscillations onto the vertical deflection of both the device that scans the original image and the cathode ray tube. The undulating scanlines on the cathode ray tube are imaged onto a photographic film so that a halftone reproduction of the original image is created which is similar to an image produced in the woodcut halftone type of printing.

3,517,120

NURSE CALL SYSTEM INCLUDING A COAXIAL CONDUCTOR ONLY CONNECTING A PLURALITY OF SIGNALS

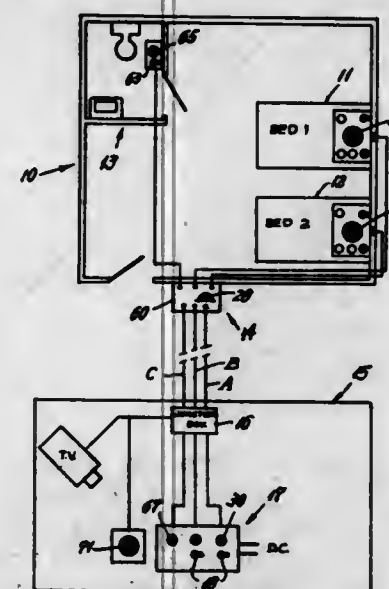
Earl L. Bunting, 34 Bermuda Road, Westport, Conn. 06880

Filed Aug. 26, 1966, Ser. No. 575,328

Int. Cl. H04n 7/00, 7/10

U.S. Cl. 178-6.8

10 Claims



A nurse call system comprising a circuit including a coaxial cable only for connecting signals at a patient's bed station, a room location or dome signal and a nurses' console, said signals being actuated by the patient at the bed station and extinguished by the nurse at the nurses' console by actuation of the answering switch. The actuation of the answering switch also places the nurse and patient in audio communication at audio frequencies. The circuit also includes a bath station signal which produces a signal at the nurses' console but the bath station signal can only be extinguished by a visit by the nurse to the bath station. The circuit further includes means establishing priority operation of the signals for emergency operation.

3,517,121

ELECTRONIC PERISCOPE PANNING APPARATUS
Edward A. Petrocelli and Joseph R. Owen, Orlando, Fla., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 29, 1967, Ser. No. 650,141

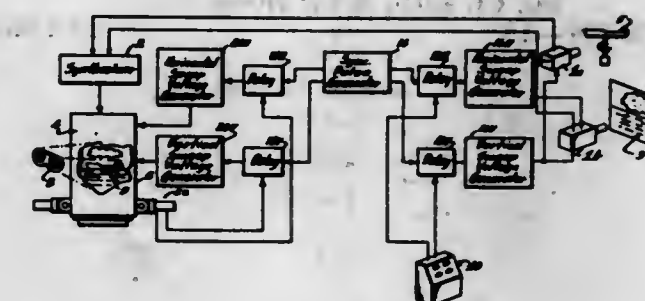
Int. Cl. H04n 7/18

U.S. Cl. 178-6.8

8 Claims

This invention concerns a training device wherein a plurality of TV cameras are arranged to scan a seascape background scene and one or more model ship targets,

respectively. Camera video information is combined into a composite scene of a target ship or ships against the seascape background on a TV monitor which is built into a simulated submarine periscope. To a trainee peering into the periscope eyepiece, the scene on the TV monitor is similar to a real life scene observed through an actual periscope. An instructor may control adjustable delays in



3,517,122

SELECTIVE IMAGE OBLITERATION IN ELECTRONIC SYNTHESIZERS

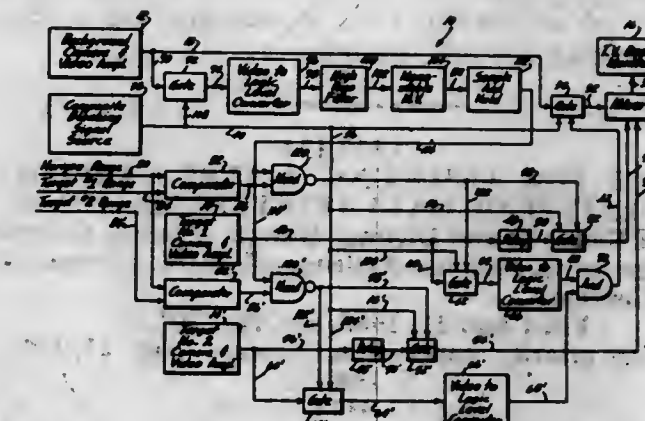
Joseph R. Owen, Orlando, Fla., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 27, 1968, Ser. No. 716,649

Int. Cl. H04n 3/16; F41g 3/26

U.S. Cl. 178-6.8

3 Claims



A system for synthesizing a television picture from a source of background video signals having high and low amplitude video information corresponding to the sky and sea or earth, respectively, and a source of target or object video signals to provide horizon effects simulating obscuring of those portions of the object which would be obscured at the simulated range, the system being characterized by a horizon effects generator including background video to logic level conversion means, filter and monostable multivibrator means for eliminating effects of spurious white areas in the sea area of the background, and sample and hold means operative to hold so long as a predetermined pulse is received from the multivibrator means at least once for each line of scan, and range comparison and gate means for blanking such portion of target video signals as occur during holding of the sample and hold circuit while the object is at a range beyond the horizon range.

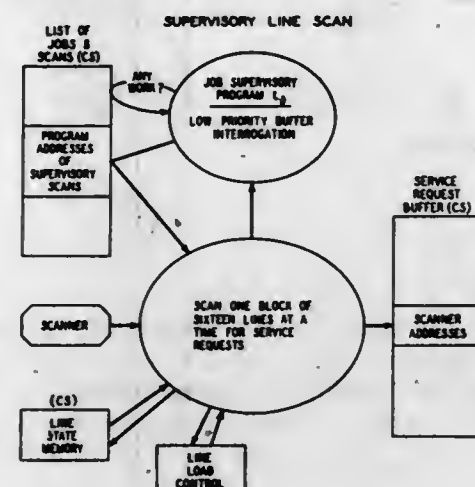
3,517,123

SCANNER CONTROL MEANS FOR A STORED PROGRAM CONTROLLED SWITCHING SYSTEM
John A. Harr, Geneva, Frank F. Taylor, West Chicago, and Werner Ulrich, Glen Ellyn, Ill., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Original application Dec. 31, 1963, Ser. No. 334,875.
Divided and this application Nov. 24, 1967, Ser. No. 685,600

Int. Cl. H04q 3/54; H04m 3/22

U.S. Cl. 179—18

13 Claims



A program controlled telephone switching system in which lines and trunks are organized in groups corresponding to word organized information in a bulk memory. The lines and trunks of each group for purposes of detecting requests for service are scanned simultaneously to generate a scanner response word. The scanner response word is combined with selected data obtained from memory to form a service request word. The selected data includes a "line load control word" which is selected in accordance with the system traffic conditions.

The system work functions relative to the detection of requests for service for several groups of lines are performed on an overlap basis to minimize the processor time required for this function.

3,517,124

DEVICE FOR ADJUSTING A TYPE CARRIER IN TELETYPE OR DATA TELETYPE MACHINES
Rudolf Reikewitz and Dietmar Horeth, Munich, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany

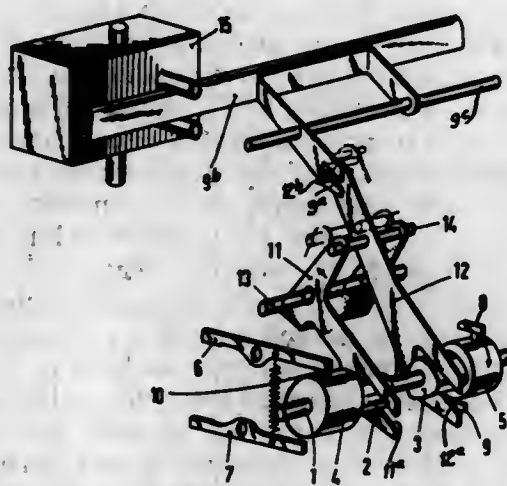
Filed Jan. 31, 1968, Ser. No. 701,947

Claims priority, application Germany, Feb. 27, 1967, S 108,532

Int. Cl. H04l 17/24

U.S. Cl. 178—34

3 Claims



Apparatus for adjusting the type carrier of a Teletype or like machine into any one of three positions in re-

sponse to a two step binary code. The apparatus includes a permanently driven shaft having a pair of cams concentrically mounted on the shaft and clutch means for causing the cams to rotate with the shaft during selected intervals. The clutches stop the cams in one of two positions. Lever arms co-act with the cams to form an aggregate motion lever gear which, in turn, controls the various positions of the type carrier.

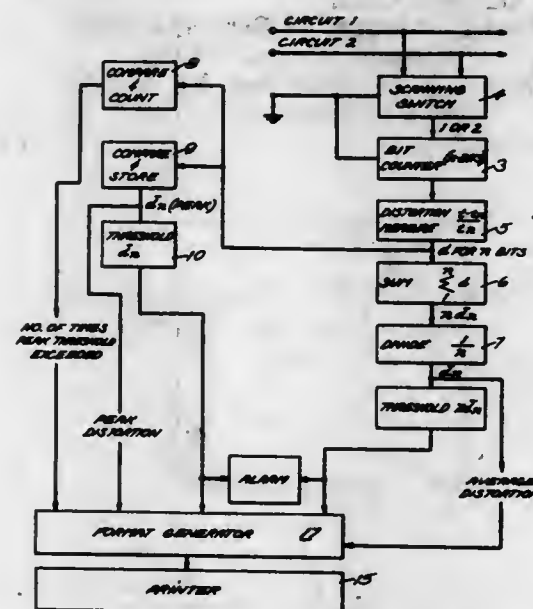
3,517,125

AUTOMATIC COMMUNICATION CIRCUIT EVALUATION AND SENSORY SYSTEM
Norman E. Peterson and Ernest E. Courchene, Jr., Ridgefield, Conn., assignors to Digitech, Inc., Ridgefield, Conn., a corporation of Connecticut
Filed Mar. 10, 1967, Ser. No. 622,300

Int. Cl. H04l 25/00

U.S. Cl. 178—69

14 Claims



A monitoring system for detecting deteriorating and faulty communications circuits having means for continuously scanning a large number of operating circuits. A sample signal from each of the circuits is analyzed for a variety of parameters or characteristics and these parameters are converted to a common read-out code or language for use to activate an alarm or a print-out circuit either continuously or alternatively only when the parameters indicate a failure or a probable deteriorating condition on the particular line being sampled. The scanning system includes a programming means for connecting an adjustably predetermined time base or other signal characteristic into the signal analyzer for each separate circuit being scanned so that different types of signals can be included. The scanning rate is also coupled to the output of the analyzer permitting the scanning speed to be reduced where trouble is encountered and to be speeded up otherwise.

3,517,126

LIGHT VALUE IMAGE PROJECTION SYSTEM WITH DEFORMABLE MEMBRANE AND THIN FILM TARGET ELECTRODE

Tatsuya Yamada, Kawasaki-shi, and Shunichi Sano, Tokyo, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan

Filed Nov. 13, 1967, Ser. No. 682,237

Claims priority, application Japan, Nov. 17, 1966, 42/75,247; May 12, 1967, 42/29,774; 42/29,775; Jan. 13, 1967, 42/2,177; Sept. 12, 1967, 42/58,113

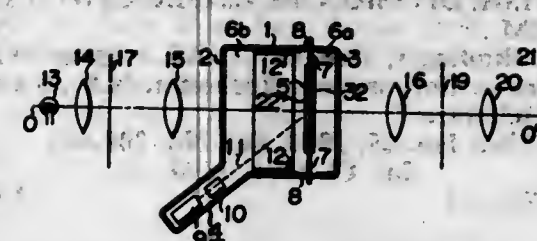
Int. Cl. H04n 5/74; H01j 29/12; G02f 1/32

U.S. Cl. 178—7.5

6 Claims

In a projection system a grid shaped thin film electrode having numerous regularly spaced gaps is interposed between a lightmodulating film to which a light

beam is impinging and a substrate receiving an electron beam, whereby the light beam passing through the gaps



of the grid shaped electrode projected to upon a screen to obtain a clear and bright projected picture.

3,517,127

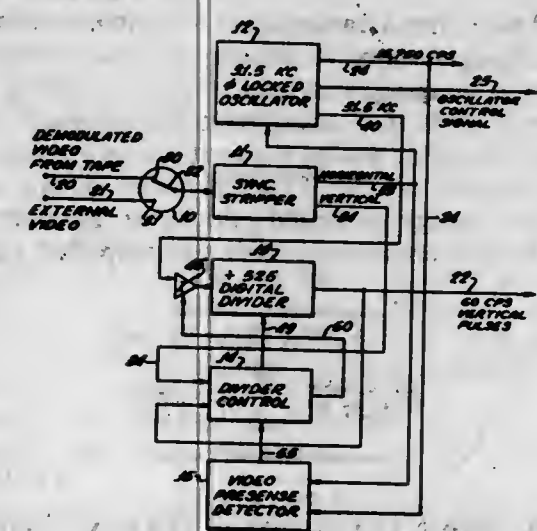
SYNC GENERATOR AND RECORDING SYSTEM INCLUDING SAME

Alan G. Grace, San Carlos, Calif., assignor, by mesne assignments, to Allan R. Fowler, Orange, Calif., trustee
Filed Mar. 21, 1966, Ser. No. 535,929

Int. Cl. H04n 5/04

U.S. Cl. 178—69.5

23 Claims



The sync generator includes a local oscillator which generates sync pulses at a frequency of 2f phase locked to horizontal sync pulses stripped from an incoming composite video waveform at a frequency f. The generated sync pulse is divided by 525 to produce a jitter-free vertical sync pulse. The generated vertical sync pulse is checked against the phase of a vertical sync pulse stripped from the composite video waveform. If the difference exceeds a predetermined limit, the division by 525 is interrupted until the next stripped vertical sync pulse at which time the division by 525 is restarted to re-establish phase agreement between the stripped and the generated vertical sync pulses.

To prevent the generated vertical sync pulse from being re-phased due to a phase difference caused by a temporary blackout of the stripped horizontal sync pulse; when such a blackout is detected, the circuitry for interrupting the division by 525 is disabled and the generation of vertical sync pulses on the basis of dividing by 525 is continued.

There is also disclosed a servo system wherein the jitter-free vertical sync pulses are used to synchronize the rotatable transducing head of a video tape recorder.

3,517,128

SURGICAL EXPANDING ARM DILATOR

James R. Hines, 251 E. Chicago Ave., Chicago, Ill. 60611

Filed Feb. 8, 1968, Ser. No. 704,003

Int. Cl. A61m 29/00

U.S. Cl. 128—345

4 Claims

A surgical dilator in the form of an expansible cage which, in its collapsed condition, consists of a series of substantially parallel closely positioned flexible stainless

steel ribs. The distal ends of the ribs are grouped together and hingedly connected to a ring carried on a guide rod, while the proximate ends of the ribs are similarly grouped and connected to a second ring which is slidable on the rod toward and away from the first ring. As the second



ring is slid toward the first ring, the steel ribs become progressively bowed outwardly to form a balloon-like cage structure which expands the surrounding tissue and maintains the body cavity expanded. Means are provided for securing the second ring to the rod at any selected position therealong.

3,517,129

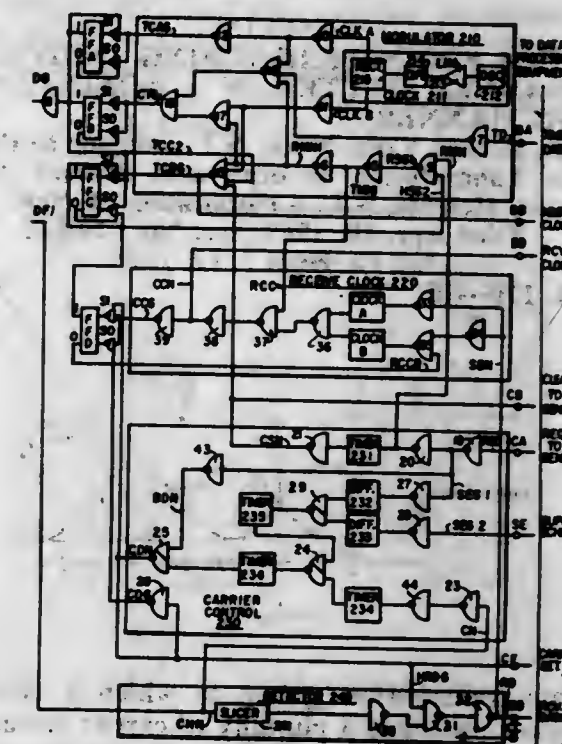
DATA TRANSMISSION SUBSET
Horace C. Talcott, Downers Grove, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Sept. 25, 1967, Ser. No. 670,114

Int. Cl. H04m 11/06

U.S. Cl. 179—2

3 Claims

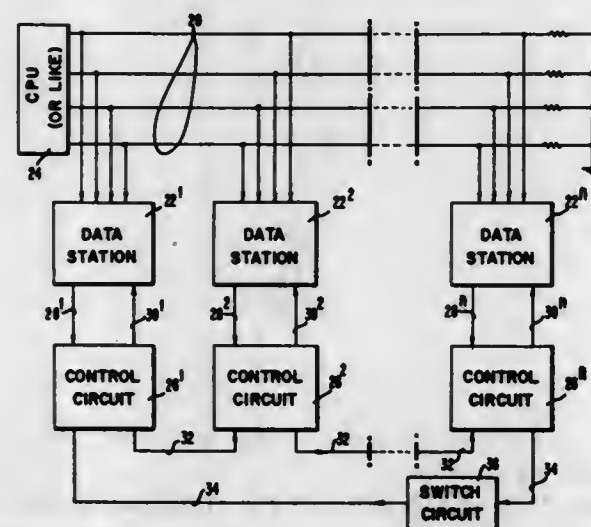


Apparatus for connecting data processing equipment to voice frequency communication channels including

equipment for transmission and reception of FSK signals and conversion to serial binary signals for use with data processing systems, with provision for rapid switching between transmit and receive modes.

3,517,130
COMMUNICATION MULTIPLEXING CIRCUIT
FEATURING NON-SYNCHRONOUS SCANNING
Raymond G. Rynders, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Oct. 26, 1966, Ser. No. 589,549
Int. Cl. H03j 3/16
U.S. Cl. 179—15

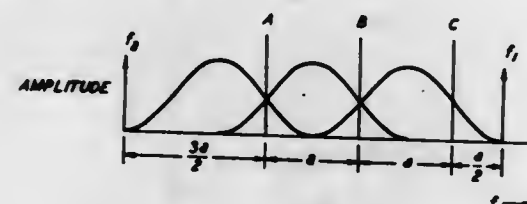
11 Claims



A multiplexing circuit that selectively accesses one of a plurality of data stations to a common receiving terminal. The circuit internally generates a scan signal that continuously examines the status of the data station until a data station provides a request signal indicating access is required to the common receiving station whereupon the circuit terminates the scan signal and provides an assign signal which accesses the data station directly to the common receiving terminal so long as the request signal is present.

3,517,131
SYSTEM FOR SUPERIMPOSING INDIVIDUAL CHANNEL SPECTRA IN A NONINTERFERING MANNER
Floyd K. Becker, Colts Neck, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Apr. 10, 1967, Ser. No. 629,631
Int. Cl. H03j 1/12, 1/18
U.S. Cl. 179—15

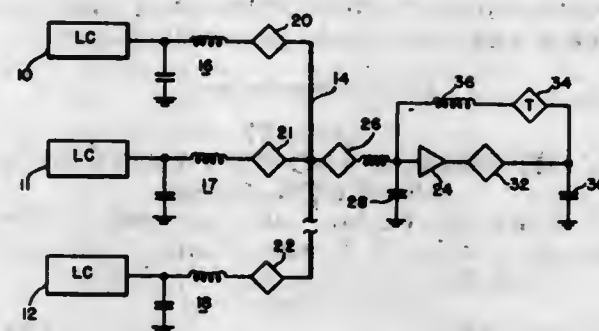
9 Claims



A data transmission system in which a plurality of data signals modulate a plurality of carrier waves so that the resultant modulated signals overlap in the frequency domain. These overlapping signals are added and transmitted with a pair of pilot tones. At the receiver, each channel is filtered, product demodulated, and sampled to recover the original data signals.

3,517,132
GATED AMPLIFIER CIRCUIT ARRANGEMENT
FOR TIME DIVISION MULTIPLEX SWITCHING
SYSTEM
Donald C. Rimlinger, Holcomb, N.Y., assignor to Stromberg-Carlson Corporation, Rochester, N.Y., a corporation of Delaware
Filed Jan. 25, 1968, Ser. No. 700,402
Int. Cl. H04j 3/00
U.S. Cl. 179—15

3 Claims



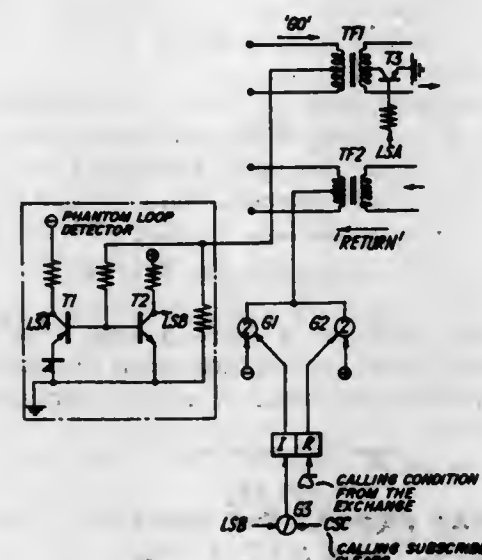
A gated amplifier arrangement for a time division multiplex switching system. A pulse-type signal is amplified and fed to a temporary storage capacitor during a first time interval. It is then transferred by resonant transfer to a second capacitor during the next successive time interval and delivered to the TDM highway during a third interval. The energy presented initially at the input of the amplifier is delivered along with the amplified signal to the load.

ERRATUM

For Class 179—18 see:
Patent No. 3,517,123

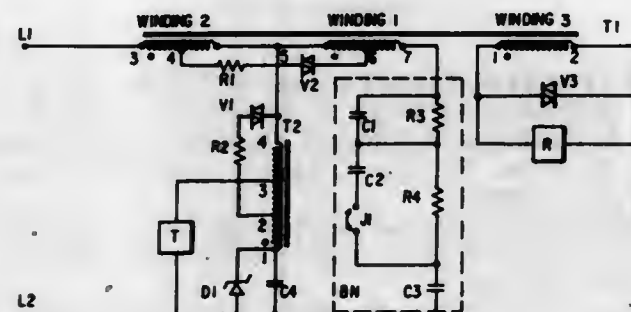
3,517,133
FOUR WIRE TELEPHONE SYSTEM USING
PHANTOM SIGNALING CIRCUIT
Ronald George Knight, John Anthony Weeks Butcher, Geoffrey George Pullum and Michael John Willson, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed July 20, 1966, Ser. No. 566,640
Claims priority, application Great Britain, July 26, 1965, 31,807/65
Int. Cl. H04m 19/02
U.S. Cl. 179—18

8 Claims



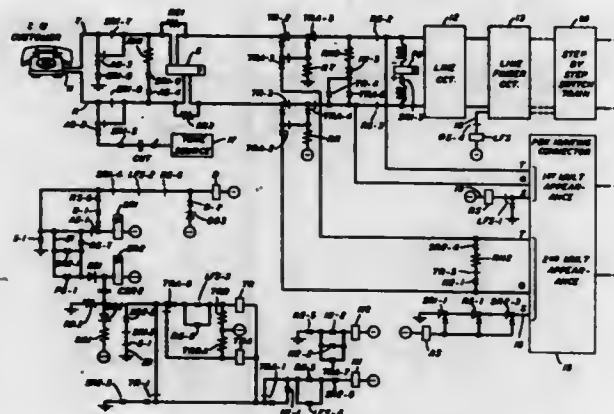
Ringin and other signals needed to establish voice circuits, which could cause spurious responses in data equipment, are generated locally.

3,517,138
LONG LOOP ANTI-SIDE-TONE TELEPHONE CIRCUIT
Victor G. Burger, Elmhurst, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Sept. 25, 1967, Ser. No. 670,116
Int. Cl. H04m 1/58
U.S. Cl. 179-81 7 Claims



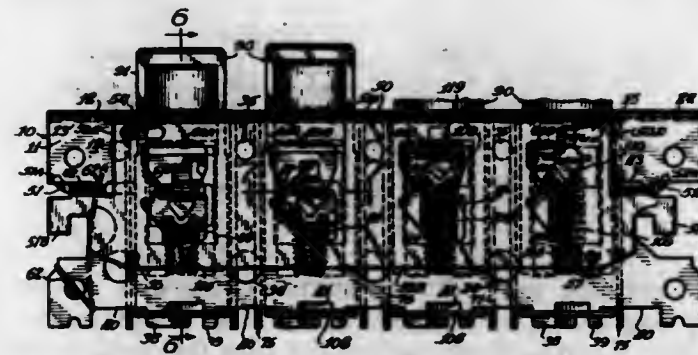
A subscriber station telephone circuit having a bridge transformer to couple the transmitter to the line and the balancing impedance in opposite phase. The receiver is magnetically coupled so as to receive practically no side-tone during transmission. An autotransformer is used to couple the transmitter to the bridge transformer. Separate transmission and receiving regulators are used to provide independent regulation for each function.

3,517,139
AUXILIARY TELEPHONE LINE CIRCUIT FOR CALL-WAITING SERVICE
Wiley Whitney, Columbus, Ohio (2829 NE. 33rd Ct., Apt. 603, Fort Lauderdale, Fla. 33306)
Filed May 27, 1968, Ser. No. 732,420
Int. Cl. H04m 3/42
U.S. Cl. 179-18 4 Claims



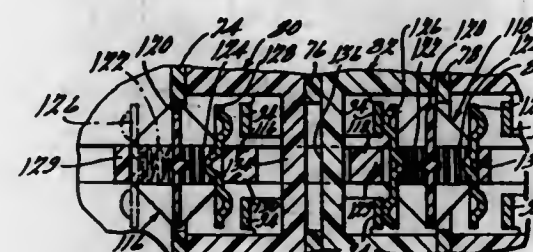
An auxiliary line circuit for providing call-waiting service in step-by-step telephone systems includes means for preventing interference by a call-waiting connection with a call already being originated, but not yet completed, by the special-services customer. Completion of the call-waiting connection is prevented until battery potential to the call-waiting customer is reversed by completion of the customer-originated call.

3,517,140
PUSHBUTTON SWITCH MEANS
James R. Bailey, Chicago, and Kurt Lutzenberger, Arlington Heights, Ill., assignors to Switchcraft, Inc., a corporation of Illinois
Filed Sept. 20, 1968, Ser. No. 761,174
Int. Cl. H01h 9/26
U.S. Cl. 200-5 10 Claims



The pushbutton switch means described herein provides a construction which is sufficiently versatile so that a row of actuator rods may selectively have non-lock, all lock, interlock, lockout and release functions individually or mixed. Each actuator rod forms part of a self-contained switch assembly containing the switch contacts and bias spring and permits easy application of a switch assembly to the mechanism or removal therefrom. The mechanism includes a frame plate and latch plate relatively linearly movable over a limited range. A latch plate can have a normal biased position at either end of its travel range. The plates have windows and the latch plate window has two opposed cam shaped sides, one side being useful in most cases at one time. The actuator rod has one or two parts as desired for cooperating with one or other cam sides, the particular cooperation for most windows depending upon the bias direction. Individual lock-out members between adjacent stations may be applied selectively.

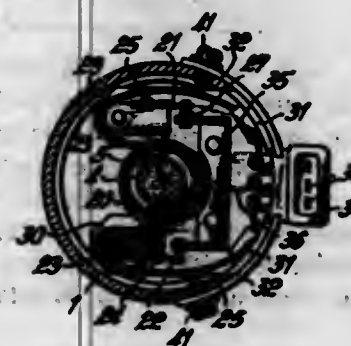
3,517,141
LIMIT SWITCH
Donald R. Gaines, Farmington, James L. Brothers, Warren, and James R. Lambert, Madison Heights, Mich., assignors to Mackworth G. Rees, a division of Avis Industrial Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 13, 1967, Ser. No. 682,361
Int. Cl. H01h 15/24
U.S. Cl. 200-16 8 Claims



This invention is an electrical make-and-break switch which is uniquely constructed so that a maximum number of the switch components can be made of plastic material by conventional injection molding methods. It is a feature of the invention that the switch housing is divided into a plurality of compartments that accommodate removable modules having fixed contacts which cooperate with bridging contact members carried by a movable switch element also mounted in the housing. In practice, the housing can be fitted with one or more of these

modules depending on the intended use of the switch. The fixed contacts on certain modules are positioned so as to be normally closed by the bridging contact members and the fixed contacts of other modules are differently positioned so as to be normally open. At least certain of the modules fit interchangeably in more than one compartment of the housing and the normal condition of the contacts can be changed by moving the modules from one compartment to another. In this manner, maximum versatility in the number of possible circuit arrangements is achieved with a minimum number of parts. Thus, simply by using selected numbers of standard module components differently arranged in the housing it is possible to have one or several normally open contacts, one or several normally closed contacts, or different combinations of normally open or normally closed contacts.

3,517,142
IGNITION DISTRIBUTOR WITH RADIALLY REMOVABLE CONTACT MECHANISM AND TERMINAL MEANS
Hans-Dieter Bastam, Gerlingen, Bernd Huber, Stuttgart-Wellmendorf, and Josef Wahl, Stuttgart-Kaltental, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Nov. 13, 1967, Ser. No. 682,027
Claims priority, application Germany, Nov. 26, 1966, B 90,037
Int. Cl. H01h 19/04, 19/62
U.S. Cl. 200-19 8 Claims

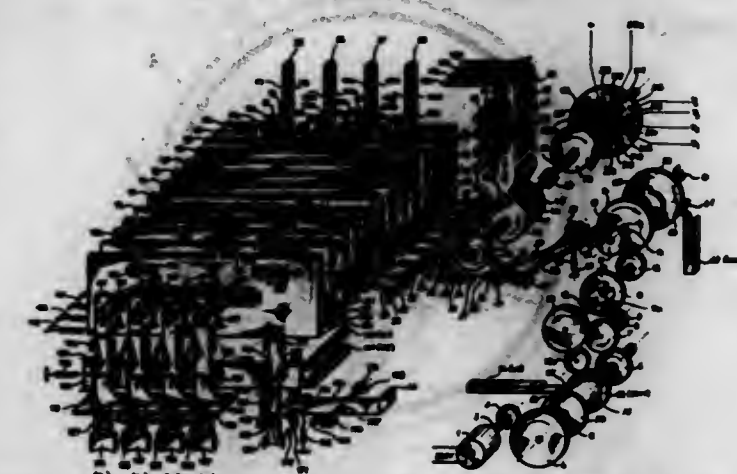


The electric fuel injection system of a multicylinder internal combustion engine receives signals from a signal generating assembly which includes a trip mounted on the shaft of the ignition distributor and a carrier which is removably inserted into the base of the ignition distributor and includes a plate located in a plane which is normal to the shaft. The plate supports two movable contacts which are biased against two stationary contacts. Signals are generated in response to each half revolution of the shaft when the trip causes one of the movable contacts to move away from the associated stationary contact. The plate is withdrawable from the base by moving radially of and away from the shaft.

3,517,143
ELECTRICAL PROGRAM CONTROL DEVICE FOR DOMESTIC APPLIANCES
Erich Scheer, Peterzell, Black Forest, Germany, assignor to Kleninger & Oberfell, St. Georgen, Black Forest, Germany
Filed July 21, 1966, Ser. No. 566,808
Int. Cl. H01h 43/12
U.S. Cl. 200-38 5 Claims

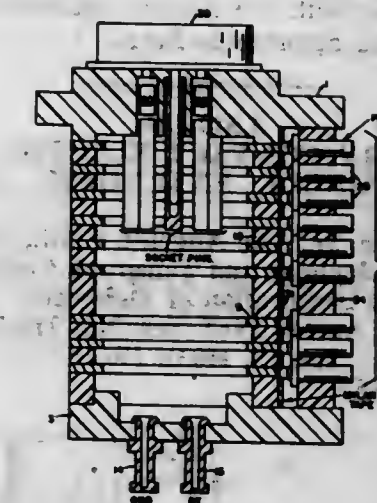
A program control device for machines comprising a program memory unit for at least one program for the automatic and coded actuation of electrical switching contacts, whereby the phases determined by the program may be automatically initiated and terminated simultaneously and/or successively, a correcting device combined with the program memory unit to actuate at least partly, the

same contacts as the contact actuating slides of the program memory unit such that these switching contacts are arbitrarily actuable during and/or outside a program phase by means of special actuating members of the correcting device, independently of the part of the program in progress or to be initiated permanently or for a predetermined time, or remaining open or closed for a pre-



terminated time, said program memory unit being characterized in that at least one program switching condition initiating or terminating a phase of the program is defined by respective states of the electrical switching contacts and is stored in the program memory unit comprising the program switching states of the individual programs in the form of a maximum program carrier.

3,517,144
INTEGRATED CIRCUIT PACKAGE PROGRAMMABLE TEST SOCKET
Joseph R. Arseneault, Bedford, Mass., and William N. Bogle, Canterbury, N.H., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Jan. 23, 1969, Ser. No. 793,272
Int. Cl. H01h 43/08
U.S. Cl. 200-46 3 Claims



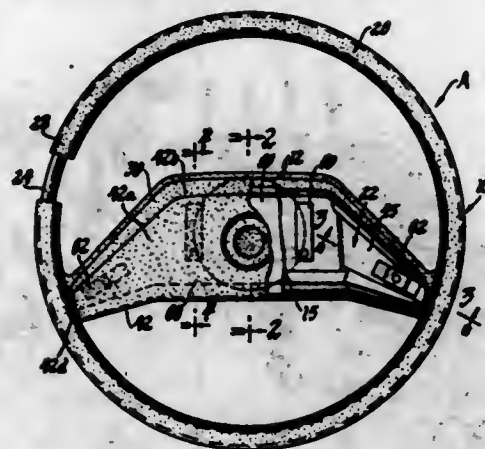
The test socket contains a plurality of contact washers sandwiched by a plurality of insulators to form a cylinder. Each plate is connected to a single terminal of the socket. Three sets of brushes connect selected contact washers to test equipment by way of feeler pins in the brushes. The selection is performed by a Mylar tape which has holes punched in it. The Mylar tape is placed between the brushes and the washers so as to allow connection of the pins to the washers only when there is presented a hole between the pin and the washer. The integrated circuit to be tested is plugged into the test socket.

3,517,145
PADDED STEERING WHEEL HORN SWITCH
 Marshall Eugene Wallace, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 3, 1968, Ser. No. 733,907
 Int. Cl. H01h 9/04

U.S. Cl. 200—61.55

3 Claims



In a preferred form, this disclosure relates to a combined steering wheel and horn switch assembly for an automotive vehicle. The steering wheel includes a hub portion which is adapted to be mounted on a steering column of the vehicle, an annular rim portion and radially extending spoke portions interconnecting the hub and rim portions. The horn switch comprises a support plate carried by the spoke portions and which is connected to a suitable ground, an actuating member disposed above the support plate and which is slidably connected thereto for movement toward and from the support plate, a plurality of spaced leaf springs connected to the support plate and engageable with the actuating member for biasing the same toward an outer position, and a cover made from a suitable elastomeric material for completely enclosing the other switch parts and for sealing the same from the ambient atmosphere. The leaf springs are connected in a circuit with an electrically actuatable horn and the cover is constructed in a manner such that it can be easily depressed at any location thereon to effect movement of the actuating member and adjacent leaf springs into engagement with the support plate to complete an electric circuit to actuate the horn.

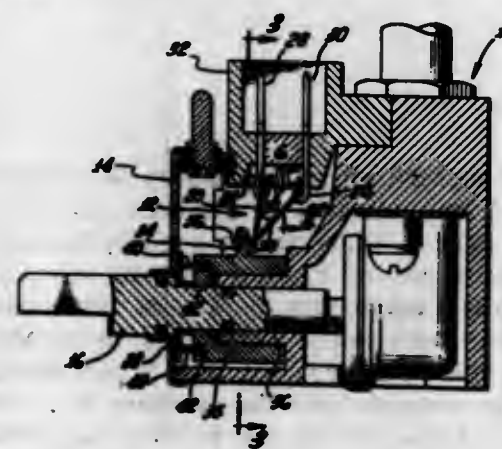
3,517,146
MOMENTARY CONTACT ELECTRIC SWITCH WITH AXIALLY EXTENDING CONTACT PORTION

Ernest Thierstein, Jr., Los Angeles, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 9, 1968, Ser. No. 719,912
 Int. Cl. H01h 19/24

U.S. Cl. 200—153

4 Claims



An electrical pulse switch employing a cam which is movable in one direction to effect momentary engagement

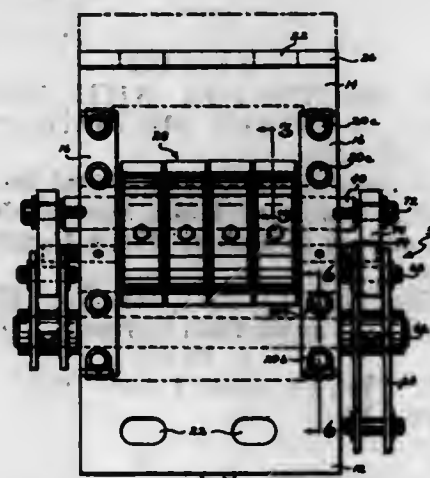
between a pair of normally spaced resilient switch contacts and is movable thereafter in the opposite direction without bringing the contacts into engagement. The switch is particularly useful in certain types of burner control apparatus such as a gas range.

3,517,147
THERMAL EXPANSION COMPENSATING MODULAR HIGH CURRENT SWITCH
 Victor A. Mortenson, Stoughton, Mass., assignor to Anderson Power Products, Inc., Boston, Mass., a corporation of Massachusetts
 Continuation-in-part of application Ser. No. 527,162, Feb. 14, 1966. This application Apr. 26, 1968, Ser. No. 724,583

Int. Cl. H01h 1/36

U.S. Cl. 200—166

11 Claims



A modular, high current switch which automatically compensates for bus expansion. The switch has two relatively moveable, spaced, co-planar electrically conductive plates and at least one moveable contact assembly for establishing or interrupting a conductive path between the plates. The plates are held in spaced relation by a set of electrically insulative bridging members which are fixed relative to one plate and moveable relative to the other plate.

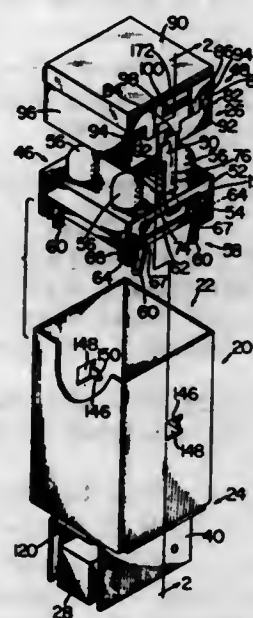
3,517,148
PUSHBUTTON SWITCH CONSTRUCTION WITH SAFETY SET MECHANISM

Anthony A. Di Pilla, Philadelphia, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
 Continuation-in-part of application Ser. No. 605,680, Dec. 29, 1966. This application Jan. 25, 1968, Ser. No. 700,631

Int. Cl. H01h 9/18

U.S. Cl. 200—167

12 Claims



There is disclosed an illuminated pushbutton switch construction having a tubular casing that receives a push-

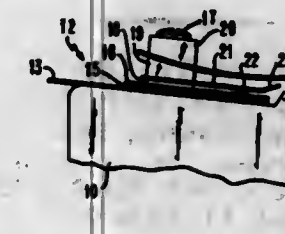
button means at the upper casing end and has a lower switch means at the lower casing end. The pushbutton means is movable inward into the upper casing end by an initial pushing in action and thereafter movable upwardly by a release countering action. This places the pushbutton means in operable locked condition to operate the switch means as often as desired. The pushbutton means may be removed from the casing by an upward movement, or by an upward, outward movement, followed by an inward, downward pushing action of the pushbutton means. Thereafter, the pushbutton means may be removed from the casing by an upward and outward removing action completely to remove the pushbutton from the casing. The pushbutton is prevented from actuating the switch means during the initial introduction of the pushbutton means into the casing, and the pushbutton can only operate the switch means after it has been released from the first pushing in action.

3,517,149
ACTUATOR FOR DIAPHRAGM TYPE SWITCH
 James Lowell Yarbrough, Raleigh, N.C., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
 Filed Oct. 15, 1968, Ser. No. 767,755

Int. Cl. H01h 3/02

U.S. Cl. 200—172

3 Claims

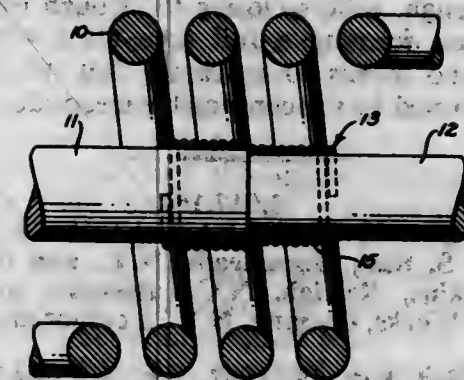


A diaphragm switch of the type having a flexible conductor pressable through a perforation in an insulator into contact with a fixed lower conductor will normally be actuated by a dimple formed on a driven member. To prevent damage to the flexible conductor, the dimple is moved to contact closing position relatively slowly to minimize dynamic forces and is in the form of a bead of rubberlike material shaped to avoid concentration of stress in the conductor. The switch actuating force applied through the dimple is controlled by mounting the dimple on a low rate spring as the driven member and by limiting the stroke of the driving member.

3,517,150
SOLDERING ASSEMBLY AND METHOD
 Harold A. McIntosh, South Pasadena, and Edmond M. Wagner, Sierra Madre, Calif., said McIntosh assignor, by same assignments, to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
 Filed Oct. 22, 1965, Ser. No. 500,756
 Int. Cl. B23k 1/12, 13/00, 35/00

U.S. Cl. 219—9.5

4 Claims



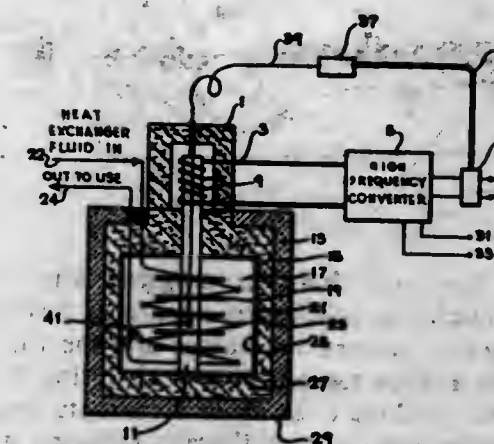
Method and article for joining wires, with abutting wires held together in alignment by a single coil spring of hard solder wire, and with induction heating for fusing the solder to form the junction.

875 O.G.—24

3,517,151
HEAT STORAGE
 Matthew Matjean, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
 Continuation-in-part of application Ser. No. 589,764, Oct. 26, 1966. This application Sept. 3, 1968, Ser. No. 757,012

Int. Cl. H05b 5/100, 1/00
 U.S. Cl. 219—10.49

7 Claims



Induction heating devices may be advantageously employed to fill heat storage modules with storage compositions which may be melted by heat generated in the metal container walls. Furthermore, induction heating of filled modules in operation as heat storage units presents decided advantages over electrical resistance heaters for introducing heat into solid, liquid and mixed solid-liquid heat storage materials.

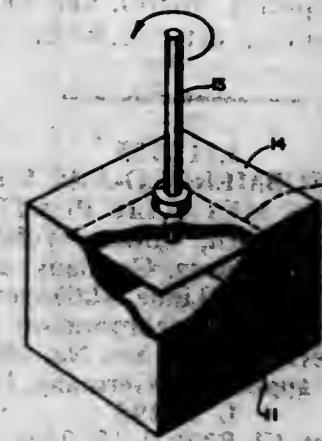
Modules which contain heat storage compositions which may become contaminated by water or carbon dioxide from the atmosphere such as alkali metal hydroxide containing composition may be protected from the atmospheric contaminants by providing a sealed-in atmosphere for one or several manifolded storage vessels via a fluid piston vent sealing means, the fluid of which separates the atmosphere from an expansion space provided in each storage module.

Heat storage modules may be internally aluminized and externally aluminized and/or phosphatized to afford a corrosion resistant module wall both towards the heat storage material and the external atmosphere.

3,517,152
MICROWAVE OVEN FIELD ALTERATION
 Joseph R. Glacobbé, Dedham, Mass., assignor to Sage Laboratories, Inc., Natick, Mass., a corporation of Massachusetts
 Filed Oct. 14, 1968, Ser. No. 767,215

Int. Cl. H05b 9/06
 U.S. Cl. 219—10.55

2 Claims



A square or rectangular conductive sheet is spaced roughly one quarter wavelength from one wall of the microwave oven cavity and rotated roughly about its center.

3,517,153

WIRE ELECTRODE HOLDER ASSEMBLY

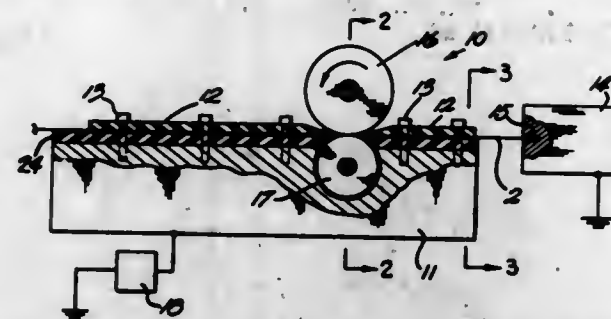
John M. Check, Ann Arbor, Mich., assignor to Raycon Corporation, Ann Arbor, Mich., a corporation of Michigan

Filed June 7, 1967, Ser. No. 644,258

Int. Cl. B23p 1/12

U.S. Cl. 219—69

3 Claims



A holder for small diameter tungsten wire electrodes for electric discharge machining apparatus having an insulating material between the holder and the wire to support the wire against radial movement during feeding of the wire while blocking stray electric currents between the electrode holder and the wire thereby reducing wire electrode breakage.

3,517,154

ELECTRICAL DISCHARGE MACHINING APPARATUS

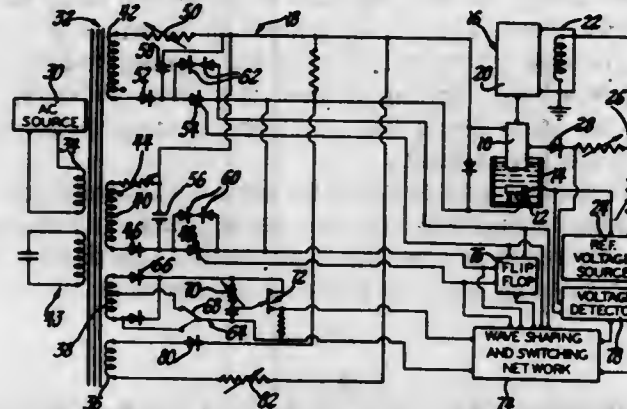
August F. Scarpelli, Warren, Millard A. Ferguson, Utica, and John J. Ross, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 15, 1966, Ser. No. 579,660

Int. Cl. B23p 1/08

U.S. Cl. 219—69

2 Claims



An electrical discharge machining power supply employing AC energy in combination with controlled rectifiers. The triggering circuit operates the controlled rectifiers so that the energy applied to the gap can be varied as to frequency, pulse width and amplitude. Also, the average voltage across the gap is increased so as to avoid instability of the gap spacing control, and short circuiting is detected by a gap voltage detector, which causes the power to be cut off.

3,517,155

METHOD OF SUBMERGED-ARC WELDING OF THICK METALLIC PLATES

Wilhelm Mantel, Munich, Lothar Wolf, Pullach, and Anton Buchmeier, Hallern, Germany; said Mantel and said Wolf assignors to Linde Aktiengesellschaft, Hohlriegelskreuth, Germany, a corporation of Germany

Filed Dec. 13, 1967, Ser. No. 690,127

Claims priority, application Germany, Dec. 16, 1966, L 55,295

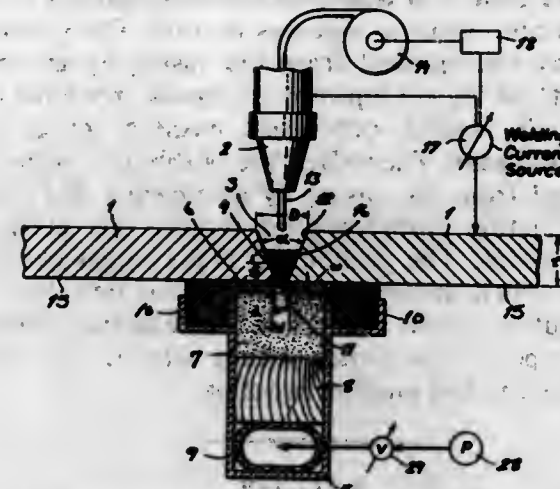
Int. Cl. B23k 9/18, 9/00

U.S. Cl. 219—73

5 Claims

A method of submerged-arc welding of relatively thick steel plates (thickness 8 mm. or greater) along a downwardly convergent elongated welding gap, wherein the

undersides of the metal plates are retained in coplanar relationship at the gap by a pair of magnetic bands extending parallel to the gap on opposite sides thereof and between the magnetic bands, a copper, mineral fibers or powder layer of temperature-insensitive material is urged



upwardly against the undersides of the plates to form a floor for the gap; the latter is partly filled with steel granules and then a welding flux in powdered form prior to be welded from the opposite side of the plates by an electrode wire whose arc is submerged in the powder within the gap.

3,517,156

WELDING APPARATUS AND METHOD

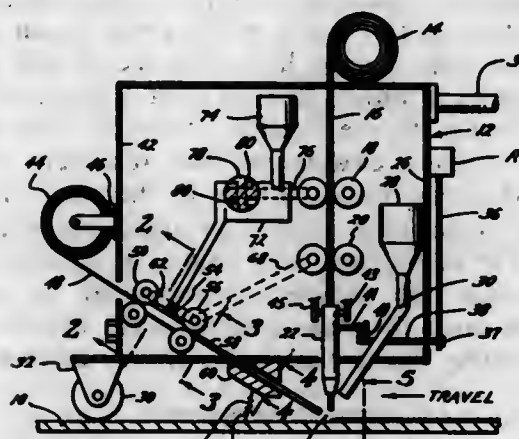
Roman F. Arnoldy, Houston, Tex., assignor to R. I. Patents, Inc., Houston, Tex., a corporation of Texas

Filed June 6, 1968, Ser. No. 734,990

Int. Cl. B23k 9/04

U.S. Cl. 219—76

19 Claims



A method of welding utilizing a consumable electrode and a foil tube having a wall less than about 0.005 inch thick and being filled with alloy granules. A welding head assembly including a consumable electrode, a roll of metal foil less than 0.005 inch thick, rollers forming a trough in the foil, means for depositing alloy granules into the trough, rollers closing the trough over the alloy granules and forming a foil tube filled with the alloy granules, and means to move the foil tube toward the arc zone formed by the consumable electrode.

3,517,157

AXIAL COMPONENT LEAD ATTACH MACHINE

Howard S. Best, Harsheheads, N.Y., and Gordon R. Tompkins, Raleigh, N.C., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Aug. 29, 1967, Ser. No. 664,148

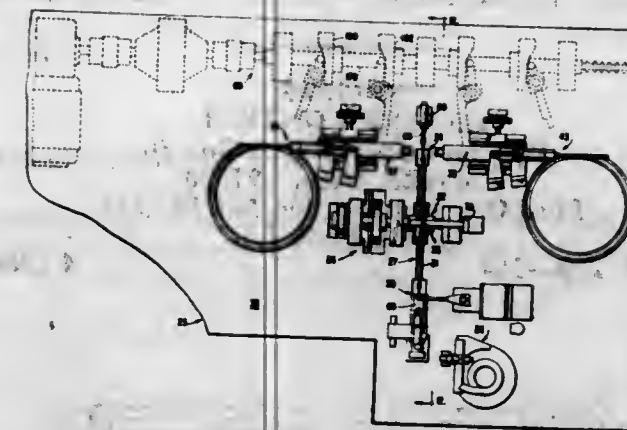
Int. Cl. B23k 1/02, 1/04

U.S. Cl. 219—85

12 Claims

The machine automatically positions successive electronic components and axial leads and resistance solders

leads to the ends of each component. The components are loaded into clamps on the periphery of a wheel which steps to carry the components through a checking station to a soldering station. Axial leads are carried by oscil-



lating arms from a vertical loading position to the soldering station. Electric current is passed through the tips of the arms to accomplish the resistance soldering. An unloading station follows the soldering station in the path of the wheel.

3,517,158

STRIP EDGE BUTT WELDING MACHINE

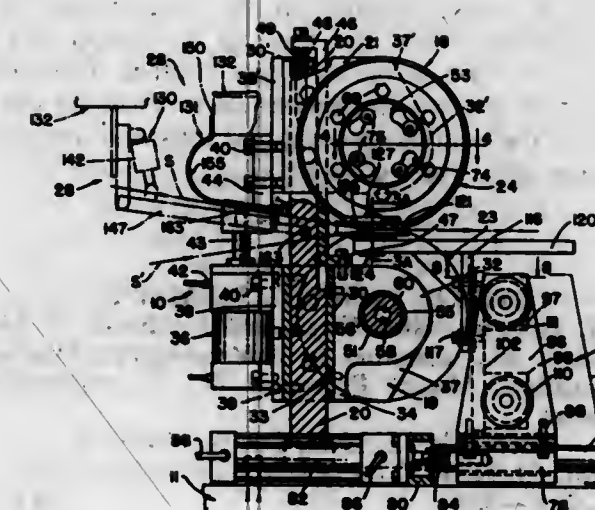
Sidney Briggs III, Bay City, Mich., assignor to The Thomson Corporation, Bay City, Mich., a corporation of Delaware

Filed May 1, 1967, Ser. No. 634,924

Int. Cl. B23k 9/02, 11/02

U.S. Cl. 219—102

16 Claims



There is herein disclosed a machine which is similar in function to, and incorporates a series of components basically the same as, the machine illustrated and described in my Letters Patent No. 3,325,623, dated June 13, 1967. Both machines in general comprise provisions for guiding a pair of flat metallic strips in convergent horizontal paths into and through a welding zone, in which the strips are locally heated at adjacent edges to a welding temperature, as by resistance-type electrodes or other means. However, in some installations it may be desirable to employ another type of heating means such as an inductive unit or an electron beam unit. The weld is completed, as the edges are as thus heated and then vertically wiped past one another, i.e., not significantly lapped one upon another, in producing a truly butt type seam weld. The union is assisted by the rolling action of a pair of parallel shaft wheels of a rolling wheel unit.

3,517,159

APPARATUS FOR CONTINUOUSLY WELDING OPTICAL ELEMENTS WITHOUT DEFORMATION

Alexandre Milochévitch, Saint-Michel-sur-Orge, France, assignor to Compagnie Generale d'Electricite, Paris, France, a corporation of France

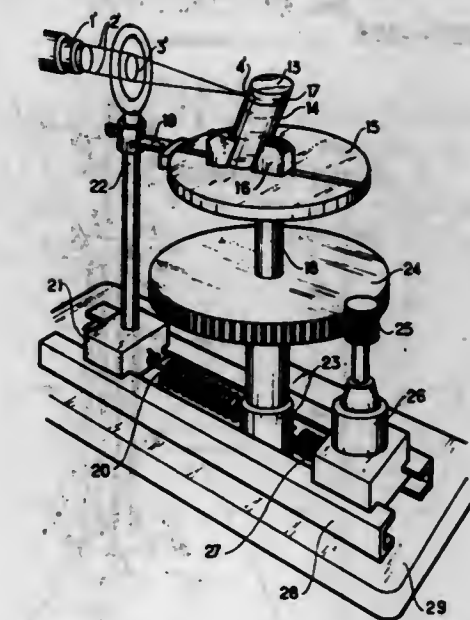
Filed June 28, 1968, Ser. No. 740,957

Claims priority, application France, June 28, 1967, 112,295

Int. Cl. B23k 27/00

U.S. Cl. 219—121

3 Claims



Laser beam welding of optically polished elements in planar contact by focusing the laser beam at a point on the contact line between the elements and rotating the elements at a constant linear speed past the focusing point.

3,517,160

ADHESIVE ACTIVATING MACHINE FOR SHOES

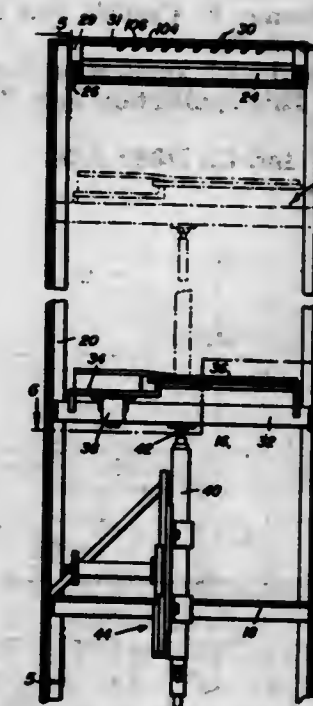
Joseph G. Maga, 62 Oak Ave., Athol, Mass. 01331

Filed Sept. 6, 1968, Ser. No. 768,586

Int. Cl. A43d 25/04; H05b 1/00

U.S. Cl. 219—215

9 Claims



A machine for heating and activating the adhesive applied to soles of shoes with an infra-red heat source so that the soles are not completely heated through when exposed to the heating source. The machine is automatic in

bringing the soles into proximity of the infra-red heat source and energizing the same for a specific period of time and then removing the soles from such proximity for application to the shoe bottom.

3,517,161

SUBLIMATION UNIT AND SYSTEM

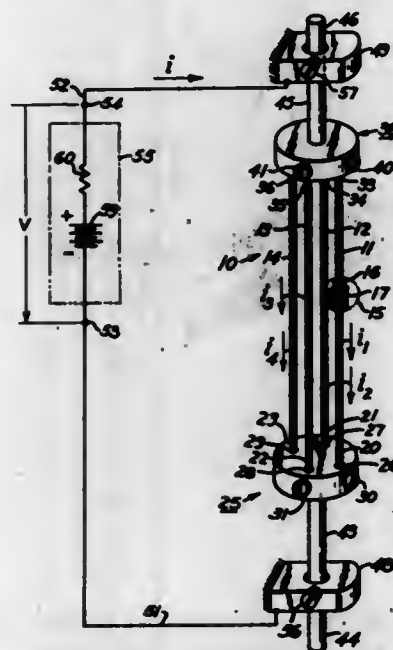
Thaddeus S. Graczyk, Rochester, N.Y., assignor, by mesne assignments, to The Bendix Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 13, 1967, Ser. No. 667,551

Int. Cl. C23c 13/00

U.S. Cl. 219-275

1 Claim



A sublimation unit for getter vacuum pumps or evaporation deposit apparatus, comprising several resistance heated sublimation elements which are spaced from each other and which are interconnected in electrical parallel within the unit.

3,517,162

METHOD AND APPARATUS FOR CONTROLLABLY HEATING FLUID

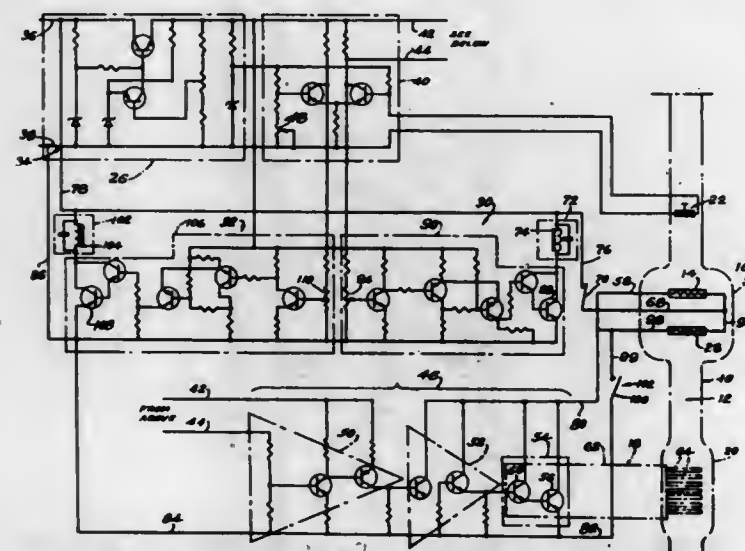
James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of Thomas E. Carlisle and Edward J. Flannery, both of Cook, Ill.

Substitute for abandoned application Ser. No. 309,781, Sept. 18, 1963. This application Feb. 9, 1966, Ser. No. 539,237

Int. Cl. H05b 1/02

U.S. Cl. 219-364

16 Claims



A method and apparatus for achieving high efficiency and power economy in a fluid heater in a conduit by placing

the control for heat generation in the fluid to be heated, upstream from the heating means, thereby utilizing the heat generated in the control means for preheating the fluid anterior to the principal heating means. The circuitry includes an under-temperature control and auxiliary heater for preventing underheating and an over-temperature control for preventing overheating of the fluid stream.

3,517,163

HEATER CONTROL

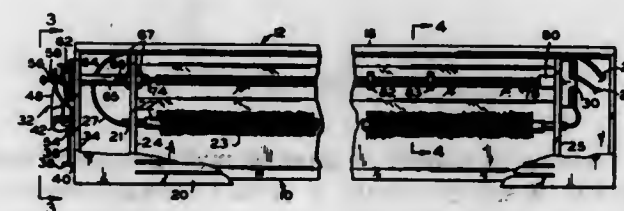
William Leiner, Rte. 2, Box 56, Corvallis, Oreg. 97330

Filed Oct. 18, 1966, Ser. No. 587,593

Int. Cl. H05b 1/02

U.S. Cl. 219-364

4 Claims



A thermostatic control for a baseboard type of electrical heater having a bimetallic plate type of thermostat mounted on one end of the housing for the heater, a switch located at the other end of the housing, and a metal rod extending through the housing parallel to the heating element therein and responsive to its temperature for operatively connecting the bimetallic thermostat with the switch. The metal rod functions in a dual capacity: it triggers the switch by being actually physically translated in the axial direction by the bimetallic plate, as well as by the expansion and contraction of its own length due to thermal changes. The linear translation of the rod serves as a coarse control on the temperature of the heating element, while the thermal expansion and contraction of the rod serves as a fine control. The cumulative nature of the two motions serves to maintain the temperature of the heating element and thus, the temperature of the room effectively constant.

3,517,164

IMAGE FUSING ASSEMBLY

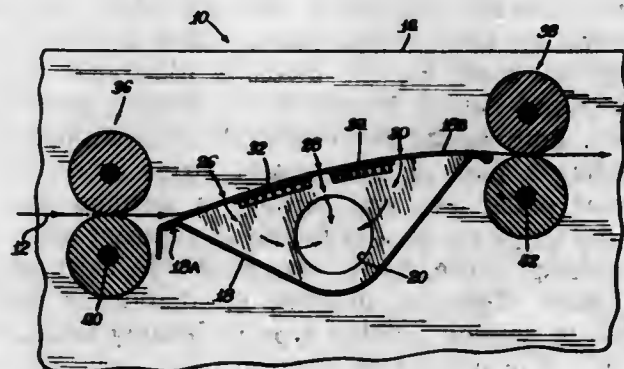
Ralph T. Huggins, Glen Ellyn, and Frederick D. Meller, Lombard, Ill., assignors to Addressograph-Multigraph Corporation, Mount Prospect, Ill., a corporation of Delaware

Filed July 22, 1968, Ser. No. 746,456

Int. Cl. H05b 1/00; F26b 3/04; G03d 3/12

U.S. Cl. 219-388

6 Claims



The application discloses a unit for fusing powder images on copy material using conduction of heat through the material. The unit includes a vacuum chest having

a thermally conductive wall over which the back of the copy material slides and to which heat is supplied by electrical heaters carried thereon. The walls are provided with spaced openings so that the moving copy material is held in intimate engagement with the wall, and any air film between the wall and the copy material is removed to permit an efficient heat transfer to the powder image by conduction from the wall and through the material.

3,517,165

ARRANGEMENT FOR HANDLING PRINTABLE CHARACTER BIT CODES

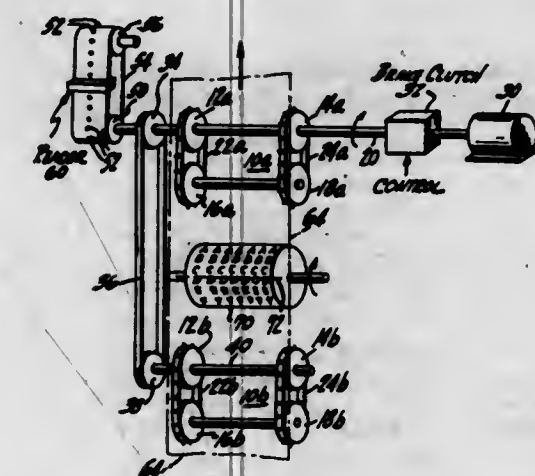
Robert C. Peyton, North Palm Beach, Fla., assignor to RCA Corporation, a corporation of Delaware

Filed Sept. 24, 1966, Ser. No. 582,016

Int. Cl. B41p 5/38; G06k 3/00

U.S. Cl. 235-61.9

7 Claims



A web drive means such as a paper tape driver, is used to enter printer bit codes directly into the buffer memory of a high speed printer. The printer bit codes are stored on a web in an order corresponding to the order of characters on the printer's font.

3,517,166

TEMPERATURE CHANGING CIRCUIT PROGRAMMING APPARATUS

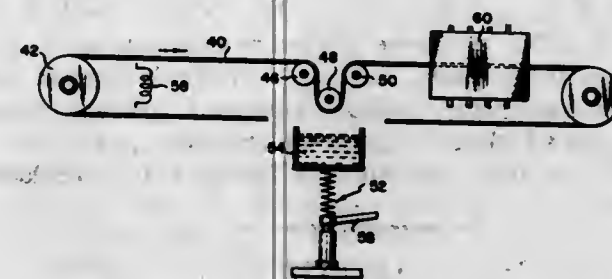
Bernard Edward Shlesinger, Jr., 3906 Bruce Lane, Annandale, Va. 22003

Filed Aug. 10, 1965, Ser. No. 478,588

Int. Cl. H01h 43/08; G06k 7/00

U.S. Cl. 235-61.11

12 Claims



A thermally responsive programming apparatus for programming electrical devices comprising a sensor block, a movable belt extending into, through and out of the block and having heatable and coolable spot portions, a series of sequentially spaced pre-set heat detectors connected to the electrical devices aligned with the direction of travel of the belt and supported in the block and each responsive to a specific temperature, independent moving means for moving the belt at different programming speeds, a spot temperature changing applicator means in close proximity to the belt and remote

from the block for changing the temperature of at least one of the spot portions, the block being remote from the spot temperature changing applicator so as to be uninfluenced thereby, controlling means independent of the block for controlling the temperature changing applicator means when changing the temperature of the spot portions whereby upon programmed controlling of at least one of said independent means, the heat detectors by the means of the spot portions are selectively caused to operate in a predetermined sequence depending upon the heat transmitted by the spot portions when they are moved into and through the block.

3,517,167

FEEDBACK LIGHT CONTROL SYSTEM

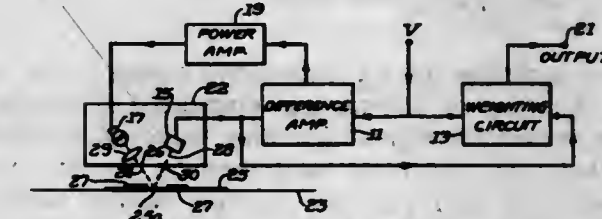
Norton W. Bell, Pasadena, Calif., assignor to The Bell and Howell Company, Chicago, Ill.

Filed Dec. 28, 1966, Ser. No. 605,240

Int. Cl. G01n 21/30; G06k 7/10

U.S. Cl. 235-61.11

5 Claims



A reflective sensing type of document scanning apparatus in combination with an insertion machine wherein a lamp is powered by the output of a differential amplifier having a first input from a photodetector which detects reflected light from a document, and a second input from a reference voltage is described.

3,517,168

GAS DEMAND COMPUTER CONTROL SYSTEM

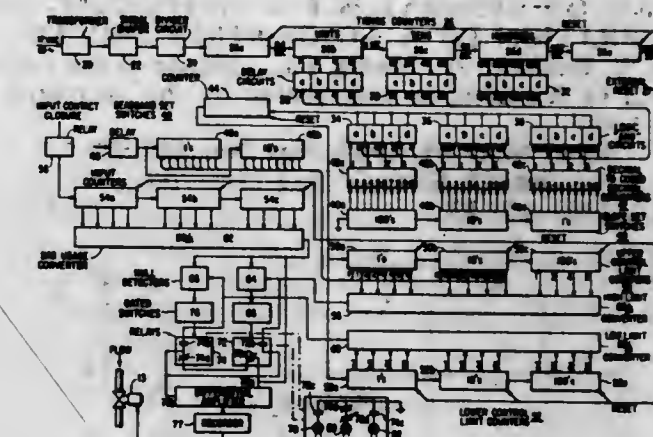
Robert H. Gates, Eastlake, Ohio, and William Tuzenga, Homewood, Ill., assignors to Bailey Meter Company, a corporation of Delaware

Filed Apr. 25, 1968, Ser. No. 724,022

Int. Cl. G06f 7/02; G05d 7/06

U.S. Cl. 235-92

7 Claims



A computer system for controlling gas usage within internally generated control limits, having binary counters which respond to inputs representing maximum and minimum gas usage limits and to an input representing total gas usage. Output signals from the binary counters are converted to analog voltage signals, said signals compared to determine deviation of total gas usage beyond the control limits. The presence of a deviation between said signals produces a control signal which regulates gas usage to establish the total gas usage within the control limits.

3,517,169

IMPEDANCE NETWORK HYBRID COMPUTER
Lucien C. Malavard, Paris, Pierre M. Marty, Verriere-le-Buisson, and Guy C. Renard, Bagneux, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a company of France

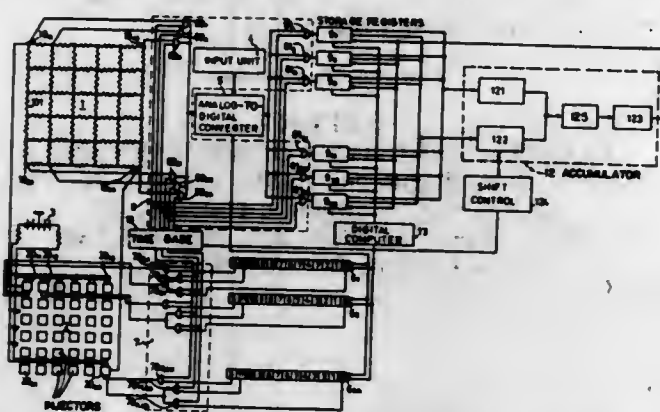
Filed Nov. 16, 1967, Ser. No. 683,616

Claims priority, application France, Nov. 18, 1966, 84,079

Int. Cl. G06j 1/00

U.S. Cl. 235-150.5

3 Claims



Hybrid computer of the impedance network type comprising an array of impedances connected therebetween at nodes, means for digitizing analog values of currents to be injected into said nodes and forming thereby binary code values of said currents, injector means associated with the array nodes which are adapted to selectively inject the nodes with a positive unit current, a negative unit current or a zero current, means for controlling said injector means and injecting the nodes, during successive injection cycles respectively corresponding to the binary weights of the current coded values, with unit currents when the digits of a given binary weight of said current binary code values are ones and with zero currents when the digits of the same weight are zeros, means for scanning said nodes during each injection cycle and deriving from said scan analog component values of the potentials of the nodes, means for digitizing these analog component potential values and forming thereby binary code values of said component potentials, and accumulator means for respectively totalizing the component potential binary code values pertaining to the several nodes.

3,517,170

SYSTEM OR APPARATUS FOR OPTIMIZING THE OPERATION OF A COMBUSTION PROCESS

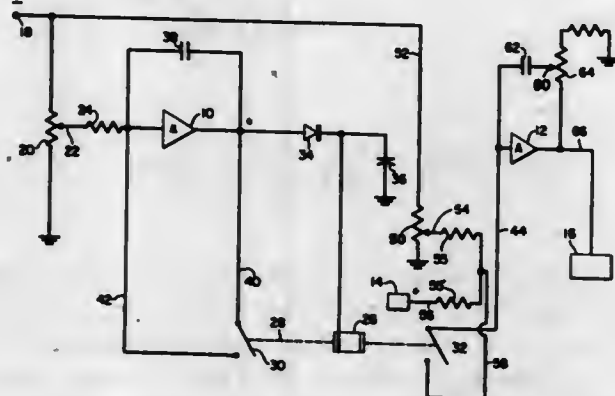
James W. Banham, Jr., Media, Pa., assignor to the United States of America, as represented by the Secretary of the Navy

Filed Mar. 29, 1967, Ser. No. 627,590

Int. Cl. G06g 7/18; F23n 3/00

U.S. Cl. 235-151.12

5 Claims



Subject disclosure relates to unique apparatus in which a corrective electrical signal developed from the relative opaqueness of the products of combustion in a combustion process is used to regulate and control the input air-fuel

ratio of the combustion process. The apparatus includes adjustable timing circuitry that intermittently activates and deactivates a summing amplifier. The summing amplifier provides an output signal that represents the difference between a preset potential and a potential proportional to the density of the smoke of the combustion process. The difference or error output signal of the summing amplifier is then used to control the input air-fuel ratio of the combustion process.

3,517,171

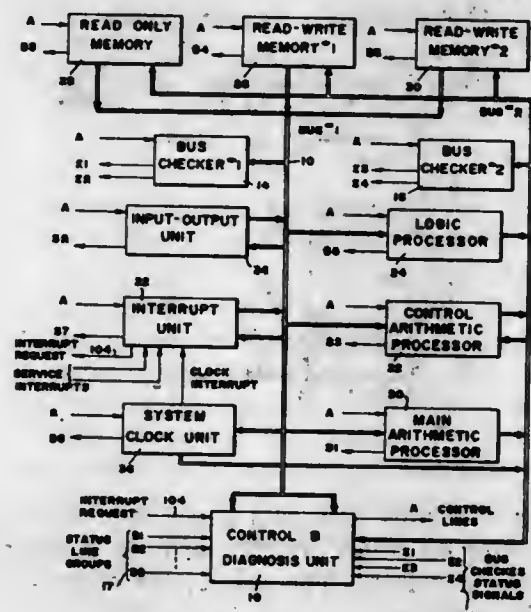
SELF-TESTING AND REPAIRING COMPUTER
Algirdas A. Avizienis, Los Angeles, Calif., assignor, by mesne assignments, to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Oct. 30, 1967, Ser. No. 679,055

Int. Cl. G06f 11/04

U.S. Cl. 235-153

10 Claims



A computer system composed of a number of functional units, each performing a major function, the system including a Control and Diagnostic Unit (CDU) which continually monitors the units for faults and replaces a faulty unit by switching off its power and switching on power to its replacements. The functional units communicate with each other over only two busses, and all communicated words are encoded by error-detecting codes. As a result, two bus checking units which monitor the two busses detect errors indicated by the codes and send fault indicating signals to the CDU. When a fault is detected, the CDU stops the program and resumes it at a previous rollback point indicated on the computer program. The program contains numerous rollback points along it, at which the computations can readily be resumed. If the fault persists, the faulty unit is replaced.

3,517,172

MOVING-WINDOW DETECTOR FOR BINARY INTEGRATION

George M. Dillard, El Cajon, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 27, 1967, Ser. No. 693,981

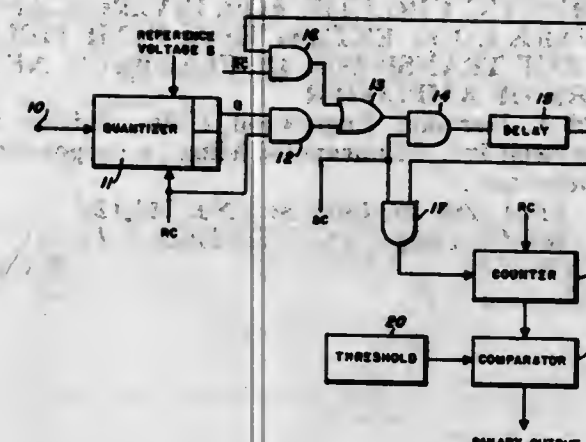
Int. Cl. G01s 9/02; G06f 3/05; H02v 13/07

U.S. Cl. 235-154

10 Claims

A system for performing binary integration on quantized data is disclosed such as might be developed at the output of a receiver for a multiple-resolution-element radar. A so-called "moving-window detector" system is described, its operation explained, and expressions for false-alarm and detection probability are developed. A

method for determining optimum detection thresholds and optimum quantizing levels is disclosed and the application of the moving-window detector system equipment



to a particular multiple-range-element radar is described in a typical embodiment availing of the advantageous features of the invention.

3,517,173

DIGITAL PROCESSOR FOR PERFORMING FAST FOURIER TRANSFORMS

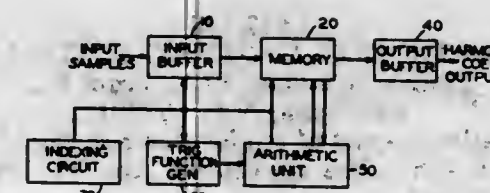
Michael J. Gilmartin, Jr., Mine Hill, and Richard R. Shively, Morristown, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Dec. 29, 1966, Ser. No. 605,768

Int. Cl. G06f 7/38

U.S. Cl. 235-156

17 Claims



A data processing system for generating complex Fourier series coefficients corresponding to at least one time-varying input signal wherein an arithmetic unit iteratively forms successive sequences of Fourier series coefficients based on trigonometric function values and previously generated coefficients selected by an indexing circuit.

3,517,174

METHOD OF LOCALIZING A FAULT IN A SYSTEM INCLUDING AT LEAST TWO PARALLELLY WORKING COMPUTERS

Bengt Erik Ossfeldt, Ringdalsvagen, Sweden, assignor to Telefonaktiebolaget LM Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Nov. 2, 1966, Ser. No. 591,503

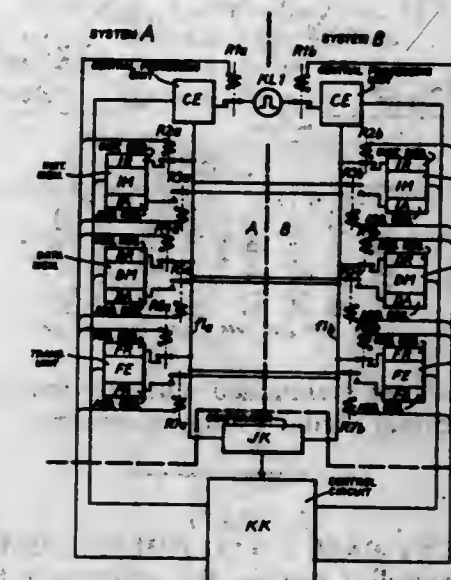
Claims priority, application Sweden, Nov. 16, 1965, 14,761/65

Int. Cl. G06f 11/00

U.S. Cl. 235-153

5 Claims

Two identical computer systems operate in parallel and simultaneously process the same data. The data streams through the computers are continuously compared. When a difference is detected, both computer systems perform the same calculation having a known result. The computer system producing the wrong result is shut down and the other computer system performs another set of calculations with units of the shut down computer system sequentially connected in parallel with corresponding



ence which, when detected, indicates the faulty unit of the shut down computer system.

3,517,175

DIGITAL SIGNAL COMPARATORS

Raymond T. F. Williams, Ilford, England, assignor to The Plessey Company Limited, Ilford, England, a British company

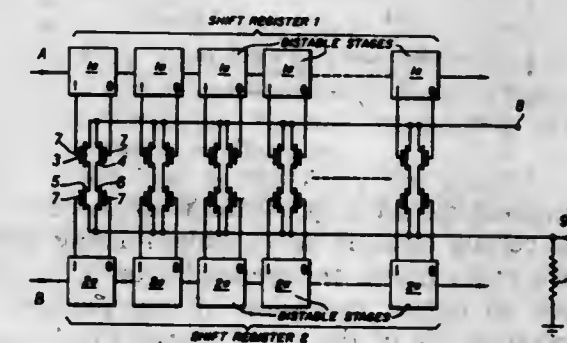
Filed Aug. 15, 1967, Ser. No. 660,653

Claims priority, application Great Britain, Aug. 25, 1966, 38,188/66

Int. Cl. G06f 7/04

U.S. Cl. 235-177

4 Claims



A digital signal comparator in which two series connected transistors are connected in parallel with a number of similarly connected transistors such that the total conductance of the parallel circuit is varied in response to the conduction of any pair of transistors. The transistors are switched on and off in accordance with the outputs of shift register stages.

3,517,176

ADAPTIVE PULSE ANALYZER WITH CROSS-CORRELATION

Kenneth J. Fawcett, Jr., Falls Church, William H. Fuhr, Springfield, Ernest B. Pefferman, Arlington, and William M. Stone, Herndon, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed Jan. 20, 1964, Ser. No. 338,875

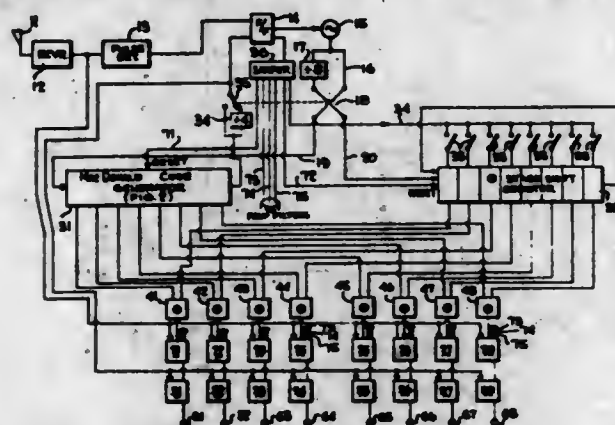
Int. Cl. G06f 15/34

U.S. Cl. 235-181

13 Claims

A system for analyzing signals in terms of abstract properties by selective passage of each incoming signal through a set of property filters adaptive to vary their transfer

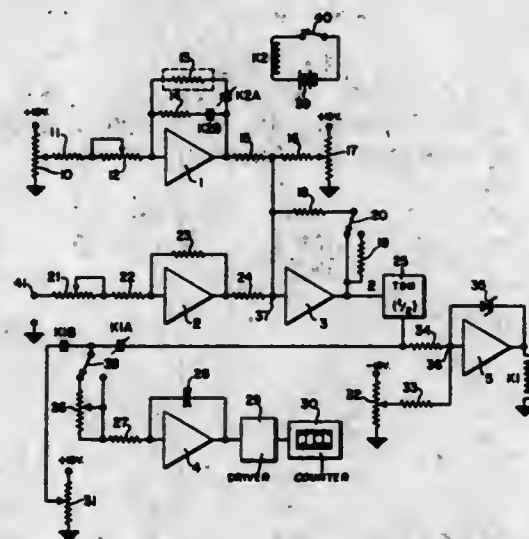
functions according to alteration of digital gating waveforms for the filters. The responses of the filters to the



incoming signal are maintained mutually independent by use of orthonormal digital gating waveforms.

3,517,177

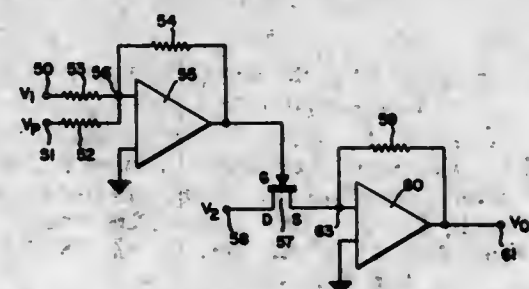
EQUIVALENT BASE LOAD HOURS COMPUTER
William H. Crowell, Lansdale, Pa., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Dec. 15, 1967, Ser. No. 690,891
Int. Cl. G06g 7/18; 7/64; G011 3/00
U.S. Cl. 235-183 8 Claims



A computing circuit is provided wherein certain constants and certain measurable variables relating to the operation of a prime mover are operated upon by a computer to produce an output indication of that portion of the useful operating life of the prime mover which has been consumed.

3,517,178

ARITHMETIC CIRCUITS WITH FIELD EFFECT TRANSISTOR IN INPUT NETWORK
Richard A. Herndon, Englewood, Colo., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed June 28, 1968, Ser. No. 741,125
Int. Cl. G06g 7/16, 7/20
U.S. Cl. 235-194 5 Claims

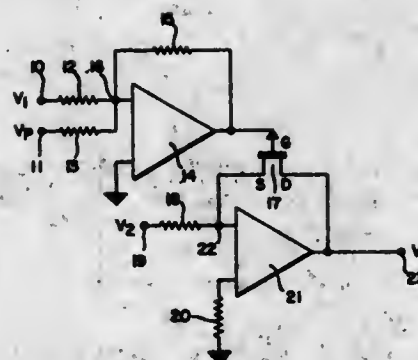


Arithmetic circuits including standard operational amplifiers are provided to effect multiplication and squaring.

A field-effect transistor (FET) with typical FET characteristics is connected in the input network of the amplifiers.

3,517,179

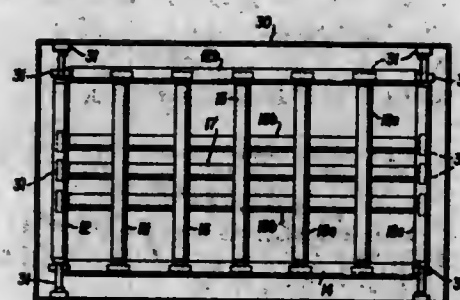
ARITHMETIC CIRCUITS FOR DIVISION AND SQUARE ROOT EXTRACTION WITH FIELD EFFECT TRANSISTOR IN FEEDBACK NETWORK OF AMPLIFIER
Richard A. Herndon, Englewood, Colo., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed June 28, 1968, Ser. No. 741,126
Int. Cl. C06g 7/16, 7/20; H03f 3/11
U.S. Cl. 235-196 5 Claims



Arithmetic circuits including standard operational amplifiers are provided to effect division and square root extraction. A field-effect transistor (FET) with typical FET characteristics is connected in the feedback network of the amplifier in order to effect the enumerated arithmetic functions.

3,517,180

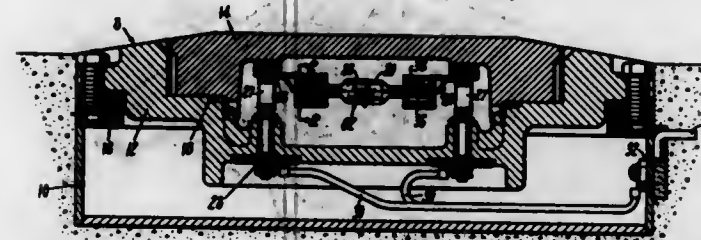
ARTIFICIAL LIGHTING SYSTEM
Zinovia Semotom, 17 E. Front St., Red Bank, N.J. 07701
Continuation-in-part of application Ser. No. 531,616, Mar. 3, 1966. This application Apr. 21, 1969, Ser. No. 817,964
Int. Cl. F21v 9/02
U.S. Cl. 240-1.1 11 Claims



A system to produce a daylight effect artificially wherein there is an array of vertically disposed tubular colored lamps, the arrays intersecting at right angles and the lamps of primary colors in each array being spaced apart an equal distance. Both arrays of lamps are mounted so as to have a non-specular background. The array of horizontal lamps are of different colors arranged in the order of the spectrum with a green lamp in between blue and yellow; the vertical array of lamps are also arranged in the order of the spectrum. In the general system, both arrays are arranged in the order of the spectrum in a symmetrical manner from crossing violet or ultraviolet center lamps.

3,517,181

INSET HIGH INTENSITY LIGHT AND COOLING MEANS THEREFOR
William C. Daley, Suffield, and Robert E. Lambert, Hazardville, Conn., assignors, by mesne assignments, to Structural Electric Products Corp., a corporation of Connecticut
Filed July 27, 1967, Ser. No. 656,456
Int. Cl. B64r 1/20; F21v 29/00
U.S. Cl. 240-1.2 6 Claims



An hermetically sealed, high intensity, inset runway light having a filament-type lamp sealed in a quartz envelope with a molded ceramic composition potted around the lamp seals to align the filament with lamp holders surrounding the seals and accommodate for misalignments between the filament and the envelope inherently resulting during the manufacture of the lamps wherein heat conducting paths, such as metal circlets of adjustable diameter, are embedded in ceramic compound and contact the seals and the holders to transmit heat from the seals. A second embodiment utilizes the circlets embedded in the ceramic positioning compound and a refrigerant radiator in tandem to conduct heat to the housing for the fixture. A third embodiment utilizes a refrigerant radiator which directly engages the lamp seals and conducts heat to the housing of the fixture.

3,517,182

PHOTOFLASH LAMP UNIT
David N. Brooks, Peabody, and Bernard Kopelman, Salem, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Feb. 7, 1968, Ser. No. 703,675
Int. Cl. G03b 15/02
U.S. Cl. 240-1.3 8 Claims



A disposable package for holding a plurality of percussively ignited photoflash lamps including a platform which provides support and has protection for the percussive portion of the lamp to prevent accidental flashing. The platform has a plurality of arms extending from the center thereof which forms a post, and a plurality of apertures through which the percussive portion of the lamp extends. Each of the arms has a depression therein which is aligned with one of the apertures in the platform and receives the percussive portion of the lamp to thereby prevent the lamp from being accidentally flashed.

3,517,183

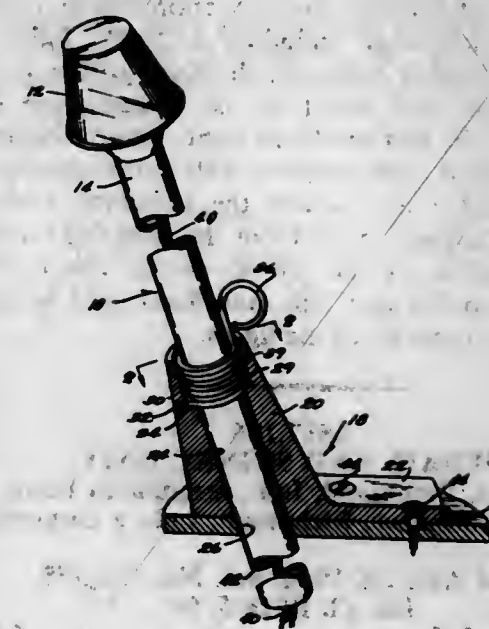
MICROSCOPE ILLUMINATOR
Robert P. Rebrez, Fairport, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Apr. 1, 1968, Ser. No. 717,752
Int. Cl. F21v 33/00
U.S. Cl. 240-2 7 Claims



A microscope illuminator has various devices such as fins, heat conducting and radiating panels and ventilation for reducing the operating temperature of the illuminator. A single rotatable member holds a plurality of colored filters readily movable between a light source and the light conducting elements to the microscope. The illuminator is constructed of bayonet and screw type fasteners so as to be readily fabricated and easily serviceable.

3,517,184

CLAMP FOR TELESCOPING SHAFT
Raymond F. Norton and Gordon B. Hale, Waukegan, Ill., assignors to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed May 4, 1967, Ser. No. 636,177
Int. Cl. B63b 45/04; E21d 15/14
U.S. Cl. 240-7.5 4 Claims



A retainer or clamp for use with a shaft to adjustably secure the shaft at various distances from the retainer. The clamp is used in a boat light mounting bracket to afford vertical height adjustment of the boat light shaft. The boat light shaft telescopes through a bore in a

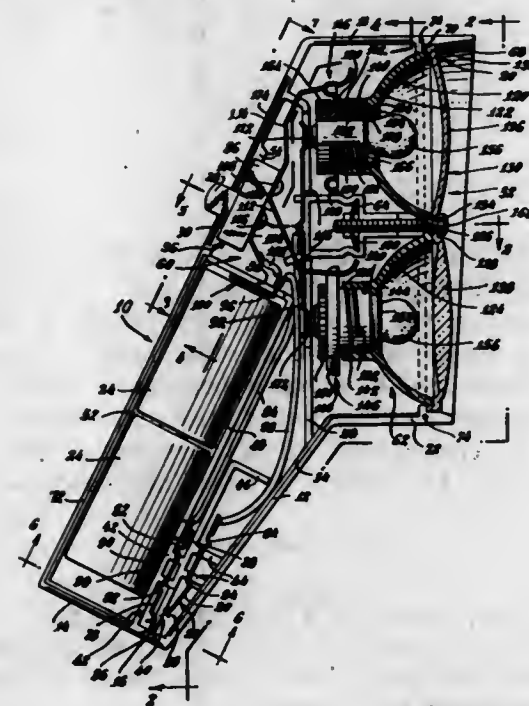
mounting bracket which is secured to a boat hull. Vertical height adjustment of the shaft is afforded by a coil spring which is principally located within the bore and which is arranged around the shaft. The spring is of a diameter slightly less than the diameter of the shaft and thus clamps on the shaft and secures the boat light at the desired height. A change in height of the boat light is effectuated by grasping a finger grip at one end of the spring and unwinding the spring to increase its diameter.

3,517,185 RECHARGEABLE FLASHLIGHT AND RECHARGING STAND

Arthur H. Moore, Fairfield, and Joseph G. Bacevius, Bridgeport, Conn., assignors to The Bridgeport Metal Goods Manufacturing Company, Bridgeport, Conn., a corporation of Connecticut
Filed Jan. 15, 1968, Ser. No. 697,750
Int. Cl. F21I 1/00

U.S. Cl. 240—10.63

7 Claims



A rechargeable flashlight having a pistol grip handle portion within which is housed a rechargeable battery, and an enlarged reflector head portion which receives a dual reflector assembly including a "spot" light and a "flood" light. Switch means is disposed within the body of the flashlight and wired to the rechargeable battery and the spot light and the flood light. The flashlight body is compartmented with internal wall formations to form a battery chamber and isolate the switching and wiring areas of the flashlight body from the spot light and flood light. The portion of the wiring means connecting the switch means to the spot light and flood light being separable to permit removal of the lights.

3,517,186 DERAIL AND SIGNAL UNIT

Brice E. Hayes, Richmond, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana

Filed Apr. 22, 1968, Ser. No. 722,955

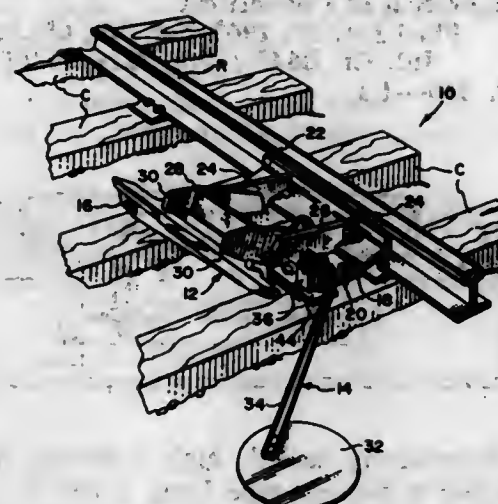
Int. Cl. B61k 5/04

U.S. Cl. 244—163

4 Claims

A railway appliance includes a derail and a blue flag signal forming a convenient, compact, self-contained unit. A hinged derail includes a base fixed to the roadbed and a derail block hinged to the base and having a derail shoe movable through an arcuate path between derailing and inactive positions. A blue flag signal including a staff and

a sign is pivotally mounted on the base for movement independently of the derail block between signalling and inactive positions. Both the derail and the blue flag may be used alone, each being movable to its active position while the other remains in the inactive position. An interlocking

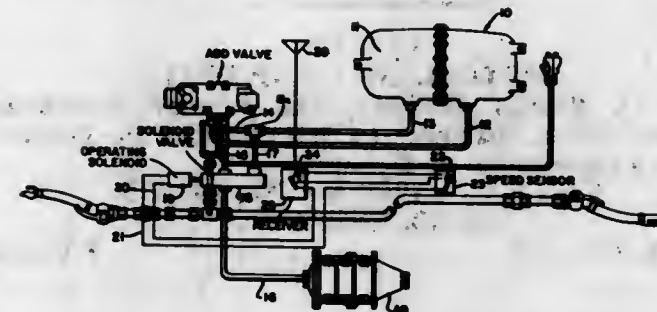


feature is provided because the signal in its signalling position prevents movement of the derail from the derailing position. The signal is mounted to the base by a pin and slot connection, and the staff is releasably received in a latching recess in the signalling position.

3,517,187
FREIGHT CAR RETARDING SYSTEM
Preston O. Roberts, Roselle, Ill., assignor to Portec, Inc., Chicago, Ill., a corporation of Delaware
Filed Jan. 29, 1968, Ser. No. 701,175
Int. Cl. B61I 3/12

U.S. Cl. 246—182

10 Claims



A system for retarding freight cars in hump yards to a predetermined low speed by means of a radiant energy control acting upon a standard car fluid brake system. A solenoid operated valve included in the fluid distribution lines of the brake system is regulated firstly, in response to signals received by a car-mounted receiver from off-car or trackside transmitters when the car is moving above a predetermined speed and secondly, in response to car-mounted speed sensor means when the car is moving below a predetermined speed.

3,517,188 ELECTRIC DISCHARGE SPECTRAL LAMP WITH MEANS IN ADDITION TO THE DISCHARGE ELECTRODES FOR VAPOR- IZING SOLID SAMPLES

John Vincent Sullivan, Carnegie, Victoria, and Alan Walsh, Brighton, Victoria, Australia, assignors to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia, a body corporate

Filed Jan. 3, 1968, Ser. No. 695,386

Claims priority, application Australia, Jan. 3, 1967, 16,034/67, 16,040/67

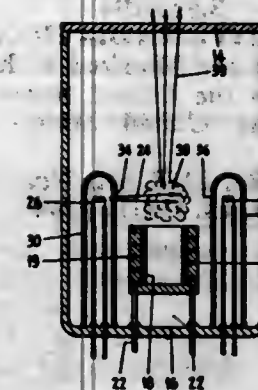
Int. Cl. G01J 3/12; H01J 37/00

U.S. Cl. 250—43

11 Claims

An electric discharge lamp having an evacuated and hermetically sealed envelope is filled with an inert gas

at low pressure and is provided with a window which is transparent to radiation of the desired wavelength. A chamber is mounted within the envelope for holding an



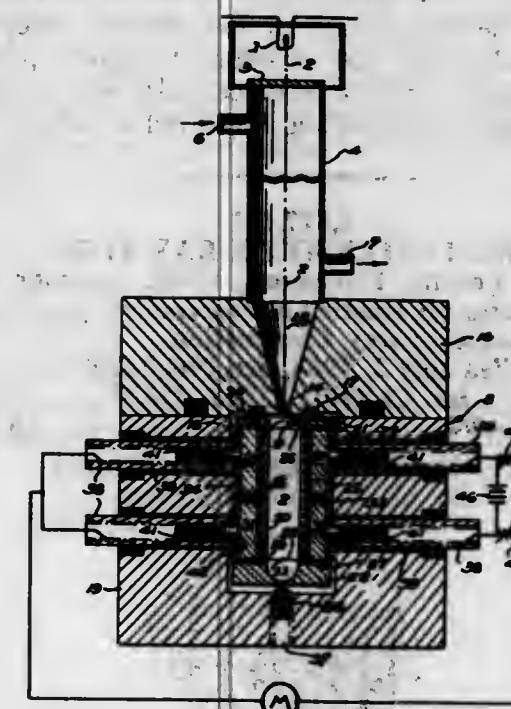
element from which the vapor is to be generated. Electrodes are provided within the envelope to provide a discharge through the atomic vapor generated upon heating of the element by separate heating means.

3,517,189
INFRARED GAS ANALYZER WHEREIN THE DE-
TECTOR COMPRISES TWO OPTICALLY SPACED
THERMISTERS SEPARATED BY AN ABSORBING
GAS

Emilio G. Meyer, Milan, Italy, assignor to Mine Safety Appliances Italiana, S.p.A., Milan, Italy
Filed May 17, 1967, Ser. No. 639,107
Int. Cl. G01J 3/42, 5/24; G01n 21/26

U.S. Cl. 250—43.5

6 Claims



This invention relates to the infrared analysis of a gaseous mixture for determining the presence and concentration of a specified component that is capable of absorbing a significant amount of infrared radiation. A single beam of radiant energy from a suitable source is passed through the sample mixture and then through a detector unit in which two heat sensing elements are arranged a certain distance apart in optical sequence and in which a predetermined concentration of the gaseous component to be detected is disposed between the sensing elements. The sensing elements are connected in an electrical bridge circuit that is balanced when the sample mixture contains none of the component to be detected,

so that the later addition of that component to the sample will affect mainly the response of the first sensing element only, whereas variations in other components of the sample mixture, in the source of radiant energy, or in the optical characteristics of the system will affect the response of both sensing elements in nearly equal proportions.

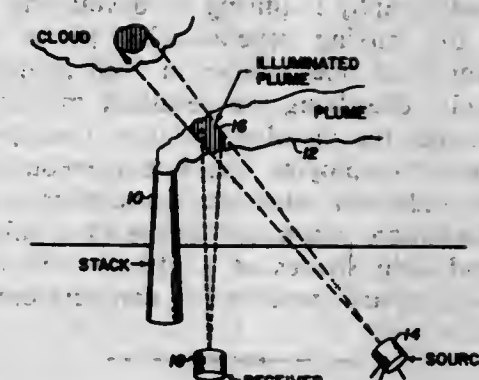
3,517,190
METHOD OF REMOTELY MONITORING
STACK EFFLUENT
Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed Dec. 1, 1967, Ser. No. 687,376

Int. Cl. G01n 21/26

U.S. Cl. 250—43.5

2 Claims



A smoke plume is illuminated near the top of the stack with a chopped source emitting radiation over a broad spectral region. A remotely positioned receiver, in proximity to or near the source, views the illuminated region of the plume in two spectral regions, one in an absorption band, and the other on either side of the absorption band. The receiver develops signals from the scattered radiation in the two spectral regions, and the ratio of these signals is utilized to measure the quantity of the absorbing gas in the illuminated cross section of the plume.

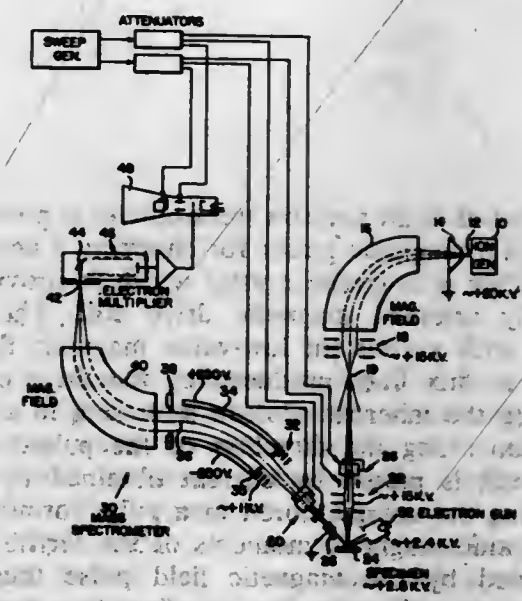
3,517,191
SCANNING ION MICROSCOPE WITH MAGNETIC
SECTOR LENS TO PURIFY THE PRIMARY ION
BEAM

Helmut J. Liebl, Goleta, Calif.
(17 Hartstrasse, 8051 Ecking, near Freising, Germany)
Filed Oct. 11, 1965, Ser. No. 494,388

Int. Cl. G01n 23/22; H01J 37/08, 37/28

U.S. Cl. 250—49.5

4 Claims



An ion probe in which discrimination between successive elemental area portions of a specimen is achieved

by focussing the primary ion beam to a very small spot on the specimen. Features include a double-focussing, stigmatic imaging mass spectrometer for analyzing the secondary ions, and a magnetic sector lens for purifying the primary beam.

3,517,192

COLOR RADIOGRAPHY WITH THE MIXTURE OF DYES CONTAINING SUDAN III AND A DYE OF THE GROUP CONSISTING OF ANILINE BLUE, QUINOLINE BLUE, NAPHTHOL YELLOW AND META METHYL RED

Masahiro Kinoshita, Osaka, and Tsuyoshi Sumada, Amagasaki-shi, Japan, assignors to Osaka Prefecture, Osaka, Japan
No Drawing. Filed Mar. 13, 1967, Ser. No. 622,388
Int. Cl. G01n 23/04

U.S. Cl. 250—65

1 Claim

Color radiography requiring no developing comprising the steps of: mixing several dyes whose sensitivities are different from one another in both qualitatively and quantitatively; dissolving the resultant mixture in a solvent; dispersing the dissolved mixture homogeneously in a basic agent; employing the homogeneously dispersed mixture as radiation sensitizer; irradiating an object to obtain a radiation penetrated image of a subject matter in dark and light shades of a plurality of colors. Also materials which are employed in carrying out the above steps.

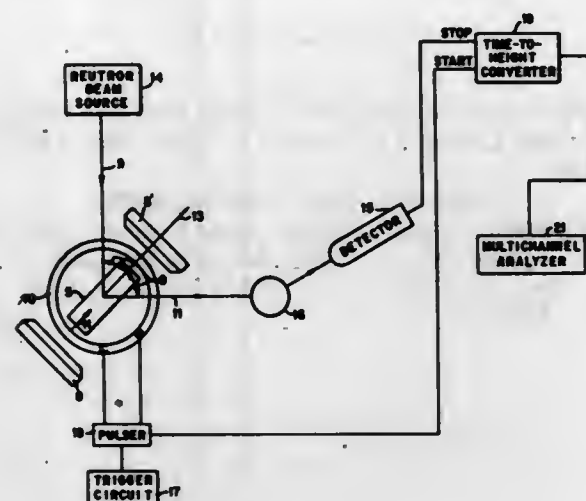
3,517,193

MAGNETICALLY PULSED TIME-OF-FLIGHT NEUTRON SPECTROMETER

Herbert A. Mook, Jr., Michael K. Wilkinson, Grady W. Clark, and Donald D. Bates, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 29, 1968, Ser. No. 756,268
Int. Cl. G01t 3/00

U.S. Cl. 250—83.1

9 Claims



A time-of-flight neutron spectrometer is provided which employs a magnetic pulser for chopping a neutron beam. The pulser is a ferrite crystal which is provided with a properly oriented magnetic drive coil. The crystal is biased with a constant low-value magnetic flux at right angles to flux lines produced by the drive coil thereby reducing the inherent neutron scattering in a Bragg-type reflection along the direction of the pulsed beam. The drive coil is pulsed by current obtained by selectively switching the energy stored in a pulse forming network. The atomic magnetic moments of the ferrite crystal are reoriented by the magnetic field pulse thus maximizing the magnetic scattering or reflecting properties of the crystal during the application of the pulse and thereby

providing a neutron beam monochromator and pulser. The neutron pulse width and repetition rate can be easily varied by changing the current pulse to the drive coil.

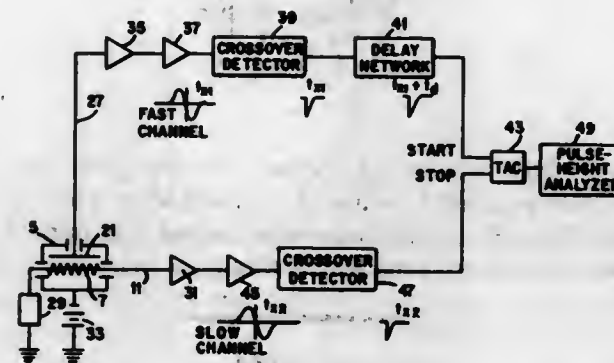
3,517,194

POSITION-SENSITIVE RADIATION DETECTOR

Casimir J. Borkowski and Manfred K. Kopp, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 24, 1968, Ser. No. 770,220
Int. Cl. H01j 39/04

U.S. Cl. 250—83.6

5 Claims



An improved position-sensitive detector is provided by placing a timing reference electrode in the detector element together with a high resistance collector electrode. The high resistance collector electrode provides a pulse whose rise time is indicative of the impact position of a radiation event along the collector. The addition of the time reference electrode provides a reference pulse having a constant rise time independent of the impact position. Thus, by time comparison of the position independent reference pulse with the position dependent pulse the radiation impact position is determined with greatly increased spatial resolution and improved linearity.

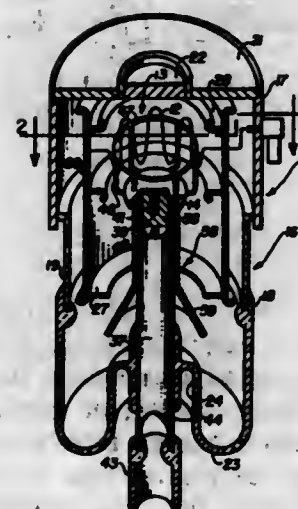
3,517,195

HIGH INTENSITY X-RAY TUBE

George A. Leavitt, Livermore, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 2, 1968, Ser. No. 742,090
Int. Cl. H01j 35/18, 35/20

U.S. Cl. 250—90

10 Claims



A tube for generating relatively high intensity, uniform density beams of X-rays having, for example, currents of tens of amperes for hundreds of microseconds. The beam may be uniformly dispersed over a relatively large

diameter, and if desired the large diameter beam may be collimated into many closely spaced clustered small spots having nearly comparable lesser intensities. The clustered spots facilitate X-ray sampling at locations of much closer spacing than is obtainable with a cluster of small X-ray tubes due to the limitations imposed by their physical size. Alternatively, the tube may be employed to produce a very intense X-ray beam of small spot size.

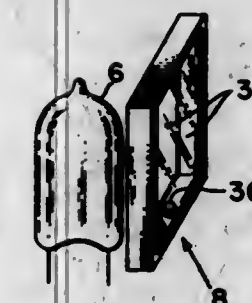
3,517,196

PYROTECHNIC DEVICE FOR INTERRUPTING THE LIGHT OUTPUT OF A FLASH BULB

Wiley H. Owens, Bloomington, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Jan. 26, 1968, Ser. No. 700,998
Int. Cl. G03b 9/56, 15/05

U.S. Cl. 250—201

8 Claims



In a photoflash system, means are provided for controlling the effective light output from a flash bulb in accordance with demand. The means include light sensing means responsive to light reflected from the object of the photo. Signals from the sensing means are integrated and used to trigger means for obfuscating the light source. The latter means may include a vaporizable substance, a deflagrating substance or the like which, in response to the trigger signal, forms an opaque shield between the light source and the photographic object.

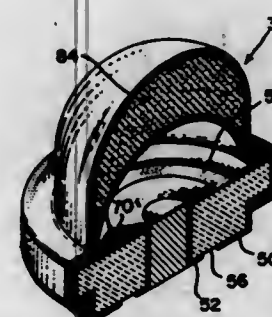
3,517,197

PYROTECHNIC MEANS FOR INTERRUPTING THE LIGHT OUTPUT OF A FLASHBULB

George J. Poeschl, Minneapolis, and Earl A. Platt, Minnetonka, Minn., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Jan. 25, 1968, Ser. No. 700,618
Int. Cl. G03b 9/56, 15/05

U.S. Cl. 250—201

9 Claims



In a photo-flash system, means are provided for controlling the effective light output from a flashbulb in accordance with demand. The means include light sensing means responsive to light reflected from the object of the photo. Signals from the sensing means are integrated and used to trigger means for obfuscating the light source.

The latter means may include a vaporizable substance, a deflagrating substance or the like which, in response to the trigger signal, forms an opaque shield between the light source and the photographic object.

3,517,198

LIGHT EMITTING AND ABSORBING DEVICES

Herbert R. Philipp, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 1, 1966, Ser. No. 598,319
Int. Cl. H01l 12/00

U.S. Cl. 250—211

9 Claims



An antireflecting coating of silicon nitride is used for minimizing reflections at the interface between a semi-conductive device which either emits or absorbs electromagnetic radiation and the medium in which the device is used by selecting an index of refraction which is substantially equal to the square root of the product of the indices of the device and the medium. The index of refraction of silicon nitride coating is preselected by preselecting the temperature at which the coating is produced, either by glow discharge dissociation of gases, pyrolytic decomposition of gases, or otherwise. The thickness of the coating is selected so that the product of coating thickness and coating index of refraction is substantially equal to an odd number of quarter wavelengths of radiation to be passed.

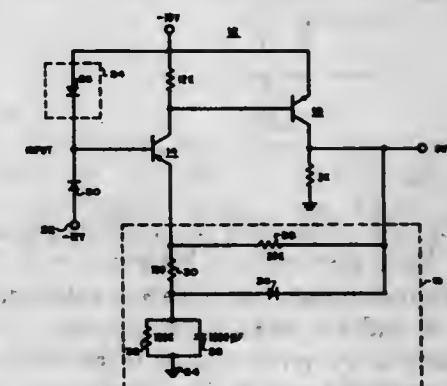
3,517,199

CONVERTER EMPLOYING A DIODE FOR LOGARITHMICALLY CONVERTING CURRENT TO VOLTAGE

David S. Cochran, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Oct. 23, 1967, Ser. No. 677,183
Int. Cl. H01j 39/12

U.S. Cl. 250—214

6 Claims



A diode is connected across the input of an amplifier and in series with a source of variable input current for the amplifier to make the output voltage of the amplifier vary linearly with fractional changes in the input current. The amplifier is A-C coupled to make its output voltage substantially independent of long-term variations in the level of input current and is provided with a nonlinear D-C feedback path to stabilize the baseline of its output voltage.

3,517,200

IMAGE CONVERSION SYSTEM

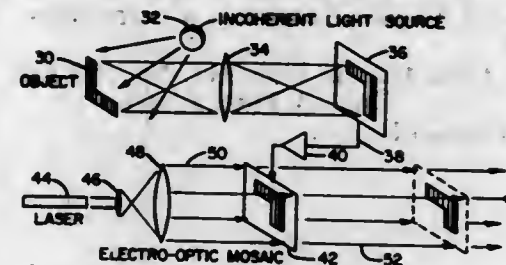
Gabor U. Kalman, Bristol, Conn., assignor to Carson Laboratories, Inc., Bristol, Conn., a corporation of Connecticut

Filed Feb. 3, 1967, Ser. No. 613,814

Int. Cl. H01j 3/14, 5/16

U.S. Cl. 250-216

7 Claims



Electro-optic modulating apparatus for light deflection, spatial wave front phase or intensity modulation, and coherency conversion having an array of electro-optic modulators positioned to receive a light input. Electrodes are positioned to selectively vary the electric field across the electro-optic elements to vary the index of refraction of the electro-optic elements to thus change the relative phase of portions of the incoming wave front as it passes through the electro-optic elements.

3,517,201

APPARATUS FOR CONTROLLING THE TRANSMITTANCE OF RADIANT ENERGY

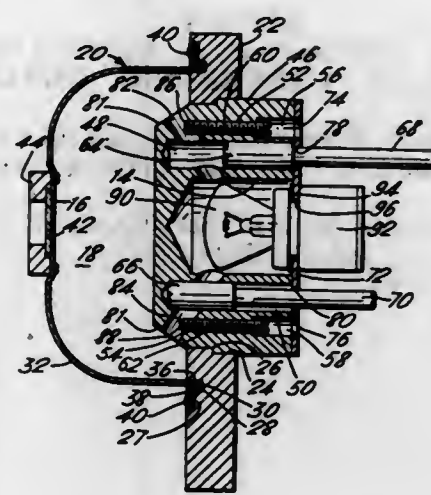
Saul R. Gilford, Oberlin, Ohio, and Walter Grengg, Madison, Wis., assignors to Gilford Instrument Laboratories, Incorporated, Oberlin, Ohio, a corporation of Ohio

Filed May 16, 1968, Ser. No. 729,623

Int. Cl. G02f 1/28; H01j 39/12

U.S. Cl. 250-217

32 Claims



A device for use especially in calibrating apparatus which include light responsive elements, such as photocells and photomultipliers, in which an internal or external source of radiant energy is capable of being divided into a number of parts whose respective intensities are accurately rendered equal. The device has an enclosure and a distributing chamber in which the light source is located, or to which the external source is directed. From the distributing chamber there are a plurality of light conduits extending into a mixing chamber, the number being chosen as ten so that the device operates as a decade device. The mixing chamber has an output port from which the radiant energy is projected. Each conduit has a shutter in it manipulated from externally of the enclosure, and likewise, each conduit has an adjustment or attenuation device also operated from the exterior of the enclosure to adjust the amount of light passing through the conduit. The light transmitted to the output port via each conduit when its shutter is open must be exactly the same as that transmitted via each of the other conduits. This adjustment is accomplished by opening only one shutter at a time and manipulating the attenuating device while reading a meter responding to the output from the mixing chamber. After all conduits have been adjusted, they are as equal in their contribution to the output port as capable of being measured by the meter used to adjust them. Once having equalized the contribution to output port energy contributed by respective conduits, the device can be used to simulate absorbance or transmittance in a relative manner by first ascertaining the response of the apparatus under test to the radiant energy output with all shutters open, and then noting the response with one or more closed, the ratio being used to calibrate accurately the meter of the apparatus under test.

In the case of an absorbance measuring apparatus, the device can be used directly operating into the light input of the tested apparatus and the calibration is a simple matter using the expression

$$A = \log_{10} I_0/I_t$$

where A is in absorbance units, and the expression I_0/I_t is obtained as the ratio of the total number of shutters open when measuring zero absorbance to the number of shutters open when measuring a point.

The device of the invention may be duplicated in a cascaded arrangement for extending the range of calibration points without varying intensity of source, or the points may be increased by using one device and varying the intensity of the radiant energy source.

3,517,202

ROTATING-MIRROR OPTICAL SCANNING SYSTEM WITH OPTICAL PATH LENGTH COMPENSATION

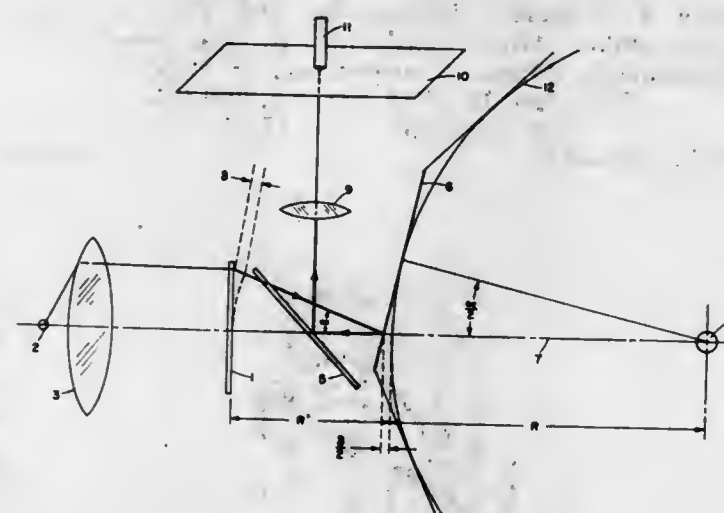
Daniel W. Kennedy, Watertown, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Nov. 14, 1967, Ser. No. 682,839

Int. Cl. G01n 21/30

U.S. Cl. 250-219

4 Claims



In a photographic memory system for computers, a rotating mirror optical readout system is proposed whereby the path length of the light transmitted by the photographic plate to the photodetectors is kept constant as the mirror rotates. The image is focused after reflection, thus eliminating Keystone distortion or blurring due to differing path lengths generated as the mirror face rotates toward and away from the plate.

3,517,203

OPTICAL APPARATUS AND METHOD FOR DETERMINATION OF PORE DIMENSIONS IN SHEET MATERIAL

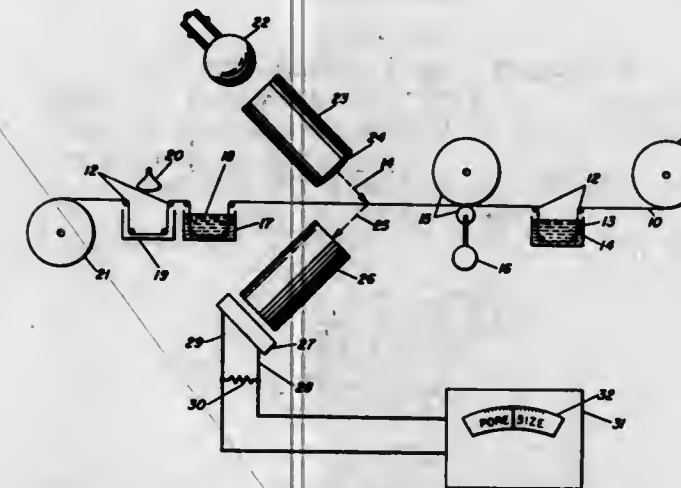
Charles P. Bean, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed July 26, 1968, Ser. No. 748,080

Int. Cl. G01n 15/08, 21/32

U.S. Cl. 250-219

14 Claims



Optical apparatus which utilizes the light scattering characteristics of porous, light transmissive sheet-like material to measure pore dimensions is disclosed. Scattered light emerging from the sheet along a predetermined path falls on the surface of a voltaic cell which generates a current substantially linear to the incident flux. The generated signal, being proportional to the dimensions of the pores in the material, is utilized to measure pore size. The employment of the generated current to control the size of the pores through direct or differential control of variables in a pore-forming apparatus is also described.

3,517,204

METHOD AND APPARATUS FOR ASCERTAINING AND CONTROLLING THE ANGULAR DEVIATION OF WEFT THREADS IN MOVING WEBS OF FABRIC

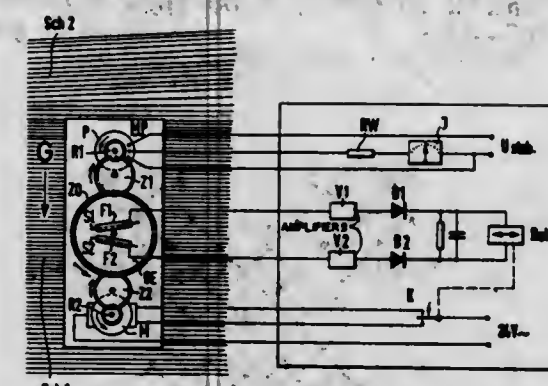
Heinz Mahlo, Saal (Danube), Klaus Peter Lange, Munich, Hellmut Beckstein, Regensburg, Guenter Schellenberger, Saal (Danube), Germany, assignors to Heinz Mahlo, Saal (Danube), Bavaria, Germany

Filed Dec. 1, 1967, Ser. No. 687,360

Int. Cl. G01n 21/32

U.S. Cl. 250-219

20 Claims



According to the invention a light spot is produced on the fabric and a direction defining photo-electric scanner is rotated clockwise and counter clockwise above the spot to produce a signal which represents the amount or extent of the deviation of the weft threads of the fabric from a predetermined direction. The signal is used to control the rotational scanning movement of the scanner and for correcting the weft direction. A separate control voltage may be produced by a potentiometer by rotating its wiper contact in unison with the scanner. Such separate voltage may be used for said correcting of the weft direction.

3,517,205

APPARATUS FOR DETECTING DIRT IN TRANSPARENT BOTTLES

Jeffrey J. Salisbury, Kempston, England, and Anthony Norris, Windsor, Ontario, Canada, assignors to Fords (Finchbury) Limited, Kempston, Bedford, England, a British company

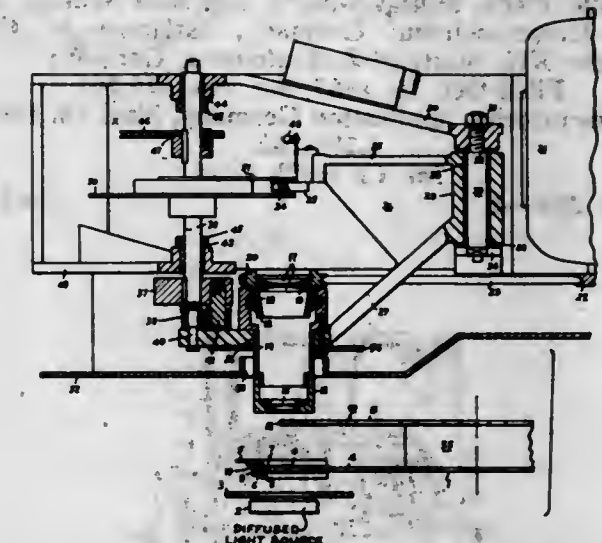
Filed Mar. 29, 1968, Ser. No. 717,248

Claims priority, application Great Britain, Mar. 31, 1967, 14,969/67

Int. Cl. H01j 39/12

U.S. Cl. 250-223

8 Claims



This invention relates to apparatus for optically scanning the base of a transparent bottle to detect dirt or foreign bodies in the bottle. The base of the bottle is illuminated from below by a diffused light source and the base is scanned by a photocell device disposed above the bottle and which includes a double-sided photocell. During change-over of the base inspection from one bottle to the next, light which can impinge on the photocell from the base inspection light source is optically gated-out and, during this time, the photocell is evenly illuminated from above by an auxiliary light source, which is gated-out during bottle inspection periods. Since optimum sensitivity of the inspection apparatus is only achieved if the base and auxiliary light sources are accurately balanced so as to maintain constant illumination of the photocell, an arrangement is provided by which the brightness of the auxiliary light source is automatically regulated in response to an unbalance in the average illumination of the photocell by the base and auxiliary light sources so as to maintain the illumination in a balanced condition.

3,517,206

APPARATUS AND METHOD FOR OPTICAL READ-OUT OF INTERNAL ELECTRIC FIELD

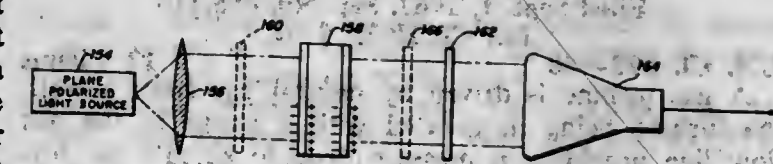
Donald Sears Oliver, West Acton, Mass., assignor to Itel Corporation, Lexington, Mass., a corporation of Delaware

Filed Apr. 8, 1968, Ser. No. 721,913

Int. Cl. G02f 1/26

U.S. Cl. 250-225

27 Claims



Apparatus is disclosed for reading out information stored in the form of a pattern in a semi-conductor medium by means of an internal electric field by exposing

to radiation an electro-optic medium, exhibiting a characteristic that varies with variations of an applied electric field, associated with the semi-conductor medium, to modulate as a function of the internal electric field of the semi-conductor medium radiation transmitted by it, and detecting the modulation of the radiation, imposed by the electro-optic medium, representative of the information pattern stored in the semi-conductor medium.

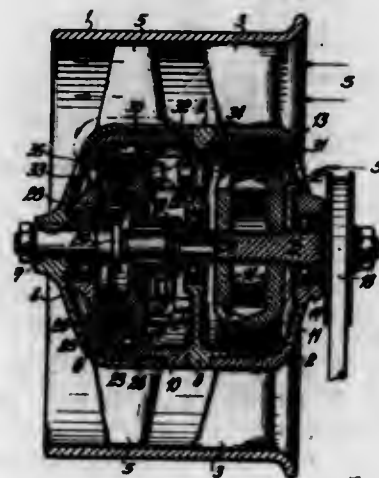
3,517,207

AXIAL COOLING AIR BLOWER FOR INTERNAL COMBUSTION ENGINES

Ferdinand Plösch, Stuttgart-Nord, and Rolf Schrag, Stuttgart-Untertürkheim, Germany, assignors to Firma Porsche KG, Stuttgart-Zuffenhausen, Germany
Filed Oct. 16, 1967, Ser. No. 675,701
Claims priority, application Germany, Nov. 18, 1966, 1,291,162

Int. Cl. H02k 9/06
U.S. Cl. 290-1

13 Claims



An axial cooling air blower for internal combustion engines, the blower rotor of which is driven by the shaft of an alternating current generator provided within the blower hub. The generator is constantly driven by the internal combustion engine and an electromagnetically actuated friction clutch is drivingly interposed between the generator and blower rotor. The clutch is provided within the hub and has one clutch member integral with the generator shaft and provided with blades for circulating air through suitable openings within the hub. The hub is internally divided into two chambers by a partition having a bearing supporting the generator shaft, so that the generator is in one chamber and the clutch is within the other chamber. Diodes for rectifying the current and the slip ring and brushes for the generator are within the chamber having the clutch.

3,517,208

FREQUENCY REGULATION FOR A TURBOGENERATOR

Harley H. Williams, Houston, and Charles L. Bundick, Deer Park, Tex., assignors, by mesne assignments, to Powell Magnetic Industries, Inc., Houston, Tex., a corporation of Texas

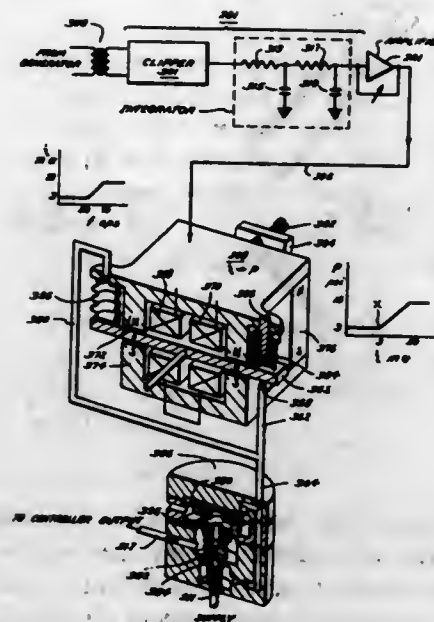
Filed Sept. 1, 1967, Ser. No. 665,115
Int. Cl. H02p 9/04

U.S. Cl. 290-40

12 Claims

A gas turbine is driven by natural gas from a well, the turbine being in parallel with a choke in the gas flow line providing a pressure drop to actuate the turbine. The turbine drives an alternator whose frequency, e.g. 60 c.p.s., is closely regulated, e.g. to within one c.p.s. A frequency to current converter connected to the alternator produces a current output in a range, e.g. 4

to 20 ma. proportional to input, over a band of frequency, e.g. 50 to 70 c.p.s. A current to pressure transducer connected to the converter produces a gas pressure output in a range, e.g. 3 to 15 p.s.i. proportional to the current input. A pneumatic controller connected to the transducer produces a fixed output if the input pressure is at a preselected set value; if the input pres-



sure departs from the set pressure, depending on the direction of the departure the output pressure increases or decreases gradually and continuously as time progresses so long as the input differs from the set pressure. The controller output actuates a pneumatic powered adjustable throttle valve in the gas supply to the turbine, thereby governing its speed and the alternator frequency.

3,517,209

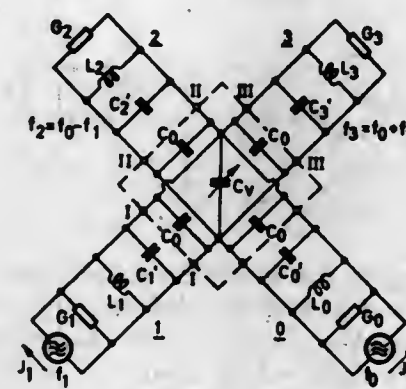
PARAMETRIC AMPLIFIER WITH INDEPENDENT TERMINAL IMPEDANCES

Konrad Abel, Munich, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Continuation of application Ser. No. 33,837, June 3, 1960. This application Aug. 24, 1966, Ser. No. 574,817
Claims priority, application Germany, June 9, 1959, S 63,372

Int. Cl. H03f 7/02, 7/04; H03c 3/18
U.S. Cl. 307-88.3

9 Claims



A parametric amplifier with four energy paths branching from a non-linear capacitance for pump energy f_0 , signal energy f_1 , lower side band energy f_2 (f_0 minus f_1), and upper side band energy f_3 (f_0 plus f_1), respectively; with active conductance values G_1 , G_2 and G_3 in the branches

for frequencies f_1 , f_2 and f_3 , respectively, having definite values correlated to provide desired output characteristics at f_2 or f_3 ; or alternatively, three branching energy paths, one branch presenting for example, a definite conductance value G_2 at frequency f_2 and also having a line section transforming the conductance to a definite value G_3 for the frequency f_3 which is correlated with the values G_1 and G_2 to provide an amplification substantially greater than f_3/f_1 .

3,517,210

FET DYNAMIC DATA INVERTER

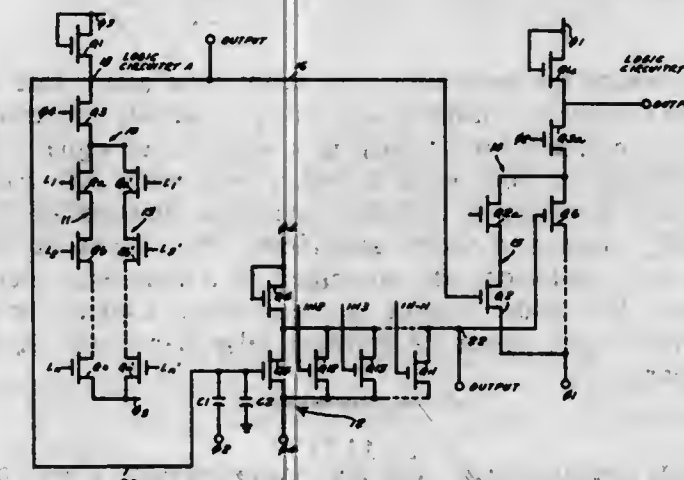
Richard B. Rubinstein, New York, N.Y., assignor to General Instrument Corporation, Newark, N.J., a corporation of Delaware

Filed Mar. 15, 1968, Ser. No. 713,390

Int. Cl. H03k 19/08

U.S. Cl. 307-205

22 Claims



An inverter for use in a logic system receives data signals from a prior logic stage. The effect at the inverter input of the production of unwanted feedthrough signals derived from one clock pulse at the prior logic stage is neutralized by coupling another phase of the clock pulse to the gate of the inverter. An attenuation is introduced at the inverter input to correct for possible overcompensation of the data input signals to the inverter as a result of the coupling of the neutralizing clock pulses thereto.

3,517,211

FREQUENCY DIVIDER CIRCUIT

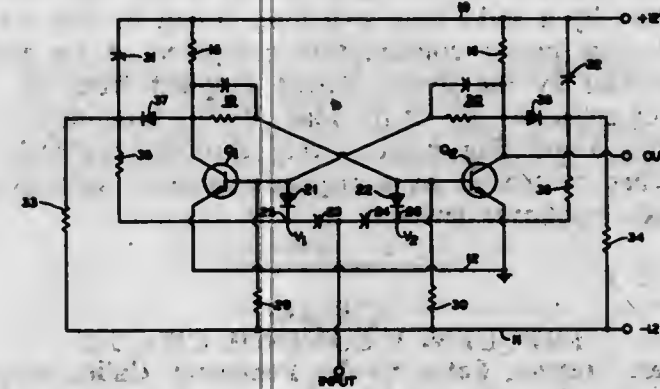
Donald Firth, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware

Filed Sept. 9, 1966, Ser. No. 578,283

Int. Cl. H03k 3/26, 21/00

U.S. Cl. 307-225

8 Claims



A bistable multivibrator having two electron discharge devices is provided with a common pulse input circuit and two respective resistor-capacitor series timing circuits. The junction of the resistor and capacitor of each timing circuit is respectively coupled to the main current

path of each of the two electron discharge devices and to the common input circuit for providing a voltage that prevents the input pulses from switching the states of the electron discharge devices for a predetermined time.

3,517,212

ELECTRICAL CIRCUIT HAVING PULSE OUTPUT WITH DURATION PROPORTIONAL TO INPUT SIGNAL

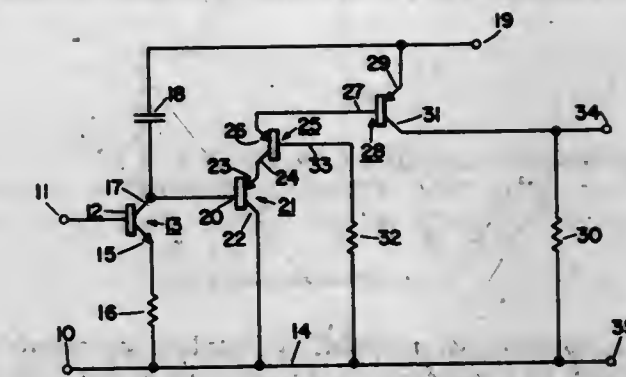
Kenneth E. Nelson, North Attleboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Filed Dec. 22, 1966, Ser. No. 603,931

Int. Cl. H03k 4/08

U.S. Cl. 307-228

7 Claims



A transistorized electrical circuit which produces a constant-amplitude pulse output having a duration proportional to the integrated value of an input signal.

3,517,213

HIGH FREQUENCY DETECTOR

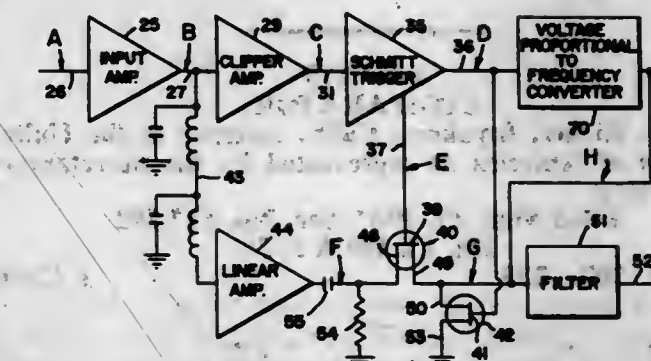
Ralph H. Britton, Jr., Palo Alto, Calif., assignor to Pacific Measurements, Inc., Palo Alto, Calif., a corporation of California

Filed Aug. 3, 1967, Ser. No. 658,245

Int. Cl. H03k 5/20

U.S. Cl. 307-231

4 Claims



A wide range rectifying detector having a pulse generator in precise phase relationship to the input signal in which the pulse output to the pulse generator is connected to gate the input signal at precise phase times to the output.

3,517,214

HIGH SPEED NARROW BAND SIGNAL RECOGNITION CIRCUIT

Dwight E. Boegeman, Lakeside, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Continuation of application Ser. No. 613,049, Jan. 31, 1967. This application Mar. 7, 1969, Ser. No. 813,795

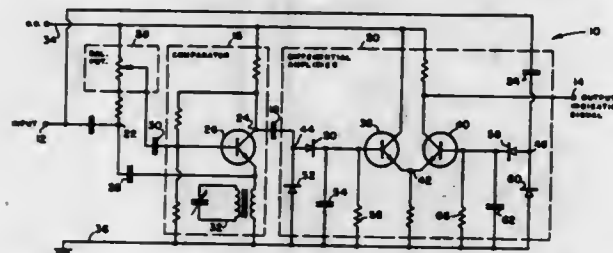
Int. Cl. H03k 5/20

U.S. Cl. 307-233

6 Claims

A mixed signal consisting of background noise and a recognition signal of known frequency first is divided and one part fed to one input of a differential amplifier. The

other part is passed through a phase detector or comparator the output of which feeds into the other part of the comparator. The differential amplifier is arranged to provide an output only when there is a reduced or negligible output fed into it by the phase comparator. Also, the comparator output is responsive to the presence of the recognition signal frequency to the extent that its presence results in a negligible comparator output so as to produce a differential amplifier output which is the signal recognition output of the entire circuit. The comparator output is phase sensitive and, preferably, includes a transistor having both its emitter and base coupled to the mixed signal input. When the mixed signal is applied equally to the transistor, its equal amplitude and phase preclude transmission or conduction and cancel the comparator output so as to produce the differential amplifier output. The amplifier output,



however, normally is presented by coupling an impedance circuit, such as a resonant circuit, into one terminal of the comparator, such as the emitter terminal, the impedance introducing a lead or lag and causing the transistor of the comparator to amplify the applied signal and produce the comparator output which, as stated, eliminates the output of the differential amplifier. Recognition is achieved by making the impedance self-cancelling in the presence of the known recognition signal frequency. Preferably the self-cancelling effect is achieved by employing a resonant circuit tuned to the known signal frequency as the impedance device. In this manner recognition can be accomplished very rapidly even for narrow band inputs since it depends upon phase matching which occurs early during the rise time of the tuned circuit rather than being delayed by thresholding requirements.

3,517,215 COMPARATOR

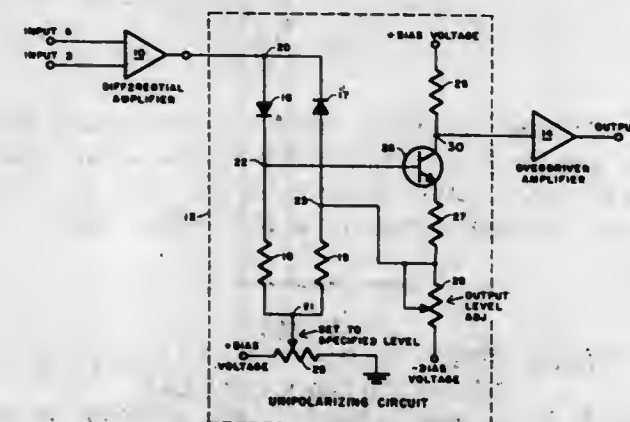
John G. Richer, Inyokern, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 29, 1967, Ser. No. 627,592

Int. Cl. H03k 5/20

U.S. Cl. 307—235

1 Claim



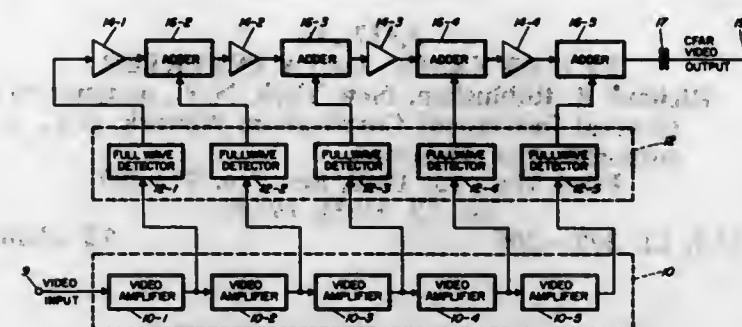
A circuit for comparing two input signals with respect to each other, regardless of their absolute values. The signals are fed through a differential amplifier to a unipolarizing diode bridge circuit the output of which is fed to an overdriven amplifier for digitalizing the output. The unipolarizing circuit converts the bipolar output of the differential amplifier into a unipolar output by driving both the base and emitter of a transistor.

3,517,216 MEANS FOR GENERATING A VIDEO CONSTANT FALSE ALARM RATE SIGNAL AT VIDEO FREQUENCIES

Robert W. Cope, Sparks, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 4, 1968, Ser. No. 695,775
Int. Cl. H03k 5/08

U.S. Cl. 307—237

12 Claims

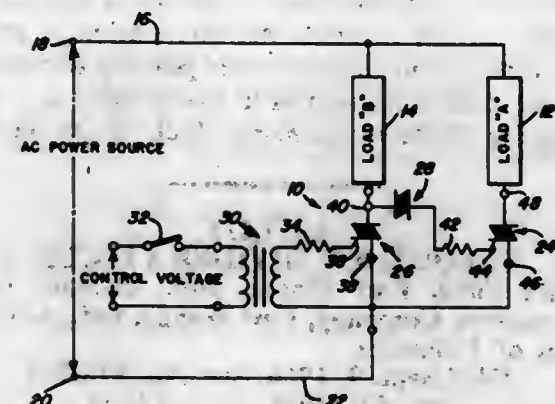


A means for generating a constant false alarm rate at video frequencies utilizing a plurality of serially connected video amplifiers for amplifying a video input signal and a plurality of full wave detectors with each full wave detector sampling a different interstage junction of the serially connected video amplifiers. The output of the full wave detectors are combined in a unilateral video adder. The adder output is capacitively coupled to a terminal upon which the constant false alarm rate signal appears.

3,517,217
SEMICONDUCTOR RELAY SWITCHING CIRCUIT
Roland G. Sleater and Charles G. Reed, Phoenix, Ariz., assignors to Signal Computer Corporation, Garland, Tex., a corporation of Texas
Filed Aug. 30, 1967, Ser. No. 664,334
Int. Cl. H03k 17/00

U.S. Cl. 307—252

5 Claims



The transfer of electrical power from one load to another by a solid state switching circuit having a relatively low power consumption compared to the power consumed by the loads. Power supplied from an AC source energizes one of the loads during a major portion of the alternating power cycle through bilateral AC switches controlled by a trigger source of voltage and a diode breakover device.

3,517,218
FREQUENCY CONTROL CIRCUIT
Albert Metzler, Palos Verdes Peninsula, Calif., assignor to Guardian Electric Manufacturing Company of California, Inc.
Filed Sept. 29, 1966, Ser. No. 583,017
Int. Cl. H03k 1/16, 1/14

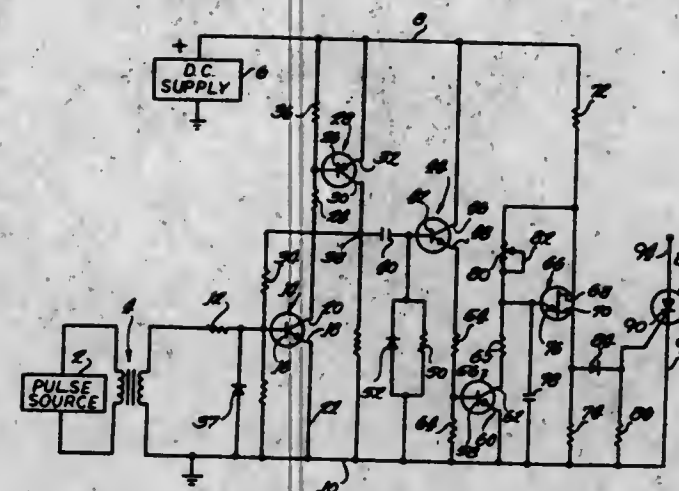
U.S. Cl. 307—265

2 Claims

A frequency control circuit comprising positive-feedback coupled transistors for converting a periodic input signal of any waveshape into a rectangular wave form,

signal differentiating means, transistor switching means and an oscillator for generating a signal when the switching means is non-conductive for a time duration greater

of the multivibrator circuit, both in response to variations of charge stored by the timing network and also in response to variations in the effective capacitance of the timing



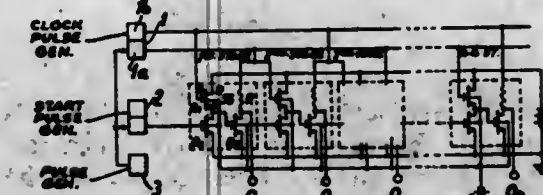
than a pre-selected duration related to the frequency of the input signal pulse to be controlled over a wide audio frequency and signal voltage range.

3,517,219
SCANNING PULSE GENERATOR
Toshio Okubo, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan
Filed Dec. 19, 1967, Ser. No. 691,809
Claims priority, application Japan, Dec. 29, 1966, 42/962

Int. Cl. H03k 5/00

U.S. Cl. 307—269

3 Claims



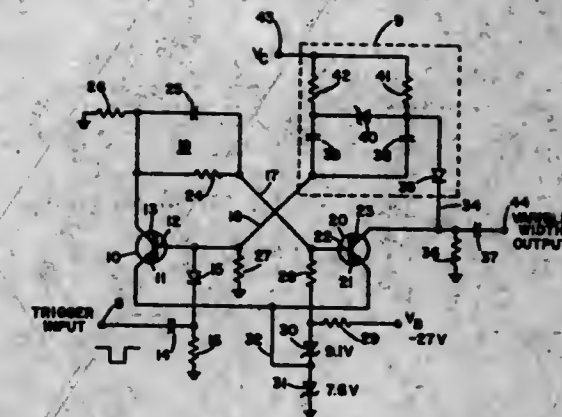
A scanning pulse generator composed almost exclusively of field effect transistors, each stage comprising a pulse width expansion circuit including first and second field effect transistor with a field effect transistor-amplifier coupled thereto.

3,517,220
VARIABLE PULSE WIDTH MONOSTABLE MULTIVIBRATOR
James G. Gibson, Scottsdale, and Louis J. Wunderlich, Phoenix, Ariz., assignors to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed May 9, 1966, Ser. No. 548,687
Int. Cl. H03k 1/18, 3/284

U.S. Cl. 307—273

8 Claims

Disclosed is a variable pulse width voltage controlled multivibrator which includes first and second transistors cross-coupled for monostable switching action, with the first transistor normally conducting and the second transistor normally nonconducting in the quiescent state of the multivibrator. A variable capacitance timing network forms part of the feedback circuit of the multivibrator and is connected between the first and second transistors. The timing network is directly connected to and continuously responds to a variable control voltage to vary the timing

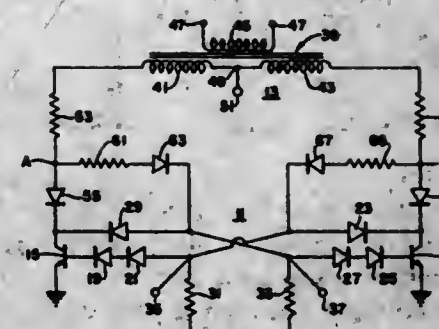


ing network. The timing network is also responsive to the control voltage to determine the point in the multivibrator timing cycle at which the capacitance is changed.

3,517,221
FLIPFLOP INTERROGATOR AND BI-POLAR CURRENT DRIVER
Robert C. Seamans, Jr., Deputy Administrator of the National Aeronautics and Space Administration, with respect to an invention of Carlos F. Chong and Charles A. Nelson, both of Philadelphia, Pa.
Filed July 29, 1966, Ser. No. 568,987
Int. Cl. H03k 3/12

U.S. Cl. 307—289

2 Claims



An interrogator and current driver circuit for combination with a transistor flipflop circuit, wherein the flipflop operates nominally in a saturated state at very low levels of collector current but wherein, during interrogation, the load resistance of the conducting transistor is reduced and wherein the conducting transistor is provided with additional base drive to sustain higher saturation currents so that the conducting transistor of the flipflop operates as the current driver amplifier.

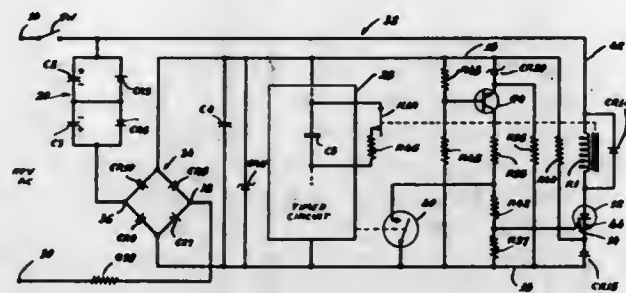
3,517,222
ELECTRONIC TIMER SYNCHRONIZED TO ALTERNATING CURRENT SUPPLY LINE
Klaus D. Wallentowitz, Waterbury, Conn., assignor to General Time Corporation, Stamford, Conn., a corporation of Delaware
Filed Mar. 6, 1967, Ser. No. 620,904
Int. Cl. H03k 17/00, 17/26, 17/28

U.S. Cl. 307—293

11 Claims

An electronic interval timer having a relay output. The relay is energized for a predetermined interval subsequent to the application of alternating current power to the cir-

cuit. The relay is controlled by a silicon-controlled rectifier and is operated from half-wave rectified alternating current. It, therefore, drops out, after the cessation of gate current to the SCR, a fixed interval subsequent to



the last half-wave energizing it. The timer portion of the circuit is enabled, when the relay energizes. At the end of the timing interval, it shorts the SCR gate by means of an electronic switch.

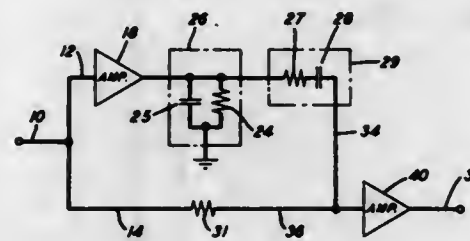
3,517,223

TRANSISTOR PHASE SHIFT CIRCUIT

Wilmer B. Gaunt, Jr., Boxford, Mass., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Nov. 17, 1967, Ser. No. 683,949
Int. Cl. H03b 3/04

U.S. Cl. 307-295

9 Claims



A circuit having all-pass filter characteristics is described. The circuit includes a plurality of resistor-capacitor networks coupled between a pair of transistors, and a resistor coupled between the circuit input and the output transistor. A physically realizable transfer function is obtained having its complex plane pole-zero configuration symmetrical with the imaginary axis so that the absolute magnitude of the ratio of output signal to the input signal is constant for all input signal frequencies.

3,517,224

REGULATED TRANSISTORIZED CURRENT SOURCE HAVING TEMPERATURE COMPENSATION

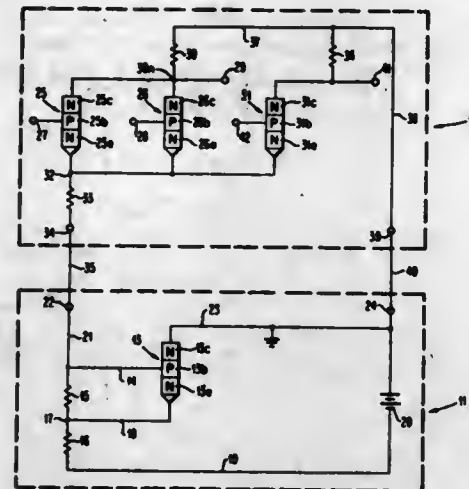
Daniel W. Murphy, Santa Clara, Calif., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Oct. 3, 1966, Ser. No. 583,532
Int. Cl. H03k 1/12

U.S. Cl. 307-297

6 Claims

A regulated current supply for monolithic circuits including a current source comprising a direct voltage source in series with a resistor which is connected to a transistorized current switch load. A semiconductor active element control means is connected across the load and to the current source resistor means. The load is responsive to an increase in ambient temperature to draw increased load current from the current source. The resistor means is responsive to load current flowing therethrough for producing a voltage drop which controls the conductive state

of the active element control means. The active element control means shunts a portion of the load current from



the load so as to maintain approximately constant load current with changes in ambient temperature.

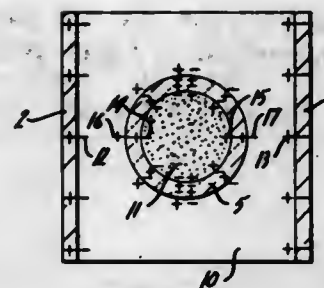
3,517,225

ELECTROSTATICALLY DRIVEN APPARATUS

Carl F. Klein, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 18, 1967, Ser. No. 668,450
Int. Cl. H02n 1/00

U.S. Cl. 310-6

6 Claims



A rotatable member is driven by an electrostatic electrical field. A ferroelectric material such as barium titanate or the like fills a tubular insulating shell which is rotatably mounted in insulated supports between a pair of parallel electrode plates. A direct current potential is applied to the plates to establish an electric field at right angles to the axis of the rotor unit. Angular displacement of the rotor results in a continued rotation. When operated in air, a discharge region exists wherein ozone is generated.

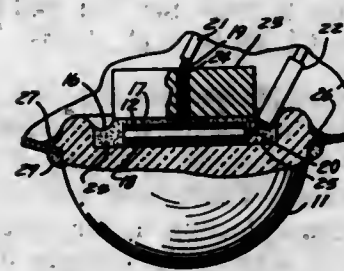
3,517,226

ULTRASONIC PIEZOELECTRIC TRANSDUCER WITH ACOUSTIC LENS

Roy E. Jones, Sr., Orlando, Fla., assignor to U-Sonics, Inc., Cocoa Beach, Fla., a corporation of Florida
Filed Mar. 25, 1968, Ser. No. 715,714
Int. Cl. H04r 17/00

U.S. Cl. 310-8.5

2 Claims



This application contains a technical disclosure of an electrosonic apparatus in the form of an acoustical lens which includes a ceramic-type piezoelectric transducer

mounted on a formed silicate incursion block of hemispheric shape, which is in turn mounted in the center of a semi-hemispheric radiating plate, thereby permitting radiation through the atmosphere of ultrasonic frequencies in a non-directional pattern. There is further disclosed the manner by which this lens structure, in combination with specialized electronic circuitry generating erratic and harmonic filled ultrasonic frequencies, may be utilized to repel and destroy vermin such as rats, mice and bats. Utilization of the disclosed acoustical lens system as a radiator for audio frequencies in combination with high fidelity and stereo systems is also described.

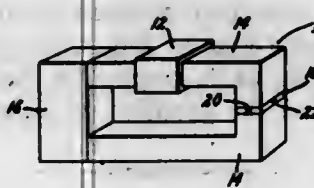
3,517,227

TRANSDUCER WITH VARIABLE PERMEABILITY MAGNETIC MEMBER

Robert C. Dobkin, Bala Cynwyd, Pa., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1968, Ser. No. 695,518
Int. Cl. H02k

U.S. Cl. 310-10

2 Claims



An electromechanical transducer capable of sensing steady state mechanical forces comprises a flux circuit which includes in series a flux generating means, such as a permanent magnet, a Hall effect device for producing an electrical signal responsive to the flux level in the circuit and a variable permeability magnetic member responsive to mechanical forces. A second magnet in series with a second variable permeability member connected to the Hall effect device in parallel with the first magnet and member is used in the preferred embodiment of the present invention to cause a null reading from the Hall effect device when no mechanical input force is present.

3,517,228

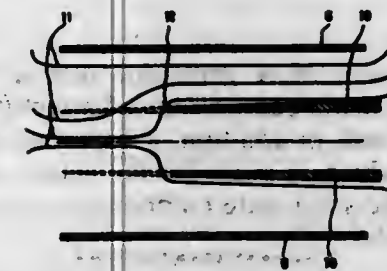
MAGNETIC PISTON

Jiri George Linhart, Frascati, Italy, assignor to European Atomic Community (Euratom), Brussels, Belgium
Filed Oct. 14, 1968, Ser. No. 767,122
Claims priority, application Belgium, Nov. 28, 1967, 51,423

Int. Cl. H01j 7/24; H02n 4/00

U.S. Cl. 310-11

4 Claims



An accelerator for plasmoids or metallic projectiles formed by a slotted cylinder and a tube within the cylinder. The edges of the slot, which runs the length of the cylinder, are connected to a current generator. The tube is of varying cross-section along its length and is spaced from the cylinder. When a magnetic field is produced by the cylinder, the tube volatilizes causing diffusion of the magnetic field to form a cusp-type magnetic field.

3,517,229

MAGNETOHYDRODYNAMIC GENERATOR APPARATUS

René Bidard, Paris, France, assignor to Compagnie Electro-Mecanique, Paris, France, a body corporate of France

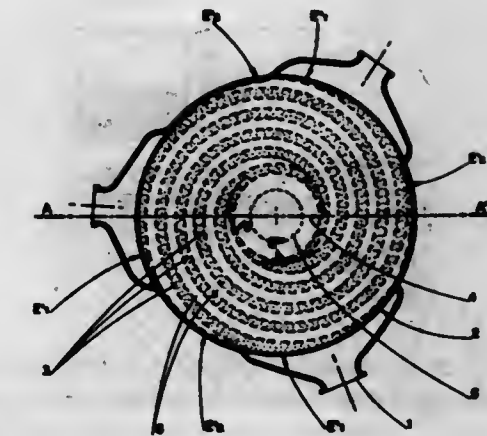
Filed June 7, 1967, Ser. No. 644,164

Claims priority, application France, July 6, 1966, 68,381

Int. Cl. H02n

U.S. Cl. 310-11

13 Claims



A power plant of the magnetohydrodynamic type for transformation of energy, either from mechanical to electrical in the case of an electrical generator, or from electrical to mechanical in the case of a gas compressor is comprised of a duct system providing loop circuits in parts of which there is circulated an emulsion of gas or vapor bubbles in a liquid which is electrically conducting. The loop circuits include such emulsified regions and also non-emulsified regions where the liquid alone flows, regions arranged in series as regards the liquid flow, and at least one magnetohydrodynamic conversion apparatus comprising spaced electrodes and an electromagnetic field transverse to the loop circuits. Also included are an emulsifier and a separator. Transformation of energy from mechanical to electrical, or vice versa, as well as transfer of the gas or vapor bubbles to successive liquid circuits, and also heat exchanges between the gas or vapor and the liquid conductor are performed simultaneously within the emulsified regions of the loop circuits.

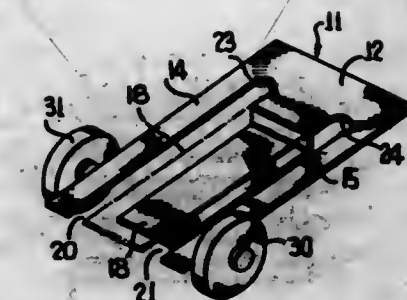
3,517,230

INTEGRAL REED TUNING FORK

Donald E. Lewis Alexandria, and Clarence R. Shenton, Sterling, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of Delaware
Filed Aug. 16, 1968, Ser. No. 753,161
Int. Cl. H02k 33/00

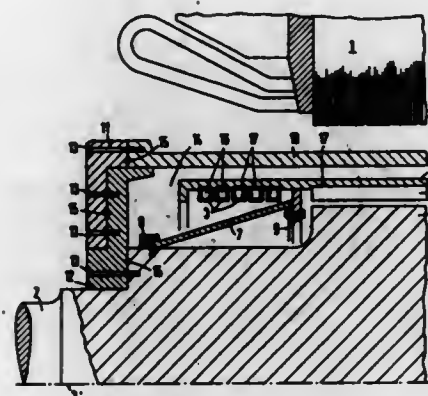
U.S. Cl. 310-25

16 Claims



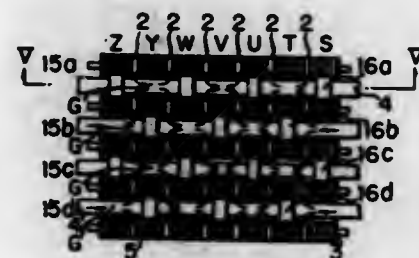
A sheet metal tuning fork has a reed integral therewith. The tuning fork is in the plane of the sheet metal, and the reed constitutes a portion of the sheet metal projecting from the bridging portion of the fork between the tines and lies in a plane offset from that of the fork.

3,517,231
TURBOGENERATOR HAVING ROTATING SUPER-CONDUCTING EXCITATION WINDING
 Ernst Massar, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, a German corporation
 Filed June 11, 1969, Ser. No. 832,106
 Claims priority, application Germany, Dec. 20, 1968, 1,815,904
 Int. Cl. H02k 9/00
 U.S. Cl. 310—52 24 Claims



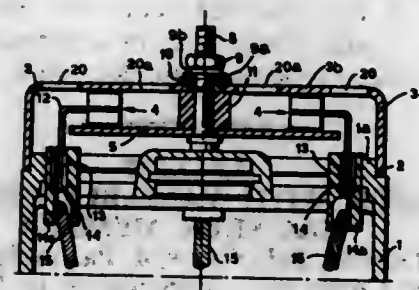
The rotary excitation winding of a turbogenerator is affixed to the surface of a carrier cylinder which faces the core of the rotor. The carrier cylinder and excitation winding are spaced from the core to form a vacuum chamber therebetween. The cylinder is affixed to the core by a plurality of holding members of poor thermal conductivity. The excitation winding has conductors of high field superconducting material and conductors of normal conducting material having good electrical conductivity properties at operating temperatures. The normal conducting conductors are arranged so that alternating currents which occur in the excitation winding during the operation of the turbogenerator occur only in such conductors. Coolant ducts extend substantially parallel to and are connected to the normal conducting conductors.

3,517,232
COOLING MEANS FOR ELECTRICAL MACHINES
 Kazuo Sano, Yokohama-shi, Japan, assignor to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
 Filed Feb. 2, 1968, Ser. No. 702,560
 Claims priority, application Japan, Feb. 6, 1967, 42/7,290; 42/7,291; Mar. 9, 1967, 42/14,449; Apr. 26, 1967, 42/26,301; May 17, 1967, 42/30,835; Dec. 26, 1967, 42/82,963
 Int. Cl. H02k 3/24
 U.S. Cl. 310—59 9 Claims



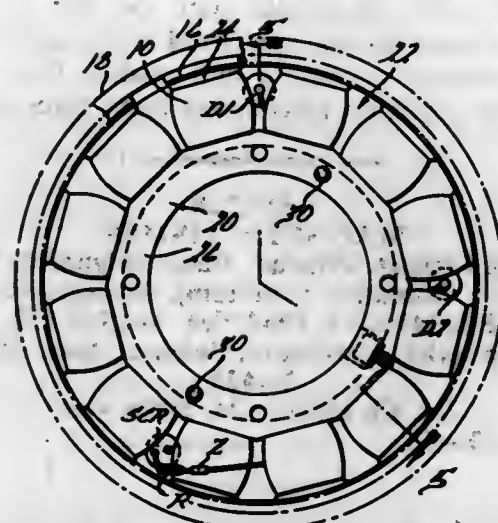
In a dynamoelectric machine or an induction regulator coils contained in slots of a magnetic core of the stator and/or rotor are secured in position by means of wedge means which are arranged to permit portions of the coils contained in the slots to be exposed to a cooling medium.

3,517,233
ALTERNATING CURRENT GENERATOR
 Rinaldo Margaira, Turin, Italy, assignor to FIAT Societa per Azioni, Turin, Italy
 Filed Feb. 2, 1968, Ser. No. 702,671
 Claims priority, application Italy, Feb. 7, 1967, 50,467/67
 Int. Cl. H02k 11/00
 U.S. Cl. 310—68 11 Claims



An alternating current generator for a motor vehicle has a demountable rectifier unit comprising respective rectifier modules clamped between a cover plate and a support plate at one end of the stator casing, connector elements connecting each respective module to a stator phase winding, and the rectifier modules being hermetically sealed.

3,517,234
HEAT SINK CONSTRUCTION FOR ELECTRICAL GENERATOR
 Richard J. Maier, Pontiac, Mich., assignor to Syncro Corporation, Oxford, Mich., a corporation of Michigan
 Continuation of application Ser. No. 599,173, Dec. 5, 1966. This application July 7, 1969, Ser. No. 842,809.
 Int. Cl. H02k 11/00, 7/00
 U.S. Cl. 310—68 9 Claims



A combination of a generator and a heat sink for mounting solid state components of a rectifying and regulating circuit and, in addition, a heat sink of a one-piece construction which is used for the return electrical path for some of the solid state components mounted thereon.

3,517,235
PORTABLE ELECTRICAL APPLIANCE
 Theodore R. Flowers, Fairfield, and Siegfried Godel, Norwalk, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
 Filed Aug. 4, 1967, Ser. No. 658,446
 Int. Cl. H02k 7/06
 U.S. Cl. 310—80 11 Claims

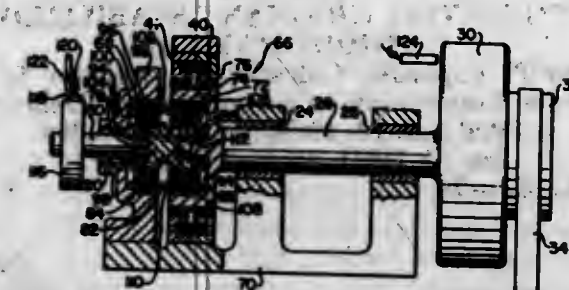
This disclosure is directed to a power driven, lightweight portable electrical appliance having output means comprising oppositely driven reciprocating hairbrush

units removably mounted in spaced parallel relationship on a self-contained handle-housing the casing is provided with a rearwardly extending manual hand grip and in



which housing, is mounted a motor and reciprocating drive means to effect the oppositely reciprocating movement of the hairbrush work units.

3,517,236
STEPPING MOTORS
 William S. Touchman, Kettering, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
 Filed Feb. 18, 1969, Ser. No. 800,184
 Int. Cl. H02k 7/106
 U.S. Cl. 310—96 22 Claims

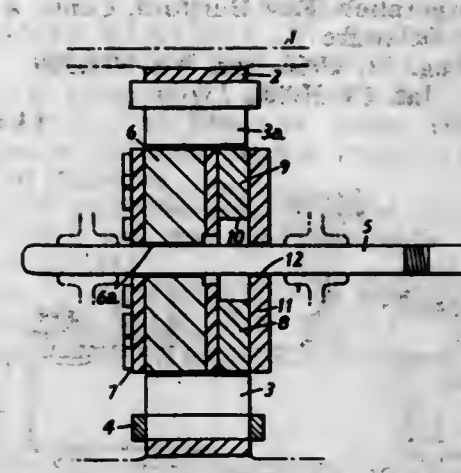


An intermittent rotary motion device for use in high-speed indexing. A resilient member, such as a shaft, is driven at the input end by a rotating flywheel and excited to torsional resonance at the other end to produce a high-frequency start-stop rotational output. The device includes magnetically-operated latch means which provide for asynchronous operation of the device in such a way that the cyclic rhythm of the intermittent motion is not detrimentally disturbed. The asynchronously-interrupted, intermittent motion produced by this device may, for example, be used in a paper tape punch, or in other applications where stepping motors may be used.

3,517,237
SELF-STARTING SYNCHRONOUS ELECTRIC MOTORS
 Eric Lloyd, Swindon, England, assignor to Garrard Engineering Limited, Swindon, Wiltshire, England, a British company
 Filed Apr. 30, 1968, Ser. No. 725,372
 Claims priority, application Great Britain, May 2, 1967, 20,375/67
 Int. Cl. H02k 21/00
 U.S. Cl. 310—162 1 Claim

In a synchronous induction motor whose rotor has, axially mutually adjacent, within the stator a squirrel-cage induction portion and a permanently magnetised

annular ferrite disc, and outside the length of the stator a metal balancing ring, the balancing ring has a centre bore fitting the rotor shaft, and the annular disc magnet



is adhesively secured to the adjacent faces of both the induction portion and of the balancing ring, being centred by utilising its outer cylindrical surface.

3,517,238
SQUIRREL CAGE ROTOR AND METHOD OF BUILDING THE SAME
 John E. Lake, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
 Filed Apr. 4, 1968, Ser. No. 718,827
 Int. Cl. H02k 3/06
 U.S. Cl. 310—211 3 Claims



A rotor for use in ultra-high speed squirrel cage induction motors and a method for building the rotor. A solid steel shaft is provided which is machined with a stepped-up portion having a plurality of longitudinal holes drilled therethrough for the insertion of rotor bars. When properly inserted, the ends of the rotor bars protrude through both sides of the stepped-up portion of the shaft and into corresponding holes drilled in two end ring assemblies, one of which is mounted adjacent to each end of the stepped-up portion. Each end ring assembly comprises a composite of concentric members, with each member comprising a metal with a modulus of elasticity so chosen that the combined stress pattern of the overall assembly permits the end rings to deform only in the elastic range when subjected to varying severe rotational and thermal loads. The materials and their dimensions are so chosen that the combined stress and deformation patterns of the overall assembly assure that contact between the end rings and the shaft at the internal surfaces of the end rings will be maintained when subjected, singularly or in combination, to varying severe rotational and thermal loads. The bars are connected to the end rings by induction brazing or by electron beam welding in such a manner as to prevent any change of metal temper or elastic limit in the end rings and bars excepting the area immediately adjacent to the joint.

3,517,239 HIGH SPEED COMMUTATOR AND BRUSH ASSEMBLY

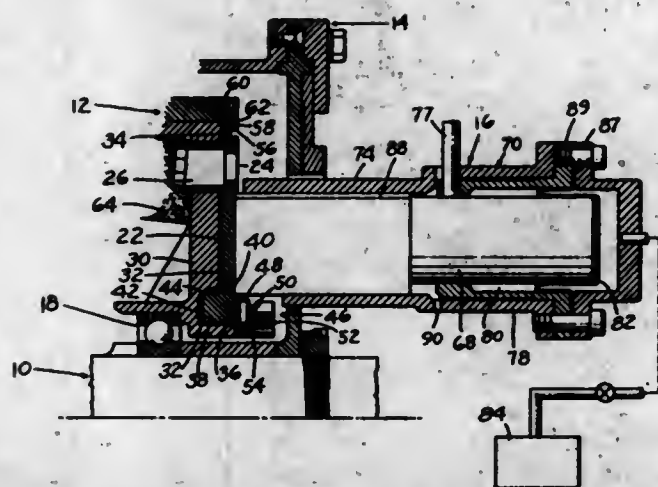
Edward J. Sedlock, Wapping, Conn., and Charles F. Paquette, Springfield, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Aug. 31, 1966, Ser. No. 576,309

Int. Cl. H02k, 13/04

U.S. Cl. 310-237

13 Claims



A face-plate commutator assembly and associated fluid loaded and cooled brushes are disclosed. The commutator is characterized by allowance for radial expansion of the individual segments while the brushes are characterized by internal and external cooling passages and contacting surfaces of shape commensurate with commutator segment shape.

3,517,240 METHOD AND APPARATUS FOR FORMING A FOCUSED MONOENERGETIC ION BEAM

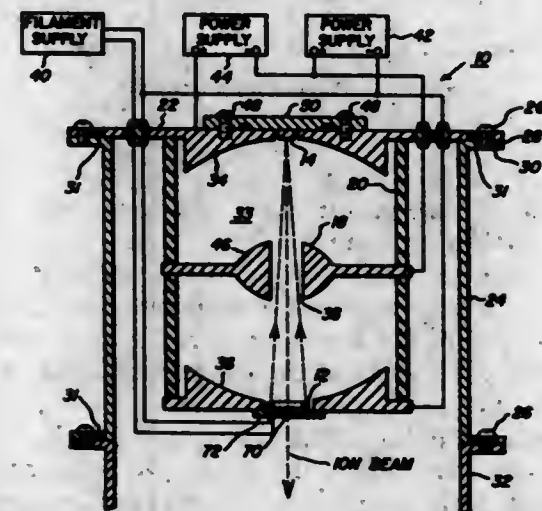
Theodore M. Dickinson, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Nov. 4, 1968, Ser. No. 773,038

Int. Cl. H01j 27/00, 39/34

U.S. Cl. 313-63

7 Claims



A method and apparatus are described for producing a focused beam of monoenergetic ions from an electrically conducting source in the solid or liquid state by electron bombardment of the source to produce an ionized vapor cloud from which cloud the generated ions are extracted by a remotely positioned negative accelerating electrode. Focusing electrodes are provided proximate the ion source to focus the generated ion beam back along the axis of the electron beam and a common electrode is employed both to accelerate electrons to the ion source and to accelerate ions in the reverse direction. By focusing the beam to a relatively small diameter spot on the source, the ionized vapor cloud is small relative to the electrode spacing and the ion beam thus formed is essentially monoenergetic.

3,517,241 PHOTOCONDUCTIVE TARGET COMPRISING ALUMINUM, SELENIUM AND ARSENIC TRISELENIDE LAYERS

Naohiro Goto and Keiichi Shidara, Tokyo, Japan, assignors to Japan Broadcasting Corporation, Tokyo, Japan

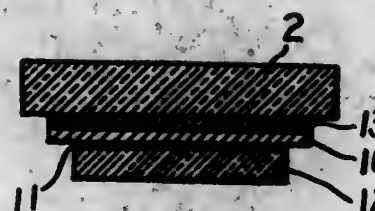
Filed June 19, 1967, Ser. No. 646,892

Claims priority, application Japan, Aug. 31, 1966, 41/56,882, 41/56,883, 41/56,886

Int. Cl. H01j 31/26, 31/38

U.S. Cl. 313-65

6 Claims



The present invention relates to an improvement of a target of photoconductive type camera tube having a photoconductive layer, comprising a blocking contact layer. The target according to the invention consists of two layers, which are a semiconductor layer forming the blocking contact and a photoconductive layer. According to the invention, arsenic triselenide can successfully be used in the substance of photoconductive layer, and by this means the target of the invention mitigates the drawbacks of conventional camera tube of this kind such as, less sensitivity for red light, incomplete stability for use as a camera tube, and other difficulties at manufacturing of the tubes. This invention affords a great advantage in obtaining an excellent target, especially suitable for the practical use as for a target of camera tube for use in color television field.

3,517,242 POTENTIAL GRADIENT STABILIZED CATHODE-RAY TUBE

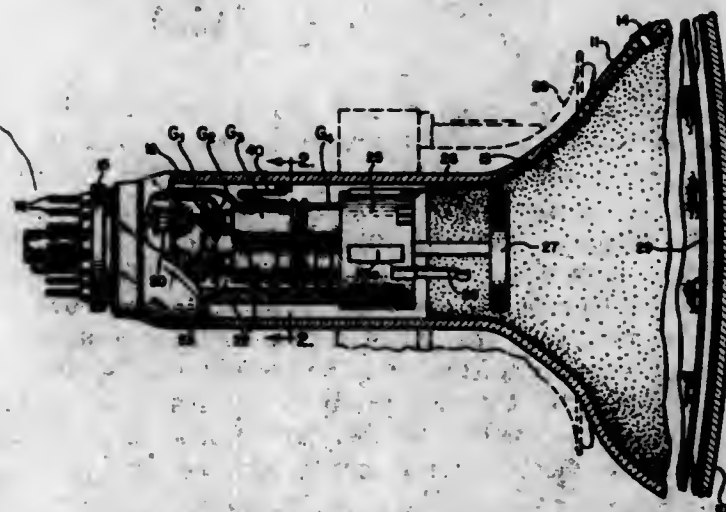
Nicholas P. Pappadakis, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Jan. 10, 1968, Ser. No. 696,806

Int. Cl. H01j 29/46, 29/50, 29/56

U.S. Cl. 313-70

3 Claims



A tri-color picture tube with a delta array of electron guns has a conductive coating of Aquadag extending into the end of the neck that is remote from the tube base and the coating, being established at final anode potential, gives rise, in stabilized operation of the tube, to a potential gradient extending from anode potential at one end of the neck to approximately zero or ground potential at the other end. The electrode next adjacent the anode, in the direction of the tube base, is used for focus control and is established at a positive potential although of much lower value than anode potential. A conductive contact is mechanically and electrically connected to the focus electrode of each of the three

guns and contacts the glass of the tube neck in a plane where the potential, in stabilized operation, has a value approximately equal to the operating potential of the focus electrode. This accelerates achieving stabilized potential distribution within the neck of the tube and minimizes convergence drift, electron spot aberrations, stray electron emission and arcing.

3,517,243 COLOR DISPLAY SCREEN EMPLOYING TWO LAYERS OF PHOSPHORS, PARTICLES IN THE INNER LAYER BEING SMALL WITH RESPECT TO THOSE IN THE OUTER LAYER AND DISCONTINUOUS IN COVERAGE

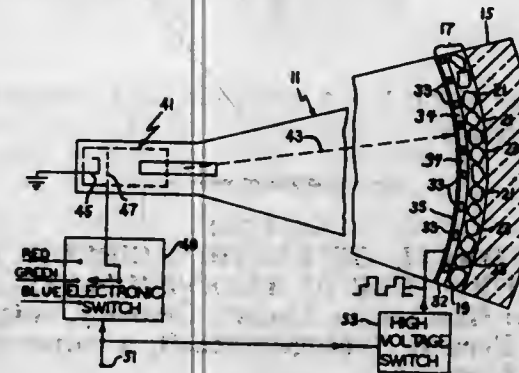
Morton E. Jones, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Continuation of application Ser. No. 598,828, Dec. 2, 1966. This application Mar. 17, 1969, Ser. No. 808,010

Int. Cl. H01j 29/26

U.S. Cl. 313-92

6 Claims



Disclosed is a color display screen that produces light of different colors in response to impinging electrons of different energies, characterized by having a first layer of phosphors which emits light of a first color when energized by electrons having energies above a relatively high predetermined level, and a discontinuous layer of small particles of a second phosphor overlying the first layer and emitting light of a second color when energized by electrons having energies above a relatively low predetermined level, the particles of the second phosphor being relatively small in relation to the thickness of the first layer and being of a size such that electrons having energies above the relatively high energy level pass through the particles without giving up substantial energy and produce substantially no more light of the second color than is produced by electrons having energies just equal to or below the relatively high level. In this way the electrons having energy above the relatively high level excite the phosphors in the first layer to produce an increasing amount of said first color with increasing electron energies but without producing substantial increases in the amount of the second color which is emitted by the particles of the second phosphor.

3,517,244 BULK CRYSTAL SEMICONDUCTOR ELECTROLUMINESCENT LIGHT SOURCE

Gerald S. Picus, Woodland Hills, and Lynette B. Van Atta, Malibu, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Jan. 22, 1968, Ser. No. 699,702

Int. Cl. H01j 1/62, 63/04

U.S. Cl. 313-108

4 Claims



Bulk recombination radiation is produced in polar, direct bandgap semiconductor materials by application of

high electrical fields. With further increases in field, radiation increases at a superlinear rate, producing super-radiance.

3,517,245 PLANAR MULTIPLE CHARACTER ELECTROLUMINESCENT DISPLAY DEVICE

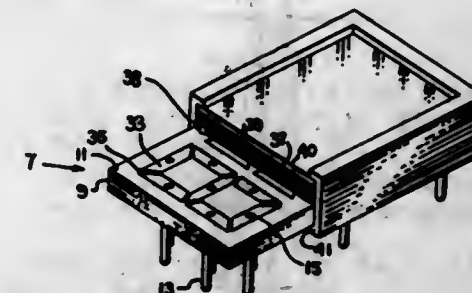
Herbert F. Dickson, Jr., and Irving D. Greenberg, Seneca Falls, N.Y., and Elmer O. Stone, Wabam, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Original application May 10, 1966, Ser. No. 558,188. Divided and this application Apr. 2, 1968, Ser. No. 718,053

Int. Cl. H01j 7/42; H01k 1/60

U.S. Cl. 313-109.5

6 Claims



A planar multiple character display device of the electroluminescent type includes a backing plate having a plurality of electrical conductors extending therethrough, first electrodes affixed to the backing plate and conductors, a phosphor-dielectric layer thereover, a conductive second electrode layer affixed to the phosphor-dielectric layer, an air-impermeable transparent layer affixed to the second electrode layer, and a sealing layer applied to the periphery of the backing plate and transparent layer.

3,517,246 MULTI-LAYERED STAGGERED APERTURE TARGET

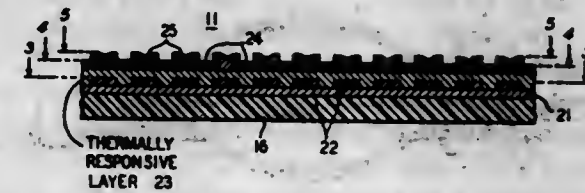
Arthur N. Chester, Murray Hill, and Morton H. Crowell, Morristown, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Nov. 29, 1967, Ser. No. 686,529

Int. Cl. H01j 31/40, 31/60; H01i 31/28

U.S. Cl. 313-66

4 Claims



An electron-beam-scanned information storage device is disclosed in which lateral electrical and thermal conduction between staggered arrays of apertures is employed. These devices include camera tubes and scan converters, in either of which continuous film arrangements or diode arrays can be used.

3,517,247 SPARK PLUG WITH TRANSPARENT INSULATING CORE

Istvan Szilagyi, Budapest, Hungary, assignor, by means of assignment, to Messrs. Contropa, Handelsgesellschaft m.b.H., Vienna, Austria, a body corporate of Austria

Continuation of application Ser. No. 696,002, Jan. 9, 1968. This application May 16, 1969, Ser. No. 825,309

Claims priority, application Great Britain, May 20, 1968, 23,975/68

Int. Cl. H01t 13/20, 13/46, 13/48

U.S. Cl. 313-123

The invention concerns a spark plug for an internal combustion engine having a central electrode and an

least one ground electrode to form a spark gap with the central electrode, a metallic housing, the central electrodes being mounted in an annular insulating body which is secured in the metallic housing. The insulating body



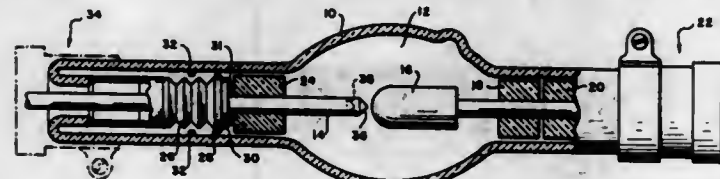
has at least partly unobstructed end surfaces and is so treated or is formed of a material e.g. glass or glass fibres, that substantially all the light entering one of the end surfaces emerges at the other of the end surfaces only.

3,517,248 PRESSURE CONTROL OF ELECTRODE POSITION IN GAS TUBE

Robert A. Eckel, Santa Clara, Calif., assignor, by mesne assignments, to the United States of America, as represented by the Secretary of the Navy.
Filed Oct. 23, 1967, Ser. No. 677,294
Int. Cl. H01j 17/04, 21/22

U.S. Cl. 313-146

2 Claims



A short-arc, compact, high pressure lamp utilizing a bellows to control the inter-electrode arc spacing, which control allows a minimum or optimum electrode separation distance while starting the lamp and provides for standard arc length during normal operation.

3,517,249 CAGE-LIKE FILAMENT STRUCTURE FOR ELECTRON DISCHARGE

Kiyoshi Uchimaru and Yukitoshi Yoshida, Tokyo, Japan, assignors to Nippon Electric Company Limited, Tokyo, Japan, a corporation of Japan.
Filed Dec. 27, 1967, Ser. No. 693,853
Claims priority, application Japan, Dec. 29, 1966, 42/985

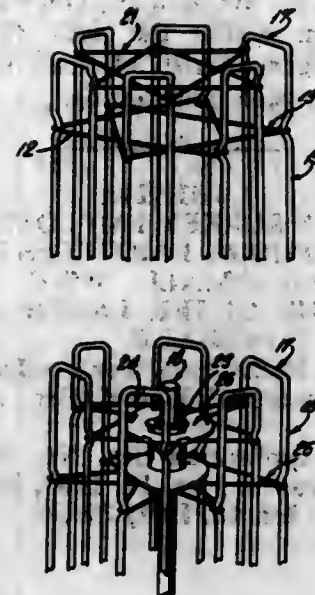
Int. Cl. H01j 1/94, 19/48

U.S. Cl. 313-278

6 Claims

A cage-like filament structure having a plurality of U-shaped filament strands arranged in cylindrical form with the strands secured at supported points thereon by a

strand bracing structure, thereby providing a relatively simple filament structure which is subject to less deformation and which has a relatively high filament heater power efficiency.



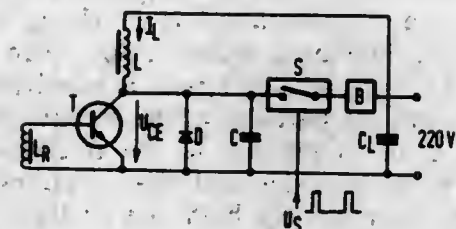
and which has a relatively high filament heater power efficiency.

3,517,250 HORIZONTAL DEFLECTION CIRCUIT FOR PICTURE TUBE OF TELEVISION SYSTEM

Walter Hirschmann, Munich, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany.
Filed May 31, 1968, Ser. No. 733,560
Claims priority, application Germany, June 7, 1967, S 110,223
Int. Cl. H01j 29/72, 29/76; H03k 4/60

U.S. Cl. 315-19

7 Claims



A source of feeding voltage is coupled to the capacitance of the tank circuit of a scanning transistor via a switch-operated pulse key during the blocking phase of the transistor whereby the voltage of the capacitance is at least equal to the recoil voltage occurring at the capacitance. A charge capacitor is connected in series with the inductance of the tank circuit between the collector and emitter electrodes of the transistor, the capacitor being connected to the emitter electrode.

3,517,251 SYSTEM FOR STABILISING THE POSITION AND SIZE OF A RASTER SCANNED BY AN ELECTRON BEAM ON A TARGET

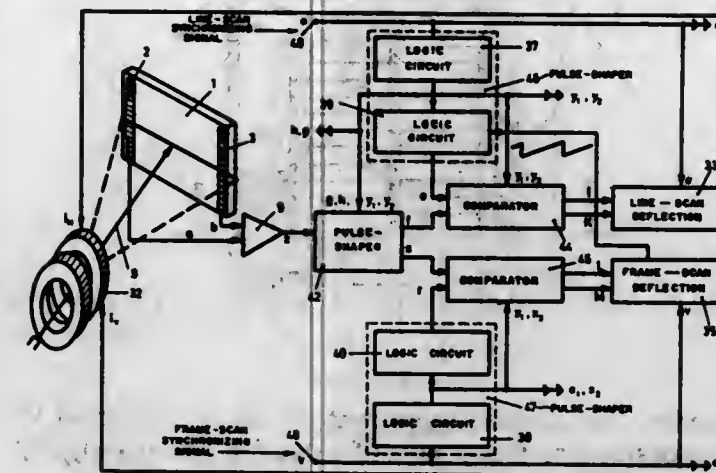
Heinrich Duerlinger and Hans Ott, Watt-Regensdorf, Switzerland, assignors to Eidophor A.G., Glarus, Switzerland.
Filed Nov. 15, 1968, Ser. No. 776,170
Claims priority, application Switzerland, Nov. 20, 1967, 16,219/67; Oct. 4, 1968, 14,831/68
Int. Cl. H01j 29/72

U.S. Cl. 315-19

9 Claims

This invention relates to a system for stabilizing the position and size of a raster scanned by an electron beam on a target and more particularly to the scanning of rasters on targets allocated to colour extracts of a multi-coloured image corresponding to the primary colours,

red, green and blue. At the edge of each target, strip-like electrodes are arranged and connected to a first pulse shaper for producing line-scan pulses and frame position pulses. Second and third pulse-shapers are provided for deriving line-scan and frame reference pulses from the



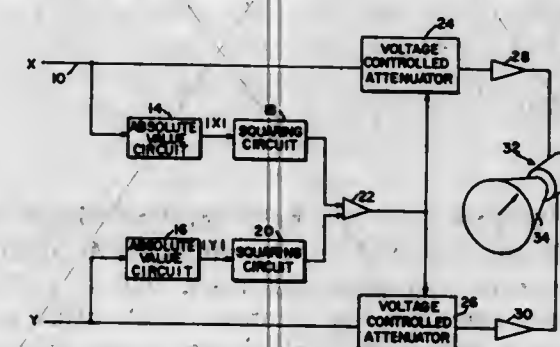
synchronising pulses of a video signal, and a comparator arrangement is included which compares the pulses supplied by the first pulse-shaper with those provided by the second and third pulse-shapers to provide signals for controlling the circuits governing the horizontal and vertical deflection functions of the electron beam.

3,517,252 LINEARITY CORRECTION APPARATUS FOR MAGNETICALLY DEFLECTED CATHODE RAY TUBES

Roy M. Williams, Jr., Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware.
Filed Feb. 20, 1969, Ser. No. 800,883
Int. Cl. H01j 29/76

U.S. Cl. 315-24

10 Claims



Apparatus is herein disclosed for providing linearity correction for magnetically deflected cathode ray tubes and comprises apparatus for generating a signal whose magnitude is proportional to the radial distance from the center of the CRT to the spot(s) to be displayed and apparatus for attenuating the input voltages (X and Y) proportionally to the generated signal.

3,517,253 VOLTAGE REGULATOR

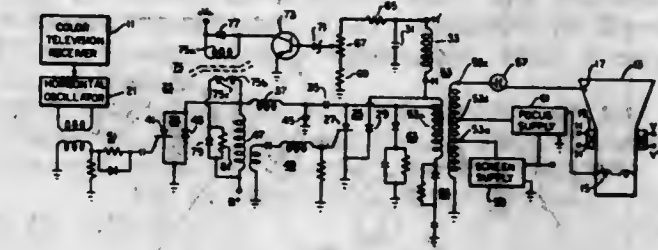
Wolfgang F. W. Dietz, Indianapolis, Ind., assignor to RCA Corporation, a corporation of Delaware.
Filed May 22, 1968, Ser. No. 731,163
Int. Cl. H01j 29/76

U.S. Cl. 315-27

12 Claims

A horizontal deflection and high voltage generating circuit for a television receiver wherein image width is maintained substantially constant despite variations in

kinescope beam current and main B+ supply voltage. Circuit reactive components are proportioned to compensate for the effect of beam current variation on deflection



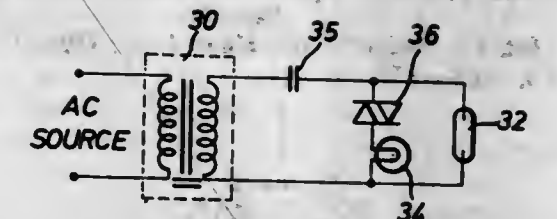
tion current and high voltage while system input power is regulated to compensate for main B+ supply voltage variations.

3,517,254 CONTINUOUS LIGHTING SYSTEM FOR GASEOUS-DISCHARGE LAMPS WITH INCANDESCENT LIGHTS FOR STANDBY

Albert C. McNamara, Jr., Houston, Tex., assignor to Esquire, Inc., New York, N.Y., a corporation of Delaware.
Filed May 14, 1968, Ser. No. 728,970
Int. Cl. H02h 3/20; H05b 39/10, 41/46

U.S. Cl. 315-91

15 Claims



This invention pertains to an emergency lighting circuit that operates with a high pressure, gaseous-discharge lamp and associated ballast. When the gaseous-discharge lamp goes out, after once being ignited, sufficient current is supplied to an incandescent light or lights to maintain illumination to the area normally illuminated by the lamp. The device for providing this current may vary, but generally incorporates a voltage breakdown means that receives higher voltage from the ballast when there is failure of the gaseous-discharge lamp than when the arc therein is struck. A preferred embodiment also lights the incandescent lights during initial warm-up of the gaseous-discharge lamp. The incandescent lights may also be used in a cold environment to maintain the gaseous-discharge lamp sufficiently above an ambient temperature level to make possible initial striking of the arc in the lamp when ambient temperature conditions might otherwise prevent it. Further, half-cycles of ballast output voltages are blocked by diodes and capacitors are used to increase the applied voltage to enhance restriking of the gaseous-discharge lamp in additional embodiments.

3,517,255 FLASH APPARATUS WITH AUTOMATIC LIGHT TERMINATION USING LIGHT ACTIVATED SILICON CONTROLLED RECTIFIER

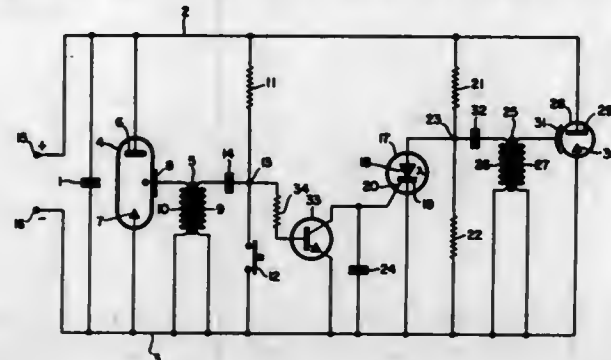
Jerry B. Hoffer and Francis T. Ogawa, Denver, and Robert H. Wallace, Littleton, Colo., assignors to Honeywell, Inc., Minneapolis, Minn., a corporation of Delaware.
Filed July 25, 1968, Ser. No. 747,628
Int. Cl. G01j 1/32; H05b 41/32, 41/38

U.S. Cl. 315-151

4 Claims

Subsequent to the firing of the flash tube of the apparatus, a light activated silicon controlled rectifier, exposed to the resulting light, charges an integrating capacitor connected between its gate and cathode until the rectifier becomes conductive coincident with having received a predetermined total quantity of light. A trigger trans-

former coupled to the rectifier anode then produces a pulse which fires a quench tube, connected in parallel with the flash tube, to terminate the light. A transistor



resetting switch, normally short-circuiting the capacitor, is opened when the flash tube is fired, and is reclosed subsequent to the production of the pulse.

3,517,256

SHOCK-WAVE GENERATOR

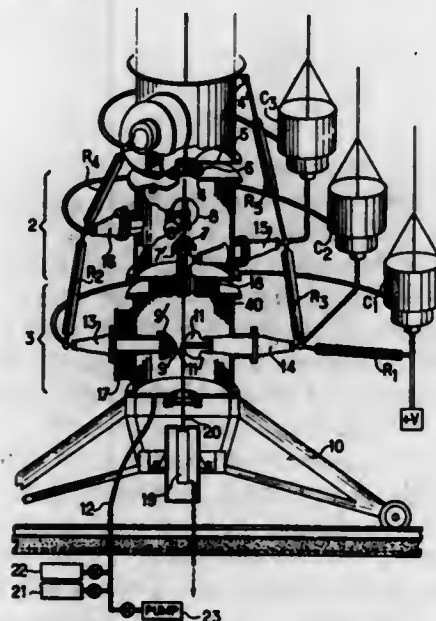
Spartacus Barbini, Chaville, Hauts de Seine, France, assignor to Compagnie Generale d'Electricite, Paris, France

Filed Feb. 21, 1967, Ser. No. 617,516

Claims priority, application France, Feb. 22, 1966

50,635

Int. Cl. H05b 37/00; H01s 1/00; H01t 15/00
U.S. Cl. 315—155 23 Claims



A high voltage shock wave generator formed by a plurality of distinct, removable units, each comprising an arcing chamber enclosing two electrodes defining a spark-gap, the arcing chambers being assembled in a vertically suspended column, the partitions separating two consecutive chambers having aligned transparent portions, said generator further comprising a control means including a laser disposed so that its luminous beam passes in the space between the electrodes of at least one of said spark-gaps.

3,517,257

INDICATOR TUBE FOR DISPLAYING A PLURALITY OF CHARACTERS

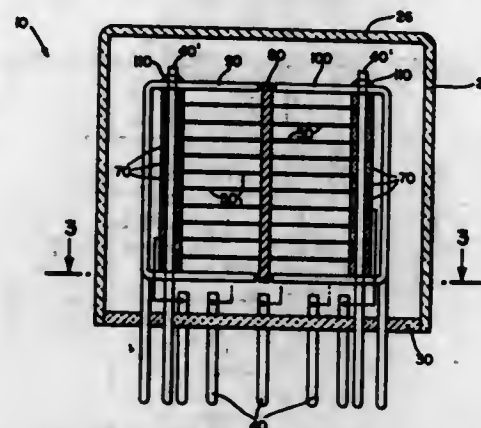
Saul Kuchinsky, Somerville, and Roger W. Wolfe, Plainfield, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Sept. 25, 1967, Ser. No. 670,258

Int. Cl. G06f 3/14

U.S. Cl. 315—169 5 Claims
The disclosure is of an indicator tube adapted to display one or two characters at a time and including a plurality of parallel plates arrayed in a stack but electrically insulated from each other. Each plate is of metal

and comprises, essentially, a frame which carries two cathode numerals side by side. A separating shield is provided between the numerals of each pair to provide two separate groups of cathode electrodes, and a separate anode electrode is provided for each group of cathode



electrodes. An alternating current circuit is connected to the anodes and to the groups of cathodes and is properly phased so that one cathode alone can glow or two cathodes, one from each group, can be caused to glow at the same time.

3,517,258

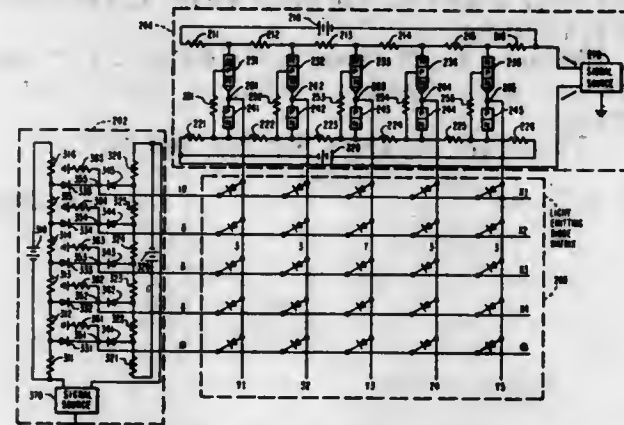
SOLID STATE DISPLAY DEVICE USING LIGHT EMITTING DIODES

Robert John Lynch, Endicott, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 31, 1966, Ser. No. 590,843

Int. Cl. H05b 39/04

U.S. Cl. 315—169 11 Claims



A display arrangement has light emitting diodes arranged in columns and rows to form an array. A horizontal gable generator energizes the rows, and a vertical gable generator energizes the columns. Each gable generator provides a pointed or gable-shaped signal distribution across the respective rows and columns, and variable signal means connected to the gable generators supply modulation or video signals for controlling the generation of characters, letters, etc. by selectively illuminating various light emitting diodes.

3,517,259

LAMP SOCKET INCLUDING AN ELECTRICAL CONTROL CIRCUIT FOR REGULATING LAMP CURRENT

Gianni A. Dotto, Dayton, Ohio, assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Original application July 6, 1964, Ser. No. 380,405, now Patent No. 3,401,265, dated Sept. 10, 1968, Divided and this application Feb. 19, 1968, Ser. No. 740,416

Int. Cl. F21v 23/00

U.S. Cl. 315—200 2 Claims
A lamp socket containing electrical circuitry for variably brightening and dimming the electrical circuit current supplied to a lamp within the socket. The electronic

circuitry is comprised of oppositely poled SCR's connected to Zener diodes and a phasing circuit having a



plurality of capacitors and variable resistance in series across the SCR's.

3,517,260

TRANSISTORIZED CONDENSER DISCHARGE IGNITION SYSTEM WITH A VACUUM REGULATOR

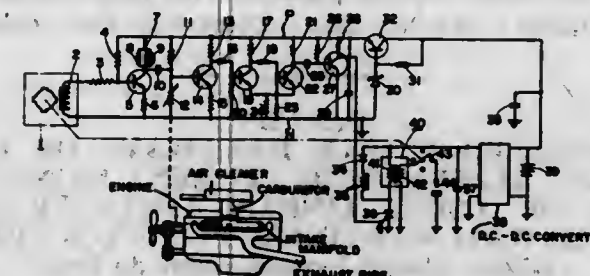
Kazuo Oishi, Kariya-shi, Japan, assignor to Nippon Denso Kabushiki Kaisha, Kariya-shi, Aichi-ken, Japan

Filed Oct. 23, 1967, Ser. No. 677,208

Claims priority, application Japan, Oct. 29, 1966, 41/71,498; Feb. 8, 1967, 42/8,105

Int. Cl. H05b 37/02, 39/04

U.S. Cl. 315—223 11 Claims



An output signal of a signal generator mounted in a distributor is amplified by at least one transistor amplifier, converted into a square-wave signal by a Schmitt trigger circuit, differentiated by a differentiator circuit and then applied to the gate of a controlled rectifier in the primary winding of an ignition coil. Temperature compensation of the transistor circuit is effected by inserting a temperature-dependent element into the output circuit of the transistor amplifier. The wave form of the output signal of the signal generator is adapted to the desired spark advance characteristics, by special formation of its stator.

3,517,261

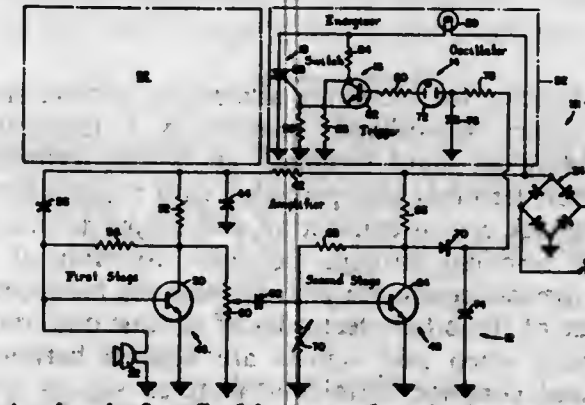
FLASHER CIRCUIT

Anthony M. Karp, New York, N.Y., assignor to William B. Birch, New York, N.Y.

Filed Sept. 27, 1968, Ser. No. 763,320

Int. Cl. H05b 37/00, 39/00, 41/14

U.S. Cl. 315—241 6 Claims



A circuit for flashing an electric lamp on and off in response to variations in the amplitude of a control signal.

3,517,262

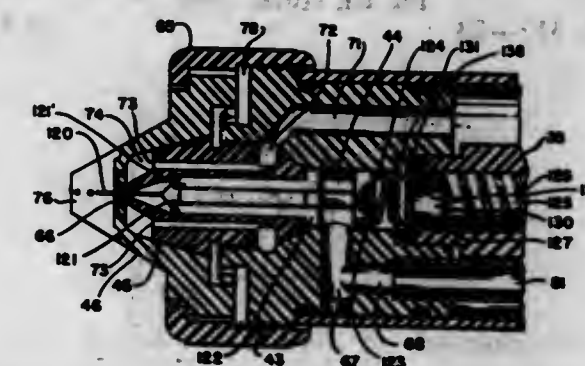
COMPONENT CONNECTING MEANS FOR ELECTROSTATIC SPRAY APPARATUS

James W. Juvinall and Erhard Kock, Toledo, Ohio, William L. Smart, Indianapolis, Ind., and Herschel A. Williams, Manchester, Tenn., assignors to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana

Original application Dec. 27, 1966, Ser. No. 685,085, now Patent No. 3,367,578, dated Feb. 6, 1968, Divided and this application Oct. 16, 1967, Ser. No. 705,237

Int. Cl. B05b 5/00; F23d 11/28

U.S. Cl. 317—3 6 Claims



In electrostatic spray apparatus electrically and mechanically connecting various components together is a problem. A replaceable spray charging electrode assembly and an electrical connector means are capable of connection within the barrel of such a gun; each include a conductive element and a body of insulating material so arranged that the electrode is removably retained and positioned on the spray gun and is electrically connected to an electric circuit within the gun. The barrel components that connect and support the replaceable electrode assembly and electrical connector means are of dissimilar materials incapable of bonding directly together. These components are connected and interlocked by a body of cement in a recess in one component, the cement being firmly bonded to the other component which spans the recess.

3,517,263

CAPACITOR VOLTAGE TRANSFORMER

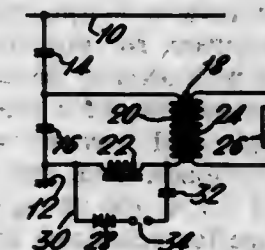
Toshio Okamura, Sigeo Izumi, and Isao Watanabe, Kyoto, Japan, assignors to Nissin Electric Co., Ltd., Kyoto, Japan, a company of Japan

Filed May 31, 1967, Ser. No. 642,387

Claims priority, application Japan, May 31, 1966, 41/51,576

Int. Cl. H02h 7/00, 7/14, 7/16

U.S. Cl. 317—12 5 Claims



A capacitor voltage transformer of the resonance type wherein a protective shunt circuit is connected across one or more of the resonant impedance elements included in the device, the shunt circuit including a bi-directional avalanche device, for example a silicon symmetrical switch. When a disorder in the secondary circuit causes the terminal voltage across the impedance element to exceed a predetermined level, the switch becomes conductive, shunting the resonant impedance element and changing the resonant condition of the circuit so that the large current caused by the disorder is suppressed for protection of the device. A dual capacitor voltage transformer is also disclosed, having means coupled to

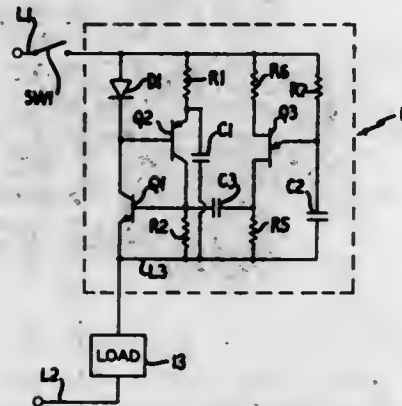
the secondary windings of the intermediate transformers thereof to distinguish between a disorder in the system line to which the transformer is connected and a disorder in the secondary circuit in the transformer itself.

3,517,264

APPARATUS FOR PROTECTING A D.C. LOAD
Walter M. Anderson, Jr., Reading, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 30, 1966, Ser. No. 606,092
Int. Cl. H02h 3/08

U.S. Cl. 317-23

11 Claims



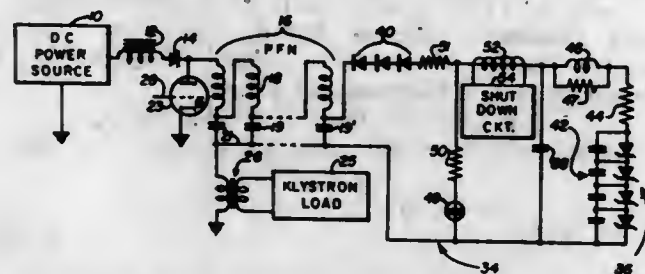
A solid state circuit is described which automatically deenergizes a D.C. electrical load when it draws more than a preselected level of current and which then periodically tests the load and reenergizes it if the overload condition is eliminated.

3,517,265

DEIONIZING AND FAULT PROTECTION CIRCUIT FOR A LINE-TYPE PULSER
Robert W. Bradford, Menlo Park, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 16, 1968, Ser. No. 721,757
Int. Cl. H02h 7/20

U.S. Cl. 317-51

10 Claims



A protective and reverse biasing circuit for a switch tube in a line-type pulser, for providing a safe low impedance breakdown path around the switch tube through a series of voltage regulating bulk avalanche diodes that conduct short circuit load currents such as frequently occur with klystron loads, and for providing from a capacitor connected across the voltage regulating diodes a reverse bias voltage for deionizing the switch tube during normal pulser operation.

3,517,266

INTERFRAME SIDE-MOUNTED DISTRIBUTION PANELBOARD
Kenji Yoda and Saburo Nagai, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan
Filed Aug. 27, 1968, Ser. No. 755,613
Claims priority, application Japan, Sept. 7, 1967, 42/76,816

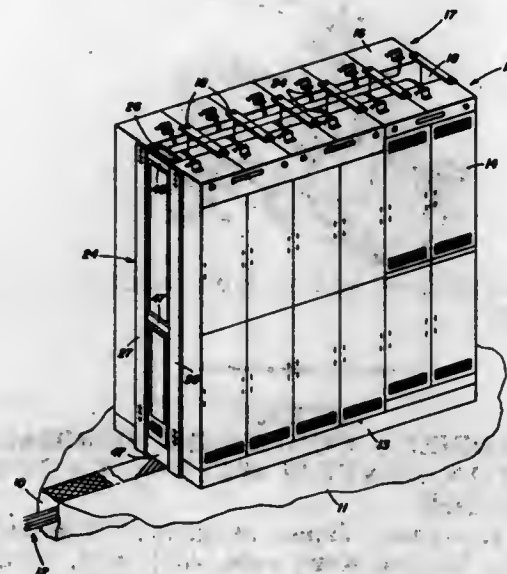
U.S. Cl. 317-99

Int. Cl. H02b 1/04

8 Claims

An assembly of communication units including a framework mounted on a floor, pluralities of housings contain-

ing communication units and disposed in horizontal alignment on opposite sides of the framework in back-to-back relation to provide a space therebetween, and panelboards removably mounted in the space between corresponding



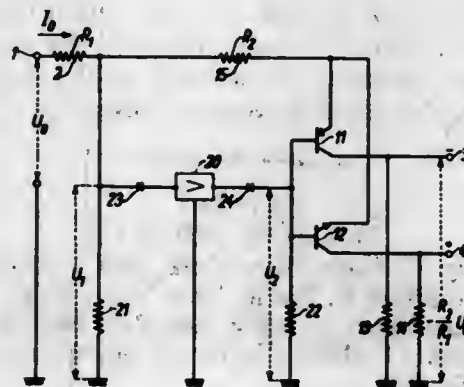
housing ends at one end of the framework and embodying electric terminals for interconnecting the communication units and cables positioned in floor conduit for transmitting communication information and power.

3,517,267

CONTROLLED LINEAR HALF-WAVE OR FULL-WAVE ALTERNATING CURRENT SIGNAL DETECTOR USING LINEAR AMPLIFIER COMBINED WITH NON-LINEAR FEEDBACK CIRCUIT
Gilbert Marcel Ferrieu, Route du Port, 22 Locquemeau, France
Filed Feb. 24, 1967, Ser. No. 618,494
Claims priority, application France, Mar. 7, 1966, 52,269

U.S. Cl. 329-101

5 Claims



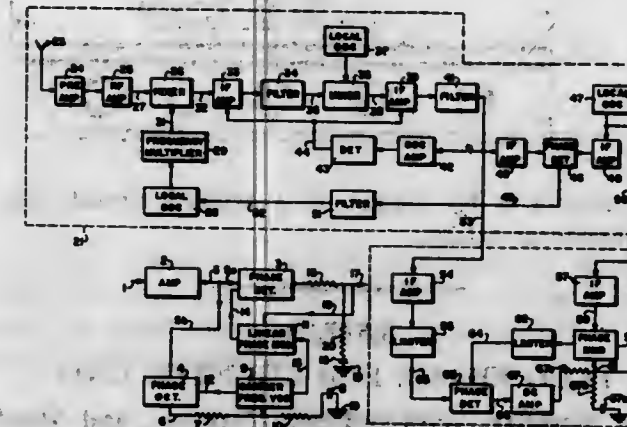
A linear detector for rectifying alternating current signals of arbitrary waveshape, comprising a high-gain amplifier having an input terminal, an output terminal and a common terminal and provided with a non-linear negative feedback circuit connecting said output terminal to said input terminal through the series assembly of a resistor and the semiconductor path between the base electrode and one of the other electrodes of at least one transistor, whereby when said signals are applied between said input and common terminals, rectified signals are received between said common terminal and the other one of said other electrodes of said transistor or transistors.

3,517,268

PHASE DEMODULATION SYSTEM WITH TWO PHASE LOCKED LOOPS
James E. Webb, Administrator of The National Aeronautics and Space Administration, with respect to an invention of Thomas Hudspeth, Malibu, Calif.
Filed Sept. 10, 1965, Ser. No. 486,573
Int. Cl. H03d 3/24; H03f 3/06

U.S. Cl. 329-122

5 Claims



The phase demodulation system is disclosed in which a phase modulated carrier frequency is operated upon to provide an output which represents the frequency modulation of the carrier signal. The system includes a first stage, which includes a phase locked loop to which the frequency modulated carrier frequency is supplied, designed to provide a first output which represents a frequency modulated intermediate frequency and a second output which consists of an unmodulated intermediate frequency, the intermediate frequencies of the two outputs having a constant phase relationship. The two outputs are supplied to a second stage, forming a phase locked loop to produce the desired system output.

3,517,269

PROCESS FOR RECOVERING ACTIVE CONCENTRATES RICH IN SENNOSIDES FROM SENNA PODS
Hans Georg Mennen, Geyen, and Hans Honerlagen, Cologne-Braunsfeld, Germany, assignors to A. Nattermann & Cie. GmbH, Cologne-Braunsfeld, Germany
No Drawing. Filed Sept. 7, 1967, Ser. No. 665,954
Claims priority, application Germany, Sept. 8, 1966, N 29,137

U.S. Cl. 260-210

Int. Cl. C07g 3/00

5 Claims

A process for preparing an active concentrate rich in sennosides from senna drugs which comprises performing a preliminary extraction from the drugs at room temperature by means of an aqueous alcohol or aqueous ketone, the solvents having a concentration of about 87% to 92% by weight, whereupon the treated pods are extracted with cold water, the dry extract being then recovered by known means. The preferred solvent for the preliminary extraction is 90% methanol. Senna preparations are used in medicine as mild laxatives.

3,517,270

SINGLE-ENDED, PUSH-PULL TRANSISTOR AMPLIFIER WITH ZERO INPUT IMPEDANCE CIRCUITRY ARRANGEMENT
William G. Dilley, 4168 North 425 West, Ogden, Utah 84404
Continuation-in-part of application Ser. No. 437,497, Mar. 5, 1965. This application Mar. 21, 1968, Ser. No. 715,016

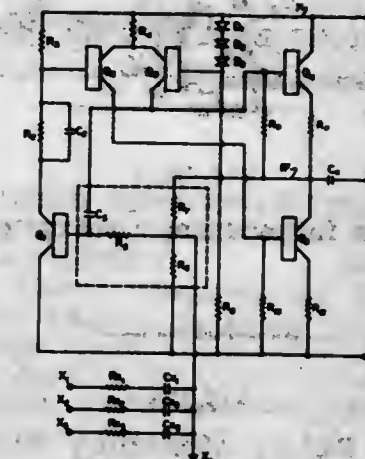
U.S. Cl. 330-15

Int. Cl. H03f 3/68

5 Claims

A wide band, low distortion, low noise, low phase shift, single-ended amplifier characterized by a multipli-

city of inputs of independently variable gain capability, a common mixed input of zero impedance, and a con-



stant level output, irrespective of the number or the gain of the individual mixed inputs.

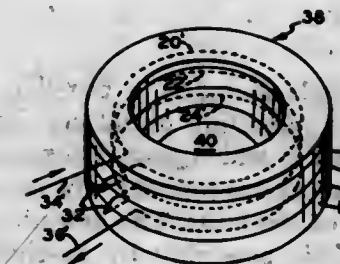
3,517,271

ELECTRONIC COMPONENT

Harold D. Edmonds, Yorktown Heights, N.Y., Gilbert Goodman, Bayville, Wis., and William J. McWilliams, New Fairfield, Conn., assignors to Vitramon, Incorporated, Monroe, Conn., a corporation of Delaware.
Continuation-in-part of application Ser. No. 656,747, July 28, 1967. This application Apr. 5, 1968, Ser. No. 719,106

U.S. Cl. 317-101

16 Claims



The present invention relates to an electronic component which primarily exhibits inductive reactance. More particularly, the present invention relates to an electronic component comprising a monolithic body having at least two generally planar sections of magnetic material surrounding at least one generally planar section of conductive material.

3,517,272

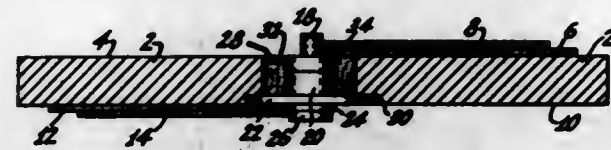
MICROWAVE CIRCUIT WITH COAXIAL PACKAGE SEMICONDUCTOR DEVICE
Hon Chiu Lee, Cranford, and Gregory Hodowanec, Newark, N.J., assignors to RCA Corporation, a corporation of Delaware
Filed Dec. 24, 1968, Ser. No. 786,589

U.S. Cl. 317-101

3 Claims

In a microwave circuit which comprises a metal plate

with a plurality of microstrip or stripline circuit portions mounted thereon, means including a ceramic washer in-



serted in the plate for mounting a coaxial package transistor in the circuit.

3,517,273

REED RELAY ASSEMBLY WITH ALIGNMENT STRIPS

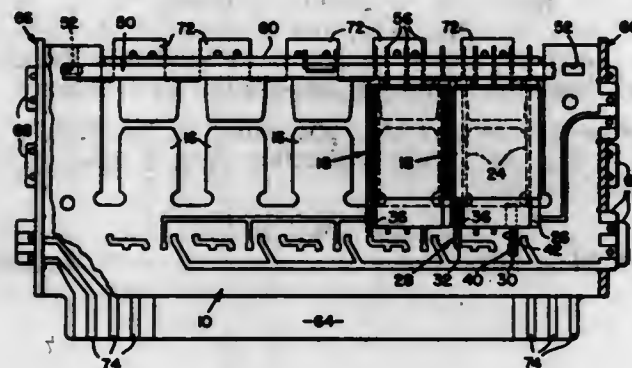
Robert W. Bentley, Penfield, Arthur B. Cieslak, Rochester, and Adam A. Jorgensen, Pittsford, N.Y., assignors to Stromberg-Carlson Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 25, 1968; Ser. No. 770,732

Int. Cl. H02b 1/04; H05k 7/02

U.S. Cl. 317-101

4 Claims



A reed relay module including a box-like assembly of printed circuit cards mounting plural coil bobbins. Reed switches encapsulated in sealed glass tubes are mounted in the bobbins for actuation responsively to energization and deenergization of the coils. The assembly is specially adapted for automatic assembly by machinery at high speed and low cost. The bobbins are received on finger-like tabs, which extend edgewise from printed circuit cards, and are held in positive alignment by auxiliary guide strips. The guide strips include tabs projecting into the bobbins opposite from the tabs on the printed circuit cards, and also include tapered guide holes for aligning the tongues of the reed switches. A covering printed circuit card is mounted over the guide strips for selectively interconnecting the coils and the tongues of the reed switches.

3,517,274

BUS BAR ASSEMBLY WITH CIRCUIT BREAKERS

Nicholas M. Raskhodoff, Chevy Chase, Md., assignor to the United States of America as represented by the Secretary of the Navy

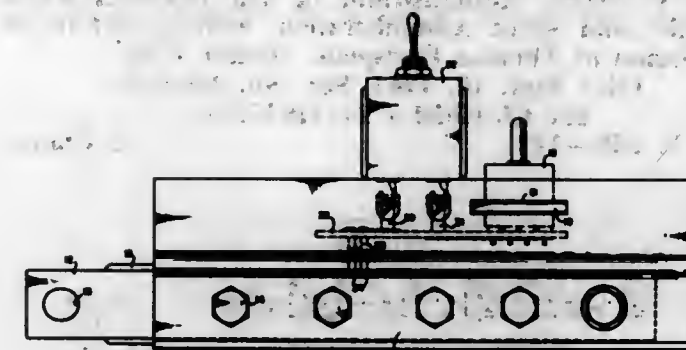
Filed Jan. 25, 1968; Ser. No. 700,555

Int. Cl. H02b 1/04

U.S. Cl. 317-112

2 Claims

A bus bar assembly has one or more circuit breakers incorporated therewith to protect all circuits powered by



outlet receptacle by means of a printed circuit type of interconnection board.

3,517,275

PLUG FRAME FOR COUNTER UNIT

Helmut Kreidler, Schwemlingen (Neckar), and Manfred Kruger, Spaichingen, Württemberg, Germany, assignors to J. Hengstler K.G. Zahlerfabrik, Tuttlingen, Germany

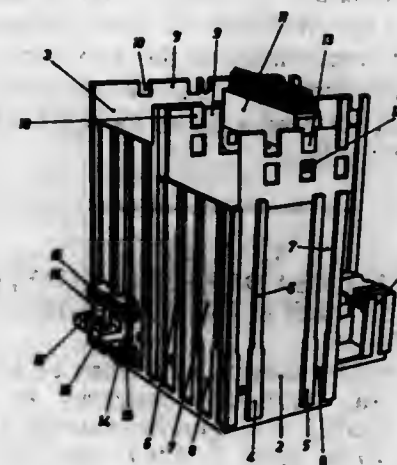
Filed Jan. 22, 1968; Ser. No. 699,639

Claims priority, application Germany, Jan. 21, 1967, H 61,619

Int. Cl. H02b 1/04

U.S. Cl. 317-117

6 Claims



A plug frame has four side walls forming a rectangular cross-section. Each side wall is formed on its outside surface with a guide extending in the direction from one end of said frame to the other. Each of said guides is in registry with and complementary to a guide on the opposite side wall. Each of at least two mutually opposite ones of said side walls is formed on its outside surface with at least two of said guides, which are laterally spaced apart. Each of said two opposite side walls has at right angles to said guides thereon a dimension which is an integral multiple of the center spacing of said guides on said side wall.

3,517,276

PHOTOELECTRIC TIME DELAY SWITCH CIRCUIT

Allan J. Zadivak, Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 19, 1967; Ser. No. 676,538

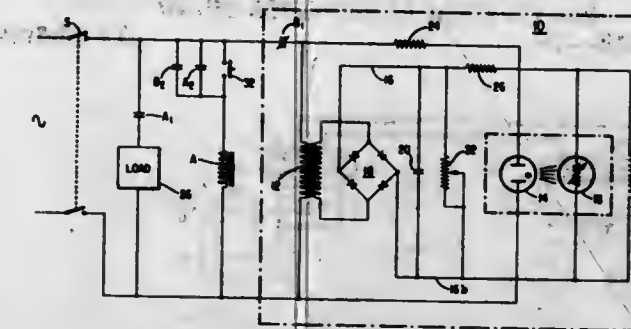
Int. Cl. H01h 47/24

U.S. Cl. 317-124

7 Claims

A photoelectric switch circuit comprising a light-sensitive cell of varying resistance in parallel with a relay coil. A light source directed at the cell controls the re-

sistive value of the cell such that, in the presence of light, the cell acts as an electrical shunt across the relay coil and, in the absence of light, the cell acts as an open circuit. A charged capacitor is connected in parallel with



the cell and relay coil and is permitted to discharge through the relay coil when the light source is extinguished; the relay being energized for a period of time by the capacitor discharge.

3,517,277

METHOD AND CAPACITOR WITH ELECTRODE AREAS OVER WEAK DIELECTRIC AREAS REMOVED

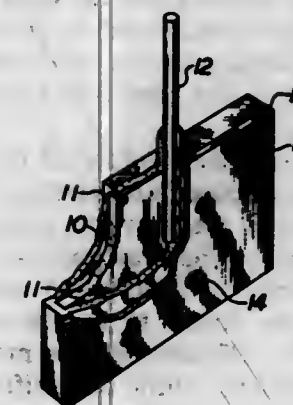
Ernest N. Urfer and Salvatore J. Acello, North Adams, Mass., and David W. Collins, State College, Pa., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Filed Oct. 25, 1967; Ser. No. 678,978

Int. Cl. H01g 3/075; 9/05

U.S. Cl. 317-230

12 Claims



Decreasing the D.C. leakage current and improving the breakdown potential of capacitors by electrolytically deplating electrode areas which overlie dielectric regions having a comparatively low dielectric strength.

3,517,278

FLIP CHIP STRUCTURE

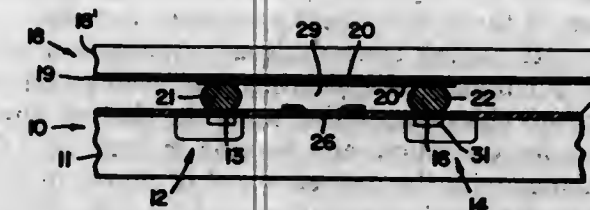
Richard W. Hager, Los Altos, Calif., assignor to Tele-dyne, Inc., Mountain View, Calif., a corporation of Delaware

Filed Oct. 2, 1967; Ser. No. 672,169

Int. Cl. H01l 1/14

U.S. Cl. 317-234

3 Claims



A flip chip structure for integrated circuits in which the circuit chip is bonded to a substrate having a printed

circuit and raised contact pads serving to interconnect contact areas on the chip. The contact pads are initially affixed to the substrate. The substrate and chip both have the same base material, such as silicon. In addition, the raised contact pads are of sufficient height to permit cross-overs of existing conductors on the circuit chip.

3,517,279

FACE-BONDED SEMICONDUCTOR DEVICE UTILIZING SOLDER SURFACE TENSION BALLING EFFECT

Koichi Ikeda, Katsuji Minagawa, and Shigeo Tanaka, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

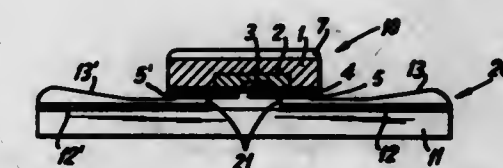
Filed Sept. 18, 1967; Ser. No. 668,371

Claims priority, application Japan, Sept. 17, 1966, 41/61,822

Int. Cl. H01l 5/02

U.S. Cl. 317-234

5 Claims



An improved semiconductor device and method for making the same by the face-bonded technique, in which metallic layer electrodes of the semiconductor element and metallic layer terminals of a substrate to which the element is bonded are formed with a predetermined pattern configuration having dimensions related to the surface tension characteristics of the solder employed in the bonding process.

3,517,280

FOUR LAYER DIODE DEVICE INSENSITIVE TO RATE EFFECT AND METHOD OF MANUFACTURE

Laurence L. Roster, Champaign, Ill., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

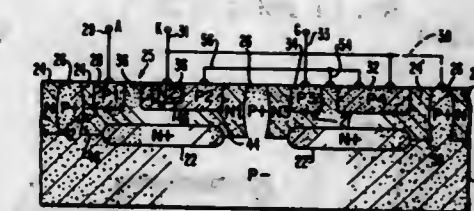
Filed Oct. 17, 1967; Ser. No. 675,865

Int. Cl. H01l 19/00

U.S. Cl. 317-235

5 Claims

Communication switching devices or crosspoints may be readily fabricated in integrated semiconductor de-

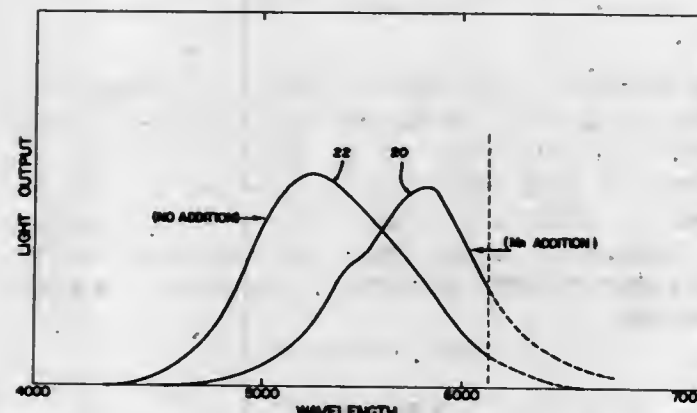
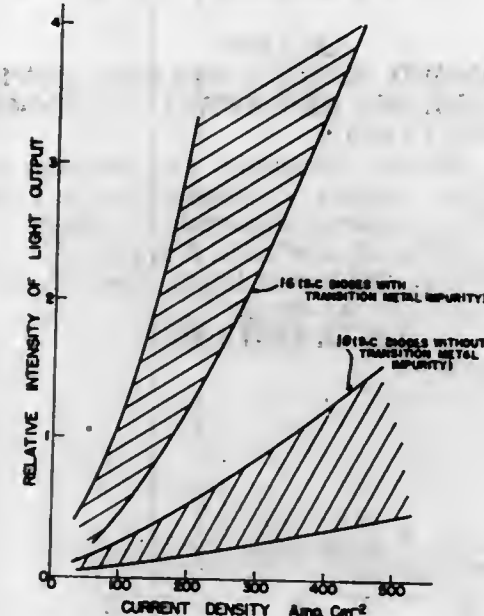


vices through an appropriate choice of materials and processes. Such devices, however, are susceptible to "rate effect" which is the sensitivity of a non-selected crosspoint in a communications system to premature firing as a result of steep waveforms developed when other crosspoints in the system are selected. Their sensitivity to "rate effect" may be reduced through appropriate connections between the device substrate and electrodes; biasing of device electrodes and proper choice of impedance magnitudes included in the devices.

3,517,281
LIGHT EMITTING SILICON CARBIDE SEMI-CONDUCTOR JUNCTION DEVICES
 Abraham I. Mlavsky, Lexington, and Leonard B. Griffiths, North Reading, Mass., assignors to Tyco Laboratories, Inc., Waltham, Mass., a corporation of Massachusetts
 Filed Jan. 25, 1967, Ser. No. 611,727
 Int. Cl. H01L 15/00

U.S. Cl. 317-237

4 Claims

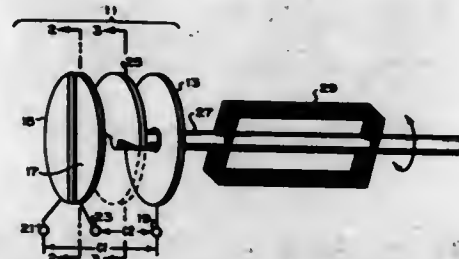


A light emitting silicon carbide semiconductor junction device containing a transition metal (such as Ti, Zr, or Mn) which increases the total light output or effects a shift in the peak of the electroluminescence spectrum.

3,517,282
VARIABLE CAPACITANCE TRANSDUCER
 Arthur Miller, Chestnut Hill, Mass., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
 Filed Nov. 14, 1968, Ser. No. 775,799
 Int. Cl. H01g 5/26

U.S. Cl. 317-249

2 Claims

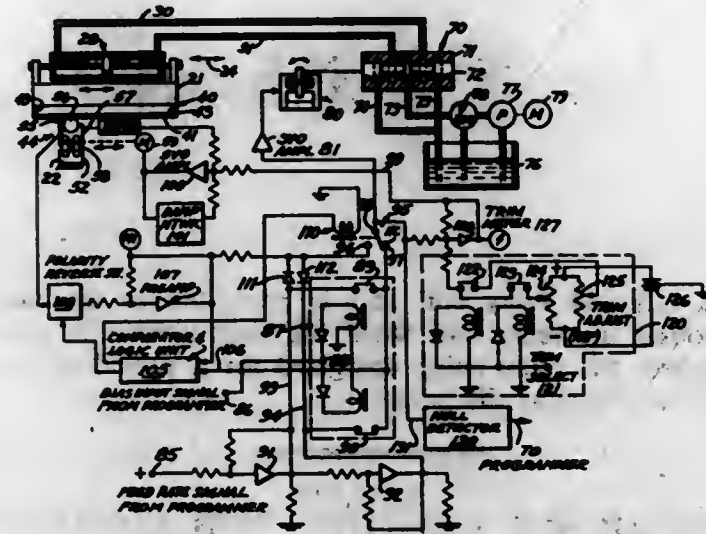


The stationary plates of a capacitor transducer are spaced apart to define a transducing gap between them. A dielectric plate is disposed in the transducing gap and is rotatable to vary the capacitances between the stationary plates. The capacitances may be varied according to predetermined functions by coating the dielectric plate on selected areas of its surface with a thin metallic shielding material.

3,517,283
MACHINE TOOL CONTROL
 Stuart McCullough, Covina, Calif., assignor to True-Trace Corporation, El Monte, Calif., a corporation of California
 Filed July 20, 1967, Ser. No. 654,908
 Int. Cl. B23q 15/00; G05b 19/20

U.S. Cl. 318-18

11 Claims



This invention relates to machine tool controls and especially to a control for that class of machine tool in which two members such as a ways and a slide are relatively moved by a motive means along an axis in order to establish the relative position of a cutting tool and a workpiece. The control includes data means carried by one of the members and adapted to bear data relating to a datum location, a static-reading means on the other one of the members adapted to sense data of the discriminator class on the data means and to produce a signal indicative of the adjacency thereof, and control means responsive to the signal for controlling the power means in response thereto.

According to an optional feature of the invention, one of these means is so disposed and arranged that the sensor means and/or the data are movable with respect to their points of attachment to the machine tool during relative motion of the members, whereby to anticipate the adjacency of the sensor means to the datum location, and also control circuitry effective on the motive means and on the shifted means to return the shifted means to the datum location and to decelerate the member at a proportional rate.

3,517,284
HIGH SENSITIVITY SOLID-STATE SERVO MOTOR CONTROL SYSTEM
 George M. Booth, Jensen Beach, Fla., assignor to Wallace & Tiernan Inc., East Orange, N.J., a corporation of Delaware
 Filed Oct. 2, 1967, Ser. No. 672,225
 Int. Cl. G05b 11/12

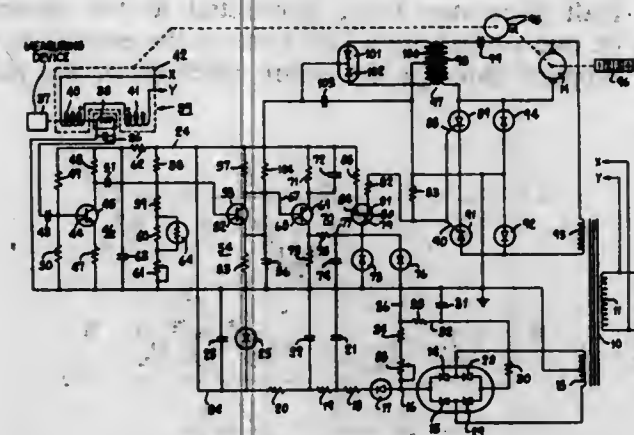
U.S. Cl. 318-18

5 Claims

A high sensitivity control for an alternating current reversible electric motor, in which the energization of the motor is controlled by a pair of threshold responsive control means, e.g., silicon controlled rectifiers, whose control electrodes are supplied with an actuating signal which is the sum of three component potentials, namely:

- an alternating control signal responsive to a variable condition and appearing in a given phase or the opposite phase depending upon the desired direction of motor operation, and varying in amplitude in accordance with the desired speed of motor operation;
- a background potential derived from the AC power source and varying at twice the source frequency, and having a fixed value at the beginning of each half-cycle of the source substantially more negative

than the threshold potential effective to trip the threshold responsive control means, said background potential being effective in the absence of a control signal to energize the motor winding in substantially equal pulses and alternately in opposite senses in succeeding half-cycles; and



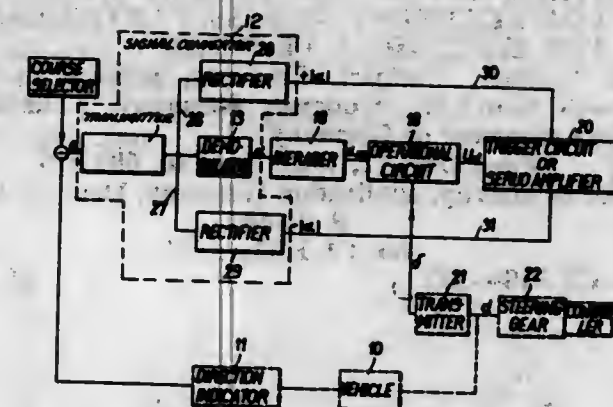
(c) a feedback potential supplied from the motor circuit and effective to introduce a negative (speed reducing) feedback whenever the motor is running.

3,517,285
ELECTRICAL AUTOMATIC PILOT FOR RUDDER-CONTROLLED VEHICLES, PARTICULARLY FOR SHIPS

Walter Kundler, Kronshagen, near Kiel, Germany, assignor to Anschutz & Co., G.m.b.H., Kiel-Wik, Germany, a limited-liability company organized under the German law
 Filed Sept. 4, 1968, Ser. No. 757,276
 Int. Cl. G05b 11/01

U.S. Cl. 318-18

23 Claims



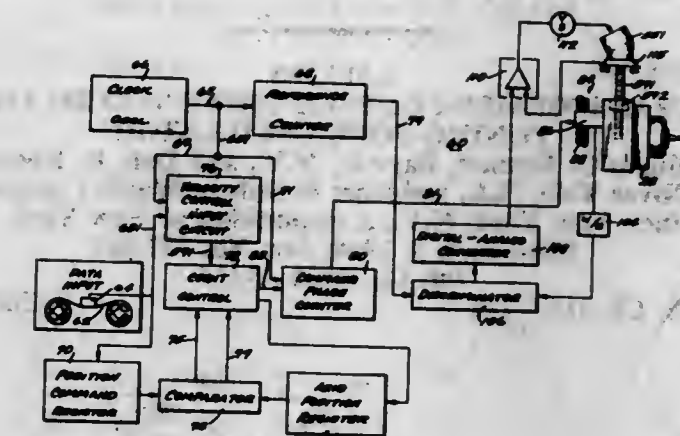
The novel electrical automatic pilot comprises means including a direction indicator, such as a compass, for producing an electrical signal representing the course error. This means is so connected by electrical connecting means with the controller of the steering gear as to cause the latter in response to any course error to actuate the rudder thereby reducing the course error to a minimum. The electrical connecting means include (a) electrical averaging means having a dead zone which permits the ship to perform yawing oscillations within certain limits without causing any rudder actuation, and (b) an operational circuit causing the controller to produce the actuation of the rudder through an instantaneous rudder angle which is composed of three components, the first one being proportional to the output of the averaging means, the second component being proportional to the integral of such output and the third component being proportional to the differential quotient of said output, and (c) a trigger circuit including means having a variable sensitivity and hysteresis and being controlled by the course error.

3,517,286
ABSOLUTE POSITION CONTROL CIRCUIT FOR NUMERICALLY CONTROLLED MACHINE TOOLS

Richard E. Stobbe, Greenfield, Wis., assignor to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
 Filed Apr. 10, 1967, Ser. No. 629,464
 Int. Cl. G05b; H02p 1/54, 5/46, 7/16, 7/17

U.S. Cl. 318-18

14 Claims

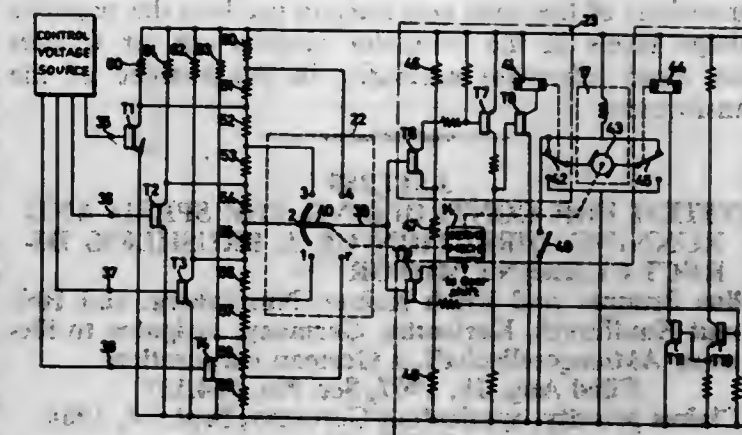


An absolute position control circuit and positioning method for operating the numerical control of a machine tool to position a metal working tool or workpiece along an axis thereof at a desired reference point on the machine tool, hereinafter termed absolute position. The control circuit ascertains the positioning of the metal working tool or workpiece by the control at the reference point of the machine tool independently of the machine tool control and overrides the positioning of the metal working tool or workpiece by the control so as to position the metal working tool or workpiece at the machine tool reference point.

3,517,287
SERVO GEAR SHIFT ARRANGEMENT FOR AUTOMOTIVE VEHICLES
 Hermann Scholl, Stuttgart, and Karl Rilling, Hochdorf, Kreis Esslingen, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
 Filed Oct. 25, 1966, Ser. No. 589,266
 Claims priority, application Germany, Oct. 29, 1965, B 84,298

U.S. Cl. 318-33

8 Claims



A control arrangement for actuating the shift mechanism of a motor vehicle. A servo motor is mechanically coupled to the shift mechanism so as to position the latter in accordance with predetermined signals generated as a function of the operating characteristics of the vehicle.

The operating voltage for the servo motor is supplied by a switching arrangement which acts upon the servo motor in response to tapped voltages from a voltage divider having transistors connected in parallel with predetermined taps. The transistors function to short circuiting portions of the voltage divider and thereby apply operating signals to the servo motor. A follow-up switch with a movable contact and fixed contacts corresponding to the number of shift positions of the vehicle, is electrically connected to the switching arrangement while the movable contact is mechanically coupled to the servomotor drive.

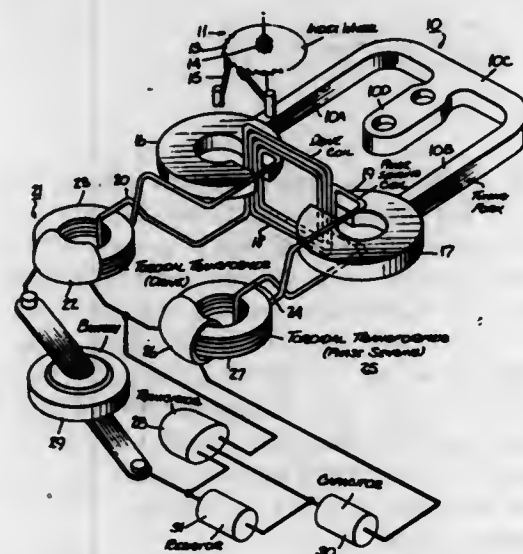
3,517,288

TRANSFORMER-COUPLED DRIVE SYSTEM FOR TUNING-FORK OSCILLATOR

William O. Bennett, Bayside, N.Y., and Dale R. Koehler, River Vale, N.J., assignors to Bulova Watch Company, Inc., New York, N.Y., a corporation of New York
Filed Sept. 3, 1968, Ser. No. 757,069
Int. Cl. H02k 33/14

U.S. Cl. 318-129

5 Claims



A tuning-fork oscillator in which the fork is electromagnetically actuated by an electronically-controlled drive system functioning to maintain the vibratory amplitude within prescribed limits. In the drive system, fixed phase-sensing and drive coils in combination with magnets attached to the vibratory tines of the fork, serve as transducers, a cyclical EMF being induced in the coils in the course of vibration. The transducer coils are coupled through respective step-up transformers to the input and output circuits of a transistor, the applied voltages acting to render the transistor periodically conductive and to regulate the amplitude of drive current flow therein. The transformers function as voltage amplifiers, hence the dimensions of the coils necessary to produce the requisite voltage levels in the transistor circuits are far smaller than those otherwise necessary in the absence of the transformers.

3,517,289

SYSTEM FOR CONTROLLING THE SPEED AND RUNNING DIRECTION OF A BRUSHLESS DIRECT CURRENT MOTOR

Julius Brunner and Erich Raumer, Nuremberg, and Helmut Kaulfisch, Karlsruhe, Germany, assignors to Siemens Aktiengesellschaft, a German corporation
Filed Aug. 29, 1967, Ser. No. 664,139
Claims priority, application Germany, Sept. 14, 1966, S 105,852

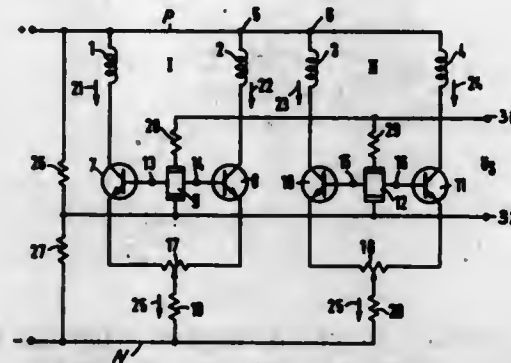
Int. Cl. H02p 7/28

U.S. Cl. 318-138

1 Claim

A system for controlling the speed and running direction of a motor in dependence upon the magnitude and polarity of a variable direct voltage, particularly a reversible error voltage furnished from a self-compensating

measuring or recording apparatus in which the motor being controlled is used for changing the apparatus to a setting that is indicative of the quantity being measured and at which the error voltage is equal to zero. Employed is a direct-current motor whose commutation is effected by means of two Hall generators subjected to the magnetic field of the rotor, the two Hall voltage electrodes of each Hall generator being connected to the respective bases of two transistors which control the energizing currents supplied through the stator windings of the motor.



The control-current terminals of the Hall generators are connected to the circuit that supplies the variable control or error voltage so that the Hall voltage appearing at the Hall electrodes and applied to the bases of the transistors is proportional to the variable error voltage. The intensity of the torque-controlling current flowing through the stator windings in such a system is proportional to the Hall voltages of the Hall-generators and thus proportional to the controlling error voltage as to magnitude and polarity.

3,517,290

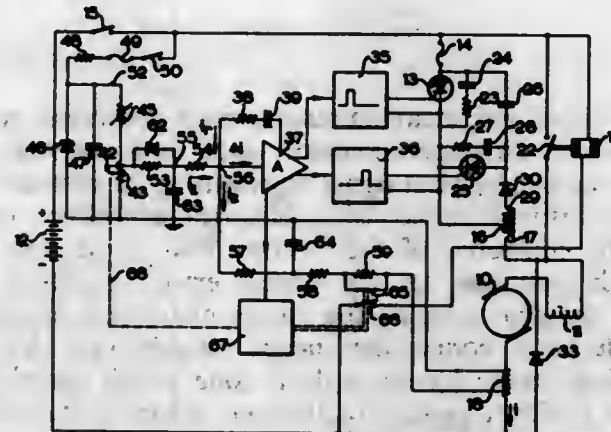
THYRISTOR CONTROL CIRCUIT WITH FULL LOAD CURRENT BY-PASS, PARTICULARLY FOR ELECTRICAL VEHICLES

Peter Gunsser, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany, a limited-liability company of Germany
Filed Dec. 12, 1967, Ser. No. 689,896
Claims priority, application Germany, Dec. 21, 1966, B 90,401

Int. Cl. H02p 5/16

U.S. Cl. 318-332

17 Claims



The power circuit of a motor is supplied intermittently with power through a thyristor, such as an SCR, which is shunted by relay contacts when the thyristor is controlled to be ON continuously; to control the relay for the shunting contacts, an integrating network is provided supplying a control output potential; a voltage sensitive semiconductor switching circuit is responsive to the control output potential to operate the shunt relay in accordance with predetermined signal transfer functions.

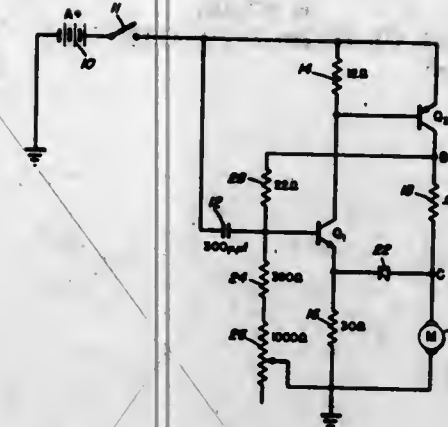
3,517,291

ELECTRIC MOTOR SPEED CONTROL

Winford B. Carruth, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 29, 1967, Ser. No. 641,966
Int. Cl. H02p 5/12

U.S. Cl. 318-332

5 Claims



A continuously variable constant speed regulator for a permanent magnet motor utilizing a two transistor electrical circuit wherein a first transistor is used to control motor current and a second transistor is used to control the first transistor. A manually positioned continuously variable potentiometer is used to vary the second transistor base to emitter voltage thereby permitting continuously variable motor speed regulation.

3,517,292

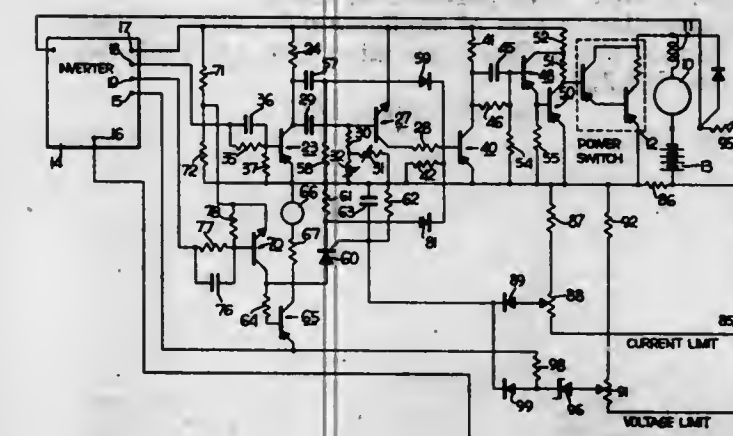
TRANSISTOR POWER SWITCHING CIRCUIT FOR PULSE MODULATION SYSTEM

Tom N. Thiele, Oconomowoc, Wis., assignor to All-Chalmers Manufacturing Company, Milwaukee, Wis.
Continuation of application Ser. No. 719,463, Apr. 8, 1968, which is a division of application Ser. No. 232,462, Oct. 23, 1962. This application Oct. 20, 1969, Ser. No. 867,964

Int. Cl. H03k 17/06

U.S. Cl. 318-341

1 Claim



A pulse modulation control system for energizing a DC motor from a battery has means including a transistor monostable circuit with adjustable time constant elements for producing a succession of unidirectional pulses, manual means for varying the time constant elements of said monostable circuit to control the time duration of said pulses and thereby vary motor speed, and a power switch controlled by said pulses for applying variable duty cycle power pulses to said battery from said motor. The power switch includes a power transistor between the battery and the motor and a driver transistor for the power transistor with a resistance in the collector

circuit of the power transistor to forward bias the collector base junction of said power transistor and maintain it in the saturated region of operation and thereby reduce power dissipation in the power transistor.

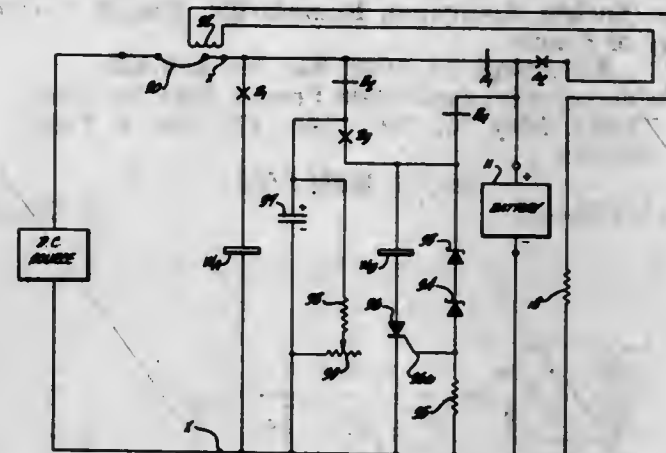
3,517,293

RAPID CHARGING OF BATTERIES

Wilford B. Burkett, Pacific Palisades, and Robert V. Jackson, Los Angeles, Calif., assignors to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed Jan. 31, 1967, Ser. No. 612,995
Int. Cl. H02j 7/00

U.S. Cl. 320-14

14 Claims



A battery is charged by imposing an increasing charge on the battery by charging during a plurality of charge intervals and by providing battery discharge intervals interspersed with the charge intervals and causing the frequency of the discharge intervals to increase as the charge on the battery progresses. Additionally, the duration of intervals of charge may be diminished as the charge on the battery increases whereby the quotient of the duration of the charging interval divided by the duration of a succeeding discharge interval diminishes as the charge on the battery increases.

3,517,294

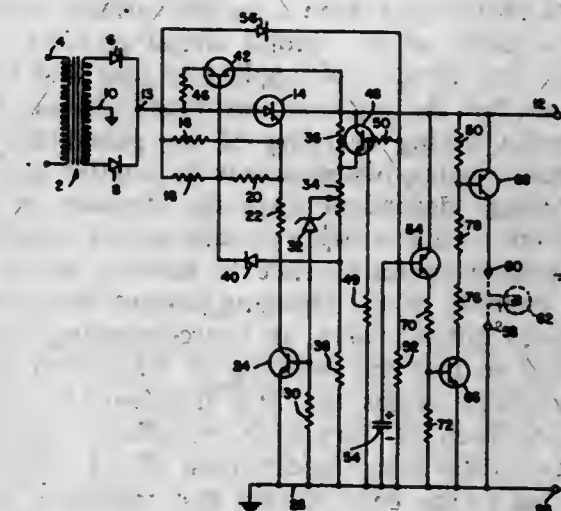
BATTERY CHARGER

Murray A. Ruben, Belmont, Mass., assignor to Tyco Laboratories, Inc., Waltham, Mass., a corporation of Massachusetts
Continuation-in-part of application Ser. No. 525,054, Feb. 4, 1966. This application Apr. 11, 1967, Ser. No. 635,638

Int. Cl. H02j 7/04

U.S. Cl. 320-24

29 Claims



The specification describes a battery charger comprising a fast charge circuit adapted to supply a battery with a high charging rate current and a trickle charge circuit

to supply the battery with a low charging rate current. The fast charge circuit embodies a controlled rectifier that delivers large charging current pulses to the battery and undergoes phase and frequency control according to the state of charge of the battery. The trickle charge circuit also undergoes phase control and delivers current according to the requirements of the battery.

3,517,295 CHARGING DEVICE FOR ELECTROCHEMICAL GENERATORS

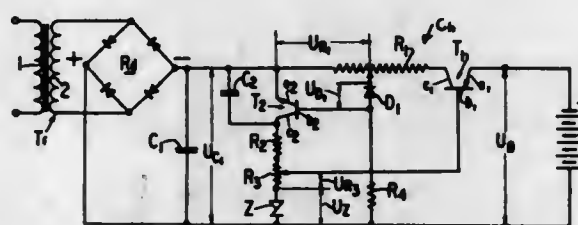
Robert Henri Lapuyade, Enghien-les-Bains, France, assignor to Societe Des Accumulateurs Fixes et de Traction (Societe Anonyme), Romainville, France, a company of France

Filed Sept. 21, 1967, Ser. No. 669,438
Claims priority, application France, Sept. 26, 1966, 77,648; May 26, 1967, 108,147; Aug. 5, 1967, 105,606

Int. Cl. H02J 7/02

U.S. Cl. 320-32

26 Claims



Charging devices for electrochemical generators of lead acid or other types enabling their operation in a practically sealed state, the charging being effected in a programmed manner to provide delivery initially of full charging current to a discharged battery with subsequent automatic reduction thereof as the battery becomes charged and either complete cut-off or else trickle charge maintenance when the battery has become fully charged to maintain it in such state during idling or storage, the devices being supplied by rectified and filtered alternating current and including at least two parallel connected circuits connected to the rectified power source, a first of the circuits supplying charging current to the electrochemical generator via the emitter-collector path of a first transistor, and the second circuit comprising the emitter-collector path of a second transistor, the first transistor being biased by a first voltage varying during charging of the generator as a function of the variable voltage taken at the terminals of the generator and applied to its emitter and upon a second variable voltage taken from a point of the second circuit parallel connected to the first circuit and applied to said first transistor base so that the apparent resistance of said first transistor varies during charging of the generator, the second transistor being biased across its emitter and its base by a voltage dependent upon the intensity of the charging current so that a swing of said second transistor from one extreme operating state to another occurs as soon as the intensity of the charging current falls below a predetermined critical value, an interconnecting circuit being provided so that the swinging of the second transistor correlatively causes the first transistor to swing towards a condition of very high or infinite apparent resistance due to the sharp modification of the reference voltage applied to the base of said first transistor, and, optionally, including a trickle charge circuit to permit trickle charging of the battery after charging thereof has been completed to compensate for self-discharge of the battery during idling or storage.

3,517,296 VOLTAGE CONTROL CIRCUIT FOR A-C GENERATOR SUBJECT TO WIDELY VARYING DRIVE SPEEDS

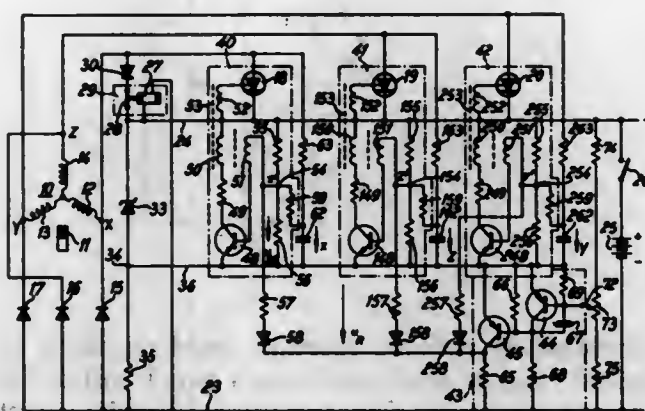
Edgar Kuhn, Gerlingen, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany, a limited-liability company of Germany

Filed June 6, 1967, Ser. No. 643,912
Claims priority, application Germany, June 15, 1966, B 87,561

Int. Cl. H02m 7/20; H02J 7/10

U.S. Cl. 321-5

15 Claims



An oscillator circuit, preferably a blocking oscillator or monopulse oscillator controls the trigger impulse for a group of SCR rectifiers, one for each phase of a three-phase automotive-type generator; control of the blocking oscillator is obtained from sawtooth wave generators, one each connected to a phase and added to an error signal comparing actual output voltage and a reference, so that the oscillator will oscillate during predetermined times of each phase, thus triggering an SCR during such time of each phase, as the sawtooth wave rises during each cycle, and, at a predetermined phase position within each cycle, begins to exceed the reference value.

3,517,297 MULTI-OUTPUT DC POWER SUPPLY MEANS

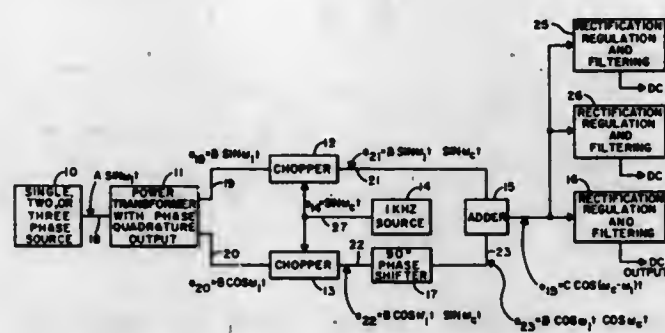
John R. Durio and Harvey S. Taylor, Newport Beach, Calif., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Continuation-in-part of application Ser. No. 703,367, Feb. 6, 1968. This application Oct. 14, 1968, Ser. No. 767,229

Int. Cl. H02m 1/12

U.S. Cl. 321-9

3 Claims



A D-C power supply wherein the A-C source of frequency f_1 which can be single, two or three phase, is supplied to a power transformer which produces an A-C output comprised of quadrature components of frequency f_1 . The A-C component outputs are chopped by a common signal of frequency f_c , where $f_c > f_1$. The two chopped signals are then added together so that the f_1 frequency component cancels out, leaving a constant amplitude signal of frequency $(f_c - f_1)$.

3,517,298 HARMONIC-INSENSITIVE GATED A.C.-TO-D.C. CONVERTER

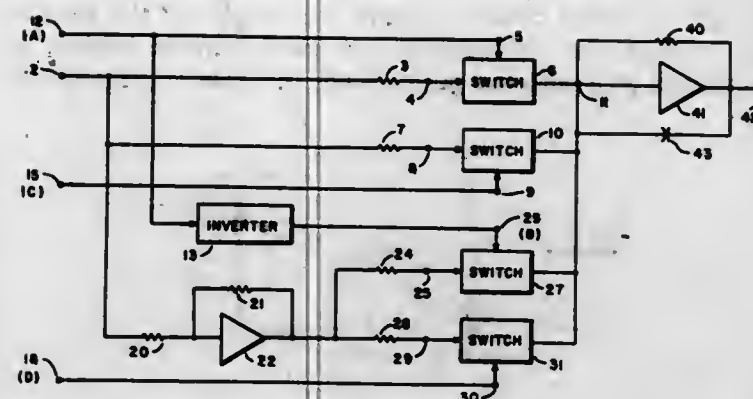
Peter L. Richman, 22 Barbary Road, Lexington, Mass. 02173

Filed July 9, 1968, Ser. No. 743,425

Int. Cl. H02m 1/12, 1/14; G01b 19/22

U.S. Cl. 321-9

21 Claims



A system for converting a time-varying periodic complex electrical input wave to D.C. with reduced response to selected harmonic distortion components of the wave, the system including a conventional A.C.-D.C. converter, the wave being gated to the converter by switches operated by reference gating signals of the same frequency as the fundamental of the input wave. Additional gating signals are provided for operating switches which gate inputs to the converter so that the gain of the converter is altered between selected phase angles (referred to the reference signals) during each cycle of the reference signals.

3,517,299 PULSE SHAPING CIRCUIT

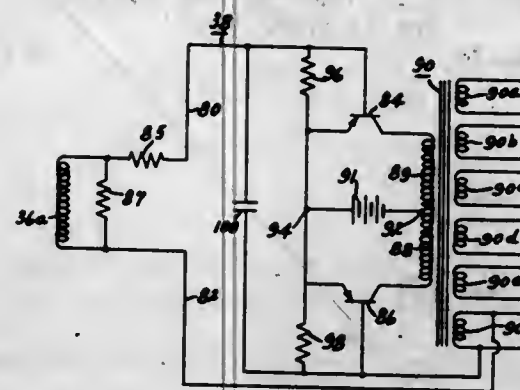
Thomas M. Corry, Goleta, Calif., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application May 20, 1965, Ser. No. 457,329, now Patent No. 3,413,493, dated Nov. 26, 1968. Divided and this application Aug. 14, 1968, Ser. No. 752,533.

Int. Cl. H02m 7/44

U.S. Cl. 321-45

3 Claims



This invention relates to an electrical control circuit for translating the speed of a rotating shaft into an electrical signal the output frequency of which is a function of the speed of rotation of the shaft. The control circuit includes a pair of transistors connected in a push-pull network and these transistors are connected with the output winding of an alternating current generator which is driven by the shaft. The transistors feed a transformer having a primary winding and a plurality of secondary windings and a square wave voltage is induced in the secondary windings when the input of the control circuit is fed by the alternating current generator. A feedback circuit is

provided between one of the secondary windings and the input of the electrical control circuit. The control circuit is adapted for use in controlling the output frequency of an inverter which feeds an induction motor.

3,517,300 POWER CONVERTER CIRCUITS HAVING A HIGH FREQUENCY LINK

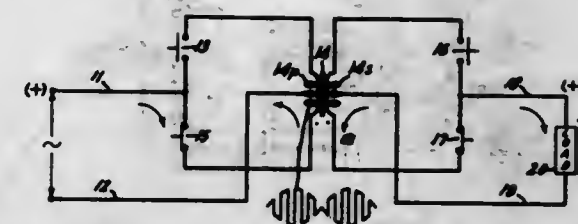
William McMurray, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 16, 1968, Ser. No. 721,817

Int. Cl. H02m 5/16, 5/30

U.S. Cl. 321-60

14 Claims



Several single phase solid state power converter circuits have a high frequency transformer link whose windings are connected respectively to the load and to a D-C or low frequency A-C source through inverter configuration switching circuits employing inverse-parallel pairs of controlled turn-off switches (such as transistors or gate turn-off SCR's) as the switching devices. Filter means are connected across the input and output terminals. By synchronously rendering conductive one switching device in each of the primary and secondary side circuits, and alternately rendering conductive another device in each switching circuit, the input potential is converted to a high frequency wave, transformed, and reconstructed at the output terminals. Wide range output voltage control is obtained by phase shifting the turn-on of the switching devices on one side with respect to those on the other side by 0° to 180° , and is used to effect current limiting, current interruption, current regulation, and voltage regulation.

3,517,301 REGULATED POWER SUPPLY

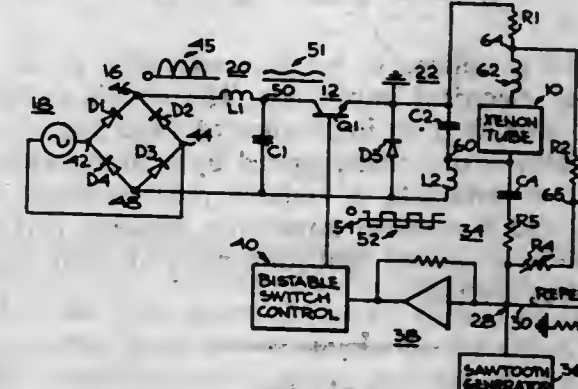
Richard A. Huber, Sherman Oaks, Calif., assignor to The Bunker-Ramo Corporation, Canoga Park, Calif., a corporation of Delaware

Filed Oct. 23, 1967, Ser. No. 677,412

Int. Cl. G05f 1/56, 1/64

U.S. Cl. 323-20

3 Claims



A regulated power supply particularly suitable for use with a varying impedance load such as a xenon light source. The power supply includes a feedback loop responsive to load current for controlling DC voltage transformation by controlling the duty cycle of a power switch. In order to assure system stability, the duty cycle is also responsive to the rate of change of load voltage with circuit values being selected to yield a substantially constant system damping factor essentially independent of variations in load impedance.

3,517,302

APPARATUS FOR MEASURING CONDUCTIVITY AND VELOCITY OF PLASMA UTILIZING A PLURALITY OF SENSING COILS POSITIONED IN THE PLASMA

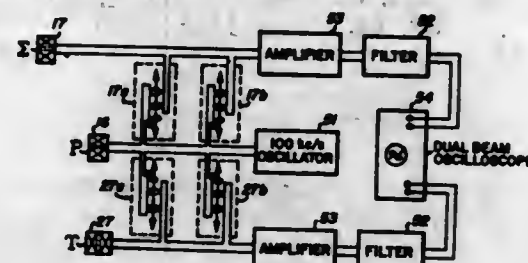
Vernon J. Rosow, Los Altos, Calif., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Apr. 20, 1967, Ser. No. 634,038

Int. Cl. G01r 33/12

U.S. Cl. 324—34

13 Claims



A system for measuring the conductivity and velocity of plasma streams employs a primary coil and several secondary coils magnetically linked thereto through the plasma. The positions of the secondary coils relative to the primary are such that they respond to distortions of the magnetic field produced by the presence of the electrically conductive fluid. The signals in the secondaries vary linearly with the conductivity and the product of conductivity times velocity.

3,517,303

CIRCUIT FOR PRODUCING A SYNTHESIZED IMPEDANCE

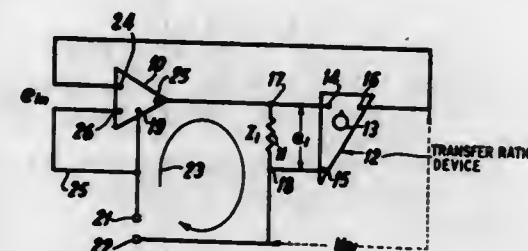
Loebs Julie, New York, N.Y., assignor to Julie Research Laboratories, Inc., New York, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 761,488, Sept. 23, 1968. This application May 1, 1969, Ser. No. 826,770

Int. Cl. G01r 15/08

U.S. Cl. 323—100

12 Claims



A circuit is utilized to produce selectable values of a synthesized electrical impedance. The circuit includes a high-gain amplifier, an impedance of fixed value, and a transfer ratio device characterized by a fixed impedance between two terminals, a variable predetermined transfer ratio, and a variable impedance between two other terminals. In a second embodiment, two such transfer ratio devices are utilized.

3,517,304

NON-DESTRUCTIVE TEST METHOD FOR DETERMINING DESTRUCTION CHARACTERISTICS OF ELECTRICAL COMPONENTS

Gaylord A. Swartz, Independence, Kans., assignor, by mesne assignments, to Electra/Midland Corporation, Kansas City, Kans., a corporation of Delaware

Filed Aug. 7, 1967, Ser. No. 658,846

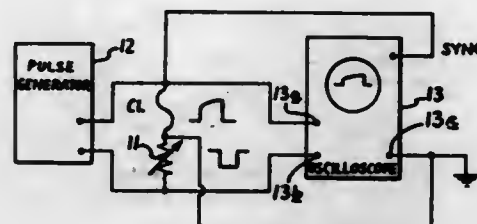
Int. Cl. G01r 31/00

U.S. Cl. 324—28

5 Claims

A non-destructive test method for determining the destruction characteristic of electrical components exhibiting dynamic characteristics which are dependent upon

power stress. In one particular application, the method is used to determine the clear time of electrical current limiters, that is the time required for the current limiters to open the circuit when subjected to an overload. The dynamic characteristics of the current limiters which is used to determine the clear time in the non-destructive test is the voltage rise characteristic. In order to determine the relationship of the clear time to the voltage rise characteristic, a selected number of current limiters are subjected to an electrical pulse corresponding to a certain overload condition, and the height of the resulting voltage rise characteristic of each current limiter is measured at a selected point. Each of these current limit-



ers is then subjected to a destructive signal corresponding to the same overload condition and blown to determine the actual clear times of the current limiters. The measured values of the height of the voltage rise characteristic and the clear times are then used to determine the relationship of the clear time to the measured height. Then additional current limiters are subjected to non-destructive electrical pulses corresponding to the same overload condition, and the height of the resulting voltage rise characteristic is measured and used to determine the clear time in accordance with the previously determined relationship of the clear time to the measured height of the voltage rise characteristic.

3,517,305

MAGNETIC TAPE TESTER IN WHICH, AFTER COMPARISON WITH A STANDARD, AN ERRONEOUS SIGNAL IS STORED FOR LATER ANALYSIS

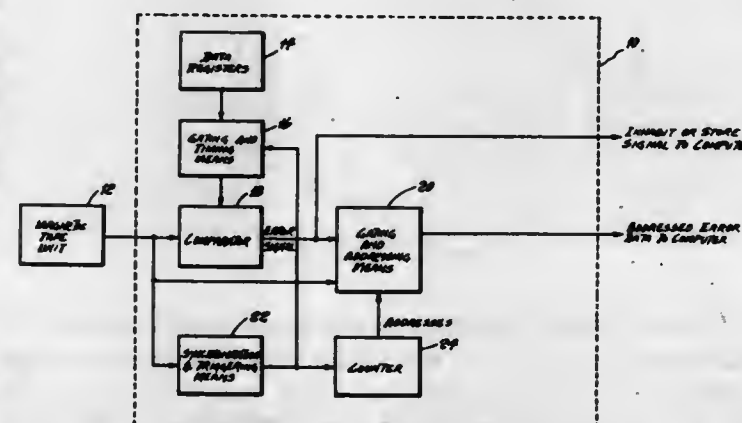
Robert Schwartz and Marvin Schwartz, Queens, and Ronald Zussman, Kings, N.Y., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 22, 1968, Ser. No. 769,586

Int. Cl. G01r 33/12

U.S. Cl. 324—34

4 Claims



Logic circuitry for comparing data recorded on a magnetic tape with the same data stored in a plurality of registers and for producing an error signal whenever there is a discrepancy therebetween. The error signals are addressed by a binary counter and gated to a computer for storage. Gating and timing circuits provide for the signal synchronization.

3,517,306

SIGNAL REFLECTION TYPE FAULT LOCATION SYSTEM UTILIZING A LOW FREQUENCY TEST SIGNAL WITH TEST SIGNAL CANCELLATION IN SIGNAL DISPLAY APPARATUS

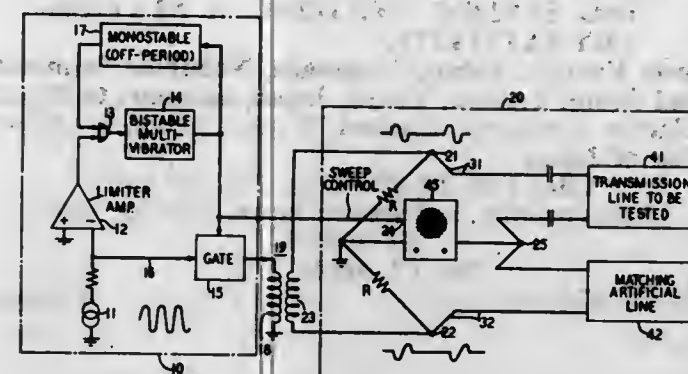
Theodore C. Anderson, Middletown, and James F. Ingle, Fair Haven, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed June 25, 1968, Ser. No. 739,847

Int. Cl. G01r 31/11

U.S. Cl. 324—52

3 Claims



A signal reflection type fault location system utilizes a test signal having a periodically recurring single-cycle sinusoidal waveform. This particular test signal permits the testing of coil-loaded transmission lines, as well as unloaded transmission lines, by concentrating the test signal energy in a frequency range readily transmitted by the transmission line. The test signal is applied to a bridge network including the transmission line under test and an artificial transmission line having electrical characteristics identical to those of the transmission line under test. The differences in the signal reflection response of the transmission line under test to the test signal from that of the artificial transmission line are displayed and indicate the location and nature of faults in the transmission line under test.

3,517,307

TRACK PROFILE AND GAUGE MEASURING SYSTEM

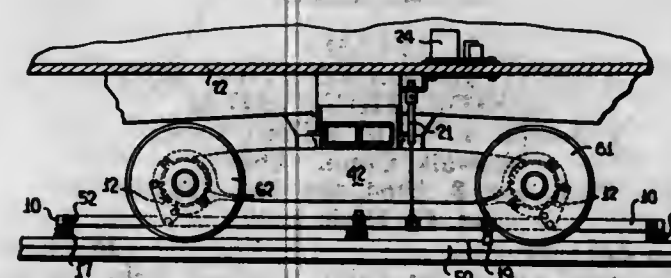
James Wallen, Jr., Annandale, and Richard H. Hronik, Falls Church, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed Sept. 12, 1967, Ser. No. 667,173

Int. Cl. G01r 27/26; G01n 27/22

U.S. Cl. 324—61

12 Claims



Instrumentation mounted aboard (i.e., on or about, or both) a railway car or the running gear or undercarriage thereof, and adapted for high speed survey measurements of track profile, i.e., vertical curvature or elevation, alignment, i.e., lateral curvature, and other railway track and rail parameters, by means of sensors having an electrical parameter that varies according to proximity to the rails

of the track without contacting the rails. Such sensing is accomplished using capacitive probes mounted on the train for movement closely adjacent the rails.

3,517,308

APPARATUS AND METHOD FOR TESTING ELECTRONIC COUNTING SYSTEMS

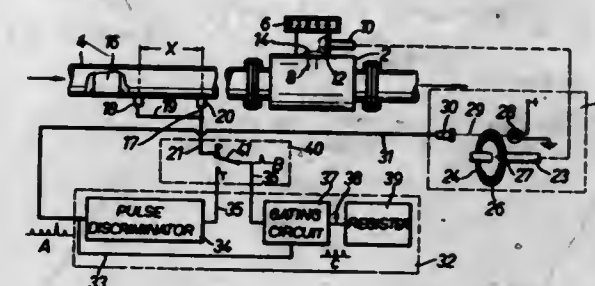
Mohammad Kian Mirdad, 7020 Alwell St., Houston, Tex. 77036

Filed Feb. 1, 1968, Ser. No. 702,355

Int. Cl. G06f 11/00

U.S. Cl. 324—68

6 Claims



In one exemplar form, test apparatus is utilized for determining the accuracy and checking the performance of an electronic pulse transmission and counting system utilized in controlling, calibrating or metering fluid flow-meters. A repetitive series of electrical pulses of predetermined number generated by a rotary transducer are applied to the electronic pulse transmission and counting system. The series of predetermined number of pulses are spaced at sufficient time intervals to enable the registered pulses to be read from the counter for indicating the performance of the counting system prior to the registration of the next series of pulses.

3,517,309

MICROWAVE SIGNAL PROCESSING APPARATUS

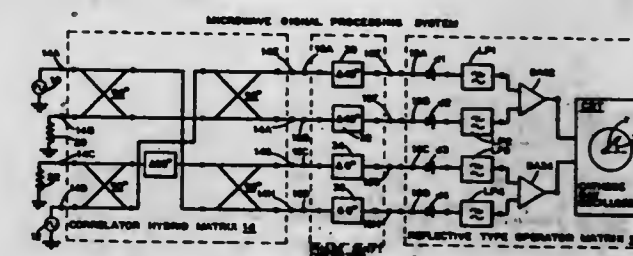
Carl W. Gerst, Skaneateles, N.Y., assignor to Anaren Microwave, Incorporated, Syracuse, N.Y., a corporation of New York

Filed May 28, 1969, Ser. No. 828,656

Int. Cl. G01r 23/04; H01p 5/12; H03h 7/30

U.S. Cl. 324—84

15 Claims

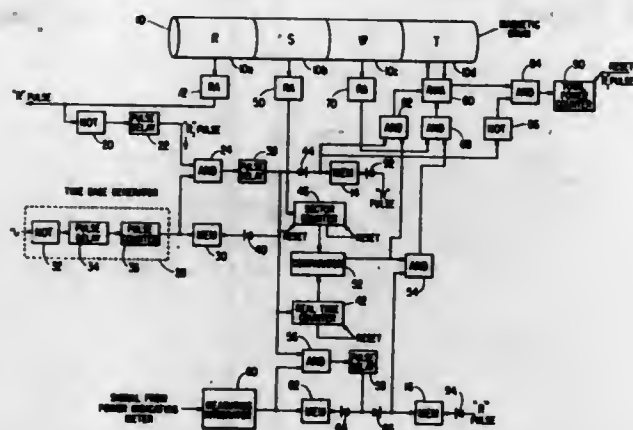


A microwave system comprises a hybrid matrix having input ports for receiving signals and output ports connected to the input ports of a phase shift operator matrix whose output ports are connected to the input ports of another operator matrix which can reflect signals back to the hybrid matrix.

In one embodiment for measuring the properties of two input signals the hybrid matrix is a correlator matrix while the reflective operator matrix includes detectors and differential amplifiers and a cathode ray tube oscilloscope for displaying the product of the magnitudes of the input voltages of the signals and the differential phase between the signals. In another embodiment of the invention in the form of a multichannel amplifier, the hybrid matrix is a power dividing matrix the reflective operator matrix is an amplifier matrix.

3,517,310
CONTINUALLY INTEGRATING USAGE COMPUTER HAVING MEANS TO BRIEFLY STORE POWER DEMAND INFORMATION
 Robert H. Gates, Eastlake, and Joseph M. Kovack, Chesterland, Ohio, assignors to Bailey Meter Company, a corporation of Delaware
 Filed June 11, 1968, Ser. No. 736,201
 Int. Cl. G01r 19/16; G06f 15/56
 U.S. Cl. 324—103

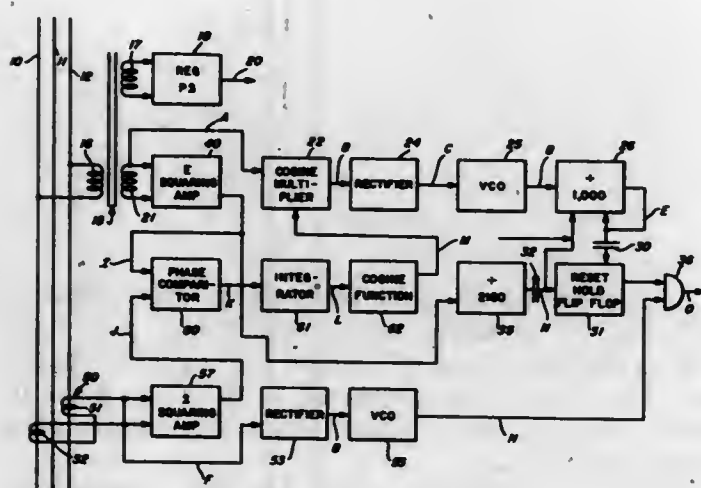
6 Claims



An apparatus for measuring and recording the highest average usage of electric power or gas during a fixed time period where the period of time continuously changes its starting and ending times but remains fixed in length. An integrator supplies pulses to a storage medium at a rate proportional to power or gas usage with the storage medium continuously updating the stored information. The information stored in the storage medium is available for display or control purposes.

3,517,311
PULSE ACCUMULATING WATT-HOUR MEASURING SYSTEM
 John Paul Wasielewski, Scottsdale, and William L. McAtee, Tempe, Ariz., assignors to Franor Industries, Inc., a corporation of Delaware
 Filed Dec. 26, 1968, Ser. No. 786,876
 Int. Cl. G01r 21/00
 U.S. Cl. 324—142

5 Claims

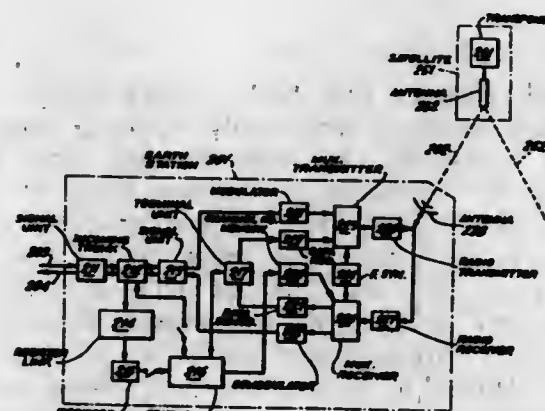


A system for accumulating pulses indicative of power consumption by measuring the voltage and current, comparing square wave representations of both and developing a direct current level proportional of the cosine of the angle between the two. The DC level is utilized to modify the amplitude of the measured alternating current voltage; the modified voltage together with a

voltage representing measured current are rectified and applied to separate voltage controlled oscillators. The pulse output of one of the voltage controlled oscillators is accumulated and sampled at predetermined intervals; the number stored pulses determines the time duration of the opening of a gate to permit pulses from the other voltage controlled oscillator to pass. The pulses passing the gate are stored and remain available for access upon a request signal from a remote station.

3,517,312
TELEPHONE AND TELEGRAPH SWITCHING SYSTEM UTILIZING A STATIONARY SATELLITE
 Shigeki Yamato, Tatsuki Watanabe, Nobuhiko Shimasaki, and Shunji Tashiro, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan
 Filed Feb. 23, 1967, Ser. No. 617,882
 Claims priority, application Japan, Feb. 23, 1966, 41/10,877
 Int. Cl. H04b 7/20
 U.S. Cl. 325—4

4 Claims



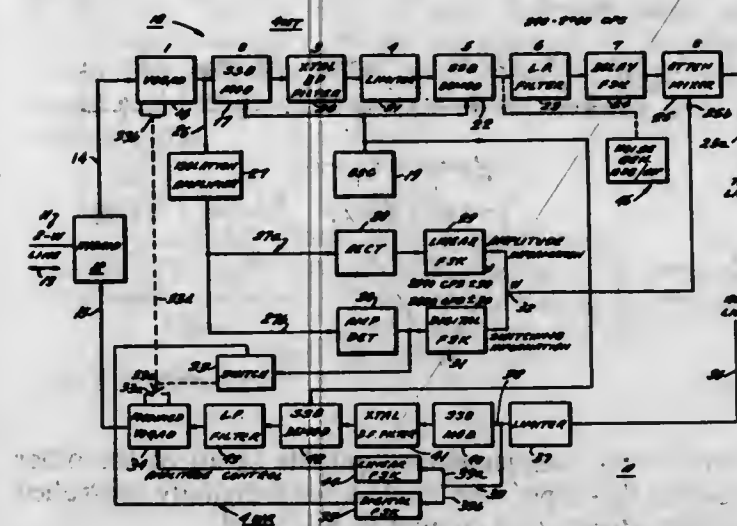
A telephone and telegraph switching system utilizing an artificial satellite relay station, and a plurality of earth stations. The relay station is equipped with transponders to which a plurality of frequency bands are assigned including a number of communication channels and control channels. Each earth station is provided with a transmitter modulator for transmitting communications and control information to be sent out into a specific idle channel and control channel respectively, the latter defining the idle path among the channels assigned to the originating or terminating earth stations; a receiving demodulator for extracting communication information and control information from the transponder; and a detector unit for detecting the origination of calls, the terminating earth stations and the termination of calls.

3,517,313
AMPLITUDE ELIMINATION AND RESTORATION SYSTEM
 Joseph A. Vassle, 4 Thorp Lane, Norwalk, Conn. 06850
 Filed Apr. 8, 1964, Ser. No. 358,360
 Int. Cl. H04k 1/00
 U.S. Cl. 325—32

18 Claims

1. Terminal means for radio telephone links and the like comprising send channel means for transmitting voice signals, said send channel being comprised of first means for amplifying said voice signals; second means for modulating operating at a predetermined center frequency; said second means having means for modulating said center frequency by said voice signals; third means for converting the output of said second means into a modulated signal having constant amplitude; fourth means for de-modulating the output of said third means about said

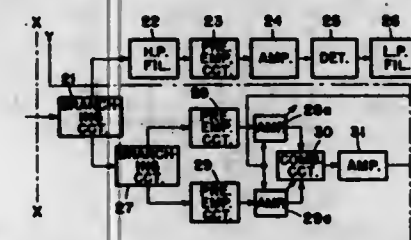
predetermined center frequency; fifth means for converting the output of said first means into a frequency varying signal, the frequency of said frequency varying signal



nal being controlled by the amplitude of said first means output signal; means for combining the output signals of said fourth means and said fifth means.

3,517,314
VARIABLE EMPHASIS FREQUENCY MODULATION SIGNAL TRANSMISSION SYSTEM
 Masahisa Miyagi, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan
 Filed Feb. 9, 1968, Ser. No. 704,350
 Claims priority, application Japan, Feb. 13, 1967, 42/8,827
 Int. Cl. H04b 1/12
 U.S. Cl. 325—46

15 Claims

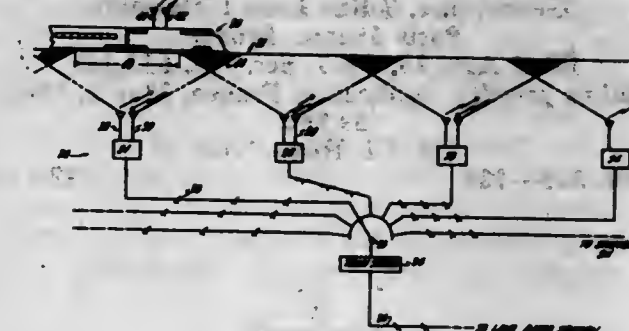


A variable emphasis frequency modulation signal transmission system including a variable pre-emphasis signal transmitter and a variable de-emphasis signal receiver; the variable pre-emphasis transmitter having an information signal divided into two portions of which one portion provides a preselected, pre-emphasized high frequency component which is translated into a first control signal varying in level in correspondence with the varying level of the information signal and the other portion is divided into two further portions of which one further portion is pre-emphasized by a first predetermined degree and the other further portion is pre-emphasized by a second predetermined degree which is different from the first predetermined level, and the pre-emphasized two further portions are differentially combined under control of the first control signal into a first composite signal varying in level in correspondence with the level variations of the information signal; and the receiver having a received signal divided into two additional portions of which one portion provides a second preselected, pre-emphasized high frequency component which is translated into a second control signal varying in level in correspondence with the varying level of the received signal and the other additional portion is divided into fifth and sixth portions of which the fifth portion is de-emphasized by a third predetermined degree which is equal to the first predetermined degree and the sixth portion is de-emphasized by a fourth predetermined degree which is equal to the second predetermined degree, and

the de-emphasized fifth and sixth portions are differentially combined under control of the second control signal into a second composite signal varying in level in correspondence with the varying level of the received signal to provide a substantial reproduction of the transmitter information signal.

3,517,315
MOBILE TELEPHONE TRANSMITTER SELECTOR CIRCUIT
 Marvin F. Malm, Milan, Tenn., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware
 Filed June 21, 1967, Ser. No. 647,747
 Int. Cl. H04b 7/08; H04m 3/00
 U.S. Cl. 325—54

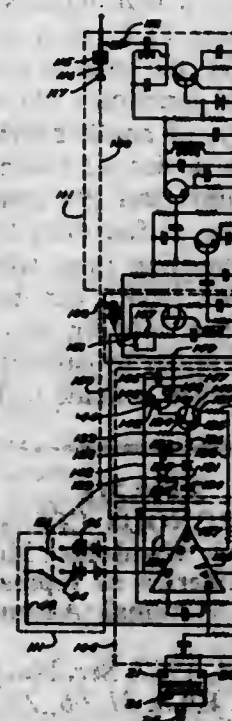
7 Claims



A number of radio telephone stations are spread out along a train track in order to provide radio link channels for telecommunication with the train. All receivers listen for telephone signals received from the train via the radio links. The receiver of the strongest signal turns on, and, responsive thereto, its associated transmitter also turns on. In overlap zones, where two receivers receive signals having the substantially same strength, timers operate to prevent oscillations of transmitters turning each other on and off.

3,517,316
SURVEILLANCE EQUIPMENT AND SYSTEM
 Kenneth G. Anderson, James R. Anderson, and John B. Hatcher, Minneapolis, Minn., assignors, by means of assignments, to Research Instruments & Controls, Inc., a corporation of Minnesota
 Filed Mar. 22, 1966, Ser. No. 536,324
 Int. Cl. H04b 1/02
 U.S. Cl. 325—113

8 Claims



A sensor in the form of a Geophone generates an electrical signal in response to the footsteps of a human

being. After amplification, the signal closes a switch to supply electric power from a battery to a signaling device. All of the components for providing the sensing and signaling are located in a single housing to provide a self-contained unit. A parachute permits the unit to be dropped safely from an aircraft. Provision is made for sending coded ratio signals to a central receiver from each unit when a number of units are used, means being provided at the receiver for discriminating between the various coded signals so as to identify the particular unit or units that are transmitting a signal.

3,517,317 MULTI-SOURCE SIGNAL COUPLING SYSTEM USING HYBRID JUNCTIONS TO COMPENSATE FOR SOURCE AMPLITUDE UNBALANCE

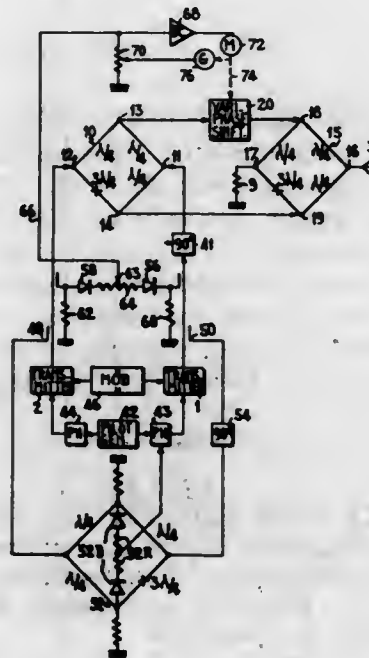
Gérard Sire, 7 Rue Leon L'Hermite,
Paris 15eme, France

Filed Apr. 25, 1967, Ser. No. 633,460
Claims priority, application France, May 2, 1966,
59,864

Int. Cl. H04b 1/04

U.S. Cl. 325-128

13 Claims



For coupling the two synchronous signal sources such as television transmitters (1,2) to a common utilization device, e.g. antenna (3), the sources are connected to the inputs of a first hybrid junction (10) whose outputs are connected to the inputs of another hybrid junction (15) having the utilization device (3) connected to one of its outputs and a dummy load (9) connected to its other output. A variable phase shifter (20) is interposed in one of the hybrid-interconnecting lines whereby the feed of power to the utilization device can be maximized even in case of an unbalance between the signal amplitudes produced by the sources, as in case of failure of one of the transmitters. Reference is made to FIG. 1.

3,517,318 SYNCHRONOUS COUNTER

Duane K. McDermott, Gambrills, Md., assignor to the
United States of America as represented by the Ad-
ministrator of the National Aeronautics and Space
Administration

Filed July 24, 1967, Ser. No. 655,677

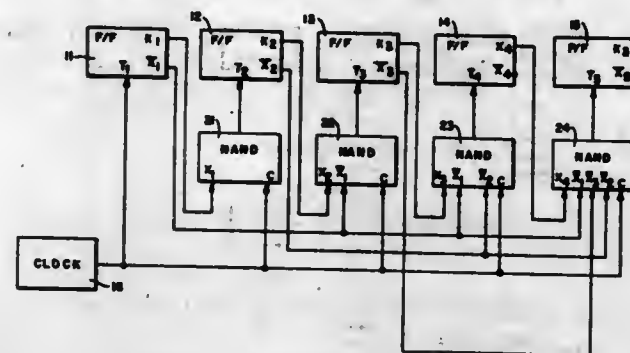
Int. Cl. H03k 21/06, 23/04

U.S. Cl. 328-42

8 Claims

A counter comprises a plurality of cascaded binary stages, each of which, except the first, is driven by the

previous stages and an input source through a NAND gate. Each NAND gate is connected directly to the input pulse source and to the output of the preceding flip-flop,



as well as to complementary outputs of all of the other preceding flip-flops. Also disclosed is a digitally controlled oscillator, driven by a counter as described.

3,517,319 DIGITAL APPARATUS FOR GENERATING A WAVE HAVING AN ACCURATELY PREDETERMINED PHASE SETTING

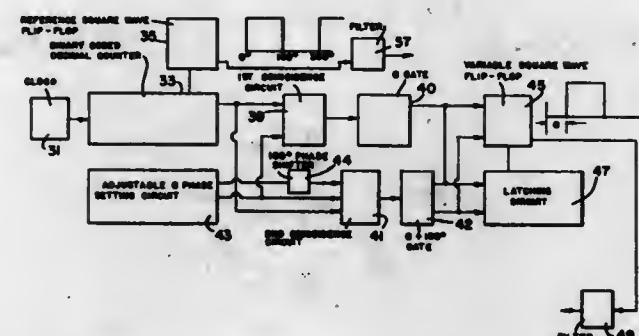
Edwin M. Drogin, North Merrick, N.Y., assignor to the
United States of America as represented by the Sec-
retary of the Army

Filed Feb. 19, 1968, Ser. No. 706,235

Int. Cl. H03k 5/13, 5/153

U.S. Cl. 328-55

5 Claims



The present invention relates to digital apparatus for the generation of a wave having an accurately predetermined phase setting. The present apparatus utilizes NAND gate coincidence circuitry for generating a variable wave which is phase shifted from a reference wave by a predetermined amount while achieving a high degree of accuracy in the phase shift.

3,517,320 MAGNETOSTRICTIVE DELAY LINE PULSE SEQUENCE GENERATOR

Jerome J. Tiemann, Schenectady, N.Y., assignor to Gen-
eral Electric Company, a corporation of New York

Filed Dec. 26, 1967, Ser. No. 693,497

Int. Cl. H03k 5/159

U.S. Cl. 328-56

14 Claims



An arbitrary sequence of sharp electrical output pulses is produced by inducing a single sonic pulse in a wire of magnetostrictive material. The voltages picked up by

coils spaced along the wire are integrated electronically to produce the output pulses. The wire is extended beyond the launch coil a distance substantially equal to one-half the sum of the launch coil length plus diameter, so that the leading edge of each reflected sonic pulse follows immediately upon the trailing edge of the original pulse. The reflected pulse is adjusted in amplitude to cancel the tail on each output pulse resulting from the original pulse.

3,517,321 RISE TIME DISCRIMINATOR

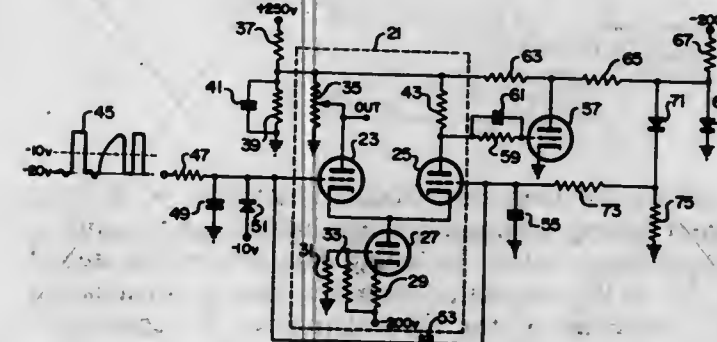
Marvin Weiss, Hicksville, N.Y., assignor to Burroughs
Corporation, Detroit, Mich., a corporation of Michigan

Filed Feb. 17, 1967, Ser. No. 616,931

Int. Cl. H03k 5/20

U.S. Cl. 328-114

14 Claims



The invention relates to a discriminator circuit, which includes a differential amplifier used to block all signals having a rate of rise smaller than a predetermined rate. In order for a signal to be passed by the circuit, its rate of rise must be greater than the charging rate of a capacitive charging circuit coupled to one input of the differential amplifier.

3,517,322 PHASE DETECTOR

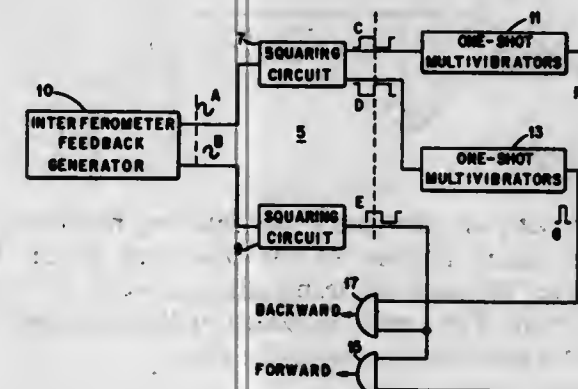
Clark M. Lay, Oak Ridge, Tenn., assignor to the United
States of America as represented by the United States
Atomic Energy Commission

Filed Jan. 22, 1968, Ser. No. 699,575

Int. Cl. H03b 3/04

U.S. Cl. 328-133

4 Claims



A phase detector for handling count pulses in a bidirectional counting system has been provided. Phase differing input pulses indicative of a given count and the direction of that count are converted to a single count pulse of a predetermined duration and presented at either a "forward" or "backward" count output terminal depending upon the phase relationship of the input pulses, thus eliminating the need for the usual direction command signal in processing bidirectional count pulses.

3,517,323 FOUR-QUADRANT PHASE SHIFTER

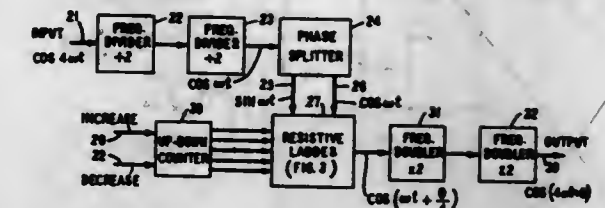
Harry R. Radin, Jr., Lincroft, N.J., assignor to Bell Tele-
phone Laboratories, Incorporated, Murray Hill, N.J.,
a corporation of New York

Filed Nov. 20, 1967, Ser. No. 684,448

Int. Cl. H03b 3/04

U.S. Cl. 328-155

7 Claims



An all-electronic phase-shifter provides digital control of phase over a 360-degree range with a single resistive ladder network. The stable oscillation to be phase shifted is divided in frequency by four and split into quadrature phases. The quadrature phases are differentially attenuated by a control signal and recombined to yield one-fourth the desired phase shift. Frequency multiplication by four completes the phase-shifting operation with a considerable saving in critical apparatus components.

ERRATA

For Classes 329-101, 329-122 and 330-15 see:
Patent Nos. 3,517,267, 3,517,268 and 3,517,270

3,517,324 COMPLEMENTARY EMITTER FOLLOWER

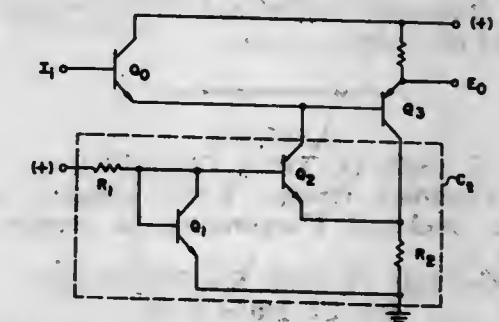
David Eric Perlman, Rochester, N.Y., assignor to East-
man Kodak Company, Rochester, N.Y., a corporation
of New Jersey

Filed Jan. 22, 1968, Ser. No. 699,437

Int. Cl. H03f 3/18

U.S. Cl. 330-17

3 Claims



A current amplifier has a very high input impedance and is easily fabricated as an integrated circuit. It uses resistors having comparatively low values, and a constant current source for base bias.

3,517,325 COMPENSATED DC AMPLIFIER INPUT STAGE EMPLOYING JUNCTION FIELD EFFECT TRANSISTORS

David E. Blackmer, Weston, Mass., assignor to Instru-
mentation Laboratories, Inc., Watertown, Mass., a
corporation of Massachusetts

Filed Mar. 9, 1967, Ser. No. 621,875

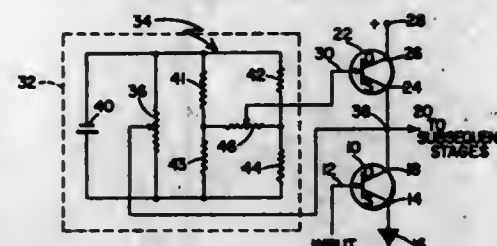
Int. Cl. H03f 1/32, 3/16

U.S. Cl. 330-23

13 Claims

A high performance DC amplifier input stage includes an input junction field effect transistor and a compensation junction field effect transistor connected in series cascade. A bias potentiometer and a temperature responsive bridge network are connected to the cascaded pair of transistors. The bridge elements are selected so that the

bridge is in balance at a selected maximum operating temperature. At that temperature the bias potentiometer is adjusted to achieve a desired input voltage condition. The circuit is then placed at a selected minimum operating



temperature and the bridge output is adjusted to achieve the same input voltage condition. The circuit, as adjusted compensates the input transistor over the desired range of operating temperature.

3,517,326

GATE RELAXATION OSCILLATOR

Edouard Roesch, Le Locle, Switzerland, assignor to Dixie S.A., Neuchatel, Switzerland

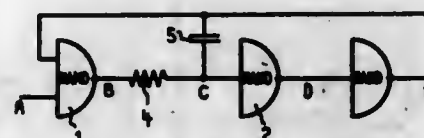
Filed June 24, 1968, Ser. No. 739,527

Claims priority, application Switzerland, June 30, 1967, 9,340/67

Int. Cl. H03b 5/20

U.S. Cl. 331-57

6 Claims



A gate relaxation oscillator of the type having a ring of gates fed-back in itself and RC-coupling means between gate inputs and outputs, the multivibrator oscillating at a frequency determined by the values of elements of said RC-coupling means.

3,517,327

LASER OUTPUT COUPLER

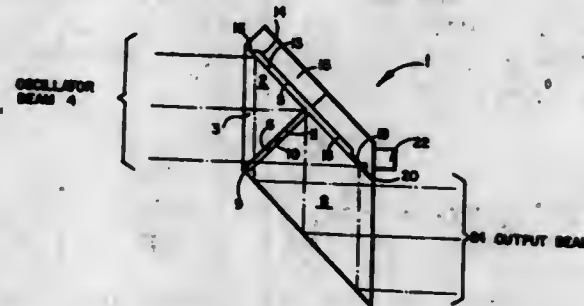
Robert L. Treuthart, Orange, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed July 19, 1965, Ser. No. 473,052

Int. Cl. H01s 3/00

U.S. Cl. 331-94.5

17 Claims



A device for splitting an incident beam of laser radiation by means of a frustrated total internal reflection gap such that a portion of the incident beam is reflected onto itself and a portion is coupled through the device to provide an output beam substantially parallel to the direction of the incident laser radiation. The device is contained in a cover that provides protection for the gap and supports additional beam splitters for monitoring the incident laser radiation.

3,517,328
METHOD AND APPARATUS FOR STABILIZING A GASEOUS OPTICAL MASER

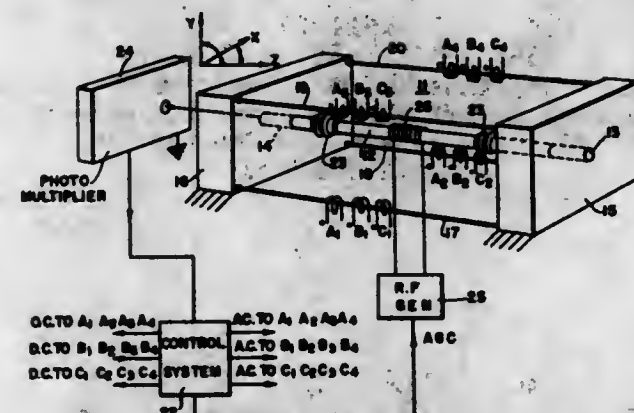
Hugh L. Dryden, Deputy Administrator of the National Aeronautics and Space Administration, with respect to an invention of Ali Javan, Boston, Mass., and Koichi Shimoda, Tokyo, Japan

Filed Oct. 24, 1965, Ser. No. 505,320

Int. Cl. H01s 3/00

U.S. Cl. 331-94.5

12 Claims



A scheme for long term frequency stability of an optical maser having a sinusoidally modulated cavity employing closed loop controls including detection of the second derivative of the modulated beam for control of excitation energy, detection of the third derivative for control of average separation and detection of the first derivative for control of tilt angles.

3,517,329

LASER HAVING AN ELECTROSTRICTIVE DETUNING MEMBER

Hendrik de Lang and Gijbertus Bouwhuis, Eindhoven, Netherlands, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

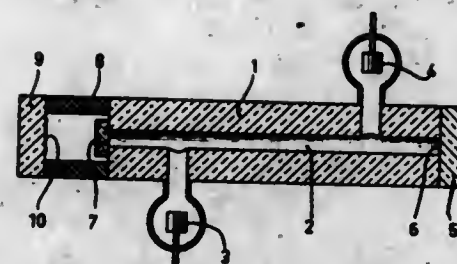
Filed Sept. 28, 1966, Ser. No. 582,719

Claims priority, application Netherlands, Oct. 8, 1965, 6513042

Int. Cl. H01s 3/02

U.S. Cl. 331-94.5

4 Claims



A laser having an electrostrictive detuning member outside of the sealed portion of the discharge space. The member serves to space the terminating reflector from the discharge cavity. The cavity is sealed at the detuning end by means of a low energy absorption plate.

3,517,330

FREQUENCY STABILIZATION OF LASER SYSTEM WHICH COMPARES THE AMPLITUDES OF TWO BEAT NOTE SIGNALS

Walter M. Doyle, Laguna Beach, and Matthew B. White, Newport Beach, Calif., assignors to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Nov. 9, 1966, Ser. No. 593,212

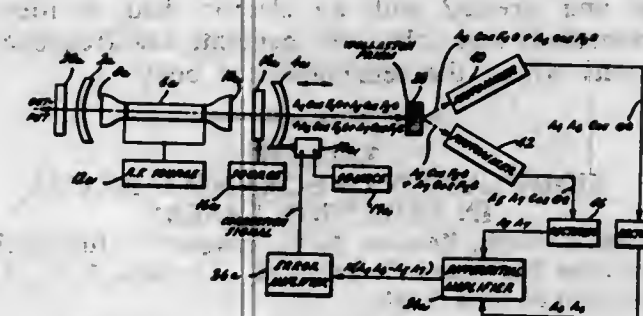
Int. Cl. H01s 3/00

U.S. Cl. 331-94.5

5 Claims

A frequency stabilized laser system in which a transducer coupled to one of the reflectors of the system is

controlled, by a signal having a value dependent on the difference in amplitude of two beat note signals obtained from respective pairs of laser oscillation signals to maintain the spacing of the reflectors at a constant distance, thereby to maintain the oscillation signals at a constant frequency. A laser discharge tube shaped so as to permit generation of a plurality of oscillation signals which have respectively different frequencies and different planes of polarization, and a light transmissive means exhibiting a signal-controlled anisotropy are disposed between the reflectors to produce at least three oscillation signals of re-



spectively different frequencies and of desired polarizations. Pairs of these signals of like polarization are heterodyned to produce two beat note signals which are rectified and then supplied to a differential amplifier having its output coupled to the transducer. When the respective amplitudes of the two beat note signals differ, a correction signal having a value directly dependent on this amplitude difference is supplied to the transducer which, in response to this correction signal, changes the distance between the reflectors in a sense tending to minimize the value of the correction signal.

3,517,331

METHOD AND APPARATUS FOR THE STABILIZATION OF LASERS, ETALONS, AND SIMILAR OPTICAL DEVICES

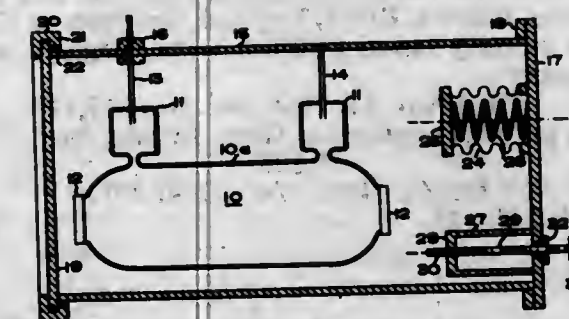
Kenneth MacClure Baird, Ottawa, Ontario, and Donald Sinclair Smith, Cumberland, Ontario, Canada, assignors to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a Canadian company

Filed Nov. 16, 1966, Ser. No. 594,908

Int. Cl. H01s 3/05

U.S. Cl. 331-94.5

5 Claims



A stabilization system for lasers, etalons, and other optical devices of the type having end mirrors mounted on the ends of a sealed chamber wherein the chamber is positioned inside a closed container containing a liquid having a bulk temperature coefficient larger than that of the container and spring means having a stiffness chosen such that changes in the chamber dimensions and thus the spacing of the end mirrors are controlled by the changes in pressure caused by the thermal expansion of the liquid working against the spring means.

3,517,332

FREQUENCY MODULATION FOR LASERS

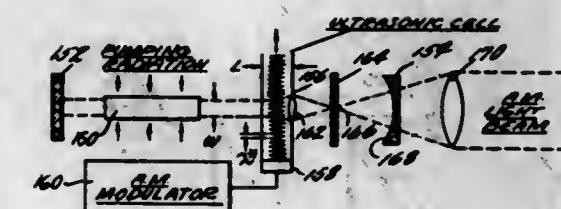
Anthony J. De Maria, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Original application Apr. 16, 1963, Ser. No. 273,514, now Patent No. 3,297,876, dated Jan. 10, 1967. Divided and this application Nov. 16, 1966, Ser. No. 618,571

Int. Cl. G02F 1/28; H01s 3/00

U.S. Cl. 331-94.5

6 Claims



An acoustic cell is positioned in the path of a laser beam, and a frequency modulated input signal is applied to the cell to generate therein an acoustic wave which propagates perpendicular to the laser beam. The width of the laser beam is seven or more times the wavelength of the acoustic wave, and the laser beam is diffracted into frequency modulated orders. A receiver is positioned to detect one or more diffracted orders and reproduce the frequency modulated input signal.

3,517,333

COHERENT OPTICAL DEVICES EMPLOYING INDUCED INHOMOGENEITIES IN NONFERROELECTRIC CRYSTALS

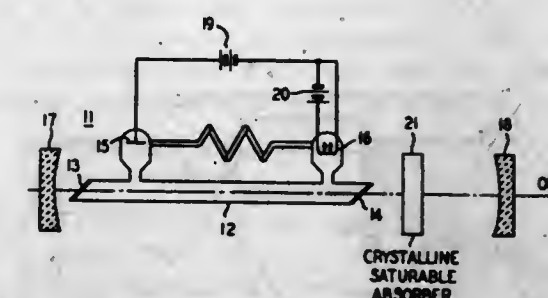
Arthur Ashkin, Bernardsville, and Benjamin Tell, Scotch Plains, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed June 16, 1967, Ser. No. 646,676

Int. Cl. H01s 3/00

U.S. Cl. 331-94.5

5 Claims



Laser pulse generators, power limiters and optically pumped lasers can be made by employing a saturation absorption produced by strong monochromatic light in a crystal, such as cadmium sulfide, having an absorption band near the light frequency. In the pulse generator, a saturable absorption of the material interacts with the inhomogeneous saturation of the laser active medium to phase-lock the oscillating modes to form the pulses from a plurality of modes that start to oscillate. In the power limiter, a diverging lens is produced by a change in index of refraction that is related to a change in the absorption due to the optically induced variation of the density of absorbing impurities across the cross section of the beam. In the optically pumped laser, the cadmium sulfide crystal is the active medium. In cadmium sulfide, the absorption is believed to be produced primarily by compensated acceptor vacancies in the material.

3,517,334 LASER PUMPED BY MULTIPLE PHOTON ABSORPTION

Leonard Glatt, Torrance, and Saul Altschuler, Manhattan Beach, Calif., assignors to TRW Inc., a corporation of Ohio

Continuation of application Ser. No. 379,840, July 2, 1964. This application Dec. 16, 1968, Ser. No. 785,441

Int. Cl. H01s 3/22

U.S. Cl. 331-94.5

9 Claims



A laser which includes active atoms which may be pumped to an excited state by multiple such as double or triple photon absorption. Since the atoms may be pumped to a high energy level, new laser frequencies are available which may be higher than the pumping frequency. In other words, the output energy may be larger than the input energy, but of course of smaller intensity. The atoms may be in gaseous or crystalline form and the pumping source may be another laser. The frequency of the pumping radiation preferably is a sub-multiple of the frequency separation between an initial state and the pumped state of the active atoms.

3,517,335 MICROWAVE CIRCUIT FOR A LIMITED SPACE CHARGE ACCUMULATION MODE DEVICE

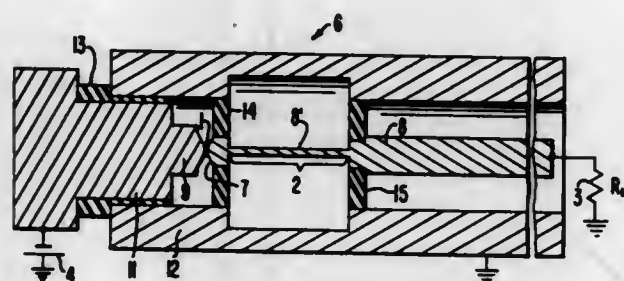
Daniel G. Dow, Palo Alto, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed May 13, 1968, Ser. No. 728,699

Int. Cl. H03b 7/14

U.S. Cl. 331-101

6 Claims



A microwave circuit for an LSA mode semiconductor bulk effect diode in which the capacitance of the bulk effect diode is series resonated with an inductance in series with the load resistance. The inductance has a relatively high surge impedance for limiting the current into the diode and for storing sufficient energy such that when the diode reaches its negative resistance threshold the energy stored in the inductor is transferred to the capacitance of the diode and thence back to the inductor to drive the voltage across the diode below its threshold. In this manner the diode is caused to operate stably in the LSA mode. In one physical embodiment of the microwave circuit, the diode is mounted between the end of the center conductor of a coaxial line and a conductive plug closing off the end of the coaxial line and being insulated from the outer conductor thereof.

3,517,336 SINGLE ELEMENT THIN FILM OSCILLATOR

Jerome J. Symanski, 2928 Famosa Blvd., San Diego, Calif. 92107

Filed May 31, 1968, Ser. No. 733,462

Int. Cl. H03b 7/00

U.S. Cl. 331-107

4 Claims



A film of a semiconducting compound when illuminated and stressed with an electric field, is found to spontaneously and coherently generate low frequency oscillations within the semiconductor body.

3,517,337 MODULATION OF SCANNING BEAMS IN INJECTION LASERS

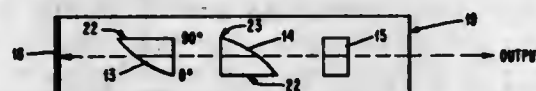
Bankim R. Shah, Beacon, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Oct. 26, 1967, Ser. No. 678,297

Int. Cl. H01s 3/10, 3/18

U.S. Cl. 332-7.51

5 Claims



A third electrical contact which consists of a separate diffused region having a constant length in the direction of lasing is provided in a semiconductor laser in addition to a first and second electrical contact which are diffused regions which vary in shape sinusoidally and cosinusoidally, respectively, in the direction of lasing. The first and second contacts have a sinusoidally varying and cosinusoidally varying current signal applied thereto, respectively. This energization in connection with the shapes of the first and second contacts along the direction of lasing provides a sweeping of the line of lasing along successive lines of a family of lines defined in the laser thereby providing scanning of any lasing beam. The third contact has applied thereto a modulated electric signal such that the threshold or degree of lasing is controlled, thus providing modulation of the continuously scanning beam.

3,517,338 DUO-BINARY FREQUENCY MODULATORS

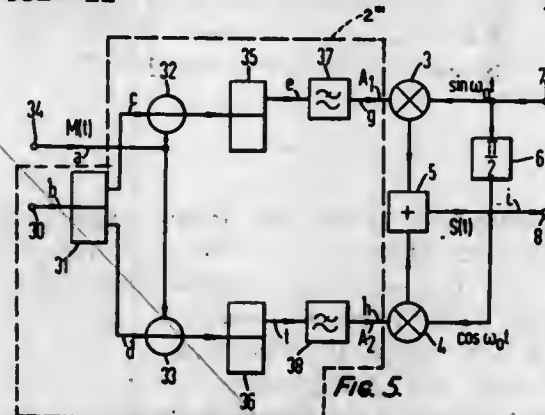
Ralph Bertrand Herman, William Renwick, and Leonard Charles Walters, Ilford, England, assignors to The Plessey Company Limited, Ilford, Essex, England, a British company

Filed Nov. 21, 1966, Ser. No. 617,443
Claims priority, application Great Britain, Nov. 23, 1965, 49,825/65

Int. Cl. H03c 3/40; H04I 27/10

U.S. Cl. 332-11

1 Claim



A duo-binary frequency modulator for affording a modulated signal of reduced bandwidth using the technique of quadrature modulation.

3,517,339 VOLTAGE TO FREQUENCY CONVERTER HAVING SYMMETRICAL WAVESHAPE OUTPUT WITH FUNDAMENTAL FREQUENCY PROPORTIONAL TO INPUT SIGNAL

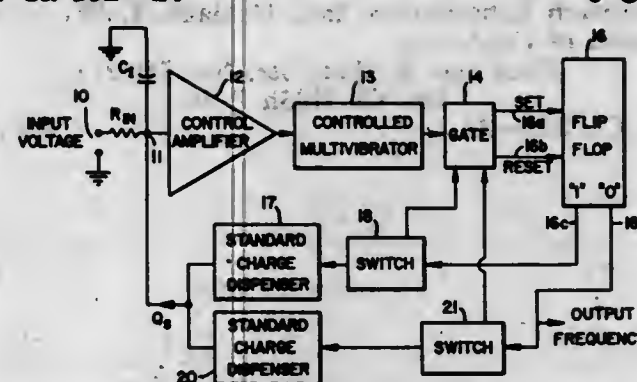
James R. Hubbard, Mountain View, Dalton W. Martin, Palo Alto, and John C. McDonald, Los Altos, Calif., assignors to Vidar Corporation, Mountain View, Calif., a corporation of California

Filed Mar. 21, 1966, Ser. No. 535,888

Int. Cl. H03k 7/00, 3/281; H02m 5/30

U.S. Cl. 332-14

6 Claims



A voltage to frequency converter having a symmetrical waveshape output proportional in frequency to the input voltage. The above is produced by use of a flip-flop or multistable means which drive standard charge dispensers coupled to an integrating capacitor. The flip-flop in turn is driven by a controlled multivibrator having a periodically varying voltage with a frequency proportional to the magnitude of the input signal on the integrating capacitor.

3,517,340 CIRCULATOR HAVING CONDUCTIVE POST CA- PACITIVELY COUPLED BETWEEN FIRST AND SECOND TRANSMISSION LINE CONDUCTORS FOR BROADBANDING PURPOSES

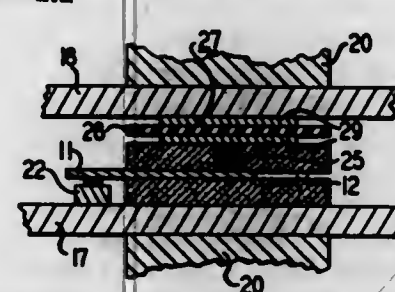
Frank M. Magalhães, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Dec. 23, 1968, Ser. No. 786,227

Int. Cl. H01p 1/32, 5/12

U.S. Cl. 333-1.1

3 Claims



The bandwidth of a Y-junction stripline circulator is increased by including a conductive post that extends from the active conductor junction through the gyro-magnetic disk to form a capacitance with the ground conductor. The capacitance is arranged with respect to the inductances of the active conductors and the conductive post to give series resonance at the center frequency of the circulator.

3,517,341 MICROWAVE POLARIZATION SWITCH

Eugene P. Augustin, San Diego, Calif., assignor to Tele-dyne, Inc., Hawthorne, Calif., a corporation of Delaware

Filed Sept. 16, 1968, Ser. No. 759,866

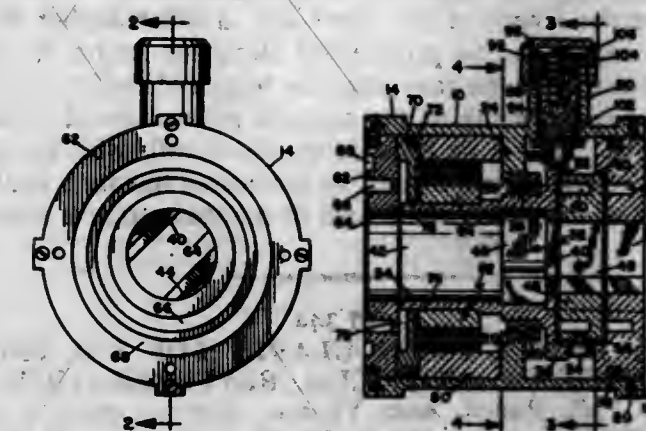
Int. Cl. H01p 1/16, 1/06, 5/08

U.S. Cl. 333-21

6 Claims

The switch has a fixed rectangular input waveguide and a driven rotary transition section with stepped transition

from a rectangular to a circular output waveguide opening. Between the input and transition section is a mechanically ganged impedance matching separator coupled to rotate at a fraction of the rate of the transition section.



A portion of the transition section incorporates cam means by which the transition section is made self-returning to a predetermined polarization when the driving means is inoperative.

3,517,342 CIRCUIT FOR SIMULATING TWO MUTUALLY COUPLED INDUCTORS AND FILTER STAGE UTILIZING THE SAME

Henry J. Orchard, San Mateo, and Desmond F. Sheahan, San Carlos, Calif., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Jan. 17, 1969, Ser. No. 792,083

Int. Cl. H03h 7/02, 7/44, 11/00

U.S. Cl. 333-24

5 Claims



A π -network of inductors for use, for example, in providing inductorless implementation of certain filter networks having ungrounded inductors, is simulated by a pair of grounded gyrator circuits and their associated capacitors connected back-to-back by a single resistor.

3,517,343 HIGH-FREQUENCY ACOUSTIC DELAY LINE

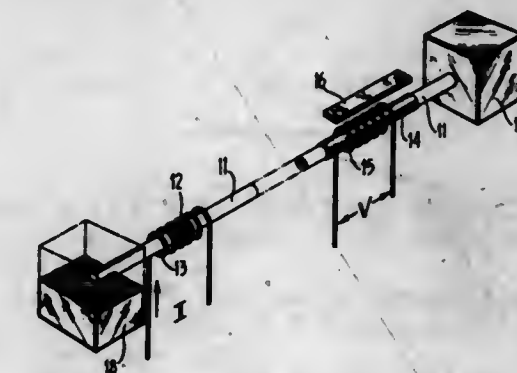
William H. Crim, San Leandro, Calif., assignor to The Singer Company, a corporation of New Jersey

Filed June 10, 1966, Ser. No. 556,763

Int. Cl. H03h 7/30, 9/30

U.S. Cl. 333-30

2 Claims



An acoustic delay line is adapted to propagate high-frequency signals by using an input transducer which includes a short length of magnetostrictive material lo-

cated at the input end of the delay line. An input coil surrounds the magnetostrictive material and has a length greater than the length of the magnetostrictive material. Since the width of an acoustic pulse induced into the delay line by an electrical signal applied to the input coil is determined by the length of the magnetostrictive material and not the length of the input coil, a much higher frequency signal can be propagated along the length of the delay line than is the case when the length of the input coil determines the width of the acoustic pulse induced in the delay line. This is so because an input coil, with its associated fringe effect, cannot be fabricated having a width as short as the width of a length of magnetostrictive material.

3,517,344

DELAY DEVICE PARTICULARLY FOR THE PRODUCTION OF ARTIFICIAL REVERBERATION
Werner Fldi, Baden, near Vienna, Austria, assignor to Akustische U. Kino-Geräte Gesellschaft mbH, Vienna, Austria

Filed Dec. 6, 1966, Ser. No. 599,596
Int. Cl. H03h 9/30

U.S. Cl. 333—30

4 Claims



A vibration or sound delay device includes a driving system for producing torsional vibration and a pick-up system responsive to the vibrations which are produced by the drive system. The construction includes two helical springs which are advantageously concentrically arranged and each includes an input and output end coupled between the driving and the pick-up system for transmitting the torsional vibrations from the driving system to the pick-up system. The system includes a large spring having a relatively long transmit time per convolution and a small spring having a relatively short transmit time per convolution. In order to facilitate the transmission of a wider range of frequencies, the invention provides a connection between the springs of the system and the drive through an elastic coupling and suspending system.

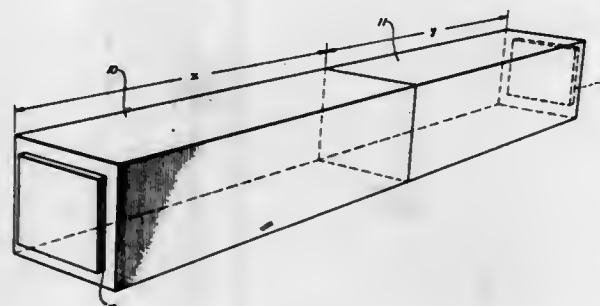
3,517,345

COMPOSITE DELAY LINE STRUCTURE
John T. Krause, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed Dec. 14, 1966, Ser. No. 601,716
Int. Cl. H03h 7/30

U.S. Cl. 333—30

5 Claims



The specification describes a composite delay line in which two different acoustic materials are joined to form a single delay element. This enables the use of acoustic

materials that have high Q values but which have an undesirably high temperature dependence of delay time. If the materials chosen have temperature coefficients of delay that are opposite in sign, the length of the delay elements can be tailored to give a zero temperature coefficient for the composite structure.

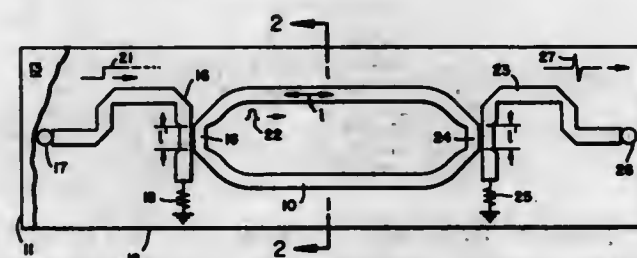
3,517,346

PULSE GENERATOR CIRCUIT
John L. Worcester, Walnut Creek, Calif., assignor to E-H Research Laboratories, Inc., Oakland, Calif., a corporation of California

Filed Jan. 3, 1966, Ser. No. 518,211
Int. Cl. H03h 7/30

U.S. Cl. 333—31

6 Claims



A timing circuit having a closed loop in the form of a stripline with an input directional coupler for coupling input pulses to the loop and producing a circulating pulse which is coupled out by an output directional coupler to produce a pulse train having a repetition rate determined by the loop length.

3,517,347

BROAD-BAND COUPLED CAVITY SLOW-WAVE STRUCTURE
Tohru Matsuoka and Toshinori Horigome, Tokyo, Japan, assignors to Nippon Electric Company Limited, Tokyo, Japan, a corporation of Japan

Filed Dec. 27, 1967, Ser. No. 693,775
Int. Cl. H01j 25/34; H03h 7/30

U.S. Cl. 333—31

3 Claims



A broad band coupled cavity slow-wave structure of the backward wave type having a plurality of successively arranged cavities formed by separating partition walls in which a short-circuit conductor is provided along the longitudinal axis of the structure to short circuit the partition walls in sequence.

3,517,348

MICROWAVE PHASE DISPERSER
Harold B. Frost, Wyomissing, Pa., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

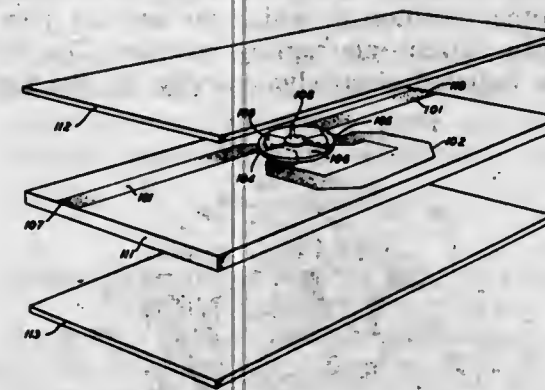
Filed July 15, 1966, Ser. No. 565,559
Int. Cl. H03h 7/34, 7/36

U.S. Cl. 333—31

3 Claims

In a stripline transmission system a phase disperser comprises a planar conductor conductively insulated from one or more ground planes, an input and an output terminal on the planar conductor, a one-quarter wavelength

portion of stripline connected across the terminals and a variable capacitor coupled across the ends of the quarter wavelength section for varying the slope of the dispersion characteristic of the transmission system.



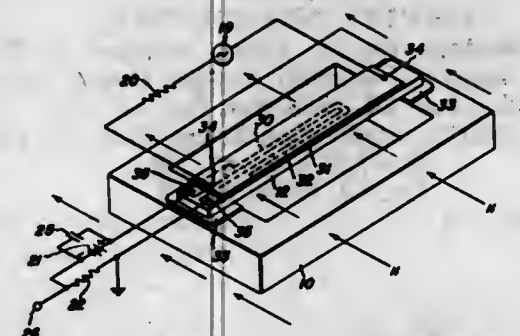
3,517,349

MINIATURE ELECTROMECHANICAL FILTER WITH MAGNETIC DRIVE
William E. Engeler, Scotia, and Marvin Garfinkel, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Aug. 11, 1967, Ser. No. 660,076
Int. Cl. H03h 9/00

U.S. Cl. 333—72

14 Claims



A miniature discrete electromechanical filter comprises a semiconductor resonator beam which is alloy bonded at either end to the sides of a cavity formed in a semiconductor wafer or ceramic base. The beam is situated in a magnetic field and is driven in its flexural mode by current through a metallic layer deposited on an insulating layer overlying the beam. Output signals are derived from piezoresistive regions diffused into the semiconductor beam.

3,517,350

ENERGY TRANSLATING DEVICE
William D. Beaver, Center Valley, Pa., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Continuation of application Ser. No. 590,264, Oct. 28, 1966, This application July 7, 1969, Ser. No. 845,635
Int. Cl. H03h 9/20, 7/38

U.S. Cl. 333—72

10 Claims



In narrow band crystal filters having two or more acoustically coupled electrode pairs wherein the electrodes have sufficient masses to decrease the coupling below a given value, inharmonic modes are suppressed by making the electrode of one pair different in area from electrodes of the other pair. Energy loss due to impedance mismatch is also avoided by dimensioning the electrode pairs differently.

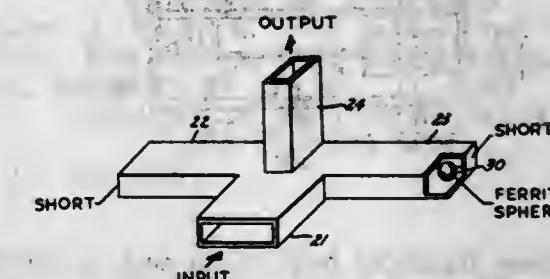
3,517,351

TUNABLE FERRIMAGNETIC FILTER USING A MAGIC-T

Robert Grossbach, Brooklyn, N.Y., assignor to Loral Corporation, Scarsdale, N.Y.
Filed Aug. 1, 1968, Ser. No. 749,540
Int. Cl. H03h 7/10, 7/52; H01p 5/12

U.S. Cl. 333—73

1 Claim



A ferrimagnetic, band-pass filter employing a magic-T wave guide junction with a sphere of ferrimagnetic material in one of the arms of said T, permitting direct current magnetic field strengths of substantially lower magnitude than those required with conventional geometries.

3,517,352

VOLTAGE VARIABLE CAPACITANCE TUNED CIRCUIT HAVING DIODE MEANS COUPLED TO EACH TERMINAL OF THE APPLIED INPUT TUNING VOLTAGE

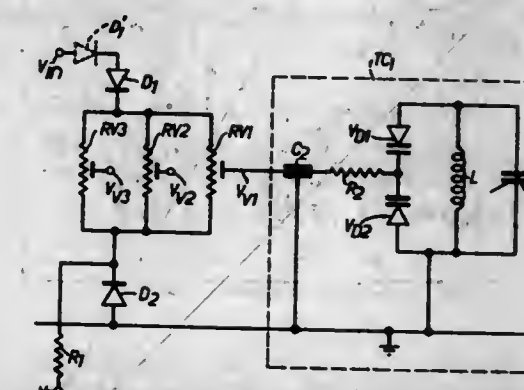
Richard S. Marshall and Allan S. Summers, Ilford, Essex, England, assignors to The Plessey Company Limited, Ilford, England

Filed Aug. 1, 1968, Ser. No. 749,427
Claims priority, application Great Britain, Aug. 14, 1967, 37,289/67

Int. Cl. H03h 5/12; H03j 5/24

U.S. Cl. 334—15

8 Claims



In or for a tuned circuit arrangement having a tuned circuit, incorporating a voltage variable capacitor as the tuning element for tuning the tuned circuit in dependence upon an applied tuning voltage, a tracking network comprising potential divider means having associated with it junction potential balancing means for producing an output voltage from the potential divider which is dependent upon the applied tuning voltage, said output voltage having an amplitude component which is independent of the potential divider ratio and substantially equal to the junction potential of said voltage variable capacitor.

3,517,353

PLURAL CAVITY TUNER EMPLOYING VARIABLE CAPACITOR TUNING AND INDUCTIVE COUPLING

Teruaki Arakawa, 99 Seijo-machi, Setagaya-ku, Tokyo, Japan, and Ikuro Saito, 4-7 Goshozaka-1, Kawasaki-shi, Kanagawa-ken, Japan

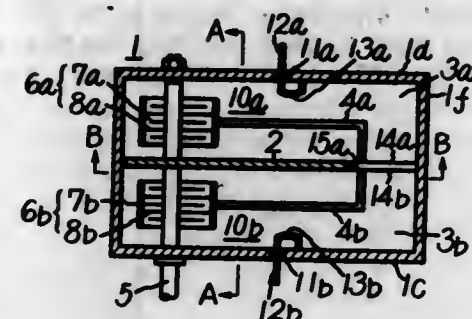
Filed Feb. 1, 1967, Ser. No. 613,263
Int. Cl. H03j 3/00, 3/28

U.S. Cl. 334—45

2 Claims

A UHF tuner device which constitutes an inductance element in cavity resonance. By the employment of in-

ductance coupling selectivity of a tuner device is greatly improved which requires loose coupling for handling sig-



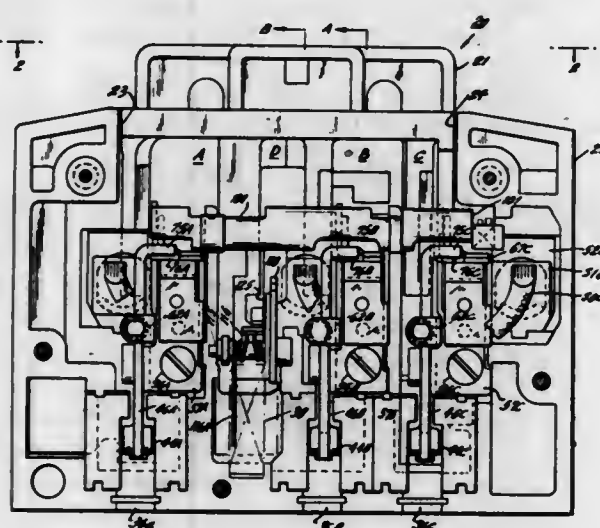
3,517,354

HIGH SENSITIVITY MAGNETIC TRIP UNIT
Martin V. Zubaty, Warren, and Robert W. Thomas, St. Clair Shores, Mich., assignors to I-T-E Imperial Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 15, 1968, Ser. No. 752,871
Int. Cl. H01h 73/02

U.S. Cl. 335-9

10 Claims



A multiphase circuit breaker of the so-called push-push type is constructed so that an automatic tripping impulse in any one of the phases is effective to operate the trip units of all other phases so that the contacts of all phases open at essentially the same time. Each trip unit includes magnetic trip means in which the magnet armature is normally in a position very close to the stationary magnet yoke. A lost motion connection between the armature and contact arm holding latch enables the latch to be released in the short stroke of the armature moving toward the yoke and thereafter over-travel of the latch is permitted, with such over-travel being transmitted through a common trip bar to the other phases to cause release of the contact holding latches thereof.

3,517,355

BLOW-OPEN CIRCUIT BREAKER

Thomas M. Cole, Harrison, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware

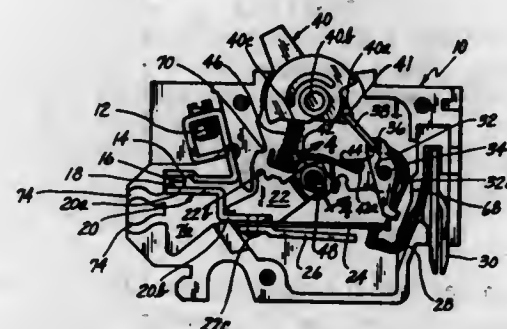
Filed Mar. 11, 1968, Ser. No. 712,041
Int. Cl. H01h 77/10

U.S. Cl. 335-16

15 Claims

A circuit breaker is made electro-dynamically responsive for high-speed opening to interrupt sudden high currents. The circuit breaker has a pivoted contact arm

arranged as part of a blow-open current loop. The pivot of the contact arm has a stable normal position in which the contact arm is operable by a manual mechanism for opening and closing the circuit breaker. The pivot is shiftable to another position in which the contact arm is in its fully open current-interrupting position. The shift of the pivot is initiated electro-dynamically, by the force in



3,517,356

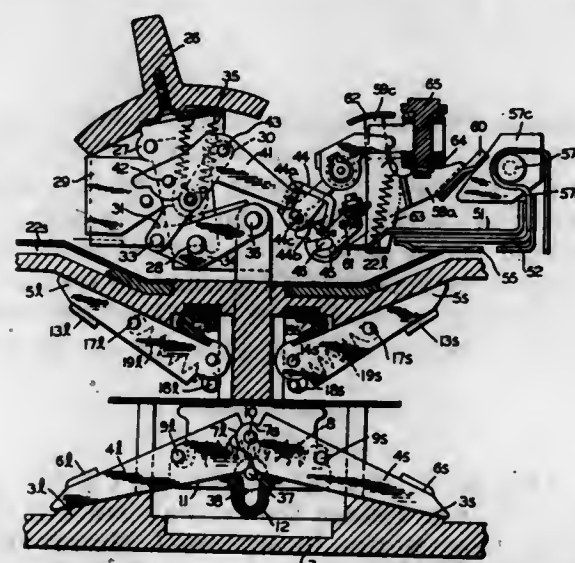
CIRCUIT INTERRUPTER

Tutomu Hanafusa, Osaka, Japan, assignor to Terasaki Denki Sangyo Kabushiki Kaisha, Osaka, Japan

Filed July 24, 1968, Ser. No. 747,189
Claims priority, application Japan, July 24, 1967,
42/47,237, 42/47,238
Int. Cl. H01h 77/10

U.S. Cl. 335-16

1 Claim



In the closed position of the disclosed circuit interrupter, a first and a second movable contact unit are disposed in opposed parallel relation while a pair of movable contact arms forming each unit are aligned with each other. The pair of second aligned contact arms are connected through individual stationary conductors to terminals remote from them respectively with each conductor having one portion disposed in parallel to the second contact arm in its closed position. A flow of current through the each conductor is the same in direction as through the second contact arms but opposite in direction to through the first arms. The first contact arms are translated to their open position through a manually opening or tripping operation. Upon the occurrence of a flow of shortcircuiting current each pair of first and second arms are rotated in the opposite directions through

an electromagnetic repulsion developed between them to interrupt the current. As the second rotating arms approach the associated conductor, their rotation is aided by an electromagnetic attraction developed between them. A little later after the interruption a tripping electromagnet is operated to bring the first arms into their open position where they are aligned with each other or put in a straight line. The second arms returned back to their original positions as the repulsion is attenuated.

3,517,357

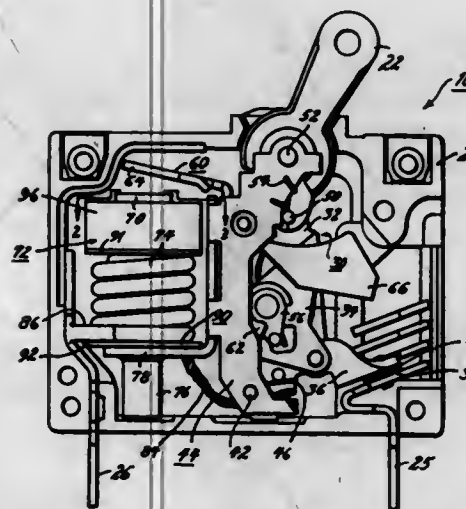
ELECTROMAGNETIC DEVICE HAVING A SHORT CIRCUITED TURN

Hal H. Bakes, Brown's Mills, N.J., assignor to Heine-mann Electric Company, Trenton, N.J., a corporation of New Jersey

Filed Apr. 4, 1968, Ser. No. 718,669
Int. Cl. H01h 7/14

U.S. Cl. 335-63

13 Claims



An electromagnetic device comprising a solenoid coil, an armature actuatable by the coil and a magnetizable frame carrying the coil. A tube of non-magnetic material within which is a movable magnetizable core, the tube having a pole piece at one end toward which the armature is attracted on predetermined overload conditions, the core being biased toward the end of the tube away from the pole piece. A short circuited turn or ring of electrically conductive, but non-magnetizable material, is associated with the coil, so that the current in the coil required to overcome the bias on the armature with substantially no time delay, when the gap between the core and the pole piece is at its maximum, is substantially higher than the current required for a similar device, but which omits the short circuited ring.

3,517,358

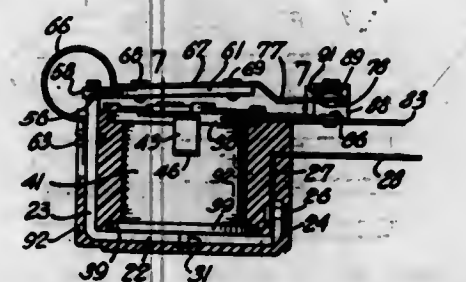
RELAY

DhuAine J. Davis, Wheaton, Ill., assignor to Hermetic Coil Co., Inc., Wheaton, Ill., a corporation of Connecticut

Filed Nov. 6, 1967, Ser. No. 680,644
Int. Cl. H01h 85/02

U.S. Cl. 335-192

11 Claims



A relay having a coil form that supports electrical contacts and an insulated frame conducting electrical current. Unitary spring biasing means that cooperate with

both the armature and the alternating contact element of the relay. Biasing spring also performs current transmitting function. Encapsulation of relay effectively insulates circuit terminals and electromagnetic components.

3,517,359

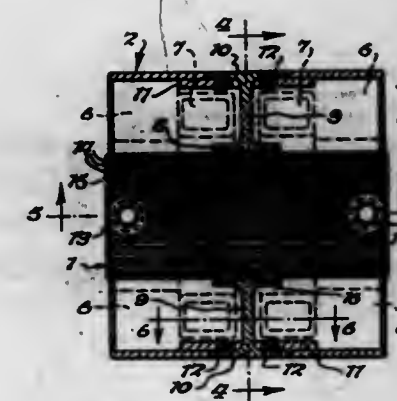
ELECTRO-MAGNETIC ACTUATOR ARMATURE ASSEMBLY

Nicholas D. Tribovich, West Seneca, and William H. Meyer, East Aurora, N.Y., assignors to Servotronics, Inc., Buffalo, N.Y.

Filed Apr. 12, 1966, Ser. No. 542,083
Int. Cl. H01f 7/08

U.S. Cl. 335-230

9 Claims



A torque motor armature having lamina stacked in side-by-side relation and lying in parallel planes substantially normal to the axis about which the armature oscillates. Banding means circumferentially encircle the opposite ends of the armature holding the lamina against lateral spreading. The armature is mounted by a frame encircling it in a transverse plane generally normal to the plane of the armature, with torsion spring mounting arms extending laterally from the frame on opposite sides of the armature to mounting plates, carried by the motor housing. The arms are integral with the frame and with the mounting plates, comprising therewith a one-piece unitary construction.

3,517,360

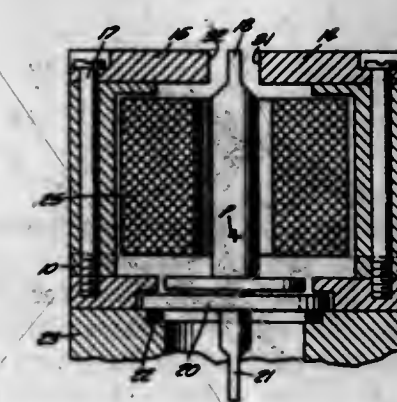
ELECTROMAGNETIC FORCE MOTOR HAVING LINEAR OUTPUT CHARACTERISTICS

Samuel A. Gray, Sun Valley, Calif., assignor to Bell Aerospace Corporation, a corporation of Delaware

Filed July 14, 1966, Ser. No. 565,237
Int. Cl. H01f 7/13; H02k 33/16

U.S. Cl. 335-230

11 Claims



An electromagnetic force motor having a frame, an annular coil, a pair of permanent magnet polarized pole pieces, a pivotable armature within the coil and pole pieces, and a plurality of discrete sections of material in

the magnetic circuit that saturate at different levels of magnetic flux density. The discrete sections may be in the pole piece faces, between the permanent magnets and the frame, or on that part of the armature between the pole pieces. The cross sectional areas of the discrete sections are chosen so that the force output is linearly proportional to the input signal to the coil.

3,517,361

SHIELDED TRANSFORMER

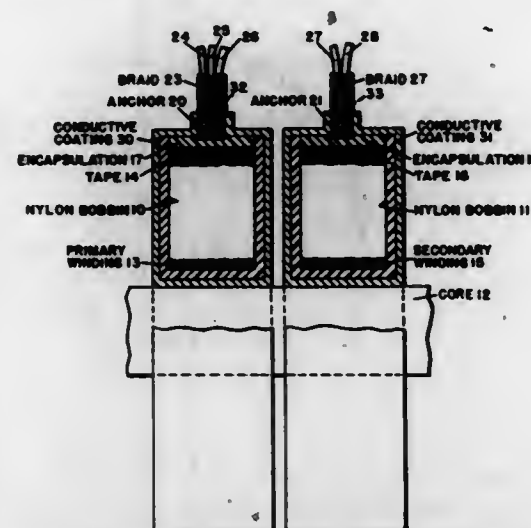
Harry Reifel, Waltham, and Vito J. Di Benedetto, Melrose, Mass., assignors to Stevens-Arnold Inc., South Boston, Mass.

Filed June 19, 1968, Ser. No. 738,292

Int. Cl. H01f 15/04

U.S. Cl. 336—84

12 Claims



A transformer has primary and secondary windings on nylon bobbins which extend around a core. For common mode rejection, the bobbins, and the windings except where the lead wires extend therefrom, are completely enclosed by conductive coatings. The coating around the primary winding and its associated bobbin is connected to one of the lead wires of the primary winding. The coating around the secondary winding is connected to the transformer core. For preventing the coatings from acting as short-circuit turns, they have electrical resistances many times larger than copper having the same thicknesses. The lead wires are within conductive braids which the respective coatings contact.

3,517,362

DIFFERENTIAL TRANSFORMER FLUX VALVE

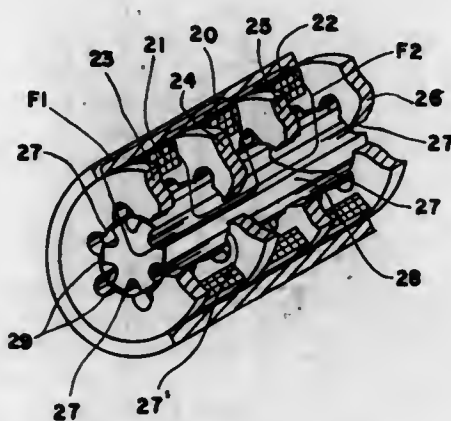
John A. Mead, 9140 Lawler Ave., Skokie, Ill. 60076

Filed Sept. 11, 1968, Ser. No. 759,029

Int. Cl. H01f 21/06

U.S. Cl. 336—135

5 Claims



Alternating current input is applied to a primary winding to produce magnetic flux through stator pole pieces. At each side of the primary winding, and within the flux

paths are secondary windings. An armature movable with respect to the stator only partially overlaps the pole pieces so that a movement in one direction increases the permeability of the flux path linking the primary with one secondary and decreases the permeability of the flux path linking the primary and the other secondary, and vice versa.

3,517,363

CONSTANT TORQUE FERRITE SLUG MOUNTING FOR INDUCTANCE ADJUSTMENTS

Hazen Curtis, III, Andover, and Gerd A. Tuchen, Boxford, Mass., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Mar. 18, 1968, Ser. No. 713,622

Int. Cl. H01f 21/06

U.S. Cl. 336—136

6 Claims



A constant torque adjustment of a ferrite slug in an inductor is achieved with an elastic interference fit between the threaded slug and a threaded molded plastic housing. The basis for control of the adjustment torque is that the housing is stretched into a multilobed shape by the interference fit. Both the static and dynamic torque achieved in the structure are highly controlled and near constant over the adjustment range. When the ferrite slug is encapsulated in plastic, the material combination of nylon against acetal polymer provides smooth tuning without stick-slip.

3,517,364

CURRENT-LIMITING REACTOR

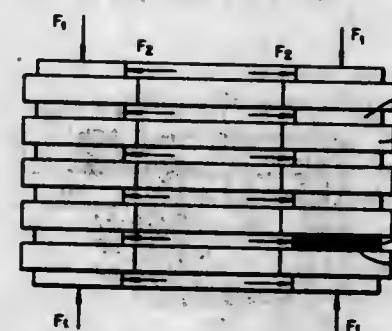
Lev Alexandrovich Maslujkov, 13 Parkovaya ulitsa 40/2 kv 36, Moscow, U.S.S.R.

Filed July 28, 1967, Ser. No. 656,901

Int. Cl. H01f 27/30

U.S. Cl. 336—185

3 Claims



A current-limiting reactor having windings constituted by disc-type coils separated axially from each other by

insulation spacers, each coil being wound of several parallel conductors, a part of the latter being constituted of a set of adjacent nonmagnetic steel strips.

3,517,365

COIL FORM WITH EMBEDDED TERMINALS

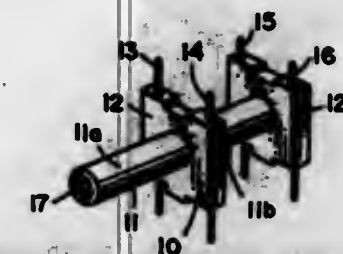
Raymond H. Hilgers, Wauconda, Ill., assignor to Resinite Corporation, Wheeling, Ill., a corporation of Illinois

Filed Aug. 30, 1968, Ser. No. 756,563

Int. Cl. H01f 15/10, 27/30

U.S. Cl. 336—208

2 Claims



A plastic coil form having a flange in which connector wires are embedded at the time of fabrication, the manufacture being achieved through an openable mold wherein the wires are fed in perpendicular to the parting line and in which the wires are severed to provide the discrete connector wire lengths just prior to full closure of the mold parts.

3,517,366

THERMAL RELAY, DOUBLE POLE, NORMALLY-OPEN AND NORMALLY-CLOSED

Mihai D. Patricle, 9750 De Soto Ave., Chatsworth, Calif. 91311

Filed May 9, 1968, Ser. No. 727,769

Int. Cl. H01h 71/20

U.S. Cl. 337—148

10 Claims



A thermal relay, having a fuse-restrained spring-loaded plunger which, when released by melting of the fuse, will effect closing of a set of normally open contacts and opening of a set of normally closed contacts.

3,517,367

FRANGIBLE FUSE CAP

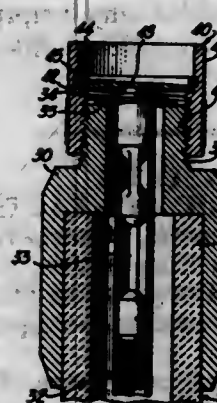
Donald O. Misare, Riverside, Ill., assignor to Joslyn Mfg. and Supply Co., Chicago, Ill., a corporation of Illinois

Filed Apr. 22, 1968, Ser. No. 722,887

Int. Cl. H01h 39/00, 85/14

U.S. Cl. 337—203

4 Claims



A rupturable cap for use on a fuse tube of the type open at one end having a fuse link extending there-through so as to provide for alteration of the fuse characteristics from a single-vented to a double-vented tube.

3,517,368

POTENTIOMETER

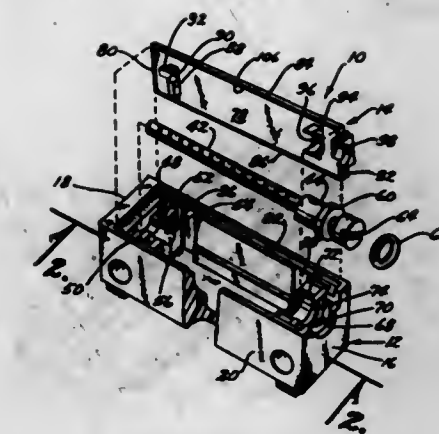
Larry B. Lindquist, Columbus, Nebr., assignor to Dale Electronics, Inc., Columbus, Nebr., a corporation of Nebraska

Filed June 28, 1968, Ser. No. 741,095

Int. Cl. H01c 5/02

U.S. Cl. 338—180

3 Claims



A potentiometer including a lead screw having an O-ring mounted in an annular groove formed in the head portion of the lead screw. The groove positions the O-ring on the lead screw and permits the lead screw to be "dropped" into the potentiometer during the assembly of the potentiometer. Cooperating case halves compress the O-ring around the lead screw to seal the end of the potentiometer through which the lead screw extends.

3,517,369

THREE PHASE TRANSITION ASSEMBLY

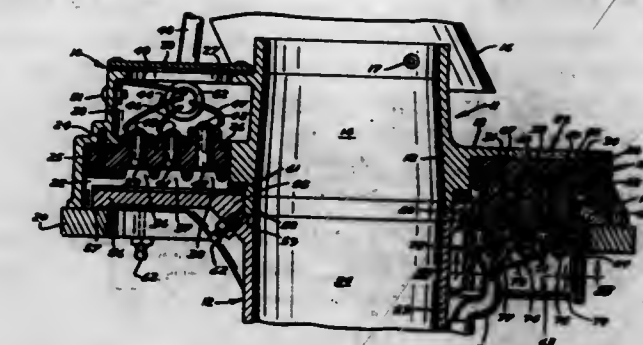
Floyd E. Buschbom, Long Lake, Minn., assignor to Van Dale Corporation, Long Lake, Minn., a corporation of Minnesota

Filed Nov. 15, 1967, Ser. No. 683,356

Int. Cl. H01r 39/02, 3/06

U.S. Cl. 339—5

6 Claims

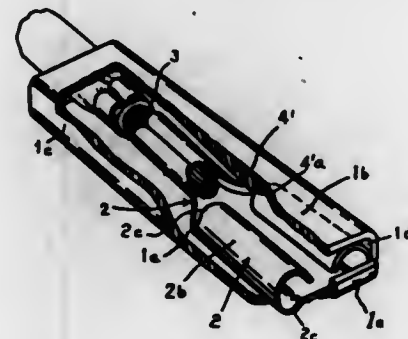


A silo unloader electrical contact ring assembly having a stationary cylindrical housing member formed with an outwardly directed flange carrying a ring of electrically insulative material. Three concentric spaced conductor rings imbedded in the insulative material are connected to a source of electric power. A rotatable cylindrical housing member mounted on the stationary housing member has an annular flange carrying a brush assembly having three pairs of electrical contacts engageable with the conductor rings. A separate conductor ring mounted on the rotatable housing member coacts with a

pair of brushes mounted in the stationary housing member to electrically couple the housing members so that the housing members form a ground connection enabling the assembly to be safely used with three phase electric power.

3,517,370

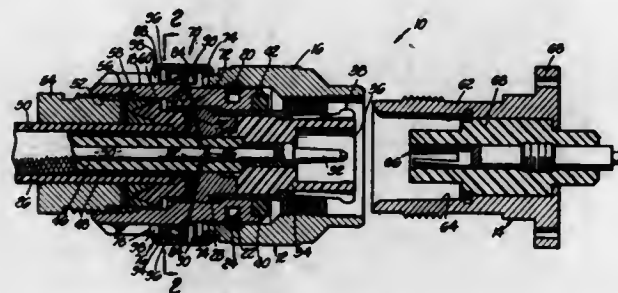
INSULATING PROTECTOR FOR CLIPS USED IN ELECTRICAL CONNECTIONS
Roger Polagt, Vincennes, France, assignor to Etablissements Proner, S.A., Montreuil (Seine-Saint-Denis), France, a body corporate of France
Filed May 24, 1967, Ser. No. 640,950
Claims priority, application France, May 27, 1966, 63,251; May 10, 1967, 105,886
Int. Cl. H01r 11/08, 13/48
U.S. Cl. 339—59 4 Claims



An insulating protector for a clip to be used for electrical connections is comprised of a sheath made from insulating material such as a molded plastic. The sheath is open at both ends, the front end of the sheath being provided with an upturned flange establishing a positive stop for the front end of the clip when inserted from the rear end of the sheath, and the sheath being also provided on one of its inner surfaces with a catch member in the form of a wedge or tongue which moves automatically into a locking engagement with a part of the clip after the clip has been fully inserted in the sheath thus preventing any backward movement of the clip.

3,517,371

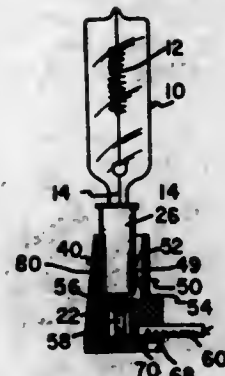
COUPLING LOCKING DEVICE
Joseph William Buckley, Sepulveda, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 4, 1968, Ser. No. 710,143
Int. Cl. H01r 13/54
U.S. Cl. 339—89 10 Claims



A coupling locking device such as may be used for locking a coupling nut of an electrical connector. The locking device is a ratchet mechanism in which ratchet teeth are formed on the coupling nut and an axially resilient concave washer is formed with pawls which engage the teeth. A sleeve surrounding the washer carries cam means which retract the pawls from the ratchet teeth upon rotation of the sleeve to a predetermined position. Retraction of the pawls from the ratchet teeth permits the coupling nut to be unscrewed from its mating element.

3,517,372

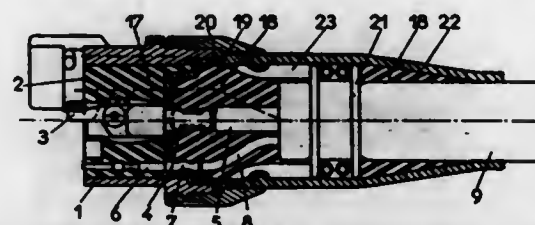
BI-PIN BASE AND SOCKET
Hendrik A. J. de Vos, Wenham, and Julian J. Wierzbicki, Peabody, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 13, 1967, Ser. No. 690,321
Int. Cl. H01r 13/54
U.S. Cl. 339—91 2 Claims



A single-ended lamp and socket arrangement in which the press-seal portion of the lamp is potted within a metal cannister and wherein the lead-in wires of the lamp extend outside of the cannister and into male prong connectors. The lamp is fitted in a socket having an aligning spring and lock on one side, the lock is provided to hold the lamp in the socket.

3,517,373

CABLE CONNECTOR
Henri H. Jamon, Solcy-sous-Montmorency, France, assignor to Etablissement Satra, Societe Achat et Transactions, Vaduz, Liechtenstein
Filed Jan. 15, 1968, Ser. No. 698,054
Claims priority, application Switzerland, Jan. 14, 1967, 535/67
Int. Cl. H01r 13/52
U.S. Cl. 339—94 10 Claims



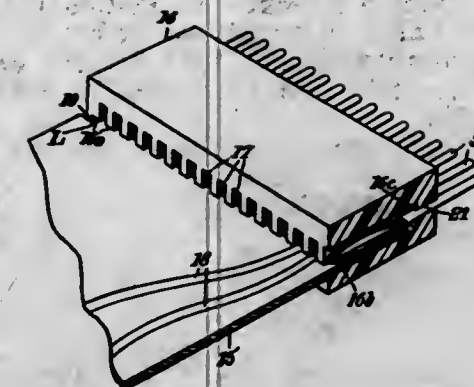
A cable connector including a conductive connecting member fixed with a rear portion thereof to a conductor end portion projecting from an insulated portion of a cable; a conductive contact member having a front portion constructed for contacting engagement with a contact member of another cable connector, and a rear portion in which a front portion of said connecting member is inserted, and insulating means fluid tightly surrounding at least a portion of the cable and the rear portion of the connecting member; and a method for producing the cable connector according to which after the elements of the connector are assembled any empty spaces formed between the elements are completely filled with a mass of insulating material.

3,517,374

ELECTRIC CONTACTS
Francois Robert Bonhomme, Courbevoie, France, assignor to Connectronics Corporation, New York, N.Y.
Continuation-in-part of application Ser. No. 513,271, Dec. 13, 1965. This application Apr. 9, 1968, Ser. No. 719,993
Claims priority, application France, Dec. 18, 1964, 999,263
Int. Cl. H01r 33/76, 13/06
U.S. Cl. 339—176 27 Claims

A contact arrangement for printed circuits, the arrangement including connector elements having a plurality of

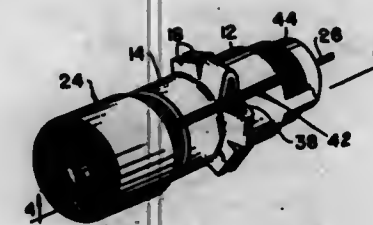
separate similar loops of a conductive resilient metal wire. These loops are juxtaposed to form an elongated composite loop, and the composite loop is widest at its middle



portion and has convergent end portions. The connector elements are mounted in alignment and covered by a member adapted to receive a printed circuit board.

3,517,375

CRIMPING TERMINAL FOR COAXIAL CABLE
Lloyd Mancini, New Cumberland, Pa., assignor to Berg Electronics, Inc., New Cumberland, Pa., a corporation of Pennsylvania
Filed Jan. 29, 1968, Ser. No. 701,356
Int. Cl. H01r 17/18
U.S. Cl. 339—177 17 Claims



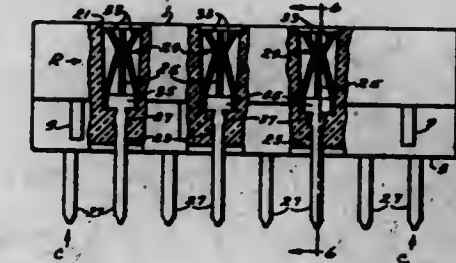
A crimp type terminal and method for forming an electrical connection with the cylindrical sleeve or shield of a coaxial cable. When crimped to a bared braided sleeve the terminal collapses a medial portion thereof to form an annular collar. The terminal is crimped to the collar to establish an electrical connection.

3,517,376

CONNECTOR FOR USE BETWEEN AN INTEGRATED-CIRCUIT AND A CIRCUIT PANEL
John C. Sarazen, Mansfield, John M. Pierini, South Attleboro, and Reidar G. Larson, North Attleboro, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 16, 1968, Ser. No. 753,287
Int. Cl. H01r 33/72, 33/04, 21/02
U.S. Cl. 339—192 11 Claims

A block of insulating material is provided with a row of openings through each side wall for registration with corresponding rows of openings in a circuit panel or board. The openings in the block are formed with inlets and outlets. A conductor extends through and from each opening. Each conductor comprises a male terminal extending from an outlet and a female jack in an inlet. The jacks are for the reception of pins of so-called dual, dual, in-line, pin-type integrated circuit units. These pins generally have rectangular cross sections. Each jack is made of two spring leaves forming a pin receiving clip. The leaves of each clip are deflected apart by ribs in an in-line, pin-type integrated circuit units. These pins

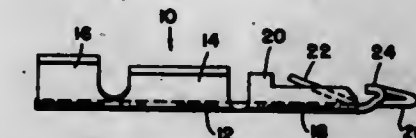
tension in the leaves before reception of a pin and provides a comparatively wide space for such reception. The rib design also provides excellent contact position control relative to other contacts in the same socket. The arrangement of the leaves is such that the narrow edges of the pins engage the leaves over small areas and further spring the leaves to provide improved contact pressure.



Each conductor is provided with means for making a removable interference fit in a hole of the block. A number of blocks are mounted on one side of the circuit panel which may be of the printed type. The male portions of the conductors extend through a panel for attachment of circuitry on its other side. To effect changes in circuitry conductor replacements may readily be made.

3,517,377

MEMORY FRAME MAGNET WIRE TERMINAL
Billy E. Olsson, New Cumberland, Pa., assignor to Berg Electronics, Inc., New Cumberland, Pa., a corporation of Pennsylvania
Filed May 9, 1968, Ser. No. 727,763
Int. Cl. H01r 7/06
U.S. Cl. 339—273 4 Claims



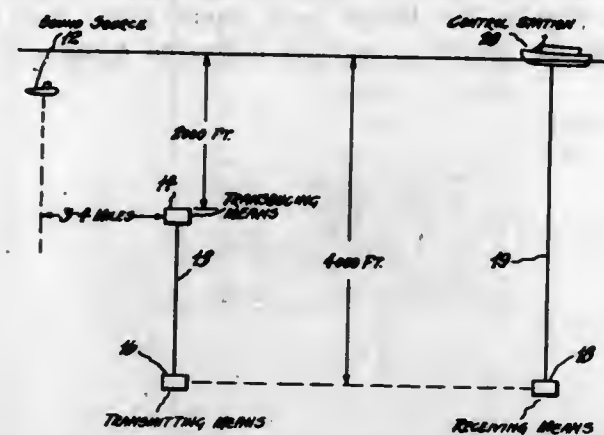
Disclosed is a terminal for accurately locating and establishing an electrical connection with one end of a memory frame magnet wire. The terminal includes a body for forming a latch connection with a memory frame connector block and a wire mounting portion having a wire orienting finger and a wire gripping finger separated by a contact portion. The thin magnet wire is threaded through the fingers, pulled tight against the orienting finger, and then physically secured in this position by the wire gripping finger. The wire may then be soldered or welded to the contact portion between the fingers to establish an electrical connection with the terminal.

3,517,378

UNDERWATER LONG-DISTANCE SOUND-DETECTION SYSTEM
Robert E. Barrett, New Haven, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 6, 1959, Ser. No. 851,480
Int. Cl. G01s 3/00
U.S. Cl. 340—5 3 Claims

1. A method for underwater sound detection at great distances from a terminal receiving station comprising the steps of: receiving underwater sounds by means of a sound transducer located between the surface of the water and the roof of the underwater sound channel, converting said received sounds into electrical analog sig-

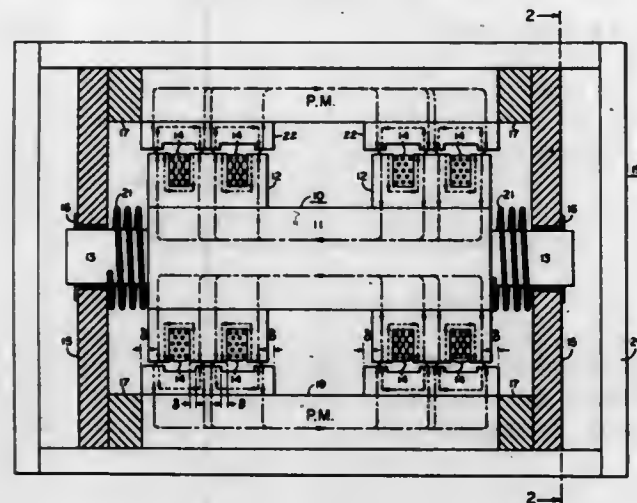
nals, coupling said analog signals to a transmitting means located within the underwater sound channel, re-converting said analog signals into corresponding sound signals and transmitting them within the underwater sound chan-



ned to a receiving transducer located remotely from said transmitting means, converting said transmitted sound signals into analog signals, and coupling said last-named analog signals to an indicating means.

3,517,379 ELECTROMAGNETIC TRANSDUCER WITH A FIXED AIR GAP

John Chervenak, Oxon Hill, Md., assignor to the United States of America as represented by the Secretary of the Navy
Continuation of application Ser. No. 199,227, May 28 1962. This application Mar 14, 1966, Ser. No. 535,651
Int. Cl. H04r 1/44
U.S. Cl. 340-12 4 Claims



1. A fixed air-gap electromagnetic transducer comprising:

a hollow housing having end and side walls;
flexible support means interconnecting said side walls;
first magnet means, including a permanent magnet and at least one first pole piece, attached to said housing;

second magnet means, including a permanent magnet and at least one second pole piece, mounted in said flexible support means, said flexible support means permitting relative movement of said first and second magnet means only in a single linear path;

said first and second pole pieces having respective surfaces which are substantially parallel to said path and which are separated by said fixed air-gap;

said surfaces of each of said second pole pieces having recessed portions;

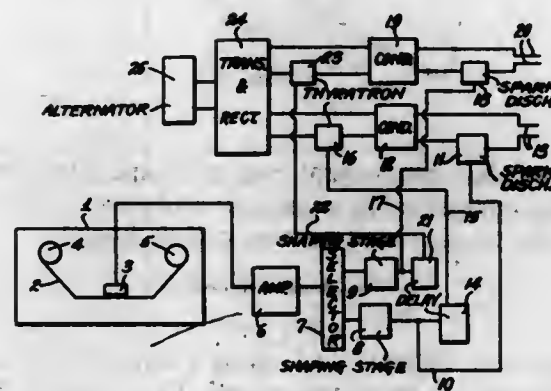
windings disposed in each of said recessed portions;

said permanent magnets and first and second pole pieces being so located that current in said windings causes relative movement of said first and second magnet means.

3,517,380 METHOD OF EXPLORATION BY TRANSMISSION OF MECHANICAL WAVES, INSTALLATION FOR CARRYING OUT THE METHOD AND THE AP- PLICATIONS THEREOF

Maurice Barbier, Ousse, and Léon Sayons, Pau, France, assignors to Société Nationale des Pétroles d'Aquitaine, Courbevoie, France, a corporation of France
Original application Dec. 27, 1967, Ser. No. 693,956.
Divided and this application Dec. 30, 1968, Ser. No. 798,561
Claims priority, application France, Dec. 28, 1966, 89,069

Int. Cl. G01v 1/08, 1/38
U.S. Cl. 340-15.5 4 Claims



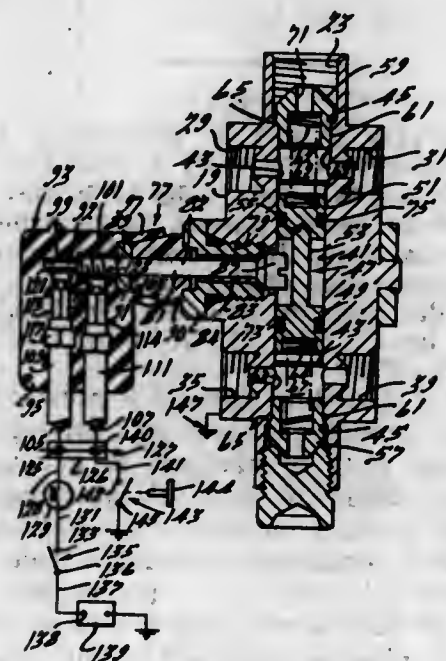
A method and apparatus for exploring the form and structure of a medium. An electrical signal comprising a train of successive pulses is transmitted through said medium. Different signal components corresponding to different propagation paths in said medium are received at one or more receiving stations and correlated with components of the originally transmitted signal in order to determine the signal delay time caused by a particular propagation path.

3,517,381 VEHICLE BRAKE FLUID LEAKAGE WARNING SYSTEM

James A. Kozicki, Warren, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed May 2, 1967, Ser. No. 635,518
Int. Cl. B60q 1/26

U.S. Cl. 340-52 5 Claims

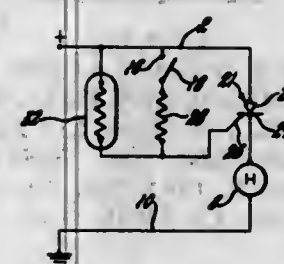


Electrical circuitry for checking the operability of electrical connections and components of an electrical circuit and switch device adapted to energize a warning lamp in

event of leakage in one fluid circuit of a two fluid circuit hydraulic brake circuit of a vehicle. Switch includes a housing having a piston movable to close switch in response to a predetermined pressure differential on opposite sides of piston. Electrical checking circuit passes through a molded electrical terminal connected at one end of one of the terminals of switch.

3,517,382 AUDIBLE FIRE ALARM

Frank S. Stein and Robert E. Knollinski, Kokomo, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 9, 1965, Ser. No. 478,328
Int. Cl. B60q 5/00; G08b 3/10, 17/06
U.S. Cl. 340-57 2 Claims

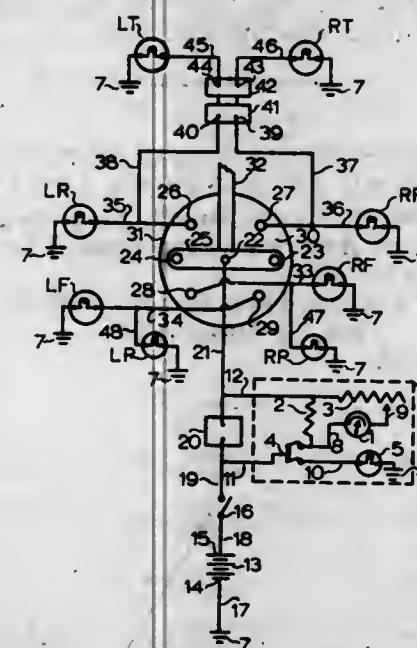


A horn circuit for an automotive vehicle wherein an inherently temperature sensitive semiconductor component is coupled in series with a conventional vehicle horn so as to provide an audible warning signal when automatically rendered conductive by a predetermined rise in ambient temperature or when manually rendered conductive by means of a switch connected to a gate electrode.

3,517,383 TURN SIGNAL MONITOR

Kenneth Edward Hughes, 4904 W. Vaughn Ave., Merced, Calif. 95340
Filed Mar. 20, 1967, Ser. No. 624,613
Int. Cl. B60g 1/38

U.S. Cl. 340-79 1 Claim

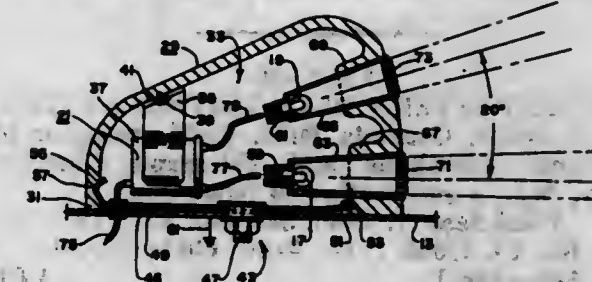


A conventional turn signaling system for vehicles including a source of electrical energy or battery, right and left turn signal lamps, a flasher unit, and a switch assembly movable lever for activating either the right or left bank of signal lamps. A device primarily designed for use in tow vehicles, which when activated provides a separate uninterrupted current path to either the right or left bank of signal lamps as selected by the switch assembly movable lever, on both a tow vehicle and the vehicle or vehicles being towed, and further providing a means of

determining if the correct value of current is flowing in either bank of lamps, hence indicating proper operation of said system or malfunction of the same system. The value of current is determined through the process of sampling a very small portion of the total current flowing in the respective bank of turn signal lamps.

3,517,384 LOW BEAM SIGNALING APPARATUS

Raymond C. Jablonski, 1879 Coventry Drive, Memphis, Tenn. 38127
Filed Apr. 23, 1968, Ser. No. 723,458
Int. Cl. B60g 1/46, 1/50
U.S. Cl. 340-83 2 Claims

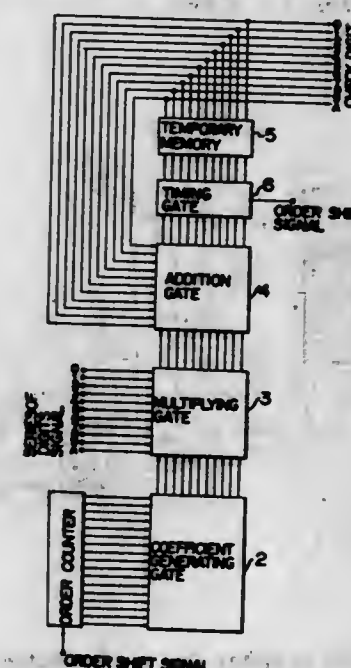


Apparatus adapted to be installed on a leading automobile for signaling the driver of a trailing automobile to dim or lower the headlights of the trailing automobile thereby to eliminate rear view mirror glare in the eyes of the driver of said leading automobile, and including electrical structure for projecting a pair of divergently arranged light beams rearwardly from the leading automobile and toward the trailing automobile and including electrical automatically operative switch means for causing the light beams to be alternately consecutively emitted, the alternating light beams being observed by the driver of the trailing vehicle and reminding the driver to dim or lower the headlights of his vehicle.

3,517,385 CODE CHECKING SYSTEMS

Sumio Katsuragi, Yokohama-shi, Japan, assignor to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed Oct. 26, 1967, Ser. No. 678,315
Claims priority, application Japan, Oct. 31, 1966, 41/71,513
Int. Cl. G06f 11/10

U.S. Cl. 340-146.1 7 Claims



In a code checking system wherein, in transmitting information represented by a series of characters or digits, the characters or digits are encoded and check digits are

added to the encoded information. There is provided a converting means adapted to convert respective characters and ambiguous characters into predetermined corresponding digits and to successively supply said digits on the output side, a coefficient generating means to successively generate predetermined coefficients corresponding to respective orders of the digit series generated on the output side of the converting means, a weight sum calculating means to calculate the weight sum of the coefficient series generated by the coefficient generating means and the digits series generated by the converting means by utilizing a predetermined prime number as the modulus, and means to restore and read erroneous characters or ambiguous characters by using the result of calculation of the weight sum calculating means.

3,517,386

VISUAL PATTERN RECOGNITION SYSTEM

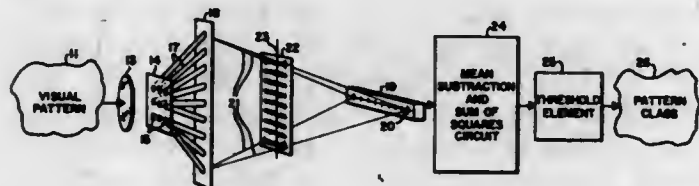
James W. Jones, Granada Hills, Calif., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Sept. 7, 1966, Ser. No. 577,710

Int. Cl. G06k 7/00, 9/00; G01n 21/30

U.S. Cl. 340-146.3

3 Claims



An analog transformation device making use of a raster onto which a visual pattern to be recognized is projected, a fiber optic converter for translating a two dimensional image pattern from the raster to a vertical linear display, and a photographic film attenuation filter for imposing a predetermined attenuation function on light transmitted from the vertical linear display to a horizontal array of sensors.

3,517,387

CHARACTER ISOLATION APPARATUS

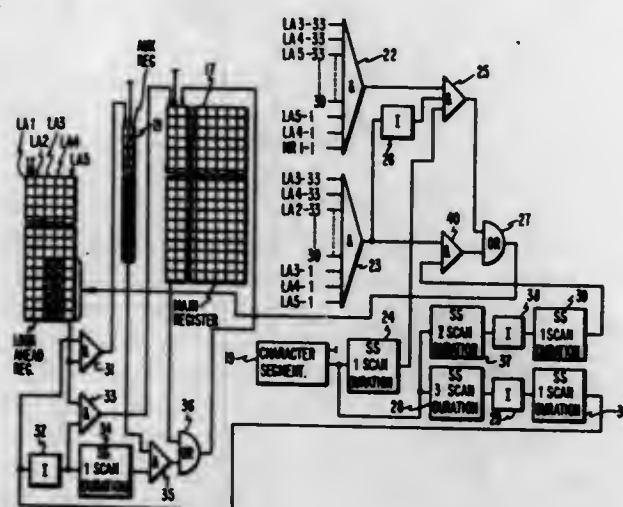
Douglas R. Andrews, Allan J. Atrubin, Richard J. Baumgartner, Milton F. Bond, and Kuang-Chi Hu, Rochester, Minn., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed May 9, 1966, Ser. No. 548,663

Int. Cl. G06k 9/12

U.S. Cl. 340-146.3

8 Claims



A look-ahead shift register for a character recognition system is provided with a selectively resettable reset area. Logic circuits for determining if a block containing character information is disconnected from either the right-side

character or the left-side character, or from both characters, are connected to shift register positions bracketing the reset area. If the logic circuits are satisfied at a predetermined time, the register positions in the reset area are reset. An auxiliary shift register is selectively interposed between the look-ahead and recognition registers and stores character data from a next character while blank scan insertion circuitry inserts a blank scan into the recognition register along the side of the character therein. In this manner, only information relating to a presently scanned character is contained in the recognition register.

ERRATA

For Classes 340-384 and 340-172.5 see:
Patent Nos. 3,517,390 and 3,517,391

3,517,388

COMMON SOURCE MODULATION OF MULTIPLE COUNTERMEASURES TRANSMITTERS

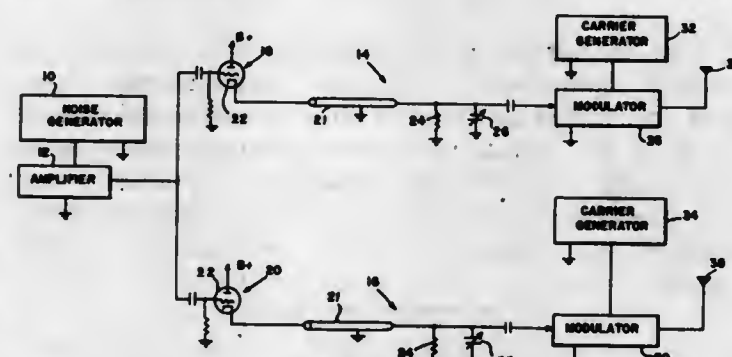
Raymond K. Vermillion, 218 Edge Ave., Valparaiso, Fla. 32580

Filed Jan. 6, 1961, Ser. No. 81,202

Int. Cl. H04k 3/00

U.S. Cl. 343-18

1 Claim



The output of a wide band noise generator is amplified and fed into two parallel cathode follower stages. The outputs of the cathode followers are then coupled to transmission lines whose lengths are equalized by means of variable capacitors. The signals are then used to modulate carrier waves and the resulting modulator outputs are transmitted over separate antennae.

3,517,389

METHOD AND SYSTEM FOR ELECTRONICALLY STEERING AN ANTENNA ARRAY

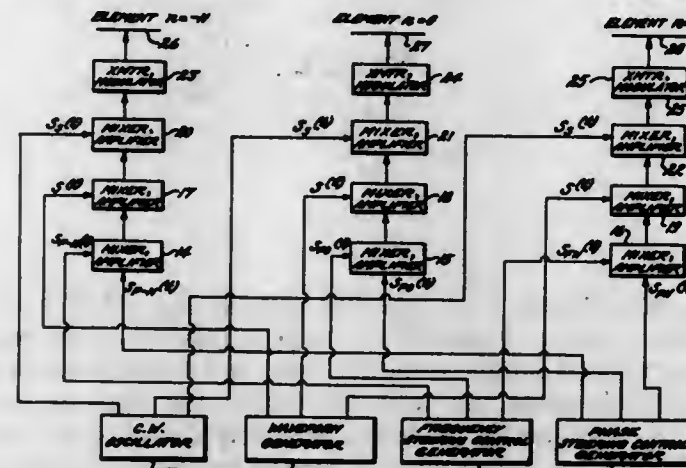
Lawrence R. Dausin, Cocoa Beach, Fla., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 15, 1964, Ser. No. 360,152

Int. Cl. H04b 7/04

U.S. Cl. 343-100

5 Claims



1. The method of electronically steering the beam of a multiple element antenna array over a predetermined

angular range wherein each of said elements is included in an associated transmitting channel comprising generating linear frequency modulated pulses for transmission in each of said channels, shifting the frequency in each of said transmitting channels a predetermined amount, simultaneously shifting the phase in each of said transmitting channels a predetermined amount, said frequency shift and said phase shift being proportional to the steering angle of said beam.

3,517,390

HIGH POWER ACOUSTIC RADIATOR

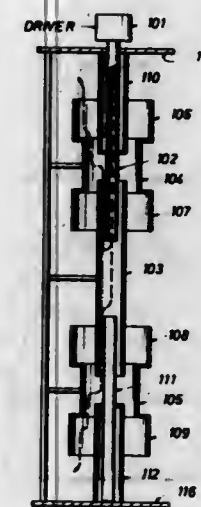
Layne Whitehead, 7220 Selma St., Houston, Tex. 77025

Continuation of application Ser. No. 496,746, Oct. 14, 1965. This application Feb. 29, 1968, Ser. No. 709,388

Int. Cl. G08b 3/00; G10k 9/00

U.S. Cl. 340-384

17 Claims



This invention relates to a new and improved acoustic radiator such as a fog radiator for allowing an acoustic source to generate a relatively large amount of acoustic power into a gas medium. During each cycle, a portion of the acoustic energy from the source is stored in the radiator to establish standing pressure waves therein; the remainder of the energy is radiated to the gas medium. The geometry of the radiator is selected so that the vibrating gases confined therein present an optimum load to the

acoustic source thereby allowing it to generate optimum power into the gas medium. The radiator can be made in sections having diverse cross-sectional areas.

3,517,391

DIGITAL COMPUTER

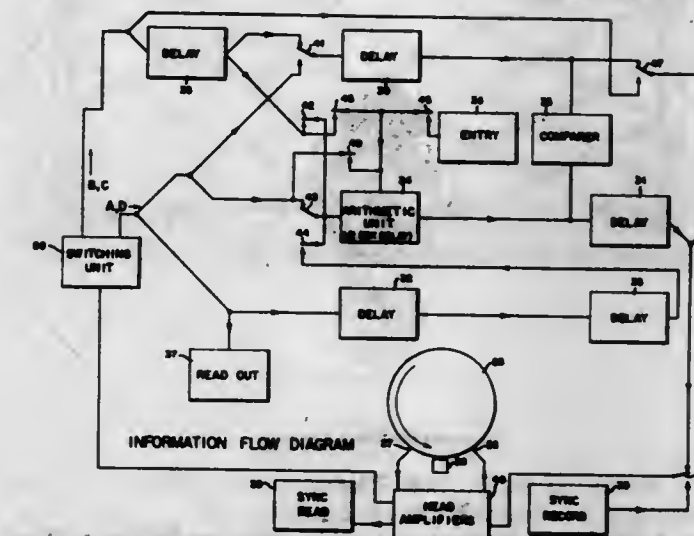
John J. Lentz, Chappaqua, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Oct. 26, 1953, Ser. No. 388,160

Int. Cl. G06f 3/00; 7/24

U.S. Cl. 340-172.5

93 Claims



A data processor including a rotating magnetic drum storage on which data is stored in four functional groups or registers A, B, C, D with data recorded in interleaved fashion $B_0A_0B_1A_1 \dots C_0D_0C_1D_1 \dots$. All data in the groups is read from the drum on each revolution and re-recorded after being circulated through arithmetic and logic circuitry. The circulation of data has a nominal time delay for non-shifting of data which may be varied to perform a right and left shift. Entry of data from a keyboard and control of various operations is effected through use of marking bits which are recorded in the data registers. In keyboard entry the marking bit is recorded in the next available data position to control the processor to effect recording when keyboard data is entered. Data output from the processor is by means of printer or cathode ray tube.

DESIGNS

JUNE 23, 1970

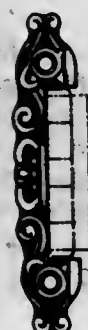
217,845
LADIES HANDBAG LOCK
David Damast, 522 Shore Road,
Long Beach, N.Y. 11561
Filed May 29, 1969, Ser. No. 17,404
Term of patent 3½ years
Int. Cl. D8—03

U.S. Cl. D8—129



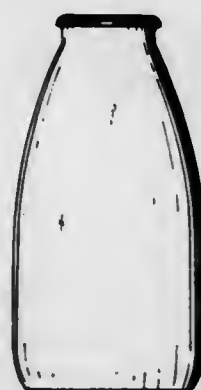
217,846
HINGE LEAF
Rogo A. Bulone, Anaheim, Calif., assignor to Hyer Hard-
ware Mfg. Co., Anaheim, Calif., a corporation of
California
Filed Apr. 7, 1969, Ser. No. 16,616
Term of patent 14 years
Int. Cl. D8—03

U.S. Cl. D8—195



217,847
BOTTLE
Thomas A. Jenkins, Toledo, and Raymond G. Reynolds,
Sylvania, Ohio, assignors to Owens-Illinois, Inc., Toledo,
Ohio, a corporation of Ohio
Filed Dec. 4, 1968, Ser. No. 14,781
Term of patent 14 years
Int. Cl. D9—01

U.S. Cl. D9—1



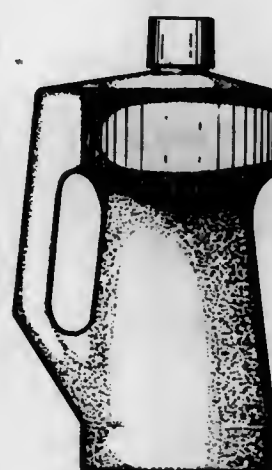
217,848
COMBINED BOTTLE AND CAP THEREFOR
Ira W. Schwartz, Great Neck, N.Y., assignor to Colgate-
Palmolive Company, New York, N.Y., a corporation
of Delaware
Filed May 26, 1969, Ser. No. 17,360
Term of patent 14 years
Int. Cl. D9—01

U.S. Cl. D9—1



217,849
JUG OR SIMILAR ARTICLE
Fred Georges Grandjean, Geroldswil, Switzerland, as-
signor to Colgate-Palmolive Company, New York,
N.Y., a corporation of Delaware
Filed June 18, 1969, Ser. No. 17,763
Claims priority, application Switzerland Dec. 23, 1968
Term of patent 14 years
Int. Cl. D9—01

U.S. Cl. D9—40



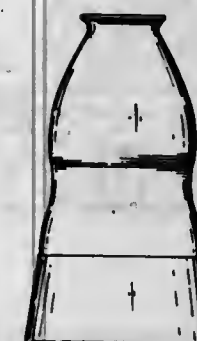
JUNE 23, 1970

U. S. PATENT OFFICE

691

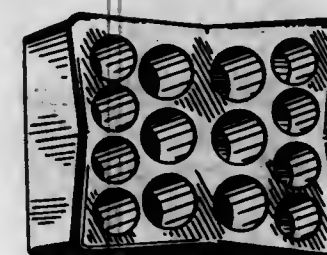
217,850
BOTTLE
Edward H. Lawton and John R. Nelson, Toledo, Ohio,
assignors to Owens-Illinois, Inc., Toledo, Ohio, a cor-
poration of Ohio
Filed Mar. 21, 1969, Ser. No. 16,379
Term of patent 14 years
Int. Cl. D9—01

U.S. Cl. D9—100



217,851
HOLDER FOR BOTTLES OR THE LIKE
Caroline C. Yankovich, 14060 Starlite Drive,
Brookpark, Ohio 44142
Filed June 2, 1969, Ser. No. 17,458
Term of patent 14 years
Int. Cl. D9—04

U.S. Cl. D9—177



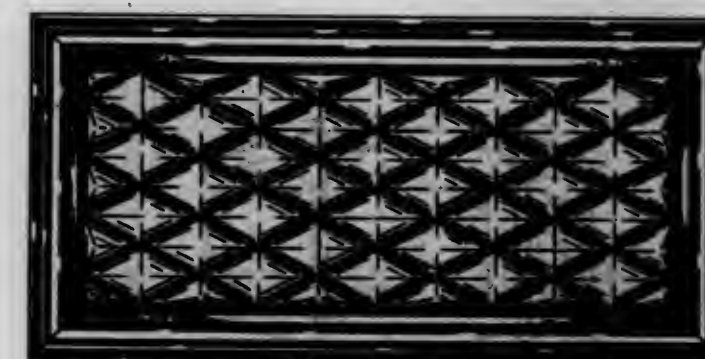
217,852
JEWELRY BOX
Marvin Wernick, Los Angeles, and Irving H. Plone, Playa
Del Rey, Calif., assignors to Republic Corporation,
Beverly Hills, Calif., a corporation of California
Filed Oct. 21, 1968, Ser. No. 14,097
Term of patent 14 years
Int. Cl. D9—04

U.S. Cl. D9—238



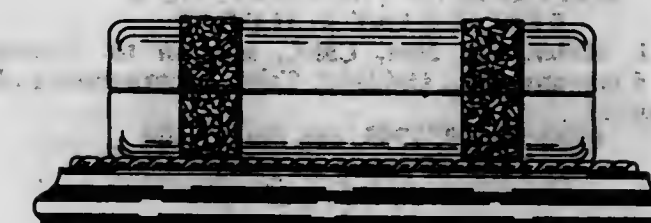
217,853
JEWELRY BOX
Marvin Wernick, Los Angeles, and Irving H. Plone, Playa
Del Rey, Calif., assignors to Republic Corporation,
Beverly Hills, Calif., a corporation of California
Filed Oct. 21, 1968, Ser. No. 14,089
Term of patent 14 years
Int. Cl. D9—04

U.S. Cl. D9—239



217,854
JEWELRY BOX
Marvin Wernick, Los Angeles, and Irving H. Plone, Playa
Del Rey, Calif., assignors to Republic Corporation,
Beverly Hills, Calif., a corporation of California
Filed Oct. 21, 1968, Ser. No. 14,100
Term of patent 14 years
Int. Cl. D9—04

U.S. Cl. D9—239



217,855
CAR WASH BUILDING
Maury W. Wayne, 13454 McCormick St.,
Van Nuys, Calif. 91401
Filed Jan. 21, 1969, Ser. No. 15,419
Term of patent 14 years
Int. Cl. D25—04

U.S. Cl. D13—1

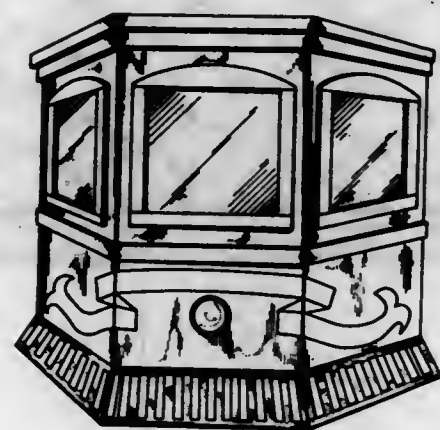


217,856

RESTAURANT BUILDING FRONT EXTERIOR
Albert J. Miller, San Jose, Calif., assignor to Cable Car
Burgers, Inc., Oakland, Calif., a corporation of
Colorado

Filed June 9, 1969, Ser. No. 17,607
Term of patent 14 years
Int. Cl. D25—01

U.S. Cl. D13—1

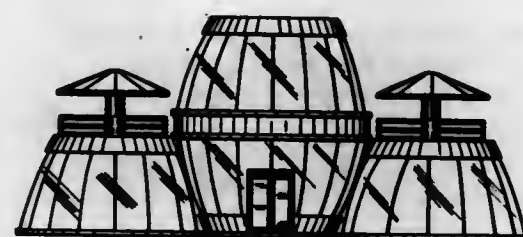


217,858

BARREL RESTAURANT BUILDING
Spero Mihailas, Belleville, Ill.
(1862 Lake Spier Drive, Winter Park, Fla. 32789)

Filed July 25, 1969, Ser. No. 18,413
Term of patent 3½ years
Int. Cl. D25—04

U.S. Cl. D13—1

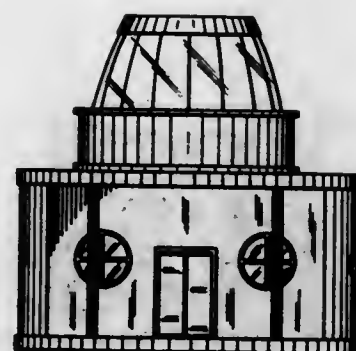


217,859

CIRCULAR RESTAURANT BUILDING
Spero Mihailas, Belleville, Ill.
(1862 Lake Spier Drive, Winter Park, Fla. 32789)

Filed July 25, 1969, Ser. No. 18,421
Term of patent 3½ years
Int. Cl. D25—04

U.S. Cl. D13—1



217,857

**EXTERIOR OF THE FRONT OF A
RESTAURANT BUILDING**

Albert J. Miller, San Jose, Calif., assignor to Norfish
Sales Company, Inc., Oakland, Calif., a corporation of
California

Filed June 9, 1969, Ser. No. 17,608
Term of patent 14 years
Int. Cl. D25—01

U.S. Cl. D13—1

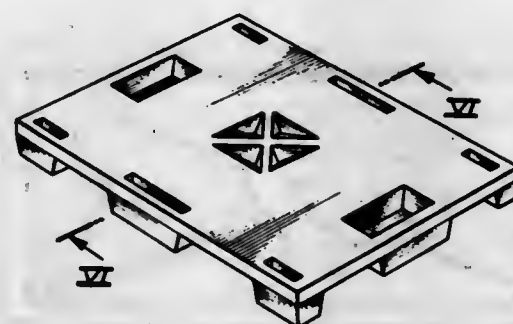


217,860

FOUR-WAY PALLET
Edward L. Bartee, Van Nuys, Calif., assignor of one-half
to Bernard B. Greene, Los Angeles, Calif.

Filed June 26, 1969, Ser. No. 17,898
Term of patent 7 years
Int. Cl. D12—99

U.S. Cl. D14—3



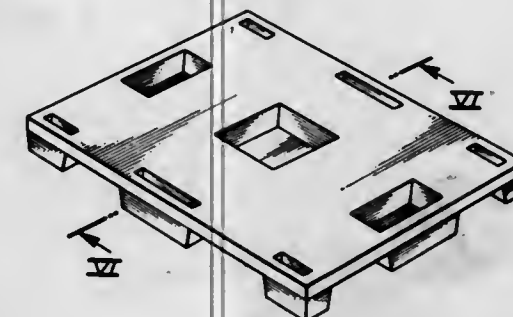
217,861

PALLET

Edward L. Bartee, Van Nuys, Calif., assignor of one-half
to Bernard B. Greene, Los Angeles, Calif.

Filed June 26, 1969, Ser. No. 17,901
Term of patent 7 years
Int. Cl. D12—99

U.S. Cl. D14—3



217,862

SNOW VEHICLE

Logan W. Johnson, Hopkins, Minn., assignor to
Boatel Company, Inc., Mora, Minn., a corporation
of Minnesota

Filed Sept. 16, 1969, Ser. No. 19,165
Term of patent 14 years
Int. Cl. D12—13

U.S. Cl. D14—24



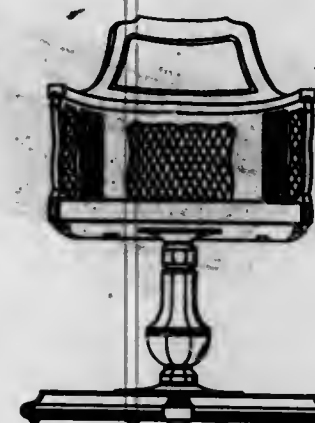
217,863

CHAIR

Wayland B. Parker, South Boston, Va., assignor to
Schlumberger Limited (Schlumberger N.V.), New York,
N.Y., a corporation of the Netherlands Antilles

Filed Apr. 9, 1969, Ser. No. 16,646
Term of patent 14 years
Int. Cl. D6—01

U.S. Cl. D15—1



217,864

BATHTUB

Dean W. Myers, Newport Beach, Calif., assignor to
Selectile Company, Inc., Los Angeles, Calif., a cor-
poration of California

Filed Apr. 9, 1969, Ser. No. 16,641
Term of patent 14 years
Int. Cl. D23—02

U.S. Cl. D23—55



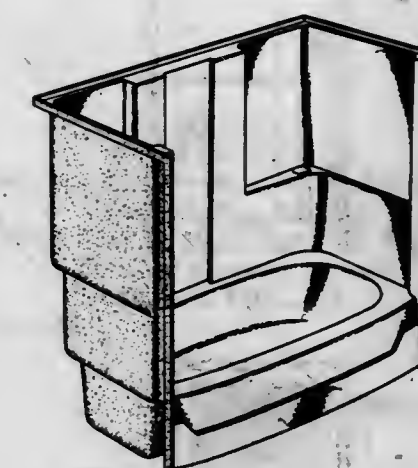
217,865

BATHTUB

Dean W. Myers, Newport Beach, Calif., assignor to
Selectile Company, Inc., Los Angeles, Calif., a cor-
poration of California

Filed Apr. 9, 1969, Ser. No. 16,647
Term of patent 14 years
Int. Cl. D23—02

U.S. Cl. D23—55



217,866

SHOWER STALL

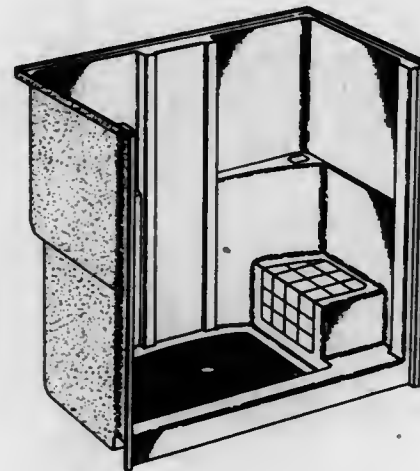
Dean W. Myers, Newport Beach, Calif., assignor to
Selectile Company, Inc., Los Angeles, Calif., a cor-
poration of California

Filed Apr. 9, 1969, Ser. No. 16,634

Term of patent 14 years

Int. Cl. D23—02

U.S. Cl. D23—57



217,867

SHOWER STALL

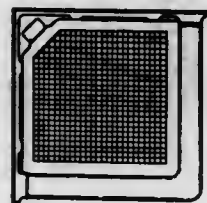
Dean W. Myers, 480 Prospect,
Newport Beach, Calif. 92660

Filed Apr. 10, 1969, Ser. No. 16,673

Term of patent 14 years

Int. Cl. D23—02

U.S. Cl. D23—57



217,868

DENTAL INSTRUMENT

Roy L. Newman, 1023 Landvall,
Rockford, Ill. 61107

Filed Apr. 17, 1969, Ser. No. 16,788

Term of patent 14 years

Int. Cl. D24—03

U.S. Cl. D24—1



217,869

DIFFERENTIAL VOLTMETER

Benjamin Shmurak, Lynbrook, Albert Blecker, Plainview,
Edward Brenner, Commack, Maurice G. Paulson,
Huntington, and Richard Projain, Jericho, N.Y., as-
signors to Lambda Electronics Corporation, Hunting-
ton, N.Y., a corporation of New York

Filed Mar. 20, 1969, Ser. No. 16,354

Term of patent 14 years

Int. Cl. D10—10

U.S. Cl. D26—1



217,870

**METERED POWER SUPPLY
RACK ADAPTER**

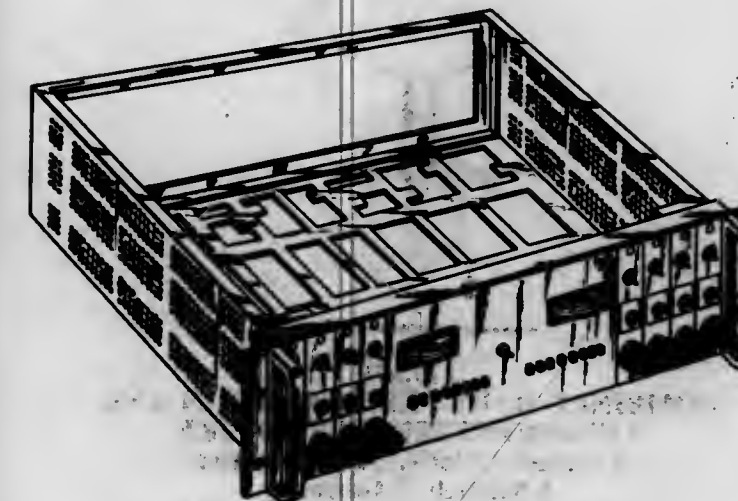
Edward Brenner, Commack, Marvin L. Price, Queens,
and Benjamin Shmurak, Lynbrook, N.Y., assignors to
Lambda Electronics Corporation, Huntington, N.Y., a
corporation of New York

Filed Aug. 15, 1969, Ser. No. 18,693

Term of patent 14 years

Int. Cl. D14—99

U.S. Cl. D26—1



217,872

**COMBINED DISPENSER BASE AND
MOUNTING BRACKET**

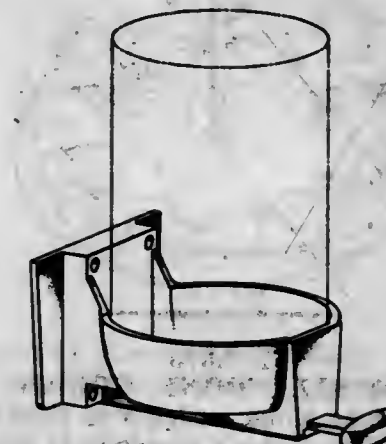
Marc H. Sessions, Los Angeles, Calif., assignor to Steiner
Company, a division of Steiner American Corporation,
Chicago, Ill., a corporation of Nevada

Filed Mar. 24, 1969, Ser. No. 16,398

Term of patent 14 years

Int. Cl. D6—01

U.S. Cl. D33—30



217,873

GOLF CLUB HEAD

Thomas Currie Steele, 94 Roslyn Ave.,
Rutherglen, Lanarkshire, Scotland

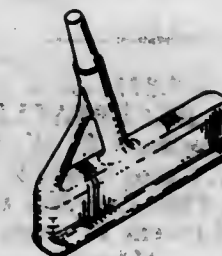
Filed Apr. 17, 1969, Ser. No. 16,802

Claims priority, application Great Britain Oct. 22, 1968

Term of patent 14 years

Int. Cl. D21—03

U.S. Cl. D34—5



217,871

**ELECTRIC POWER UNIT FOR A
SEWING MACHINE**

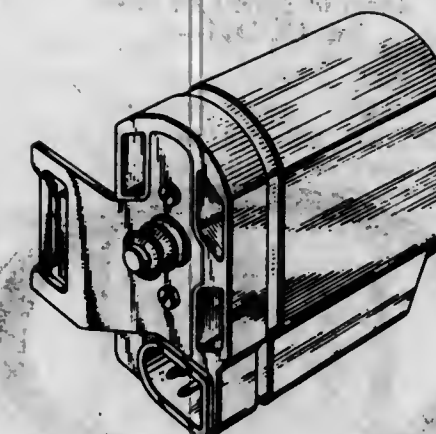
Henry Dreyfus, South Pasadena, Calif., assignor to The
Singer Company, New York, N.Y., a corporation of
New Jersey

Filed Feb. 18, 1969, Ser. No. 15,822

Term of patent 14 years

Int. Cl. D13—01

U.S. Cl. D26—5



217,874

ROLLER SKATE

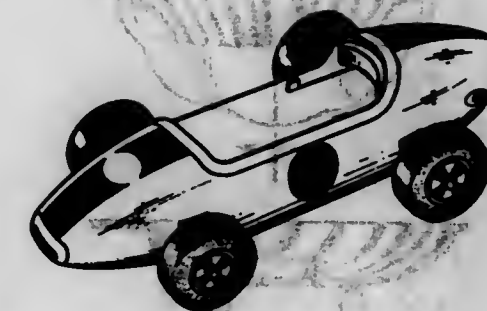
Lawrence C. French, 8267 Buffalo Ave.,
Norfolk, Va. 23518

Filed May 6, 1969, Ser. No. 17,033

Term of patent 14 years

Int. Cl. D21—04

U.S. Cl. D34—14



217,875

COMBINED PUZZLE AND WHIRLING TOY

Simon Gompes and Herman Schpektor, both of Nieuwe Kellersgracht 58, Amsterdam C, Netherlands
 Filed Mar. 5, 1969, Ser. No. 16,072
 Claims priority, application Great Britain Feb. 5, 1969
 Term of patent 14 years
 Int. Cl. D21-02

U.S. Cl. D34-15

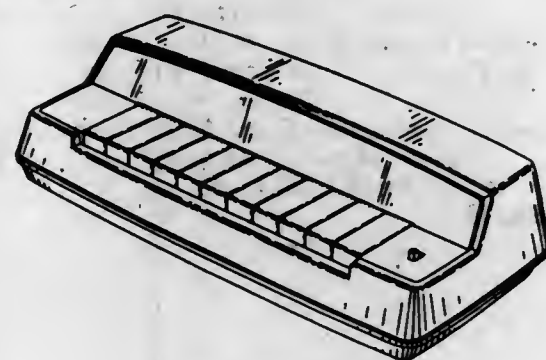


217,876

TOY ELECTRONIC ORGAN

Duncan Tong, Hong Kong, assignor to Decorart & Play-art Limited, Hong Kong, a company of Hong Kong
 Filed Mar. 10, 1969, Ser. No. 16,140
 Claims priority, application Great Britain Nov. 20, 1968
 Term of patent 14 years
 Int. Cl. D21-02

U.S. Cl. D34-15



217,877

FLOWER RECEPTACLE

Raymond G. Lankowitz, 4700 W. 32nd Ave., Denver, Colo. 80212
 Filed Oct. 14, 1968, Ser. No. 13,977
 Term of patent 14 years
 Int. Cl. D11-02

U.S. Cl. D35-3

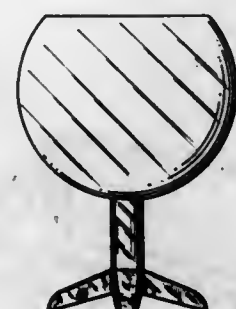


217,878

GOBLET OR SIMILAR ARTICLE

Fernando Alvarez, Glen Dale, W. Va., assignor to Morgantown Glassware Guild, Incorporated, Morgantown, W. Va.
 Filed Feb. 28, 1969, Ser. No. 15,967
 Term of patent 14 years
 Int. Cl. D7-01

U.S. Cl. D36-8

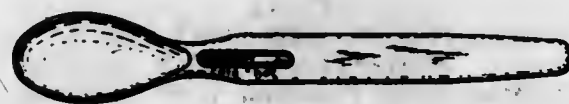


217,879

COMBINED BABY FEEDING SPOON AND THERMOMETER OR THE LIKE

Alexander Biolik, 14 Marsstrasse, 8 Munich 2, Germany
 Filed Mar. 28, 1969, Ser. No. 16,511
 Claims priority, application Germany Oct. 14, 1968
 Term of patent 14 years
 Int. Cl. D8-02

U.S. Cl. D44-29

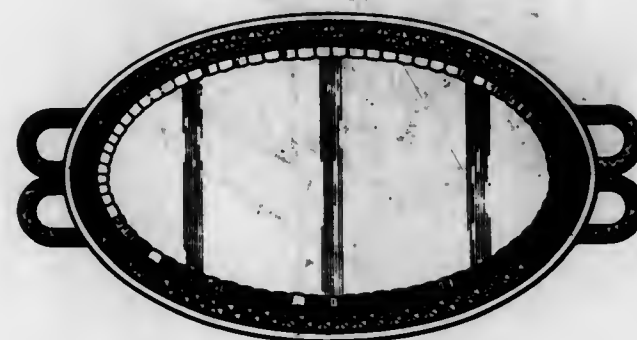


217,880

LINK FOR AN IDENTIFICATION BRACELET OR SIMILAR ARTICLE

Murray L. Cowan, Norwood, Mass., assignor to Textron Inc., Providence R.I., a corporation of Delaware
 Filed July 16, 1969, Ser. No. 18,229
 Term of patent 14 years
 Int. Cl. D11-01

U.S. Cl. D45-4

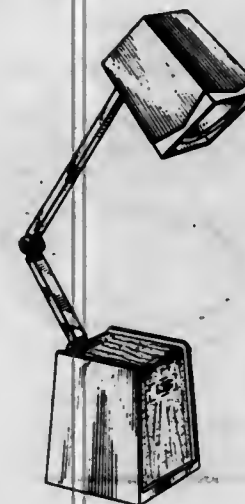


217,881

DESK LAMP

Dan M. Andre, 8843 Kostner Terrace, Skokie, Ill. 60076
 Filed Dec. 19, 1966, Ser. No. 5,082
 Term of patent 14 years
 Int. Cl. D26-02

U.S. Cl. D48-20



217,882

HIGH INTENSITY LAMP

Dan M. Andre, 8843 Kostner Terrace, Skokie, Ill. 60076
 Filed Dec. 27, 1966, Ser. No. 5,184
 Term of patent 14 years
 Int. Cl. D26-02

U.S. Cl. D48-20

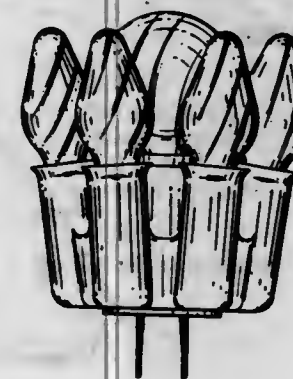


217,883

DECORATIVE LIGHT UNIT

James R. Stober, 435 SE. 28th Ave., Portland, Ore. 97214
 Filed Apr. 14, 1969, Ser. No. 16,720
 Term of patent 3 1/2 years
 Int. Cl. D26-02

U.S. Cl. D48-20

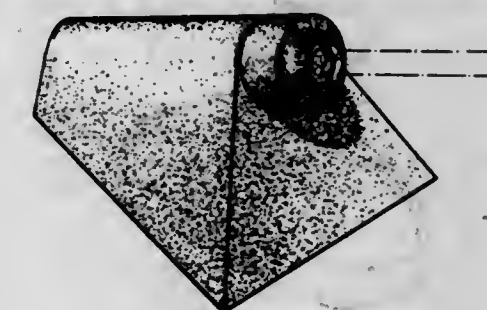


217,884

THERMOMETER HOLDER

Earl A. Logan, Morris County, and Samson Asah, Union County, N.J., assignors to C. R. Bard, Inc., Murray Hill, N.J., a corporation of New York
 Filed Feb. 17, 1969, Ser. No. 15,788
 Term of patent 14 years
 Int. Cl. D16-09

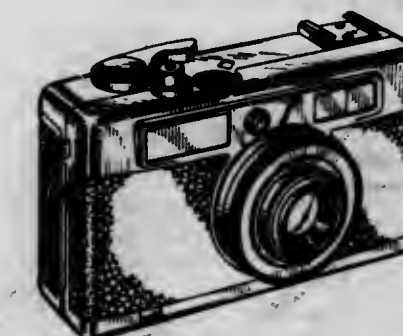
U.S. Cl. D52-7



217,885

CAMERA

Masahiro Fukuda, Kawasaki-shi, Japan, assignor to Fuji Shashin Film Kabushiki Kaisha, Kanagawa-ken, Japan, a corporation of Japan
 Filed Aug. 22, 1969, Ser. No. 18,801
 Claims priority, application Japan Apr. 4, 1969
 Term of patent 14 years
 Int. Cl. D16-01

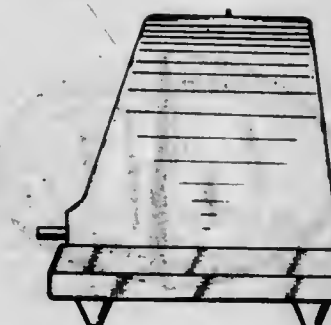
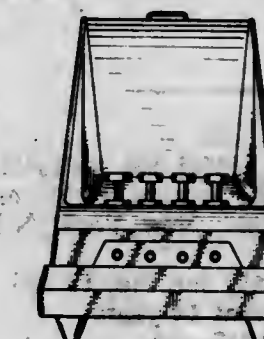


217,886

AQUARIUM AIR PUMP

Tsuyoshi Itakura, Tokyo, Japan, assignor to Itakurayushi Kogyo Co., Ltd., Tokyo, Japan, a Japanese corporation
 Filed Apr. 8, 1969, Ser. No. 16,626
 Term of patent 14 years
 Int. Cl. D15-02

U.S. Cl. D65-1



217,887

RAILWAY PASSENGER CAR

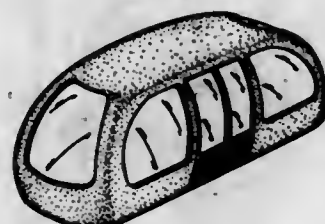
Rima Gerevitz, New York, N.Y., assignor to The Dashavoy Company, Venice, Calif., a corporation of California

Filed Apr. 23, 1969, Ser. No. 16,869

Term of patent 14 years

Int. Cl. D12-03

U.S. Cl. D66-1



217,888

AMPHIBIOUS AIRCRAFT

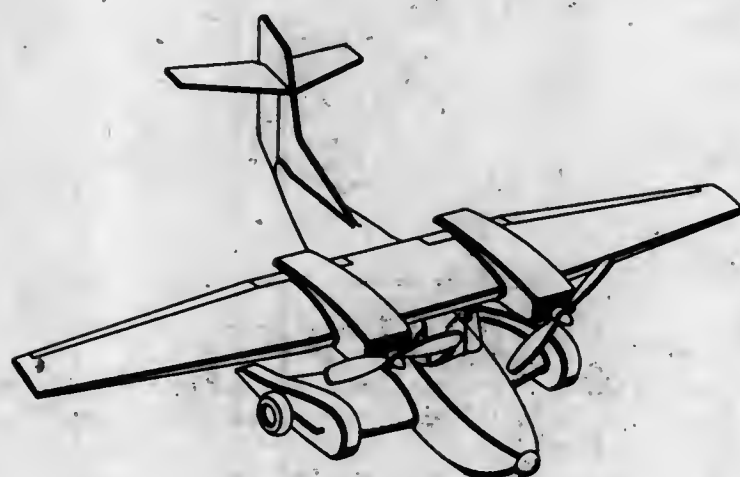
Cornelius Blemond, 2388 Richards Drive, Carson City, Nev. 89701

Filed Aug. 19, 1968, Ser. No. 13,182

Term of patent 14 years

Int. Cl. D12-07

U.S. Cl. D71-1



217,889

BAR OF SOAP OR SIMILAR ARTICLE

Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Aug. 15, 1969, Ser. No. 18,709

Term of patent 14 years

Int. Cl. D7-06

U.S. Cl. D73-1



217,890

BAR OF SOAP OR SIMILAR ARTICLE

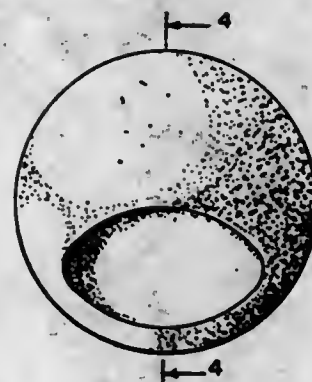
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Aug. 15, 1969, Ser. No. 18,711

Term of patent 14 years

Int. Cl. D7-06

U.S. Cl. D73-1



217,891

BAR OF SOAP OR SIMILAR ARTICLE

Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Aug. 15, 1969, Ser. No. 18,720

Term of patent 14 years

Int. Cl. D7-06

U.S. Cl. D73-1



217,892

ANKLE SPLINT

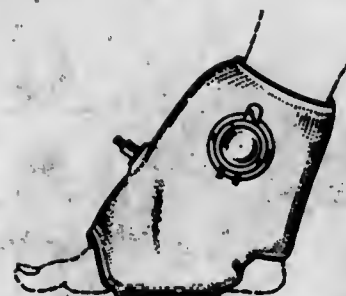
Fred R. Dunning and Jean R. Dunning, both of 3800 Oakes Road, Brecksville, Ohio 44141

Filed Mar. 19, 1969, Ser. No. 16,320

Term of patent 14 years

Int. Cl. D24-05

U.S. Cl. D83-1



LIST OF PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 23D DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Akerlund & Rausing: See—
Bjorklund, Bengt, 3,516,587.

AB Gambro: See—
Alwall, Nils, Ostergren, Bo Lennart, and Hagstrom, Nils Olov Wilhelm, 3,516,548.

Abbotts, William Edward, to Solartron Electronic Group Limited, The. Methods and apparatus for measuring the densities of fluids by vibrating a hollow body surrounded by the fluid. 3,516,283, Cl. 73-30.

Abel, Konrad, to Siemens Aktiengesellschaft. Parametric amplifier with independent terminal impedances. 3,517,209, Cl. 307-88.3

Abert, Jack C.: See—
Farnbach, Fred A., 3,516,586.

Accello, Salvatore J.: See—
Urfer, Ernest N., Accello, Salvatore J., and Collins, David W. 3,517,277.

ACF Industries, Incorporated: See—
Bradford, Dudley M., and Proctor, Aurion M., 3,516,366.

Ackerman, Bernard, to Electro-Catheter Corporation. Bipolar electrode having irregularity at inserting end thereof and method of insertion. 3,516,412, Cl. 128-418.

Ackermann, Karl, deceased (by Siebert, Karl, representative), to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Galvanic cell of equipment for determining the oxygen concentration of a gas mixture of vapor mixture. 3,516,916, Cl. 204-195.

Acme Highway Products Corporation: See—
Crone, Alfred F., 3,516,338.

Acme Precision Products, Inc.: See—
McCarroll, Raymond A., 3,516,138.

Addressograph-Multigraph Corporation: See—
Huggins, Ralph T., and Meller, Frederick D., 3,517,164.

Adell, Robert. Wheelless tape cartridge. 3,516,616, Cl. 242-55.19

Adler, Estelle. Apparatus for the therapeutic treatment of the skin. 3,516,411, Cl. 128-404.

Adler, Robert, to Zenith Radio Corporation. Cylindrical lens compensation of wide-aperture Bragg diffraction scanning cell. 3,516,729, Cl. 350-161.

Afga Aktiengesellschaft: See—
Hagge, Walter, Quedvlieg, Mathieu, Heusch, Rudolf, Hebbel, Konrad, and Schiffmann, Richard, 3,516,833.

Agren, Sven Birger, and Stenman, Erkki Antero, to Aktiebolaget Haglund & Soner. Fluid shock absorber. 3,516,520, Cl. 188-96.

Ainsworth, Ira V. Dental matrix equipment. 3,516,162, Cl. 32-63.

Aisin Selki Company Limited: See—
Kozaki, Tatsuo, 3,516,374.

Aitken, Robert William: See—
Lawrence, Paul Anthony, Aitken, Robert William, and Bennett, Robert Neil, 3,516,925.

Aiuola, Franco: See—
Maulini, Maurizio, and Aiuola, Franco, 3,516,336.

Akamatsu, Takashi, Kenmochi, Hiohito, Suda, Hideaki, and Hotta, Seiji, to Sunthome Chemical Company, Ltd. Anthrapyridone and anthraquinone dyes containing 1 or 2 β -sulfo-, β -isulfo- or β -vinylethylsulfonylalkanoyle-N-methyleamine groups. 3,517,013, Cl. 260-278.

Akamatsu, Tatsuo: See—
Akamatsu, Tatsuo, 3,516,255.

Akamatsu, Tatsuo, 1/2 to Akamatsu, Tatsuo, and 1/2 to Mitsui Real Estate Co., Ltd. Concrete component or block for a protective covering structure. 3,516,255, Cl. 61-37.

Aktiebolaget Electrolux: See—
Nilsson, Bengt Erik, 3,516,110.

Aktiebolaget Haglund & Soner: See—
Agren, Sven Birger, and Stenman, Erkki Antero, 3,516,520.

Akustische U. Kino-Gerate Gesellschaft m.b.H.: See—
Fidi, Werner, 3,517,344.

Alaimo, Robert James, to Norwich Pharmacal Company, The. Certain 2-substituted amino quinolizinium compounds. 3,517,019, Cl. 260-294.8

Alamance Industries, Inc.: See—
Fain, Bobby Ray, 3,516,240.

Albrecht, David Eugene, to Allied Piping Products Company of Pennsylvania, Inc. Branch pipe connection. 3,516,692, Cl. 285-156.

Albuquerque Gravel Products Co.: See—
Sundt, Maurice Eugene, and Wagner, Walter K., 3,516,431.

Alexander, Herman: See—
Langwell, John D., 3,516,687.

Allen, Kenneth C., to Hobart Manufacturing Company, The. Scales. 3,516,504, Cl. 177-12.

Allied Chemical Corporation: See—
Largman, Theodore, and Newallis, Peter E., 3,517,027.

Litt, Morton H., and Roth, Sorrell, 3,516,944.

Newallis, Peter E., Lombardo, Pasquale, and Spano, Francis A., 3,517,089.

Reedy, Ora Lee, Twilley, Ian C., and Rainer, Norman B., 3,516,956.

Allied Filter Engineering, Inc.: See—
MacDonnell, Robert W., 3,516,549.

Allied Piping Products Company of Pennsylvania, Inc.: See—
Albrecht, David Eugene, 3,516,692.

Allied Thermal Corporation: See—
Edwards, Albert S., 3,516,606.

Allis-Chalmers Manufacturing Company: See—
Manion, Jean P., and Davies, Daniel J., 3,516,921.

Thiele, Tom N., 3,517,292.

Welch, Fredrick M., 3,516,929.

Allport, Davies, and Kratt, Henry J. Combustion system for producing high temperature and high pressure gas. 3,516,253, Cl. 60-39.77

Alphamatic Corporation: See—
Maziarka, Robert J., 3,516,279.

Altshuler, Saul: See—
Glatt, Leonard, and Altshuler, Saul, 3,517,334.

Aluminum Company of America: See—
Gitzel, Walter H., and Mac Zura, George, 3,516,840.

Mizuk, John, 3,516,573.

Pohlentz, Elmer E., 3,516,564.

Alwall, Nils, Ostergren, Bo Lennart, and Hagstrom, Nils Olov Wilhelm, to AB Gambro. Dialysis means having spacing disks with gratings displaced or twisted in relation to each other. 3,516,548, Cl. 210-321.

Alworth, Kathleen M.: See—
Bechtold, Arthur W., and Alworth, Kathleen M., 3,516,422.

American Bitrite Rubber Co., Inc.: See—
Slosberg, David K., 3,516,894.

American Cyanamid Company: See—
Bach, Frederick Louis, Cohen, Elliott, and Kohlbrenner, Philip John, 3,517,069.

Bishop, Harlow, 3,516,909.

Callister, John David, and Carile, Clayton George, 3,517,075.

Coleman, Denis, 3,517,087.

Ease, Robert Carlyle, 3,517,101.

Nakazawa, Chuichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro, 3,516,229.

Renella, Joseph Gerald, 3,517,100.

Susi, Peter Vincent, and Arthen, Frank Joseph, Jr., 3,517,045.

American Home Products Corporation: See—
Bell, Stanley C., 3,516,992.

Bell, Stanley C., 3,517,037.

Bruce, William F., 3,517,000.

Hecker, Robert W., Jr., and Beckwith, Robert C., 3,516,103.

Kim, Dong H., and Santilli, Arthur A., 3,517,007.

Kim, Dong H., and Santilli, Arthur A., 3,517,008.

Kim, Dong H., and Santilli, Arthur A., 3,517,009.

Kim, Dong H., and Santilli, Arthur A., 3,517,010.

Kim, Dong H., Santilli, Arthur A., and Childress, Scott J., 3,517,011.

Koo, Charles M. C., Pattison, Thomas W., and Herbst, David R., 3,516,987.

Osdene, Thomas S., and Santilli, Arthur A., 3,516,998.

Sallay, Stephen I., 3,516,989.

Santilli, Arthur A., and Osdene, Thomas S., 3,517,061.

Teller, Daniel M., Douglas, George H., and Smith, Herchel, 3,516,990.

Wei, Peter H. L., and Bell, Stanley C., 3,516,996.

American Metal Climax, Inc.: See—
Papafingos, Pandelis, and Bernath, Kornel, 3,516,877.

Ammons, Thomas J.: See—
Powell, William W., and Ammons, Thomas J., 3,516,881.

AMP Incorporated: See—
Wahl, Frederick William, 3,517,112.

Amsted Industries Incorporated: See—
Kaim, John W., 3,516,696.

Anaconda Company, The: See—
Bigley, Arthur C., Jr., and Kramlick, Emil S., 3,516,820.

Anaren Microwave, Incorporated: See—
Gerst, Carl W., 3,517,309.

Anchor Hocking Corporation: See—
Hatkevich, Albert, 3,516,565.

Shank, Herbert C., Jr., and Lowry, Ned W., 3,516,849.

Andersen, H. W., Products, Inc.: See—
Andersen, Harold Willids, Andersen, Harold W., and Harrison Charles H., 3,516,223.

- Andersen, Harold W.: See—
Andersen, Harold Willids, Andersen, Harold W., and Harrison, Charles H. 3,516,223.
- Andersen, Harold Willids, Andersen, Harold W., and Harrison, Charles H., to Andersen, H. W., Products, Inc. Apparatus for managing and using volatile substances. 3,516,223, Cl. 53-112.
- Andersen, Joseph J.: See—
Oelrich, John A., and Andersen, Joseph J. 3,516,331.
- Anderson, James: See—
Bayless, Frank K., Descaries, Raymond, Ohlson, B Erik, and Anderson, James 3,516,107.
- Anderson, James R.: See—
Anderson, Kenneth G., Anderson, James R., and Hatcher, John B. 3,517,316.
- Anderson, Kenneth G., Anderson, James R., and Hatcher, John B., to Research Instruments & Controls, Inc., mesne. Surveillance equipment and system. 3,517,316, Cl. 325-113.
- Anderson Power Products, Inc.: See—
Mortenson, Victor A., 3,517,147.
- Anderson, Theodore C., and Ingle, James F., to Bell Telephone Laboratories, Incorporated. Signal reflection type fault location system utilizing a low frequency test signal with test signal cancellation in signal display apparatus. 3,517,306, Cl. 324-52.
- Anderson, Walter M., Jr., to Texas Instruments, Incorporated. Apparatus for protecting a D.C. load. 3,517,264, Cl. 317-23.
- Andis, Ernest R. Deposit receptacle for newspapers or the like. 3,516,600, Cl. 232-17.
- Andre, Edmond. Device for clamping articles to be machined. 3,516,680, Cl. 279-4.
- Andre, Herbert, and Cast, Adolf, to Reich, Karl M., Maschinenfabrik. Nail selecting and feeding mechanism for nailing apparatus. 3,516,574, Cl. 221-278.
- Andres, Helmut: See—
Schenkel, Fritz, Von Hayn, Ernst, and Andres, Helmut 3,516,533.
- Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi, to International Business Machines Corporation. Character isolation apparatus. 3,517,387, Cl. 340-146.3
- Andrews, Edward George David, Oldfield, Harry, and Healey, Gordon Terry, to Rolls-Royce Limited. Rocket engine. 3,516,251, Cl. 60-39.48
- Andrews, George Inglis, Groszek, Aleksander Jerzy, and Witheridge, Rodney Ernest, to British Petroleum Company Limited. The Surface-modified metals in composites and bearings. 3,516,933, Cl. 252-12.
- Angus, Robert H. Movable bed apparatus. 3,516,097, Cl. 5-323.
- Anot Controls Corporation: See—
Munroe, William O., 3,516,442.
- Anschutz & Co., G.m.b.H.: See—
Kundler, Walter, 3,517,285.
- Antonsen, Donald H., to Sun Oil Company. Preparation of color-improved methyl esters of naphthalenedicarboxylic acids. 3,517,053, Cl. 260-475.
- Anzilotti, Willard F., to Du Pont de Nemours, E. I., and Company. Method of inhibiting corrosion. 3,516,922, Cl. 208-47.
- Apamed Establishment: See—
Courmut, Rene, 3,516,403.
- Arakawa, Teruaki, and Saito, Ikuo. Plural cavity tuner employing variable capacitor tuning and inductive coupling. 3,517,353, Cl. 334-45.
- Arllet, Francois. Decorative and the like device. 3,516,186, Cl. 40-126.
- Armour and Company: See—
Story, Julian R., Herrick, Aaron B., and Jungermann, Eric, 3,516,937.
- Armour Industrial Chemical Company.: See—
Malec, Robert E., 3,516,806.
- Arndt, Frans Martin, to Gewerkschaft Eisenhutte Westfalen. Worm gears. 3,516,298, Cl. 74-427.
- Arndt, John P., and Franklin, Edmond G., to Cleve Corporation. Ultrasonic cleaner. 3,516,645, Cl. 259-72.
- Arooldy, Roman F., to R. I. Patents, Inc. Welding apparatus and method. 3,517,156, Cl. 219-76.
- Arsenault, Joseph R., and Bogle, William N., to United States of America, Army, mesne. Integrated circuit package programmable test socket. 3,517,144, Cl. 200-46.
- Arthen, Frank Joseph, Jr.: See—
Susi, Peter Vincent, and Arthen, Frank Joseph, Jr. 3,517,045.
- Artos Engineering Company: See—
Gudmestad, Ragnar, 3,516,313.
- Arzoumanidis, Grigorios G.: See—
Mila, Nicholas A., and Arzoumanidis, Grigorios G. 3,517,032.
- Asahi Kasei Kogyo Kabushiki Kaisha: See—
Inoue, Goro, Honda, Makoto, and Kobayashi, Takashi, 3,517,046.
- Nakano, Hiroshi, Takai, Hideo, Muroto, Yoshiaki, and Nakajima, Fumio, 3,516,241.
- Ashkin, Arthur, and Tell, Benjamin, to Bell Telephone Laboratories, Incorporated. Coherent optical devices employing induced inhomogeneities in nonferroelectric crystals. 3,517,333, Cl. 331-94.5
- Ashland Oil & Refining Company: See—
Taft David D., 3,516,955.
- Ashton, Donald M., Jr., and Dubois, Richard, Jr., to Wagner Electric Corporation. Colored readout assembly. 3,516,724, Cl. 350-96.
- Asikainen, Niilo: See—
Manninen, Paavo, and Asikainen, Niilo 3,516,358.
- Asikainen, Niilo Kalervo, to Etablissement Salgad. Gunsight mounting. 3,516,168, Cl. 33-50.
- Asinovskaya, Gnesa Abramovna: See—
Shashkov, Andrei Nikolaevich, Asinovskaya, Gnesa Abramovna, and Ilina, Inna Ivanovna 3,516,825.
- Associated Spring Corporation: See—
Maker, James H., and Kurasz, George W., 3,516,874.
- Asheimer, Robert W., to Barnes Engineering Company. Method of remotely monitoring stack effluent. 3,517,190, Cl. 250-43.5
- Astrosystems International, Inc.: See—
Strauss, Robert F., 3,516,772.
- Atrubin, Allan J.: See—
Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi 3,517,387.
- Atwater, Wayne G., to Triax Company, The. Automatic warehousing system with transfer mechanism. 3,516,558, Cl. 214-16.4
- Audran, Roger G. L., Delest, Philippe F., and Vige, Maurice, to Eastman Kodak Company. Ionizing radiation sensitive photographic element comprising foamed gelatin-silver halide emulsion. 3,516,834, Cl. 96-114.
- Augustin, Eugene P., to Teledyne, Inc. Microwave polarization switch. 3,517,341, Cl. 333-21.
- Austen, Herman E., to National Cash Register Company, The. Method of making a magnetic transducer set. 3,516,152, Cl. 29-603.
- Auto-Control, Inc.: See—
Furlong, James H., 3,516,506.
- Automatic Electric Laboratories, Inc.: See—
Burger, Victor G., 3,517,138.
- Orchard, Henry J., and Sheahan, Desmond F., 3,517,342.
- Talcott, Horace C., 3,517,129.
- 'Automatic' Sprinkler Corporation of America: See—
Bovard, Robert M., and Simmonds, Milo R., 3,516,797.
- Carter, Sidney T., 3,516,435.
- Auxiliary Brake Systems, Inc.: See—
Besoyan, Kirk, 3,516,519.
- Avco Corporation: See—
Straniti, Salvatore, and Massey-Shaw, Frederick, 3,516,482.
- Avizienis, Algirdas A., to United States of America, National Aeronautics and Space Administration, mesne. Self testing and repairing computer. 3,517,171, Cl. 235-153.
- AVM Corporation: See—
Lawson, Ivar S., 3,516,637.
- Avtron Manufacturing, Inc.: See—
Haner, Lambert, and James, Eugene F., 3,516,617.
- Azuma, Hiroshi, to Wakayama Tetsuko Kabushiki Kaisha. Driving mechanism for jiggers. 3,516,619, Cl. 242-67.1
- Babcock & Wilcox Company, The: See—
Zadiraka, Allan J., 3,517,276.
- Babcock, Wayne R., and Cattaneo, Alfredo G., to United Aircraft Corporation. Method and apparatus for generating an acoustic output from an ionized gas stream. 3,516,286, Cl. 73-116.
- Bacevius, Joseph G.: See—
Moore, Arthur H., and Bacevius, Joseph G. 3,517,185.
- Bach, Frederick Louis, Cohen, Elliott, and Kohlbrenner, Philip John, to American Cyanamid Company. Processes for preparing 4-(lower alkoxy)-4'-trifluoro-methylbiphenyls. 3,517,069, Cl. 260-612.
- Badali, Joseph A.: See—
Lewis, Oliver N., and Badali, Joseph A. 3,516,189.
- Bader, Stephen, & Co., Inc.: See—
Bader, Stephen, 3,516,207.
- Bader, Stephen, to Bader, Stephen, & Co., Inc. Belt grinding and polishing machine. 3,516,207, Cl. 51-135.
- Badische Anilin- & Soda-Fabrik Aktiengesellschaft: See—
Ackermann, Karl, 3,516,916.
- Dimroth, Peter, and Mayer, Kurt, 3,516,982.
- Floss, Josef Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans, 3,516,828.
- Baenziger, Robert C. Fishing reel wheel. 3,516,191, Cl. 43-25.
- Bahner, Wilburn E. Method of mounting stones in a foam plastic panel. 3,516,888, Cl. 156-298.
- Bailey, George Edward. Folding fruit or vegetable basket. 3,516,595, Cl. 229-35.
- Bailey, James R., and Lutzenberger, Kurt, to Switchcraft, Inc. Pushbutton switch means. 3,517,140, Cl. 200-5.
- Bailey Meter Company: See—
Gates, Robert H., and Tuinenga, William, 3,517,168.
- Gates, Robert H., and Kovacic, Joseph M., 3,517,310.
- Baird, Kenneth Mac Clure, and Smith, Donald Sinclair, to Canadian Patents and Development Limited. Method and apparatus for the stabilization of lasers, etalons, and similar optical devices. 3,517,331, Cl. 331-94.5
- Baker, Leroy D., and Peppler, William S., to Diamond International Corporation. Apparatus for continuously producing packages of produce. 3,516,227, Cl. 53-229.
- Baker, Mark E.: See—
Marroni, Michael A., Hardy, John C., and Baker, Mark E. 3,516,091.
- Baker, William Andrew, to Rolls-Royce (Composite Materials) Limited. Bore hole type wells. 3,516,448, Cl. 138-144.
- Bakes, Hal H., to Heinemann Electric Company. Electromagnetic device having a short circuited turn. 3,517,357, Cl. 335-63.
- Balas Collet Company: See—
Cox, John R., and Mix, Joseph E., 3,516,681.

- Blackmer, David E., to Instrumentation Laboratories, Inc. Compensated DC amplifier input stage employing junction field effect transistors. 3,517,325, Cl. 330-23.
- Baldino, James Peter: See—
Jones, Wilford Donald, Baldino, James Peter, and Melamed, Sidney 3,516,903.
- Baldwin, D. H., Company: See—
Harris, Michael R., 3,516,321.
- Munch, Walter, Jr., 3,516,319.
- Wayne, William C., Jr., 3,516,318.
- Baldwin, Edwin C.: See—
Goll, Frederick M., and Baldwin, Edwin C. 3,516,855.
- Baldwin-Lima-Hamilton Corporation: See—
Robertson, Dean S., and Jackson, Carroll V., 3,516,513.
- Robertson, Dean S., and Jackson, Carroll V., 3,516,555.
- Ball Corporation: See—
Mixell, Ronald G., and Cerny, Daryl D., 3,517,097.
- Banfi, Jacques Claude, and Chauvin, Christian. Spectacle bows that flex to overlie the frame. 3,516,737, Cl. 351-114.
- Banham, James W., Jr., to United States of America, Navy. System or apparatus for optimizing the operation of a combustion process. 3,517,170, Cl. 235-151.12
- Barak, Anthony J., Beckenhauer, Harriet C., Myers, Richard A., and Wilger, Roy N., to United States of America, Veterans Affairs and/or Army. Flowmeter for use in monitoring oxygen uptake. 3,516,292, Cl. 73-221.
- Barbier, Maurice, and Sayous, Leon, to Societe Nationale des Petroles d'Aquitaine. Method of exploration by transmission of mechanical waves installation for carrying out the method and the applications thereof. 3,517,380, Cl. 340-15.5
- Barbini, Spartacus, to Compagnie Generale d'Electricite. Shock-wave generator. 3,517,256, Cl. 315-155.
- Bardons & Oliver, Inc.: See—
Hicks, Morris R., and Le Veque, Joseph C., 3,516,439.
- Barefoot, Charles A. Electromagnetic catheter blood flow probe. 3,516,399, Cl. 128-205
- Barkman, James H., Jr., Darley, Henry C. H., Jorda, Robert M., and Tuttle, Robert N. Well completion and workover fluid and method of use thereof. 3,516,496, Cl. 166-281.
- Barmag Barmer Maschinenfabrik Aktiengesellschaft: See—
Braun, Siegfried, Ruppel, Friedrich, and Schippers, Heinz, 3,516,120.
- Barnes & Tucker Company: See—
Birch, Joseph J., 3,516,931.
- Barnes, Derek, to MacMillan Bloedel Limited. Apparatus for spraying liquid on moving articles. 3,516,388, Cl. 118-316.
- Barnes Engineering Company: See—
Asheimer, Robert W., 3,517,190.
- Barnes, Philip Earle, to United Aircraft Corporation. Fluid governor. 3,516,427, Cl. 137-47.
- Barnstorf, Joachim: See—
Ploog, Uwe, Stein, Werner, and Barnstorf, Joachim 3,516,954.
- Barr & Stroud Limited: See—
Ritchie, David S., 3,516,748.
- Barrett, Robert E., to United States of America, Navy, mesne. Underwater long-distance sound-detection system. 3,517,378, Cl. 340-5.
- Barron, Daniel. Circular sonar slide rule. 3,516,602, Cl. 235-88.
- Bartley, Douglas M.: See—
Whitlock, Huber M., Bartley, Douglas M., and Torongo, Richard E. 3,516,440.
- Bassot, Jacques, and Monpetit, Louis, to Societe des Procedes Modernes d'Injection Soproni. Fuel injection system for internal combustion engines. 3,516,395, Cl. 123-139.
- Bastam, Hans-Dieter, Huber, Bernd, and Wahl, Josef, to Bosch, Robert, G.m.b.H. Ignition distributor with radially removable contact mechanism and terminal means. 3,517,142, Cl. 200-19.
- Bates, Donald D.: See—
Mook, Herbert A., Jr., Wilkinson, Michael K., Clark, Grady W., and Bates, Donald D. 3,517,193.
- Batley, Ray E., to Kramer, Robert A., d/b/a Kramer Designs. Sounding cord twist toy. 3,516,195, Cl. 46-63.
- Bauer, Gunther, and Bucher, Jakob, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process and device for winding up threads. 3,516,614, Cl. 242-18.
- Baumann, Kurt, to Escher Wyss Limited. Labyrinth seal for a hydraulic rotary machine. 3,516,757, Cl. 415-112.
- Baumgartner, Richard J.: See—
Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi 3,517,387.
- Bausch & Lomb Incorporated: See—
Clark, James A., 3,516,732.
- Rebres, Robert P., 3,517,183.
- Baybutt, William Edward, to Pilkington Brothers Limited. Electrode assemblies. 3,517,107, Cl. 13-18.
- Bayless, Frank K., Descaries, Raymond, Ohlson, B Erik, and Anderson, James, to Electrolux Corporation. Pile lifter for a floor care machine. 3,516,107, Cl. 15-246.
- Beachler, Edward D.: See—
Dennis, Louis E., and Beachler, Edward D. 3,516,905.
- Bean, Charles P., to General Electric Company. Optical apparatus and method for determination of pore dimensions in sheet material. 3,517,203, Cl. 250-219.
- Beane, David J.: See—
Udell, Robert F., Beane, David J., and Krieger, Stanley 3,516,252.
- Beaver, William D., to Bell Telephone Laboratories, Incorporated. Energy translating device. 3,517,350, Cl. 333-72.
- Beavers, Robert J.: See—
MacGeorge, William D., and Beavers, Robert J. 3,516,289.
- Bechtold, Arthur W., and Alworth, Kathleen M., to Chemway Corporation. Magnetic false eyelashes and method of affixing to the eyelids. 3,516,422, Cl. 132-53.
- Becka, Michael M., and Harriman, Allen C., to Kamborian, Jacob S. Tape strip fabrication and handling. 3,516,892, Cl. 156-522.
- Beckenhauer, Harriet C.: See—
Barak, Anthony J., Beckenhauer, Harriet C., Myers, Richard A., and Wilger, Roy N. 3,516,292.
- Becker, Floyd K., to Bell Telephone Laboratories, Incorporated. System for superimposing individual channel spectra in a noninterfering manner. 3,517,131, Cl. 179-15.
- Becker, Joseph J.: See—
Fullman, Robert L., and Becker, Joseph J. 3,516,612.
- Beckett, Clark: See—
Wolf, Wilfred L., and Beckett, Clark 3,516,831.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., to Monsanto Company. Hydrocarbon separations. 3,517,079, Cl. 260-674.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., to Monsanto Company. Hydrocarbon separations. 3,517,080, Cl. 260-677.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., to Monsanto Company. Hydrocarbon separations. 3,517,081, Cl. 260-677.
- Beckstein, Hellmut: See—
Mahlo, Heinz, Lange, Klaus Peter, Beckstein, Hellmut, and Schellenberger, Guenter 3,517,204.
- Beckwith, Robert C.: See—
Hecker, Robert W., Jr., and Beckwith, Robert C. 3,516,103.
- Bedecker, Viktor Alexandrovich: See—
Sinyavsky, Adolf Pinkhusovich, and Bedeker, Viktor Alexandrovich 3,516,531.
- Beerebo, John J.: See—
Engleman, Donald Max, and Beerebo, John J. 3,516,193.
- Beermann, Wilhelm: See—
Benteler, Erich, Schmidt, Hermann, Schmidt, Wilhelm, and Beermann, Wilhelm 3,516,483.
- Behavioural Research & Development, Ltd.: See—
Cleary, Alan, Packham, Derek W., and Pashley, Jack C., 3,516,176.
- Behrens, Curtis E., to Fedders Corporation, mesne. Control arrangement for dry cleaning machines. 3,516,174, Cl. 34-45.
- Behrens, Herbert, to Olympia Werke AG. Punching apparatus. 3,516,601, Cl. 234-115.
- Bell & Howell Company, The: See—
Bell, Norton W., 3,517,167.
- Schneider, Robert A., 3,516,153.
- Bell Aerospace Corporation: See—
Gray, Samuel A., 3,517,360.
- Bell, Norton W., to Bell & Howell Company, The. Feedback light control system. 3,517,167, Cl. 235-61.11
- Bell, Stanley C.: See—
Wei, Peter H. L., and Bell, Stanley C. 3,516,996.
- Bell, Stanley C., to American Home Products Corporation. 3-(2-Amino-5-halo, 5-alkyl-and-5-alkoxy-benzoyl) benzene sulfonamides. 3,516,992, Cl. 260-239.7
- Bell, Stanley C., to American Home Products Corporation. 4-Amino-2-halo-5-(2-halo- α -hydroxy-5-sulfamoylbenzyl) benzenesulfonamides. 3,517,037, Cl. 260-397.7
- Bell Telephone Laboratories, Incorporated: See—
Anderson, Theodore C., and Ingle, James F., 3,517,306.
- Ashkin, Arthur, and Tell, Benjamin, 3,517,333.
- Beaver, William D., 3,517,350.
- Becker, Floyd K., 3,517,131.
- Chester, Arthur N., and Crowell, Merton H., 3,517,246.
- Collier, Robert J., and Pennington, Keith S., 3,516,721.
- Curtis, Hazen, III, and Tuchen, Gerd A., 3,517,363.
- Dillon, Joseph F., Jr., 3,516,726.
- Frost, Harold B., 3,517,348.
- Gaunt, Wilmer B., Jr., 3,517,223.
- Gilmartin, Michael J., Jr., and Shively, Richard R., 3,517,173.
- Harr, John A., Taylor, Frank F., and Ulrich, Werner, 3,517,123.
- Krause, John T., 3,517,345.
- Magalhaes, Frank M., 3,517,340.
- Mayer, Edward H., and Moore, Robert J., 3,516,915.
- Monforte, Frank R., and Schnettler, Frank J., 3,516,935.
- Rudin, Harry R., Jr., 3,517,323.
- Sinden, Frank W., 3,516,623.
- Whinnery, John R., 3,516,731.
- Wood, William W., Jr., 3,516,260.
- Bellinson, Bernard, and Young, Henry R., to Marine Swimming Pool Equipment Co. Combination diving board, grab rail and mounting. 3,516,660, Cl. 272-66.
- Beloit Corporation: See—
Dennis, Louis E., and Beachler, Edward D., 3,516,905.
- Roerig, Arnold J., and Brown, Kenton J., 3,516,714.
- Bemis Company, Inc.: See—
Gildersleeve, John T., 3,516,217.

- Bendix Corporation, The: See—
 Boyadjieff, George I., and Verge, Kenneth W., 3,516,765.
 Carruth, Winford B., 3,517,291.
 Cope, Robert W., 3,517,216.
 Gaydou, Francois, and Jenne, Rudolf, 3,516,919.
 Graczyk, Thadeus S., 3,517,161.
 Krohn, Lawrence H., and Stout, Charles D., 3,516,400.
 Landree, Raymond L., and Raupp, Ray J., 3,516,540.
 Moore, Robert G., Jr., 3,516,250.
 Bendix-Westinghouse Automotive Air Brake Company: See—
 Valentine, Harry M., 3,516,430.
 Benjamin, Sidney Howard: See—
 Krauer, Otto Albert, Brooks, Kenneth Raymond, and Benjamin, Sidney Howard 3,516,518.
 Benner, Robert I.: See—
 Davis, Joseph R., Jr., Tice, John D., and Benner, Robert I., 3,516,926.
 Bennett, John D., Johnson, Ford L., Mayes, Fred M., and Peret, John W., to Sun Oil Company. Method and apparatus for explosive drilling of well bores. 3,516,502, Cl. 175-4.5.
 Bennett, John E., and Munger, Fay E., to Jeffrey Galion Inc. Mining machine for mining material from the entire face. 3,516,712, Cl. 299-64.
 Bennett, Robert Neil: See—
 Lawrence, Paul Anthony, Aitken, Robert William, and Bennett, Robert Neil 3,516,925.
 Bennett, Willard H. Production of nuclear reactions by highly concentrated electron beams. 3,516,906, Cl. 176-11.
 Bennett, William O., and Koehler, Dale R., to Bulova Watch Company, Inc. Transformer-coupled drive system for tuning-fork oscillator. 3,517,288, Cl. 318-129.
 Benteler, Erich, Schmidt, Hermann, Schmidt, Wilhelm, and Beermann, Wilhelm, to Benteler-Werke Aktiengesellschaft. Heat exchange arrangement. 3,516,483, Cl. 165-22.
 Benteler-Werke Aktiengesellschaft: See—
 Benteler, Erich, Schmidt, Hermann, Schmidt, Wilhelm, and Beermann, Wilhelm, 3,516,483.
 Bentley, Robert W., Cieslak, Arthur B., and Jorgensen, Adam A., to Stromberg-Carlson Corporation. Reed relay assembly with alignment strips. 3,517,273, Cl. 317-101.
 Benz, Manfred, and Klein, Ernst, to Heinkel, Ernst, Aktiengesellschaft. V-belt pulley. 3,516,295, Cl. 74-230.17.
 Bercier, Newton L., 1/2 to Deshotels, O. H., and Maraist, Frank L. Terminal scraping tool. 3,516,159, Cl. 30-169.
 Berg Electronics, Inc.: See—
 Mancini, Lloyd, 3,517,375.
 Olson, Billy E., 3,517,377.
 Berger, Abe, to General Electric Company. Nitrogen-containing organosilicon materials. 3,517,001, Cl. 260-248.
 Bergere, Emric W. Taper rivet. 3,516,699, Cl. 287-189.36.
 Berk Limited: See—
 Jonas, Donald Moore, 3,516,959.
 Berkovits, Abe. Garment hanger coupling. 3,516,126, Cl. 24-84.
 Bernath, Kornel: See—
 Papafingos, Pandelis, and Bernath, Kornel 3,516,877.
 Berner, Albert. Expandable plugs. 3,516,324, Cl. 85-83.
 Bennett, Marianne K.: See—
 Zaman, William A., and Bennett, Marianne K., 3,516,938.
 Bernstein, Joseph T., to McDonnell Douglas Corporation. Separation of gas mixtures such as methane and nitrogen mixtures. 3,516,262, Cl. 62-28.
 Berr, Charles E., to Du Pont de Nemours, E. I., and Company. Polyketone copolymers. 3,516,966, Cl. 260-47.
 Bertullo, Victor H., and Pereira, Celso Rivada. Protein hydrolysis. 3,516,349, Cl. 99-14.
 Bertva, John T., and Thrasher, George E., Jr., to Master Pneumatic-Detroit, Inc. Lubricator for air motors. 3,516,516, Cl. 184-55.
 Besoyan, Kirk, to Auxiliary Brake Systems, Inc. Auxiliary brake and braking system. 3,516,519, Cl. 188-77.
 Best, Howard S., and Tompkins, Gordon R., to Corning Glass Works. Axial component lead attach machine. 3,517,157, Cl. 219-85.
 Beton- und Monierbau AG: See—
 Rieve, Johann Jacob, 3,516,211.
 Betzler, Otto, to Weing, Michael, KG. Machine for copying and longitudinally machining work pieces. 3,516,463, Cl. 144-144.
 Bidak, John, and Toloczko, Henry A., to General Electric Company. Vertically adjustable shelf. 3,516,369, Cl. 108-138.
 Bidard, Rene, to Compagnie Electro-Mecanique. Magneto-hydrodynamic generator apparatus. 3,517,229, Cl. 310-11.
 Biederman, Edwin W., Jr., to Cities Service Oil Company. Grate for vertical kiln. 3,516,648, Cl. 263-29.
 Biel, John H. Methods and compositions of reserpine alkaloids with antidepressants for treating hypertension. 3,517,103, Cl. 424-244.
 Bigelow, James T., to Kaiser Aluminum & Chemical Corporation. Foil container. 3,516,597, Cl. 229-43.
 Bigley, Arthur C., Jr., and Kramlick, Emil S., to Anaconda Company, The. Copper smelting method. 3,516,820, Cl. 75-74.
 Binford, Robert F., Rodgers, Otis N., and Pace, George A., to Flex-weight Corporation. Welded pipe construction. 3,516,689, Cl. 285-47.
 Birch, Joseph J., to Barnes & Tucker Company. Process of treating acid mine water. 3,516,931, Cl. 210-46.
 Birch, William B.: See—
 Karr, Anthony M., 3,517,261.
 Bishop, Basil T. G., to Rolls-Royce Limited. Filter cleaning means. 3,516,547, Cl. 210-304.
 Bishop, Harlow, to American Cyanamid Company. Fermentative biosynthesis of tetracycline antibiotics. 3,516,909, Cl. 195-102.
 Bizerba-Werke Wilhelm Kraut KG.: See—
 Kuhnle, Ernst, and Schwarz, Josef, 3,516,507.
 Bjorklund, Bengt, to AB Akerlund & Rausing. Carton having a tearing edge. 3,516,587, Cl. 225-19.
 Black, Sivalis & Bryson, Inc.: See—
 Smalling, Charles E., and Waguespack, Otis J., 3,516,490.
 Blackwood, Richard D., to Kansas City Plywood Co. Furniture leg mount. 3,516,633, Cl. 248-188.
 Blakey, George Thomas Allan: See—
 Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard 3,516,527.
 Blanchard, Floyd W. Self-pressurizing, retractable ballpoint pen. 3,516,754, Cl. 401-101.
 Blanchard, Paul, to Compagnie General des Eaux. Process for removing ozone from ozone-loaded air. 3,516,783, Cl. 23-4.
 Bland, Geoffrey, to Formica International Limited. Method of and apparatus for assembling stacks of flexible sheets in a predetermined order. 3,516,653, Cl. 270-58.
 Blaw-Knox Company: See—
 Wright, Edward S., 3,516,368.
 Block, Burton Peter, and Dahl, Gerd Helmut, to Pennwalt Corporation. Carbamate compounds. 3,517,060, Cl. 260-543.
 Blumcraft of Pittsburgh: See—
 Horgan, William J., Jr., 3,516,644.
 Bobbitt, Randall Edgar. Water sport device. 3,516,381, Cl. 115-20.
 Boca, Michel: See—
 Normand, Gerard, and Boca, Michel 3,516,144.
 Boegeman, Dwight E., to United States of America, Navy, mesne. High speed narrow band signal recognition circuit. 3,517,214, Cl. 307-233.
 Boeing Company, The: See—
 Houser, Richard W., and Woodlock, David F., 3,516,625.
 Landwehr, Gilbert L., and Schindler, Charles A., 3,516,386.
 Bogle, William N.: See—
 Arsenault, Joseph R., and Bogle, William N., 3,517,144.
 Bohannon, William D., Jr., to Western Electric Company, Incorporated. Wire wrapping tool. 3,516,140, Cl. 29-203.
 Bokum Tool Company, Inc.: See—
 Heuser, Halmut C., 3,516,134.
 Boland, Calvin S., to Boland Development Company Limited. Work platform. 3,516,258, Cl. 61-45.
 Boland Development Company Limited: See—
 Boland, Calvin S., 3,516,258.
 Van de Vegte, John, 3,516,257.
 Bolhofer, William A. Ester and amide derivative of 3-trifluoromethylphenoxy (4-halophenyl)acetic acid. 3,517,050, Cl. 260-473.
 Bolhofer, William A., to Merck & Co., Inc. Phenoxy substituted phenylacetic acids. 3,517,051, Cl. 260-473.
 Bolz, Ralph C., and Jeffery, Robert W., to Sperry Rand Corporation. Power transmission. 3,516,768, Cl. 418-82.
 Bond, Harry Laurence Fred, to Davy and United Engineering Company. Rolling mills. 3,516,276, Cl. 72-237.
 Bond, Milton F.: See—
 Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi 3,517,387.
 Bonhomme, Francois Robert, to Connectronics Corporation. Electric contacts. 3,517,374, Cl. 339-176.
 Bonkowski, William S., and Corallo, Nunzio Ralph, to Thermo Electric Co., Inc. Spring-loaded thermocouple. 3,516,873, Cl. 136-221.
 Bonneau, Claude, to Rhone-Poulenc S.A. Spherules of 2-(N-morpholiniothio) benzothiazole. 3,516,902, Cl. 161-168.
 Bonnard, Georges, to Institut de Recherches de la Siderurgie Francaise Saint Germain-en-Laye, and Bureau de Recherches Geologiques et Minieres. Separation process for nickel and cobalt. 3,516,822, Cl. 75-103.
 Boomer, Daryl R. Method of forming a high pressure seal for noncircular openings. 3,516,148, Cl. 29-527.4.
 Booth, George M., to Wallace & Tiernan Inc. High sensitivity solid-state servo motor control system. 3,517,284, Cl. 318-18.
 Borgen, Arden L.: See—
 Harris, George V., and Borgen, Arden L., 3,516,477.
 Borkowski, Casimer J., and Kopp, Manfred K., to United States of America, Atomic Energy Commission. Position-sensitive radiation detector. 3,517,194, Cl. 250-83.6.
 Bosch, Robert, G.m.b.H.: See—
 Bastam, Hans-Dieter, Huber, Bernd, and Wahl, Josef, 3,517,142.
 Gunsser, Peter, 3,517,290.
 Kuhn, Edgar, 3,517,296.
 Scholl, Hermann, and Rilling, Karl, 3,517,287.
 Bouwhuis, Gijbertus: See—
 De Lang, Hendrik, and Bouwhuis, Gijbertus 3,517,329.
 Bovard, Robert M., and Simmonds, Milo R., 'Automatic' Sprinkler Corporation of America. Chemical oxygen generator. 3,516,797, Cl. 23-281.
 Bowditch, Hoel L.: See—
 Williams, George F., and Bowditch, Hoel L., 3,516,691.
 Bowen, Henry D., and Splinter, William E. Electrostatic nozzle. 3,516,608, Cl. 239-15.

- Bower, Richard Raymond, to International Telephone and Telegraph Corporation. Flash bulb assembly apparatus. 3,516,130, Cl. 29-25.19.
 Boyadjieff, George I., and Verge, Kenneth W., to Bendix Corporation, The. Fluid actuated actuator. 3,516,765, Cl. 418-61.
 Boynton, Ira D., Di Maggio, Carmelo A., and Healy, James W., to Diamond Crystal Salt Company, mesne. Apparatus for making fluted packages. 3,516,889, Cl. 156-357.
 Bracco, Cesare, and Taverna, Sergio. Workpiece feed and die change device. 3,516,277, Cl. 72-446.
 Bracken, Robert S.: See—
 Donnelly, Joseph W., and Bracken, Robert S., 3,516,812.
 Braden, Rudolf: See—
 Rinkler, Heinrich, Braden, Rudolf, and Nischk, Gunther 3,516,974.
 Bradford, Dudley M., and Proctor, Aurion M., to ACF Industries, Incorporated. Railway boxcar having end doors. 3,516,366, Cl. 105-378.
 Bradford, Robert W., to United States of America, Atomic Energy Commission. Deionizing and fault protection circuit for a line-type pulser. 3,517,265, Cl. 317-51.
 Braet, August, to Clayton N.V. Elevators for crops etc. 3,516,530, Cl. 198-8.
 Brakemaster Corporation: See—
 George, Robert H., 3,516,231.
 Bramco Inc.: See—
 Hobbs, Howard H., Kunkle, Calvin S., and Cataline, Aclal L., 3,516,104.
 Brandts, Theodor Gerardus, and Lichtenberger, Joseph Alois, to Consolidated Paper (Bahamas) Limited. Resins from bark. 3,517,052, Cl. 260-473.5.
 Brannon, Ward: See—
 Mayer, Ernest F., Brannon, Ward, Schaller, Edwin S., Jr., and Pickard, Frank C., 3,516,503.
 Braun, Siegfried, Ruppel, Friedrich, and Schippers, Heinz, to Barmag Barmer Maschinenfabrik Aktiengesellschaft. Extrusion die for underwater granulator. 3,516,120, Cl. 18-12.
 Brennan, Wendell E., to Monsanto Company. Golf tee holder. 3,516,664, Cl. 273-33.
 Bridgeport Metal Goods Manufacturing Company, The: See—
 Moore, Arthur H., and Bacevius, Joseph G., 3,517,185.
 Brief, Philip: See—
 D'Agostino, Vincent F., and Brief, Philip 3,516,670.
 Briggs, Sidney, III, to Thomson Corporation, The. Strip edge butt welding machine. 3,517,158, Cl. 219-102.
 Brighton, John Monroe. Power skids. 3,516,560, Cl. 214-85.
 Briakin, Theodore S., and Ward, Geoffrey R., to Sutton Research Corporation. Method of preparing a smokable material. 3,516,416, Cl. 131-2.
 Bristol-Myers Company: See—
 Buchanan, Ronald L., and Partyka, Richard A., 3,517,024.
 Crast, Leonard Bruce, Jr., 3,517,023.
 British Iron and Steel Research Association, The: See—
 Syke, George, 3,516,749.
 British Petroleum Company Limited, The: See—
 Andrews, George Inglis, Groszek, Aleksander Jerzy, and Withridge, Rodney Ernest, 3,516,933.
 King, William Ronald, and Thomas, William Llewelyn, 3,516,928.
 Lawrence, Paul Anthony, Aitken, Robert William, and Bennett, Robert Neil, 3,516,925.
 Britton, Ralph H., Jr., to Pacific Measurements, Inc. High frequency detector. 3,517,213, Cl. 307-231.
 Brockett, Bruce W., to National Cash Register Company, The. Record sheet sensitized with salt modified kaolin-phenolic material. 3,516,845, Cl. 117-36.2.
 Brodnyan, John G., to Rohm & Haas Company. Adhesive for bonding a reinforcing element to a rubbery composition. 3,516,897, Cl. 161-92.
 Brodt, Rudolf: See—
 Floss, Josef Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans 3,516,828.
 Broglio, Edward P., to Eagle-Picker Industries, Inc. Deferred-action battery. 3,516,869, Cl. 136-114.
 Bromarker, Carl Olof. Portion dispenser, more particularly for feeding cattle. 3,516,579, Cl. 222-440.
 Brooks, David N., and Kopelman, Bernard, to Sylvania Electric Products, Inc. Photoflash lamp unit. 3,517,182, Cl. 240-1.3.
 Brooks, Kenneth Raymond: See—
 Krauer, Otto Albert, Brooks, Kenneth Raymond, and Benjamin, Sidney Howard 3,516,518.
 Brophy, Jere Hall: See—
 Trapp, Robert Howard, Hayden, Howard Wayne, Jr., and Brophy, Jere Hall 3,516,804.
 Brothers, James L.: See—
 Gaines, Donald R., Brothers, James L., and Lambert, James R., 3,517,141.
 Brown & Williamson Tobacco Corporation: See—
 Sextone, John H., and Hiltgartner, George H., Jr., 3,516,885.
 Brown Company: See—
 Buttery, Kenneth T., 3,516,599.
 Brown, Kenton J.: See—
 Roerig, Arnold J., and Brown, Kenton J., 3,516,714.
 Brown, William B., to Western Electric Company, Incorporated. Methods of and apparatus for assembling terminal strips. 3,516,157, Cl. 29-626.
 Bruce, Harry J., to Spector Industries, Inc. Freight vehicles. 3,516,706, Cl. 296-24.
 Bruce, William F., to American Home Products Corporation. Alpha-aminomethyl benzyl alcohols. 3,517,000, Cl. 260-247.5.
 Bruch, Charles A., to General Electric Company. Transparent magnesia-alumina spinel and method. 3,516,839, Cl. 106-39.
 Brundick, Charles L.: See—
 Williams, Harley H., and Brundick, Charles L., 3,517,208.
 Brunner, Julius, Rainer, Erich, and Kaulerich, Helmut, to Siemens Aktiengesellschaft. System for controlling the speed and running direction of a brushless direct current motor. 3,517,289, Cl. 318-138.
 Brunner, Walter H., to Clairol Incorporated. Naphthoquinone imine compositions and method for using the same. 3,516,778, Cl. 8-10.2.
 Brunswick Corporation: See—
 Burke, Maurice P., 3,516,636.
 Kuester, Frank E., Clark, Richard A., and Gregory, Kenneth J., 3,516,675.
 Bryant, William L.: See—
 Vrdrey, Julius Friedrich, and Bryant, William L., 3,516,280.
 Bryer, Denis William, and Walshe, Denis Eugene Joseph, to National Research Development Corporation. Butterfly valve. 3,516,640, Cl. 251-305.
 Brynko, Carl, and Olderman, Gerald M., to National Cash Register Company, The. Replacement of capsule contents by diffusion. 3,516,943, Cl. 252-316.
 Buchanan, Ronald L., and Partyka, Richard A., to Bristol-Myers Company. Anilinoalkyltetrazoles. 3,517,024, Cl. 260-308.
 Bucher, Jakob: See—
 Bauer, Gunther, and Bucher, Jakob 3,516,614.
 Buckley, Joseph William, to International Telephone and Telegraph Corporation. Coupling locking device. 3,517,371, Cl. 339-89.
 Buford, Charles Gilbert, and Buford, Wesley Ellis. Container filling apparatus. 3,516,220, Cl. 53-59.
 Buford, Wesley Ellis: See—
 Buford, Charles Gilbert, and Buford, Wesley Ellis 3,516,220.
 Bullard, E. D., Company: See—
 Raschke, Herbert A., 3,516,092.
 Bulova Watch Company, Inc.: See—
 Bennett, William O., and Koehler, Dale R., 3,517,288.
 Bunker-Ramo Corporation, The: See—
 Huber, Richard A., 3,517,301.
 Koerner, Ralph J., 3,516,173.
 Smith, Charles W., 3,516,155.
 Bunting, Earl L. Nurse call system including a coaxial conductor only connecting a plurality of signals. 3,517,120, Cl. 178-6.8.
 Bureau de Recherches Geologiques et Minieres: See—
 Bonnard, Georges, 3,516,822.
 Burger, Victor G., to Automatic Electric Laboratories, Inc. Long loop anti-side-tone telephone circuit. 3,517,138, Cl. 179-81.
 Burke, Maurice P., to Brunswick Corporation. Tilt mechanism for chairs and the like. 3,516,636, Cl. 248-381.
 Burkett, Wilford B., and Jackson, Robert V., to McCulloch Corporation. Rapid charging of batteries. 3,517,293, Cl. 320-14.
 Burndy Corporation: See—
 Janssens, Gilbert Armand, 3,516,630.
 Burroughs Corporation: See—
 Kuchinsky, Saul, and Wolfe, Roger W., 3,517,257.
 Rech, Jakob, 3,516,141.
 Weiss, Marvin, 3,517,321.
 Burton Delingpole & Company Limited: See—
 Lowe, Jack Graham, 3,516,695.
 Buschbom, Floyd E., to VanDale Corporation. Three phase transition assembly. 3,517,369, Cl. 339-5.
 Buschman, Jerome A.: See—
 Roods, John F., and Buschman, Jerome A., 3,516,456.
 Butcher, John Anthony Weeks: See—
 Knight, Ronald George, Butcher, John Anthony Weeks, Pullum, Geoffrey George, and Wilson, Michael John 3,517,133.
 Butler, David F., to Olin Mathieson Chemical Corporation. Repeating caseless tool. 3,516,246, Cl. 60-26.11.
 Butler, James F., to International Harvester Company. Trailing ploughs. 3,516,500, Cl. 172-282.
 Buttery, Kenneth T., to Brown Company. Paperboard folder with pockets. 3,516,599, Cl. 229-72.
 Buttner, Horace J.: See—
 Silvon, Kay, Buttner, Horace J., and Carter, Russell E., 3,516,459.
 Caccini, Augusto, to Solfrene Macchine S.p.A. Device for filling and sealing pressure containers in particular aerosol-bombs. 3,516,224, Cl. 53-112.
 Caldwell, John R., and Jackson, Winston J., Jr., to Eastman Kodak Company. Three-dimensional polycyclic bisphenol polycarbonates and polyesters. 3,517,071, Cl. 260-619.
 California Tube Products, Inc.: See—
 Knox, Leon J., Jr., 3,516,247.
 Calistrat, Mircea, to Koppers Company, Inc. Stacking system for paperboard blanks. 3,516,532, Cl. 198-33.
 Calistrat, Mircea, to Koppers Company, Inc. Method for separating interlaced stacks of paperboard blanks. 3,516,561, Cl. 214-152.

- Callister, John David, and Carlile, Clayton George, to American Cyanamid Company. Nitration of phenol using recycle acid. 3,517,075, Cl. 260-622.
- Cameron, Donald P., and Stephens, Charles R., to Pfizer, Chas., & Co., Inc. 1,5-Benzoxepin- and -benzodioxepin-ones as flavor and odorant agents. 3,517,031, Cl. 260-333.
- Canada, Her Majesty the Queen of, as represented by the Minister of National Defence: See—
Charlton, Peter, 3,516,375.
- Canada Patents and Development Limited: See—
Dudzik, Zdzislaw F., 3,516,947.
- Canadian Industries Limited: See—
Jones, Elwyn David, 3,516,887.
- Canadian Patents and Development Limited: See—
Baird, Kenneth Mac Clure, and Smith, Donald Sinclair, 3,517,331.
- Evans, Brian, and Flood, Edward A., 3,516,791.
- Candor, James T.: See—
Candor, Robert R., and Candor, James T. 3,516,350.
- Candor, Robert R., and Candor, James T. Cooking apparatus having electrostatic means. 3,516,350, Cl. 99-444.
- Canevari, Roger: See—
Regnier, Gilbert, Canevari, Roger, and Le Douarec, Jean-Claude 3,517,012.
- Canfield, Sheldon A.: See—
Underwood, John T., Palmer, Burton M., Canfield, Sheldon A., and Pitt, Richard E. 3,516,809.
- Capgras, Rene, to Industrial Development Company Establishment, mesne. Hydropneumatic suspension. 3,516,683, Cl. 280-124.
- Carboni, Rudolph Anthony, to Du Pont de Nemours, E. I., and Company. 2-(o-Nitrosophenyl)-2,1,3-benzotriazole. 3,517,025, Cl. 260-308.
- Carlick, Daniel J., to Inmont Corporation. Oil modified thermosetting resins. 3,516,958, Cl. 260-23.7
- Carlile, Clayton George: See—
Callister, John David, and Carlile, Clayton George 3,517,075.
- Carlisle, Thomas E.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,162.
- Carpenter, David H., to RCA Corporation. Color killer and automatic chroma control circuits. 3,517,114, Cl. 178-5.4
- Carr, Hugh B., to Kinney, S. P., Engineers, Inc. Rotary drum strainer. 3,516,550, Cl. 210-359.
- Carroll, Max L., Jr.: See—
Gray, Theodore F., Jr., and Carroll, Max L., Jr. 3,516,957.
- Carruth, Winford B., to Bendix Corporation. The Electric motor speed control. 3,517,291, Cl. 318-332.
- Carson Laboratories, Inc.: See—
Kalman, Gabor U., 3,517,200.
- Carter, James B., Ltd.: See—
Windsor, Lynne E., 3,516,387.
- Carter, Russell E.: See—
Silvon, Kay, Buttner, Horace J., and Carter, Russell E. 3,516,459.
- Carter, Sidney T., 'Automatic' Sprinkler Corporation of America, mesne. Container-filling apparatus. 3,516,455, Cl. 141-90.
- Carter, Willard J., and Turner, Edwin John, to Kahr Bearing Corporation. Self-aligning bearing and method of forming and mounting thereof. 3,516,136, Cl. 29-149.5
- Case, J. I., Company: See—
Schowalter, Lewis G., 3,516,498.
- Cast, Adolf: See—
Andre, Herbert, and Cast, Adolf 3,516,574.
- Castedello, William: See—
Schwartz, Morris, Castedello, William, and Kaprelian, Edward K. 3,516,739.
- Castela, Andre: See—
Joubert, Philippe, and Castela, Andre 3,516,488.
- Cataline, Acial L.: See—
Hobbs, Howard H., Kunkle, Calvin S., and Cataline, Acial L. 3,516,104.
- Caterpillar Tractor Company: See—
Fangman, Charles N., 3,516,335.
- Cattaneo, Alfredo G.: See—
Babcock, Wayne R., and Cattaneo, Alfredo G. 3,516,286.
- Caulkis, Bruce D.: See—
Harkins, Allen A., Stoner, Richard G., and Caulkis, Bruce D. 3,516,471.
- Caval Developments Limited: See—
Stribling, John Brian, 3,516,370.
- Celotex Corporation, The: See—
Cummisford, Robert G., 3,516,882.
- Sawyer, Charles W., 3,516,212.
- Centre National de la Recherche Scientifique: See—
Malavard, Lucien C., Marty, Pierre M., and Renard, Guy C., 3,517,169.
- Cerny, Daryl D.: See—
Mixell, Ronald G., and Cerny, Daryl D. 3,517,097.
- Ceskoslovenska akademie ved: See—
Hrdina, Jiri, 3,516,752.
- C.H.W. Inc.: See—
Whitlock, Huber M., Bartley, Douglas M., and Torongo, Richard E., 3,516,440.
- Challiss, John Van Hoesen: See—
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yin, and Challiss, John Van Hoesen 3,516,274.
- Chamberlain, Richard K., to General Tire & Rubber Company, The. Liquid cooled wheel and brake assembly. 3,516,522, Cl. 188-264.
- Chambers, William W., to Robertshaw Controls Company. Temperature control system for heating and cooling apparatus. 3,516,484, Cl. 165-26.
- Chandler Evans Inc.: See—
Oelrich, John A., and Andersen, Joseph J., 3,516,331.
- Charlton, Peter, to Canada, Her Majesty the Queen of, as represented by the Minister of National Defence. Horizon indicators for assisting helicopter landings on ships. 3,516,375, Cl. 114-43.5
- Charnay, Claude: See—
Nee, Claude, Pathe, Claude, and Charnay, Claude 3,516,868.
- Chase, Marston. Picture mounting means and methods and materials therefor. 3,517,106, Cl. 156-249.
- Chastain, Sidney J.: See—
Ivey, Kenneth H., Chastain, Sidney J., and Shell, Haskiel R. 3,516,810.
- Chauvin, Christian: See—
Banfi, Jacques Claude, and Chauvin, Christian 3,516,737.
- Check, John M., to Raycon Corporation. Wire electrode holder assembly. 3,517,153, Cl. 219-69.
- Chemed Engineering Ltd.: See—
Westerlund, Gothe O., 3,516,790.
- Chemmerda, John Martin, and Slettinger, Meyer, to Merck & Co., Inc. 1-Benzoyl-2-methyl-3-indolylacetic acid derivatives. 3,517,028, Cl. 260-326.16
- Chemische Werke Witten GmbH: See—
Wolfe, Wolfgang, and Renckhoff, Gustav, 3,516,972.
- Chemway Corporation: See—
Bechtold, Arthur W., and Alworth, Kathleen M., 3,516,422.
- Chervenak, John, to United States of America, Navy. Electromagnetic transducer with a fixed air gap. 3,517,379, Cl. 340-12.
- Chery, Walter Valdemar. Torque converter. 3,516,305, Cl. 74-796.
- Chester, Arthur N., and Crowell, Merton H., to Bell Telephone Laboratories, Incorporated. Multi-layered, staggered aperture target. 3,517,246, Cl. 313-66.
- Chevron Research Company: See—
Jaffe, Joseph, 3,516,927.
- Childress, Scott J.: See—
Kim, Dong H., Santilli, Arthur A., and Childress, Scott J. 3,517,011.
- Chong, Carlos F.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,221.
- Chrysler Corporation: See—
Jessee, Joseph S., and Rolovich, Ivan, 3,516,201.
- Kozicki, James A., 3,517,381.
- Chubb & Son's Lock and Safe Company Limited: See—
Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard, 3,516,527.
- Ciba Limited: See—
Luescher, Rene, 3,516,342.
- Riat, Henri, Gunst, Raymond, and Hoelzle, Gerd, 3,516,981.
- Thaddey, Kurt, 3,516,741.
- Cieslak, Arthur B.: See—
Bentley, Robert W., Cieslak, Arthur B., and Jorgensen, Adam A. 3,517,273.
- Cities Service Oil Company: See—
Biederman, Edwin W., Jr., 3,516,648.
- Clairol Incorporated: See—
Brunner, Walter H., 3,516,778.
- Clapp, Roy A. Illumination control during color printing. 3,516,740, Cl. 355-36.
- Clark, George W., III. Chromatography apparatus. 3,516,546, Cl. 210-198.
- Clark, Grady W.: See—
Mook, Herbert A., Jr., Wilkinson, Michael K., Clark, Grady W., and Bates, Donald D. 3,517,193.
- Clark, James A., to Bausch & Lomb Incorporated. Crank and link mechanism for nonlinearly related motions. 3,516,732, Cl. 350-187.
- Clark, Richard A.: See—
Kuester, Frank E., Clark, Richard A., and Gregory, Kenneth J. 3,516,675.
- Clark, Sheldon L., Polak, Roger J., and Wojtowicz, John A., to Olin Mathieson Chemical Corporation. Oxetyl tosylates and haloxyetanes. 3,517,030, Cl. 260-333.
- Clark, Walter W.: See—
Engman, William C., and Clark, Walter W. 3,516,910.
- Clarke, Robert George, to Eastman Kodak Company. Photographic activator solution. 3,516,829, Cl. 96-50.
- Clarke, Robert J. Dust mitt cleaning attachment for a vacuum cleaner and the like. 3,516,109, Cl. 15-310.
- Clash, Douglas Keith. Foldable step structure for campers. 3,516,515, Cl. 182-96.
- Clayson N.V.: See—
Braet, August, 3,516,530.
- Cleary, Alan, Packham, Derek W., and Pashley, Jack C., to Behavioural Research & Development, Ltd. Touch detecting teaching machine. 3,516,176, Cl. 35-9.

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- Cleve Corporation: See—
Arndt, John P., and Franklin, Edmond G., 3,516,645.
- Clifton, John M., and Clifton, Rebecca A. Double action sanitary commode seat lifting and lowering device. 3,516,095, Cl. 4-251.
- Clifton, Rebecca A.: See—
Clifton, John M., and Clifton, Rebecca A. 3,516,095.
- Coastal Abrasive and Tool Company, Inc.: See—
Inwood, Alvin, 3,516,585.
- Coburn, Herbert D., and Kelly, Gilbert H., to Texas Instruments, Incorporated. Seismic wave generator having adjustable reaction force and method of operation thereof. 3,516,509, Cl. 181-0.5
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- Cockerham, Lloyd E., to Commercial Solvents Corporation. Phenolic resin coating and process of coating. 3,517,082, Cl. 260-840.
- Cohen, Elliott: See—
Bach, Frederick Louis, Cohen, Elliott, and Kohlbrenner, Philip John 3,517,069.
- Cole, Thomas M., to Federal Pacific Electric Company. Blow-open circuit breaker. 3,517,355, Cl. 335-16.
- Colegrove, George T., to Kelco Company. Treatment of xanthomonas hydrophilic colloid and resulting product. 3,516,983, Cl. 260-209.
- Coleman, Denis, to American Cyanamid Company. Poly-tris(1-aziridinyl)phosphine oxide sulfide phosphoric acid. 3,517,087, Cl. 260-926.
- Coles, David D.: See—
Hardingham, Derek D., 3,516,541.
- Collez, Louis. Method of producing artificial furs of nonuniform fiber density. 3,516,265, Cl. 66-9.
- Collier, Robert J., and Pennington, Keith S., to Bell Telephone Laboratories, Incorporated. Sampling techniques for holograms. 3,516,721, Cl. 350-3.5
- Collins, David W.: See—
Urfer, Ernest N., Acello, Salvatore J., and Collins, David W. 3,517,277.
- Collins Radio Company: See—
Durio, John R., and Taylor, Harvey S., 3,517,297.
- Commercial Solvents Corporation: See—
Cockerham, Lloyd E., 3,517,082.
- Firth, Jay A., 3,517,099.
- Commissariat a l'Energie Atomique: See—
Cledat, Jean, Moreau, Michel, and Rappeneau, Jean, 3,516,948.
- Commonwealth of Australia, The: See—
Metcalfe, Kenneth A., and Lowe, William H., 3,516,934.
- Commonwealth Scientific and Industrial Research Organization: See—
Sullivan, John Vincent, and Walsh, Alan, 3,517,188.
- Compagnie Electro-Mecanique: See—
Bidard, Rene, 3,517,229.
- Compagnie Generale des Eaux: See—
Blanchard, Paul, 3,516,783.
- Compagnie Generale d'Electricite: See—
Barbini, Spartacus, 3,517,256.
- Milochewitch, Alexandre, 3,517,159.
- Connectronics Corporation: See—
Bonhomme, Francois Robert, 3,517,374.
- Conner, Arno Sten. Mortar barrel. 3,516,326, Cl. 89-14.
- Conrad, Winthrop B., to Teleflex, Incorporated. Motion transmitting control assembly. 3,516,299, Cl. 74-501.
- Consolidated Paper (Bahamas) Limited: See—
Brandts, Theodor Gerardus, and Lichtenberger, Joseph Alois, 3,517,052.
- Consolidation Coal Company: See—
Lee, Arthur L., and Coval, Arthur B., 3,516,508.
- Moroni, Eneo C., and Newworth, Martin B., 3,517,072.
- Curran, George P., and Gorin, Everett, 3,516,808.
- Constable, Geoffrey Ernest Patrick: See—
Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard 3,516,527.
- Container Corporation of America: See—
Nigrelli, Biagio J., Standley, Wendell E., and Whittmann, Richard B., 3,516,219.
- Continental Can Company, Inc.: See—
Cooper, Donald L., 3,516,316.
- Continental Oil Company: See—
Lippoldt, Richard F., and Woods, Warren W., 3,516,196.
- Cook, Edward H., Jr.: See—
Grotheer, Morris P., Currey, John E., and Cook, Edward H., Jr. 3,516,918.
- Cook, M.L. Fishing rod holder. 3,516,190, Cl. 43-21.2
- Cook, Richard L., to Goodyear Aerospace Corporation. Hard faced plastic armor. 3,516,898, Cl. 161-93.
- Coonen, Joeh A.M.J.: See—
Thoma, Jozef A., Ponnet, Jules P. J., and Coonen, Jogh A.M.J. 3,517,058.
- Coonen, Joseph A.M.J.: See—
Thoma, Jozef A., and Coonen, Joseph A.M.J. 3,517,048.
- Cooper, Donald L., to Continental Can Company, Inc. Stock pusher and locator. 3,516,316, Cl. 83-419.
- Cooper, Peter John Frederick, Wainwright, John, and Lindfield, Michael John, to Langley London Limited. Heating elements and resistors. 3,516,154, Cl. 29-611.
- Cope, Robert W., to Bendix Corporation. The Means for generating a video constant false alarm rate signal at video frequencies. 3,517,216, Cl. 307-237.
- Corallo, Nunzio Ralph: See—
Bonkowski, William S., and Corallo, Nunzio Ralph 3,516,873.
- Corbett, Herbert O.: See—
Quackenbush, John J., and Corbett, Herbert O. 3,516,886.
- Corning Glass Works: See—
Best, Howard S., and Tompkins, Gordon R., 3,517,157.
- Corry, Thomas M., to General Motors Corporation. Pulse shaping circuit. 3,517,299, Cl. 321-45.
- Courbat, Pierre, to Zyma S.A. Process for manufacturing O- β -hydroxyethyl ethers of rutin. 3,516,984, Cl. 260-210.
- Courchene, Ernest E., Jr.: See—
Peterson, Norman E., and Courchene, Ernest E., Jr. 3,517,125.
- Cournut, Rene, to Apamed Etablissement. Intra-uterine contraception device and instrument for placing this device in position. 3,516,403, Cl. 128-130.
- Couture, Paul Archille: See—
Jentoft, Arthur Philip, and Couture, Paul Archille 3,516,210.
- Coval, Arthur B.: See—
Lee, Arthur L., and Coval, Arthur B. 3,516,508.
- Cox, John R., and Mix, Joseph E., to Balas Collet Company. Hydraulic chuck or arbor. 3,516,681, Cl. 279-4.
- Cox, Robert B. Electric fence. 3,516,643, Cl. 256-10.
- Cox, William F. Hardtop camping trailer. 3,516,708, Cl. 296-23.
- CPC International Inc.: See—
Molotsky, Hyman M., and Karraker, Edward L., III, 3,516,952.
- Craet, Leonard Bruce, Jr., to Bristol-Myers Company. Derivatives of aminobenzylpenicillin. 3,517,023, Cl. 260-306.7
- Crawford, Robert F.: See—
Hunter, Don L., Kitasaki, Kiyoshi, and Crawford, Robert F. 3,516,986.
- Crim, William H., to Singer Company, The. High-frequency acoustic delay line. 3,517,343, Cl. 333-30.
- Crompton & Knowles Corporation: See—
Darwin, Clifford, and Nelson, Howard I., 3,516,449.
- Crone, Alfred F., to Acme Highway Products Corporation. Load transfer joint supports for pavements. 3,516,338, Cl. 94-8.
- Cronin, Timothy H., and Hess, Hans-Jurgen E., to Pfizer, Chas., & Co., Inc. Certain 2- and -substituted quinazolines. 3,517,005, Cl. 260-256.4
- Crook, Norman L. Pitch stabilization system for dual unit aircraft. 3,516,624, Cl. 244-2.
- Crowell, Merton H.: See—
Chester, Arthur N., and Crowell, Merton H. 3,517,246.
- Crowell, William H., to Honeywell Inc. Equivalent base load hours computer. 3,517,177, Cl. 235-183.
- Cruger, Robert W.: See—
Strance, John S., and Cruger, Robert W. 3,516,626.
- Cullen, Graeme E.: See—
Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard 3,516,527.
- Cummisford, Robert G., to Celotex Corporation, The. Method for manufacture of gypsum wallboard. 3,516,882, Cl. 156-39.
- Curran, George P., and Gorin, Everett, 1/2 to Consolidation Coal Company, and 1/2 to United States of America, Interior, mesne. Preparation of carbon dioxide acceptors by the melt process. 3,516,808, Cl. 48-197.
- Currey, John E.: See—
Grotheer, Morris P., Currey, John E., and Cook, Edward H., Jr. 3,516,918.
- Curry, James W., to Texas Instruments, Incorporated. Organosilicon water-repellency agent and method of applying a water-repellent coating. 3,516,854, Cl. 117-161.
- Curtis, Hazen, III, and Tuchen, Gerd A., to Bell Telephone Laboratories, Incorporated. Constant torque ferrite slug mounting for inductance adjustments. 3,517,363, Cl. 336-136.
- Curtis, Margaret A.: See—
Hester, John P., 3,516,580.
- Cyr, Joseph F., to U.S. Plywood-Champion Papers Inc. Apparatus and method for removing wood defects. 3,516,464, Cl. 144-309.
- Cyrus, Richard: See—
Suranyi, Laszlo A., and Cyrus, Richard 3,517,049.
- D'Alelio, Gaetano F.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,516,970.
- United States of America, National Aeronautics and Space Administration, Administrator, 3,516,971.
- Dadd, Morris V., to Johnson Products, Inc. Anti-pump-up tappet. 3,516,393, Cl. 123-90.
- D'Agostino, Vincent F., and Brief, Philip, to RAI Research Corporation. Polyethylene target with wafer-type rigidifying structure. 3,516,670, Cl. 273-102.2
- Dahl, Gerd Helmut: See—
Block, Burton Peter, and Dahl, Gerd Helmut 3,517,060.
- Dalcel Ltd.: See—
Kato, Rikitaro, Nagato, Syoichi, and Suzuki, Jaro, 3,516,973.

- Daimler-Benz Aktiengesellschaft: See—
Wilfert, Karl, 3,516,707.
- Dale Electronics, Inc.: See—
Lindquist, Larry B., 3,517,368.
- Daley, William C., and Lambert, Robert E., to Structural Electric Products Corporation, messe. Inset high intensity light and cooling means therefor. 3,517,181, Cl. 240-1.2
- Dall'Asta, Leone: See—
Pedrazzoli, Andrea, and Dall'Asta, Leone, 3,517,016.
- Dane, Dan H., to United States of America, National Aeronautics and Space Administration. Mechanical simulator of low gravity conditions. 3,516,179, Cl. 35-12.
- Dane, Dan H., to United States of America, National Aeronautics and Space Administration. Harness assembly. 3,516,711, Cl. 297-385.
- Danielson, Mark, to Doban Labs., Inc. Automatic bowling scorekeeping system. 3,516,665, Cl. 273-54.
- Dankese, Joseph P., to General Electric Company. Fuel cell system with dehumidifier and humidifier. 3,516,867, Cl. 136-86.
- Darley, Henry C. H.: See—
Barkman, James H., Jr., Darley, Henry C. H., Jorda, Robert M., and Tuttle, Robert N., 3,516,496.
- Darwin, Clifford, and Nelson, Howard I., to Crompton & Knowles Corporation. Fringe forming mechanism for looms. 3,516,449, Cl. 139-24.
- Dathe, Christian: See—
Muller, Richard, Dathe, Christian, and Moss, Dieter, 3,517,043.
- Dausin, Lawrence R., to United States of America, Air Force. Method and system for electronically steering an antenna array. 3,517,389, Cl. 343-100.
- Davidge, Ronald V., Greer, Donald L., McCormack, Richard W., and O'Daniel, Jerome B., to International Business Machines Corporation. Character selector. 3,516,528, Cl. 197-16.
- Davies, Daniel J.: See—
Manion, Jean P., and Davies, Daniel J., 3,516,921.
- Davis, DhuAine J., to Hermetic Coil Co., Inc. Relay. 3,517,358, Cl. 335-192.
- Davis, George D.: See—
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,079.
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,080.
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,081.
- Davis, Joseph R., Jr., Tice, John D., and Benner, Robert I., to Sun Oil Company. Catalyst sulfiding with carbon disulfide. 3,516,926, Cl. 208-143.
- Davis, Paul, to Sweetheart Plastics, Inc. Closure having double fastening means. 3,516,572, Cl. 220-60.
- Davy and United Engineering Company: See—
Bond, Harry Laurence Fred, 3,516,276.
- Day, Robert L.: See—
Smith, Edward A., and Day, Robert L., 3,516,215.
- Dayco Corporation: See—
Freedlander, Abraham L., Matthews, Robert E., and Garrett, Wayne C., 3,516,236.
Fultz, Russell E., and Wolk, Reuben, 3,516,901.
- D.C. Transit System, Inc.: See—
Sherbert, Thomas Leroy, and Sherbert, Tillison Myron, 3,516,710.
- Decker, Matthew J.: See—
Gatchet, George L., and Decker, Matthew J., 3,516,811.
- De Francis, Dominick J., Fooks, James M., and Staats, Louis T., Sr. Apparatus for stapling sheets into pads. 3,516,589, Cl. 227-7.
- DeGaetano, Joseph F. Process for the production of 2,3,6-trichlorophenylacetic acid. 3,517,056, Cl. 260-515.
- De Lang, Hendrik, and Bouwhuis, Gijbertus, to U.S. Philips Corporation, messe. Laser having an electrostrictive detuning member. 3,517,329, Cl. 331-94.5
- Delest, Philippe F.: See—
Audran, Roger G. L., Delest, Philippe F., and Vige, Maurice, 3,516,834.
- Dell'Aira, Michele. Multiple-spirometer respiration measuring device. 3,516,401, Cl. 128-208.
- Delta Hydraulics Company: See—
McCormick, Joseph F., 3,516,441.
- Demag-Lauchhammer Maschinenbau und Stahlbau G.m.b.H.: See—
Heitzer, Heinrich, 3,516,534.
- De Maria, Anthony J., to United Aircraft Corporation. Frequency modulation for lasers. 3,517,332, Cl. 331-94.5
- de Niet, Johan M. Daniel. Storage equipment and brackets therefor. 3,516,635, Cl. 248-245.
- Dennis, Louis E., and Beachler, Edward D., to Beloit Corporation. Headbox overflow and recirculation system. 3,516,905, Cl. 162-337.
- Dennison Manufacturing Company: See—
Merzer, Francis G., 3,516,124.
- Depuy, Francis A.: See—
Gallant, James O., Knapp, George P., and Depuy, Francis A., 3,516,135.
- DeRose, Ralph A., Mottl, Anton J., and Madden, Richard A., to International Telephone and Telegraph Corporation. Flat-pack manipulation tools. 3,516,142, Cl. 29-203.
- De Ruiter, Rudolf: See—
Timmerbeil, Ewald Rudolf, De Ruiter, Rudolf, and Jeronimus, Eppo Hemmo, 3,516,590.
- Descaries, Raymond: See—
Bayless, Frank K., Descaries, Raymond, Ohlson, B Erik, and Anderson, James, 3,516,107.
- Deshotels, O. H.: See—
Bercier, Newton L., 3,516,159.
- DeSoto, Inc.: See—
Sekmakas, Kazys, Gauger, Edward A., Jr., and Henning, Lester A., 3,516,913.
- Destival, Pierre, to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procédes Georges Claude. Sealing device with leakage gas recovery for cryogenic gas expansion turbine. 3,516,756, Cl. 415-112.
- Dettinger, Willi, to Pumpenfabrik Urach. Method of sealing piston pumps. 3,516,760, Cl. 417-53.
- Detwiler, Willard R., to Emerson Electric Co. Adjustment mechanism for variable ratio transmission. 3,516,296, Cl. 74-230.17
- Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: See—
Weiberg, Otto, 3,517,033.
- de Vos, Hendrik A. J., and Wierzbicki, Julian J., to Sylvania Electric Products, Inc. Bi-pin base and socket. 3,517,372, Cl. 339-91.
- Diamond Crystal Salt Company: See—
Boynton, Ira D., Di Maggio, Carmelo A., and Healy, James W., 3,516,889.
- Diamond International Corporation: See—
Baker, Leroy D., and Peppler, William S., 3,516,227.
Klinker, John J., Jr., and Sessel, Robert N., Jr., 3,516,842.
Klinker, John J., Jr., 3,516,904.
- Diassi, Patrick A., to Squibb, E. R., & Sons, Inc. Hydroxy, acyloxy and 11-keto-1,3,5(10),7-estratetraenes. 3,517,036, Cl. 260-397.3
- Di Benedetto, Vito J.: See—
Reifel, Harry, and Di Benedetto, Vito J., 3,517,361.
- Dickey, Clarence A. Berol Corporation Writing instrument and process of making the same. 3,516,753, Cl. 401-96.
- Dickinson, Theodore M., to General Electric Company. Method and apparatus for forming a focused monoenergetic ion beam. 3,517,240, Cl. 313-63.
- Dickson, Herbert F., Jr., Greenberg, Irving D., and Stone, Elmer O., to Sylvania Electric Products, Inc. Planar multiple character electroluminescent display device. 3,517,245, Cl. 313-109.5
- Didry, Yves. Clip. 3,516,698, Cl. 287-189.35
- Dieterle, Horst, and Rabe, Peter, to Mattner, Heinrich, GmbH. Lighter. 3,516,776, Cl. 431-344.
- Dietz, Wolfgang F. W., to RCA Corporation. Voltage regulator. 3,517,253, Cl. 315-27.
- Digitel, Inc.: See—
Peterson, Norman E., and Courchene, Ernest E., Jr., 3,517,125.
- Dillard, George M., to United States of America, Navy. Moving-window detector for binary integration. 3,517,172, Cl. 235-154.
- Dilley, William G. Single-ended, push-pull transistor amplifier with zero input impedance circuitry arrangement. 3,517,270, Cl. 330-15.
- Dillon, Joseph F., Jr., to Bell Telephone Laboratories, Incorporated. Optical devices with zero linear magnetic birefringence. 3,516,726, Cl. 350-151.
- Di Maggio, Carmelo A.: See—
Boynton, Ira D., Di Maggio, Carmelo A., and Healy, James W., 3,516,889.
- Dimroth, Peter, and Mayer, Kurt, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Monazo dyes containing a 2-nitro diphenylamine. 3,516,982, Cl. 260-206.
- Di Pilla, Anthony A., to Robertshaw Controls Company. Pushbutton switch construction with safety set mechanism. 3,517,148, Cl. 200-167.
- DiTommaso, Anthony: See—
McKown, Daniel C., Howlett, Donald E., and DiTommaso, Anthony, 3,516,743.
- Dixi S.A.: See—
Roach, Edouard, 3,517,326.
- Doban Labs., Inc.: See—
Danielson, Mark, 3,516,665.
- Dobkin, Robert C., to General Electric Company. Transducer with variable permeability magnetic member. 3,517,227, Cl. 310-10.
- Dodds, Robert E., to Sylvania Electric Products, Inc. Method of preparing soluble iron polytungstate, and product thereof. 3,516,784, Cl. 23-51.
- Dold, Edward L.: See—
Malloy, George L., and Dold, Edward L., 3,516,514.
- Domovs, Kelvin B.: See—
Tesoro, Giuliana C., Lee, Wing-Kai, and Domovs, Kelvin B., 3,516,853.
- Donitz, Dieter, to Voigtlander A.G. Method and apparatus for focussing an optical device on an object distant therefrom. 3,516,742, Cl. 356-4.
- Donnelley, R. R., & Sons Company: See—
Larsen, Howard F., 3,516,593.
- Donnelly, Joseph W., and Bracken, Robert S., to Maul Bros., Inc. Triple gob glass feeder. 3,516,812, Cl. 65-327.
- Dore, Jacky, and Neier, Reinhard, to Sandoz Ltd. Heterogeneous 1:2 metal complexes of monazo dyes. 3,516,979, Cl. 260-145.
- Dore, Jacky, and Neier, Reinhard, to Sandoz Ltd., a/k/a Sandoz A.G. Heterogeneous 1:2 cobalt or chromium complex azo dyestuffs. 3,516,980, Cl. 260-145.
- Dotson, Ronald L., to Dow Chemical Company, The. Liquid degassing apparatus. 3,516,799, Cl. 23-283.

- Dotto, Gianni A., to Mallory, P. R., & Co., Inc. Lamp socket including an electrical control circuit for regulating lamp current. 3,517,259, Cl. 315-200.
- Dougherty, William E., to Herman Pneumatic Machine Company. Molding method and apparatus. 3,516,475, Cl. 164-37.
- Dougherty, William E., to Herman Pneumatic Machine Company. Molding apparatus. 3,516,481, Cl. 164-384.
- Douglas, George H.: See—
Teller, Daniel M., Douglas, George H., and Smith, Herchel, 3,516,990.
- Dow Chemical Company, The: See—
Dotson, Ronald L., 3,516,799.
Haveman, Gerrit, 3,516,841.
- Dow, Daniel G., to Varian Associates. Microwave circuit for a limited space charge accumulation mode device. 3,517,335, Cl. 331-101.
- Dowell, Calvin. Auto wheel locks. 3,516,270, Cl. 70-259.
- Doyle, Walter M., and White, Matthew B., to Philco-Ford Corporation. Frequency stabilization of laser system which compares the amplitudes of two beat note signals. 3,517,330, Cl. 331-94.5
- Draper, Everett J., to Rheem Manufacturing Company. Recording playback mechanism. 3,516,676, Cl. 274-9.
- Dresser Industries, Inc.: See—
O'Hagan, Thomas J., Yoke, Michael P., and VanHoutte, James J., 3,516,446.
- Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z., to Grace, W. R., & Co. Opening device on bags and the like. 3,516,537, Cl. 206-46.
- Drilling Well Control, Inc.: See—
Scroggins, Elva J., 3,516,761.
- Driver, Wilbur B., Company: See—
Gottlieb, Arnold J., and Majesko, George A., 3,516,824.
- Drogin, Edwin M., to United States of America, Army. Digital apparatus for generating a wave having an accurately predetermined phase setting. 3,517,319, Cl. 328-55.
- Dubois, Richard, Jr.: See—
Ashton, Donald M., Jr., and Dubois, Richard, Jr., 3,516,724.
- Dudzik, Zdzislaw F., to Canada Patents and Development Limited. Catalysts having stable free radicals containing sulfur. 3,516,947, Cl. 252-439.
- Dueringer, Heinrich, and Ott, Hans, to Eidophor A.G. System for stabilizing the position and size of a raster scanned by an electron beam on a target. 3,517,251, Cl. 315-19.
- Duling, Irl N.: See—
Moore, Robert E., and Duling, Irl N., 3,516,968.
Hoogland, Mary Ellen, and Duling, Irl N., 3,516,969.
- Dullinger, Karl, to Kronseder, Hermann. Drive for labeling device. 3,516,297, Cl. 74-395.
- Dunlop Company Limited, The: See—
Jones, Frank B., 3,516,468.
Wood, John O., and Young, Philip B., 3,517,096.
Wragg, Reginald T., 3,517,003.
- Dunn, Stanley A., and Rakestraw, Lawrence F., to Monsanto Company. Apparatus for separation of impurities from metal melts in a filament spinning device. 3,516,478, Cl. 164-281.
- Dunnington, Gordon Beale, and Fields, Reuben Thomas, to Du Pont de Nemours, E. I., and Company. Extrusion process. 3,517,095, Cl. 264-176.
- Du Pont de Nemours, E. I., and Company: See—
Anzilotti, Willard F., 3,516,922.
Berr, Charles E., 3,516,966.
Carboni, Rudolph Anthony, 3,517,025.
Dunnington, Gordon Beale, and Fields, Reuben Thomas, 3,517,095.
Funer, Rolf E., 3,516,967.
Gordon, Mendel T., and Silversmith, Ernest Frank, 3,517,074.
Harper, Lee R., 3,516,883.
Hoffman, Lewis C., 3,516,949.
Seney, John Seymour, 3,516,285.
Short, Oliver A., 3,516,857.
Toll, Kal Greenlie, 3,516,426.
- Du Puit, Robert N., to General Foods Corporation. Intermediate moisture foodstuffs containing reduced polysaccharides. 3,516,838, Cl. 99-150.
- Durand, Marcel: See—
Pomagalaki, Jean, and Durand, Marcel, 3,516,642.
- Durio, John R., and Taylor, Harvey S., to Collins Radio Company. Multi-output DC power supply means. 3,517,297, Cl. 321-9.
- Durso, August J., Maurer, Frank C., and Panczyzyn, George A., said Maurer and said Panczyzyn assors. to said Duro. Combination bottle and closure cap unit therefor. 3,516,563, Cl. 215-9.
- Eagle, Martin A. Hair-care device. 3,516,424, Cl. 132-148.
- Eagle-Picker Industries, Inc.: See—
Broghio, Edward P., 3,516,869.
- Earhart, Howard F., Jacoby, Frederick J., and Starck, Clemens B., to Eastman Kodak Company. Photographic articles and materials useful in their manufacture. 3,516,832, Cl. 96-87.
- Eastman Kodak Company: See—
Audran, Roger G. L., Delest, Philippe F., and Vige, Maurice, 3,516,834.
Caldwell, John R., and Jackson, Winston J., Jr., 3,517,071.
Clarke, Robert George, 3,516,829.
Earhart, Howard F., Jacoby, Frederick J., and Starck, Clemens B., 3,516,832.
Fields, Donald L., 3,517,073.
- Gray, Theodore F., Jr., and Carroll, Max L., Jr., 3,516,957.
- Johnson, Dee Lym, 3,517,029.
- Mauer, Paul Bernard, 3,516,720.
- O'Donnell, Miles C., 3,516,588.
- Paddy, John Frank, 3,516,844.
- Periman, David Eric, 3,517,324.
- Stern, Max H., 3,517,067.
- Whiteley, Thomas E., 3,516,830.
- Wolf, Wilfred L., and Beckett, Clark, 3,516,831.
- Eaton Yale & Towne, Inc.: See—
Goetz, George W., 3,516,685.
- Eberle, Marcel K., to Sandoz-Wander, Inc. Certain 1-(3'-nicotinoyl)-2-loweralkyl-thio-benzimidazoles. 3,517,020, Cl. 260-294.8
- Eckel, Robert A., to United States of America, Navy, messe. Pressure control of electrode position in gas tube. 3,517,248, Cl. 313-146.
- Edler, Hans-Joachim: See—
Rausch, Werner, Oei, Han Yong, and Edler, Hans-Joachim, 3,516,875.
- Edleson, Stuart K., to United States of America, Navy. Instantaneous tension load release device. 3,516,702, Cl. 294-1.
- Edmonds, Harold D., Goodman, Gilbert, and McWilliams, William J., to Vitramon Incorporated. Electronic component. 3,517,271, Cl. 317-101.
- Edwards, Albert S., to Allied Thermal Corporation. Air conditioning temperature volume controller. 3,516,606, Cl. 236-13.
- E-H Research Laboratories, Inc.: See—
Worcester, John L., 3,517,346.
- Eich, Edmund, and Gerner, Heinz, to Werkzeugmaschinenfabrik Adolf Waldrich Coburg. Wide-belt grinding machine, more particularly for working sheet metal. 3,516,208, Cl. 51-143.
- Eichberger, Josef: See—
Stoal, Arnold, and Eichberger, Josef, 3,516,582.
- Eidophor A.G.: See—
Dueringer, Heinrich, and Ott, Hans, 3,517,251.
- Eisenbau Karl Ludwig BSB: See—
Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry, 3,516,512.
- Eisler, Paul. Packaging method. 3,516,218, Cl. 53-25.
- Electra/Midland Corporation: See—
Swartz, Gaylord A., 3,517,304.
- Electro GmbH: See—
Pusch, Gunter, 3,516,722.
- Electro-Catheter Corporation: See—
Ackerman, Bernard, 3,516,412.
- Electrolux Corporation: See—
Bayless, Frank K., Descaries, Raymond, Ohlson, B Erik, and Anderson, James, 3,516,107.
- Elitex Zavody Textilního Strojrenství, Generalni Reditelství: See—
Uhlir, Pavel, 3,516,267.
- Elkott, Eugene C. Spreader vehicle with power take-off. 3,516,576, Cl. 222-177.
- Ellis, Robert. Automatically adjusting skog for surfboards. 3,516,100, Cl. 9-310.
- Ellman, Irving A. Amalgam packer attachment for dental handpiece. 3,516,161, Cl. 32-53.
- Ellman, Irving A. Method of making dental parts. 3,517,091, Cl. 264-16.
- Emerson Electric Co.: See—
Detwiler, Willard R., 3,516,296.
- Endo, Sukeharu, to Ishikawajima-Harima Jukogyo Kabushiki Kaisha. Annealing furnace for coil material. 3,516,649, Cl. 263-40.
- Engeler, William E., and Garfinkel, Marvin, to General Electric Company. Miniature electromechanical filter with magnetic drive. 3,517,349, Cl. 333-72.
- Engelhard Minerals and Chemicals Corporation: See—
Marchik, John F., and Rylander, Paul N., 3,517,021.
- Engineered Products Company, The: See—
Galloway, John J., 3,516,216.
- Engleman, Donald Max, and Beerebo, John J., to Kinetic Objects Inc. Toy having limajous vibratory motion. 3,516,193, Cl. 46-1.
- Engman, William C., and Clark, Walter W., to Grace, W. R., & Co. Removing and inhibiting scale in black liquor evaporators. 3,516,910, Cl. 203-7.
- Escher Wyss Limited: See—
Baumann, Kurt, 3,516,757.
- Espinosa, Adrian O. House number receptacle. 3,516,187, Cl. 40-131.
- Esquire, Inc.: See—
McNamara, Albert C., Jr., 3,517,254.
- Ese, Robert Carlyle, to American Cyanamid Company. Crystallization of astatin. 3,517,101, Cl. 424-123.
- Eso Research and Engineering Company: See—
Lovett, John R., and Schmall, Edwin A., 3,516,802.
Patton, John T., 3,516,495.
- Estes, Sanford A. Club with shifting weight. 3,516,673, Cl. 273-162.
- Estrin, Gerald. Board game apparatus with path forming pieces. 3,516,671, Cl. 273-130.
- Etablissement Saland: See—
Aikainen, Niilo Kaleervo, 3,516,168.
- Etablissement Satra, Societe Achat et Transactions: See—
Jamou, Henri H., 3,517,373.
- Etablissements Proser, S.A.: See—
Poinet, Roger, 3,517,370.
- Ethyl Corporation: See—
Wollnsak, John C., 3,516,814.

- European Atomic Energy Community (Euratom): See—
Linhart, Jiri George, 3,517,228.
Klein, Klaus, and Verheyden, Luc, 3,516,278.
Evans, Brian, and Flood, Edward A., to Canadian Patents and Development Limited. Microporous carbon preparation. 3,516,791, Cl. 23-209.1
Eversharp, Inc.: See—
Ferraro, Frank A., 3,516,382.
Excel Corporation: See—
Heeter, Victor L., and Shockey, Howard J., 3,516,884.
Ex-Cell-O Corporation: See—
Mickas, George, 3,516,149.
Fabyan, Jack. Wrench holster. 3,516,584, Cl. 224-5.
Fagan, William F.: See—
Kobler, Richard, Fagan, William F., and Feldman, Edward 3,516,175.
Fain, Bobby Ray, to Alamance Industries, Inc. Method of false-twisting plural ends of thermoplastic yarn. 3,516,240, Cl. 57-157.
Fairbairn, Rhys A., to Northern Electric Company Limited. System for processing direct dialled international telephone calls. 3,517,136, Cl. 179-18.
Fangman, Charles N., to Caterpillar Tractor Company. Piston with heat dam. 3,516,335, Cl. 92-176.
Farbenfabriken Bayer Aktiengesellschaft: See—
Rinkler, Heinrich, Braden, Rudolf, and Nischk, Gunther, 3,516,974.
Wagner, Kuno, Meisert, Ernst, and Mennicken, Gerhard, 3,517,039.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: See—
Bauer, Gunther, and Bucher, Jakob, 3,516,614.
Kirst, Werner, and Hertel, Hasso, 3,516,780.
Farnbach, Fred A., to Abert, Jack C. Pack frame and suspension means. 3,516,586, Cl. 224-25.
Faucheron, Jean, to Societe d'Etudes et d'Exploitation de Procédés pour l'Industrie Alimentaire. Sterile packing. 3,516,225, Cl. 53-180.
Fawcett, Kenneth J., Jr., Fuhr, William H., Pefferman, Ernest B., and Stone, William M., to Melpar, Inc. Adaptive pulse analyzer with cross-correlation. 3,517,176, Cl. 235-181.
Fedders Corporation: See—
Behrens, Curtis E., 3,516,174.
Federal Pacific Electric Company: See—
Cole, Thomas M., 3,517,355.
Feldman, Charles: See—
Smith, Richard C., Moulton, Charles W., and Feldman, Charles 3,516,133.
Feldman, Edward: See—
Kobler, Richard, Fagan, William F., and Feldman, Edward 3,516,175.
Fellner, Philip J., to Sturtevant Industries, Inc. Apparatus for wrapping with flexible heat sealable material. 3,516,228, Cl. 53-390.
Fenault, Philippe, to Institut Français du Pétrole, des Carburants et Lubrifiants. Process for purifying sulfide containing gases and the recovery of sulfur therefrom. 3,516,793, Cl. 23-225.
Fenner, Gunther E., to General Electric Company. Infrared intensity modulator wherein the optical absorption spectrum of cadmium telluride doped with iron ions is varied. 3,516,728, Cl. 350-160.
Ferasaki Denki Sangyo Kabushiki Kaisha: See—
Hanafusa, Tutomu, 3,517,356.
Ferguson, Kenneth F., to Hunt-Wesson Foods, Inc. Forklift truck and push-pull unit therefor. 3,516,641, Cl. 254-122.
Ferguson, Millard A.: See—
Scarpelli, August F., Ferguson, Millard A., and Ross, John J. 3,517,154.
Ferington, Thomas E.: See—
Tsuk, Andrew G., Ferington, Thomas E., and Markofsky, Sheldon B. 3,516,795.
Fero, Finn. Hydraulic gear mechanisms. 3,516,764, Cl. 418-19.
Ferraro, Frank A., to Eversharp, Inc. Blade supply indicator for ribbon razor magazine. 3,516,382, Cl. 116-124.
Ferentino, Antonio, to Pirelli S.p.A. Apparatus for severing and recovering submarine cables. 3,516,158, Cl. 30-134.
Ferrieu, Gilbert Marcel. Controlled linear half-wave or full-wave alternating current signal detector using linear amplifier combined with non-linear feedback circuit. 3,517,267, Cl. 329-101.
Fiat Societa per Azioni: See—
Gnavi, Francesco, 3,516,288.
Margaira, Rinaldo, 3,517,233.
Fidi, Werner, to Akustische U. Kino-Gerate Gesellschaft m.b.H. Delay device particularly for the production of artificial reverberation. 3,517,344, Cl. 333-30.
Field, Joseph P., to International Telephone and Telegraph Corporation. Automatic switching system having reduced delay times. 3,517,134, Cl. 179-18.
Field, Sheldon B., Pangalila, Frans V., Miller, Richard Lawrence, and Grigoraki, Nicholas Mark, to Flume Stabilization Systems, Inc. Variably damped passive tank stabilizer. 3,516,377, Cl. 114-125.
Fielden Electronics (Australia) Proprietary Limited: See—
Leach, Ian Campbell, and Sack, Kevin Howard, 3,516,282.
Fielding, Harold Crosbie, to Imperial Chemical Industries Limited. Preparation of ketenes. 3,517,065, Cl. 260-585.5
Fields, Donald L., to Eastman Kodak Company. Synthesis of a hydroxy group-containing polycyclic aromatic fused ring compound. 3,517,073, Cl. 260-621.
Fields, Reuben Thomas: See—
Dunnington, Gordon Beale, and Fields, Reuben Thomas 3,517,095.
Fielek, Anthony C., Jr., and Weber, Francis J., to Kelsey-Hayes Company. Skid control system including valve cycling and checking circuit. 3,516,715, Cl. 303-21.
Finnie, Lies N., and Kornblau, Marvin J., to Singer-General Precision Systems, Inc. Method of changing the thermochromic transition temperature of silver mercuric iodide and copper mercuric iodide. 3,516,945, Cl. 252-408.
Firth, Donald, to Magnavox Company, The. Frequency divider circuit. 3,517,211, Cl. 307-225.
Firth, Jay A., to Commercial Solvents Corporation. Production of a cycloserine-O-carbamyl-D-serine composition. 3,517,099, Cl. 424-123.
Fisch, Albert, and Kneisel, Otto, to Siemens Aktiengesellschaft. Time multiplex communication system employing third party break-in apparatus including speech energy stores. 3,517,135, Cl. 179-18.
Fish, Daniel Cecil Edward, to National Research Development Corporation. Storage of liquids. 3,516,568, Cl. 220-18.
Fisher, Norman Ernest, Whiteside, John, and Green, David Frederick, to Vandervell Products Limited. Method for making thin wall flexible bearing liners. 3,516,137, Cl. 29-149.5
Fisher, Wilfred M. Incinerator. 3,516,372, Cl. 110-18.
Fitzhuh, Andrew F., and Snelgrove, James A., to Monsanto Company. Self-bonding magnet wire and process for preparing same. 3,516,858, Cl. 117-218.
Fiverel Company: See—
Guyot, Raymond F. J., 3,516,465.
Flannery, Edward J.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,162.
Fleetwood, Michael John: See—
Ward, David Marshall, Fontaine, Paul Isidore, and Fleetwood, Michael John 3,516,826.
Flexweight Corporation: See—
Binford, Robert F., Rodgers, Otis N., and Pace, George A., 3,516,689.
Flood, Edward A.: See—
Evans, Brian, and Flood, Edward A. 3,516,791.
Florey, Klaus: See—
Murty, Dasika R. K., and Florey, Klaus 3,516,794.
Floss, Josef Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of printing plates. 3,516,828, Cl. 96-35.1
Flowers, Theodore R., and Godel, Siegfried, to Sperry Rand Corporation. Portable electrical appliance. 3,517,235, Cl. 310-80.
Flume Stabilization Systems, Inc.: See—
Field, Sheldon B., Pangalila, Frans V., Miller, Richard Lawrence, and Grigoraki, Nicholas Mark, 3,516,377.
FMC Corporation: See—
Hirahara, Katsuji, 3,516,398.
Smith, Bart A., 3,516,454.
Focke & Pfuhl: See—
Focke, Heinz, Liedtke, Kurt, and Friedhoff, Horst, 3,516,214.
Focke, Heinz, Liedtke, Kurt, and Friedhoff, Horst, to Focke & Pfuhl. Apparatus for continuously collecting elongated articles. 3,516,214, Cl. 53-62.
Foley, James P. Index securing arrangement. 3,516,188, Cl. 40-336.
Folkerts, Walter E. Valve for automobile power steering gear. 3,516,437, Cl. 137-596.
Fontaine, Paul Isidore: See—
Ward, David Marshall, Fontaine, Paul Isidore, and Fleetwood, Michael John 3,516,826.
Fooks, James M.: See—
De Francis, Dominick J., Fooks, James M., and Staats, Louis T., Sr. 3,516,589.
Forano Limited: See—
Hedrei, Constantin, 3,516,458.
Forbes, James T., to Universal Oil Products Company. Catalytic reforming process. 3,516,924, Cl. 208-65.
Fords (Finsbury) Limited: See—
Sainsbury, Jeffrey J., and Norris, Anthony, 3,517,205.
Foreman, Caley A., to U.S. Industries, Inc. Device for minimizing twisting of circular knit fabric. 3,516,268, Cl. 66-149.
Formica International Limited: See—
Bland, Geoffrey, 3,516,653.
Forrest, Norman, to Tenneco Chemicals, Inc. Method of filling a flexible mold. 3,517,094, Cl. 264-167.
Foulke, Donald Gardner, and Simonian, Atkin, to Sel-Rex Corporation. Process and solution for sensitizing substrates for electroless plating. 3,516,848, Cl. 117-47.
Fowler, Allan R.: See—
Grace, Alan G., 3,517,127.
Foxboro Company, The: See—
Nelson, Kenneth E., 3,517,212.
Williams, George F., and Bowditch, Hoel L., 3,516,691.
Franch, Howard S., to Philco-Ford Corporation. Foam stop. 3,516,566, Cl. 220-9.
Franklin, Edmond G.: See—
Arndt, John P., and Franklin, Edmond G. 3,516,645.
Freedlander, Abraham L., Matthews, Robert E., and Garrett, Wayne C., to Dayco Corporation. Mower blade. 3,516,236, Cl. 56-295.

- Freedman: See—
Liobia, Vytautas A. 3,516,170.
Freeman, Frank George, to Lucas, Joseph, (Industries) Limited. Radial piston pumps. 3,516,334, Cl. 91-475.
Freiberg, Ashley H.: See—
Gutman, Arnold D., and Freiberg, Ashley H. 3,517,088.
Freuden, Carl: See—
Schmitt, Wilhelm, 3,516,679.
Freytag, Arthur H.: See—
Lira, Emil P., and Freytag, Arthur H. 3,516,815.
Friedhoff, Horst: See—
Focke, Heinz, Liedtke, Kurt, and Friedhoff, Horst 3,516,214.
Friedman, Lester, to Weston Chemical Corporation. Phenolic phosphites used as stabilizers. 3,516,963, Cl. 260-45.8
Friedman, Lester, to Weston Chemical Corporation. Unsaturated phosphonates. 3,517,090, Cl. 260-953.
Friedrich Deckel Prazisions Mechanik und Maschinenbau: See—
Muller, Johann, 3,516,306.
Friedrich, Wolfgang. Collapsible transport box. 3,516,592, Cl. 220-7.
Frost, Harold B., to Bell Telephone Laboratories, Incorporated. Microwave phase disperser. 3,517,348, Cl. 333-31.
Fruengel, Frank. Optical radiation pulse control receiver. 3,516,751, Cl. 356-226.
Fuhr, William H.: See—
Fawcett, Kenneth J., Jr., Fuhr, William H., Pefferman, Ernest B., and Stone, William M. 3,517,176.
Fujimoto, Yasuo, and Naruse, Masao, to Kyowa Hakko Kogyo K.K. (Kyowa Fermentation Industry Co., Ltd.). Process for the purification of 6-halogenopurine. 3,517,006, Cl. 260-254.
Fujisawa Pharmaceutical Co., Ltd.: See—
Takano, Tadayoshi, Kurita, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko, 3,516,997.
Fujiwara, Takashi: See—
Hayakawa, Shohei, Kanematsu, Yoshiko, and Fujiwara, Takashi 3,516,908.
Fukuda, Kenji, and Okamoto, Yujiro, to Teijin Limited. Artificial fiber having voids and method of manufacture thereof. 3,516,239, Cl. 57-140.
Fukuda, Kiyoshi: See—
Yokota, Ryosuke, Muto, Yuhei, Nakajima, Saburo, and Fukuda, Kiyoshi 3,516,939.
Fullman, Robert L., and Becker, Joseph J., to General Electric Company. Sizing of fine particle ferromagnetic materials. 3,516,612, Cl. 241-24.
Fultz, Russell E., and Wolk, Reuben, to Dayco Corporation. Foam rubber article. 3,516,901, Cl. 161-160.
Funer, Rolf E., to Du Pont de Nemours, E. I., and Company. Polyminoide and polyamide nitrile compositions. 3,516,967, Cl. 260-47.
Furlong, James H., to Auto-Control, Inc. Control apparatus for automatic industrial operations. 3,516,506, Cl. 177-164.
Fusby, Lloyd L., to United States Borax & Chemical Corporation. Boric oxide having a low rate of moisture pick-up. 3,516,788, Cl. 23-149.
Fyffe, De Winn: See—
Moltzan, Herbert J., and Fyffe, De Winn 3,516,803.
Gable, Charles E., and Willis, Glenn D., to General Electric Company. Electric motor resilient mounting for end attachment. 3,516,627, Cl. 248-15.
Gachot, Jean. Multiple-purpose demountable pipe-coupling system. 3,516,688, Cl. 285-31.
GAF Corporation: See—
Mackey, E. Scudder, Mayhew, Raymond L., and Gantz, George M., 3,516,835.
Gage, Arthur F., to Rockwell-Standard Company, Inc. Friction welding apparatus. 3,516,591, Cl. 228-2.
Gaines, Donald R., Brothers, James L., and Lambert, James R., to Rees, Mackworth G. Limit switch. 3,517,141, Cl. 200-16.
Gallant, James O., Knapp, George P., and Depuy, Francis A., to Mount Hope Machine Company, Incorporated. Roll with vibration damping means. 3,516,135, Cl. 29-116.
Gallay, Pierre-Henri, to Mecaplast S. A. Blow extrusion apparatus. 3,516,118, Cl. 18-5.
Gallistel, Albert F., and Tierney, Myrel T., to Pako Corporation. Multiple film tabbing apparatus. 3,516,890, Cl. 156-505.
Galloway, John J., to Engineered Products Company, The. Multi-section hollow post construction. 3,516,216, Cl. 52-731.
Gantz, George M.: See—
Mackey, E. Scudder, Mayhew, Raymond L., and Gantz, George M. 3,516,835.
Garfinkel, Marvin: See—
Engeler, William E., and Garfinkel, Marvin 3,517,349.
Garrard Engineering Limited: See—
Lloyd, Eric, 3,517,237.
Garrett Corporation, The: See—
Kelty, Glenn L., and Hinton, Sanford H., 3,516,524.
Garrett, Wayne C.: See—
Freedlander, Abraham L., Matthews, Robert E., and Garrett, Wayne C. 3,516,236.
Garrison, Erskine P., and Tschirky, John E., to Smith Industries International, Inc. Lower thrust equalizer for drilling tools. 3,516,718, Cl. 308-230.
Gatchet, George L., and Decker, Matthew J., to Indian Head, Inc. Method of and apparatus for coating glassware retaining its heat of formation. 3,516,811, Cl. 65-60.
Gates, Albert George Ronald, to Gestetner Limited. Sheet handling apparatus. 3,516,353, Cl. 101-118.
Gates, Robert H., and Kovacic, Joseph M., to Bailey Meter Company. Continually integrating usage computer having means to briefly store power demand information. 3,517,310, Cl. 324-103.
Gates, Robert H., and Tuinenga, William, to Bailey Meter Company. Gas demand computer control system. 3,517,168, Cl. 235-92.
Gauger, Edward A., Jr.: See—
Sekmakas, Kazys, Gauger, Edward A., Jr., and Henning, Lester A. 3,516,913.
Gaunt, Wilmer B., Jr., to Bell Telephone Laboratories, Incorporated. Transistor phase shift circuit. 3,517,223, Cl. 307-295.
Gaydou, Francois, and Jenne, Rudolf, to Bendix Corporation, The. Apparatus for the sputtering of materials. 3,516,919, Cl. 204-298.
Gebruder Junghans G.m.b.H.: See—
Weber, Rudolf, and Winterhalter, Walter, 3,516,359.
General Dynamics Corporation: See—
McKown, Daniel C., Howlett, Donald E., and DiTommaso, Anthony, 3,516,743.
General Electric Company: See—
Bean, Charles P., 3,517,203.
Berger, Abe, 3,517,001.
Bidak, John, and Toloczko, Henry A., 3,516,369.
Bruch, Charles A., 3,516,839.
Dankese, Joseph P., 3,516,867.
Dickinson, Theodore M., 3,517,240.
Dobkin, Robert C., 3,517,227.
Engeler, William E., and Garfinkel, Marvin, 3,517,349.
Fenner, Gunther E., 3,516,728.
Fullman, Robert L., and Becker, Joseph J., 3,516,612.
Gable, Charles E., and Willis, Glenn D., 3,516,627.
Holdstock, Norman G., 3,517,038.
Kegan, Robert E., 3,516,798.
Keiser, John T., 3,516,487.
Lake, John E., 3,517,238.
Mathes, Kenneth N., 3,516,132.
McMurray, William, 3,517,300.
Modie, Frank J., 3,516,946.
Paige, Hilliard W., and Moyer, Ronald G., 3,516,622.
Philipp, Herbert R., 3,517,198.
Rexford, Donald L., 3,516,428.
Rexford, Donald L., 3,516,605.
Schaefer, Donald L., 3,516,346.
Smith, Ronald L., 3,516,951.
Tedmon, Craig S., Jr., and White, Donald W., 3,516,865.
Tiemann, Jerome J., 3,517,320.
van der Grinten, Willem J., 3,516,862.
General Foods Corporation: See—
Du Puis, Robert N., 3,516,838.
General Instrument Corporation: See—
Rubinstein, Richard B., 3,517,210.
General Mills, Inc.: See—
Nordberg, Calvin T., Merboth, John A., and Siverson, Robert D., 3,516,312.
General Motors Corporation: See—
Corry, Thomas M., 3,517,299.
Hachtel, Guenter, 3,516,603.
Johnson, Douglas, 3,516,880.
Peterson, Victor W., 3,516,717.
Scarpelli, August F., Ferguson, Millard A., and Ross, John J., 3,517,154.
Shakespeare, Horacio, 3,516,684.
Stein, Frank S., and Knolinski, Robert E., 3,517,382.
Stevens, Derek Norman, 3,516,610.
Wallace, Marshall Eugene, 3,517,145.
Willmann, Norman L., and Helms, Jerry L., 3,516,863.
Willmann, Norman L., and Wheadon, Ellis G., 3,516,864.
General Steel Industries, Inc.: See—
Lich, Richard L., 3,516,365.
General Time Corporation: See—
Wallentowitz, Klaus D., 3,517,222.
General Tire & Rubber Company, The: See—
Chamberlain, Richard K., 3,516,522.
Meincke, Edmund R., 3,516,975.
Reinbold, Emmett Burton, 3,516,977.
George, Robert H., to Brakemaster Corporation. Aftercooler. 3,516,231, Cl. 55-267.
Gerard, Anthony J. Decorative laminated panel and method of making the same. 3,516,893, Cl. 161-6.
Gerland, Heinz, and Gotze, Werner, to Siemens Aktiengesellschaft. Method of producing insulated electrical conductor. 3,516,859, Cl. 117-218.
Gerner, Heinz: See—
Eich, Edmund, and Gerner, Heinz 3,516,208.
Gerst, Carl W., to Anaren Microwave, Incorporated. Microwave signal processing apparatus. 3,517,309, Cl. 324-84.
Gestetner Limited: See—
Gates, Albert George Ronald, 3,516,353.
Gewerkchaft Eisenhütte Westfalen: See—
Arndt, Frans Martin, 3,516,298.

- Gheen, Ernest Lee: See—
Gheen, Robert Lee, and Gheen, Ernest Lee 3,516,609.
Gheen, Robert Lee, and Gheen, Ernest Lee. Dragline sprinkler system. 3,516,609, Cl. 239-212.
Giacobbe, Joseph R., to Sage Laboratories, Inc. Microwave oven field alteration. 3,517,152, Cl. 219-10.55.
Gibson, James G., and Wunderlich, Louis J., to Motorola, Inc. Variable pulse width monostable multivibrator. 3,517,220, Cl. 307-273.
Giddings & Lewis, Inc.: See—
Jones, Gordon H., and Klabunde, Steven E., 3,516,328.
Giessler, Henry H. Mobile home. 3,516,705, Cl. 296-23.
Gilbert, George T., to Poor & Company. Rotary impact crusher. 3,516,613, Cl. 241-186.
Gilbertson, John E. Ash tray device. 3,516,232, Cl. 55-385.
Gildersleeve, John T., to Bemis Company, Inc. Compression packaging. 3,516,217, Cl. 53-24.
Giles, George W.: See—
Wood, George C., and Giles, George W. 3,516,237.
Gilford Instrument Laboratories, Incorporated: See—
Gilford, Saul R., and Grengg, Walter, 3,517,201.
Gilford, Saul R., and Grengg, Walter, to Gilford Instrument Laboratories, Incorporated. Apparatus for controlling the transmittance of radiant energy. 3,517,201, Cl. 250-217.
Gilmartin, Michael J., Jr., and Shively, Richard R., to Bell Telephone Laboratories, Incorporated. Digital processor for performing fast Fourier transforms. 3,517,173, Cl. 235-156.
Giraud, Francois L.: See—
Paris, Francois Gilbert, and Giraud, Francois L. 3,516,362.
Gitzen, Walter H., and Mac Zura, George, to Aluminum Company of America. Production of ceramic bodies. 3,516,840, Cl. 106-65.
Giuzza, Pietro. Multicolor sheet printing machine drive. 3,516,355, Cl. 101-183.
Glas, Maurus. Multi-way fluid control valve. 3,516,438, Cl. 137-596.
Glaser, Josef: See—
Kurth, Johannes, Glaser, Josef, and Strohachin, Manfred 3,516,479.
Glatt, Leonard, and Altschuler, Saul, to TRW Inc. Laser pumped by multiple photon absorption. 3,517,334, Cl. 331-94.5.
Gleim, William K.T., to Universal Oil Products Company. Recovery of halogen. 3,516,792, Cl. 23-216.
Globus, Robert H.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,516,879.
Gloor, Urs, Ruegg, Rudolf, and Schwieter, Ulrich, to Hoffmann-La Roche Inc. Hydroquinone compounds. 3,517,070, Cl. 260-613.
Glover, Alfred H.: See—
Manning, Thomas J., Jr., and Glover, Alfred H. 3,516,453.
Glover, John Benjamin, to Hepworth Iron Company Limited, The. Pipe couplings. 3,516,693, Cl. 285-235.
Gnavi, Francesco, to Fiat Societa per Azioni. Process and apparatus for testing on the ground the orbital operation of the apparatus controlling the setting of a space vehicle. 3,516,288, Cl. 73-117.1.
Godel, Siegfried: See—
Flowers, Theodore R., and Godel, Siegfried 3,517,235.
Goes, Friedrich A., to Volkswagenwerk Aktiengesellschaft. Radiator cap for vehicles. 3,516,569, Cl. 220-40.
Goetz, George W., to Eaton Yale & Towne, Inc. Inflatable confinement vehicle safety apparatus. 3,516,685, Cl. 280-150.
Goll, Frederick M., and Baldwin, Edwin C., to International Business Machines Corporation. Method of depositing conductive ions by utilizing electron beam. 3,516,855, Cl. 117-212.
Goodell, William V., to Melpar, Inc. Large relative aperture plastic lens system. 3,516,735, Cl. 350-220.
Goodman, Gilbert: See—
Edmonds, Harold D., Goodman, Gilbert, and McWilliams, William J. 3,517,271.
Goodman, H., & Sons, Inc.: See—
Rosmarin, Philip F., 3,516,421.
Goodman, Louis. Mailbox signal flag. 3,516,383, Cl. 116-132.
Goodrich, B. F., Company, The: See—
Hartman, Richard E., 3,516,895.
Goodyear Aerospace Corporation: See—
Cook, Richard L., 3,516,898.
Gordon, Mendel T., and Silversmith, Ernest Frank, to Du Pont de Nemours, E. I., and Company. Preparation of dinitroresols. 3,517,074, Cl. 260-622.
Gorin, Everett: See—
Curran, George P., and Gorin, Everett 3,516,808.
Gosacn, P., & Co. G.m.b.H.: See—
Schmitt, Helmut, 3,516,750.
Goto, Naohiro, and Shidara, Keiichi, to Japan Broadcasting Corporation. Photoconductive target comprising aluminum, selenium and arsenic triselenide layers. 3,517,241, Cl. 313-65.
Gottlieb, Arnold J., and Majesko, George A., to Driver, Wilbur B., Company. Ferrous alloy containing nickel cobalt and chromium. 3,516,824, Cl. 75-128.
Gotze, Werner: See—
Gerland, Heinz, and Gotze, Werner 3,516,859.
Grabie, Donovan B., and Jackson, John M. Well pumping and servicing system. 3,516,762, Cl. 417-362.
Grace, Alan G., to Fowler, Allan R., mesne. Sync generator and recording system including same. 3,517,127, Cl. 178-69.5.

- Grace, W. R., & Co.: See—
Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z., 3,516,537.
Engman, William C., and Clark, Walter W., 3,516,910.
Hemphill, Adley W., 3,516,567.
Ketley, Arthur D., 3,517,054.
Maher, Philip K., and Scherzer, Julius, 3,516,786.
Tsuk, Andrew G., Ferington, Thomas E., and Markofsky, Sheldon B., 3,516,795.
Graczyk, Thadeus S., to Bendix Corporation, The, mesne. Sublimation unit and system. 3,517,161, Cl. 219-275.
Grafstein, Daniel: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,516,185.
Graham, Percy R. Door latch and lock of magnetic type. 3,516,701, Cl. 292-144.
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yin, and Challiss, John Van Hoesen. Method and device for shaping metal. 3,516,274, Cl. 72-57.
Grantham, Le Roy F., and Larsen, Christian M., to North American Rockwell Corporation. Carbonaceous process for sulfur production. 3,516,796, Cl. 23-225.
Grasvoll, Halvor, 1/3 to Magnusson, Gustav G., and 1/3 to Weiner, Karl I. Loading apparatus. 3,516,226, Cl. 53-229.
Gray, Fester. Baseball bat. 3,516,669, Cl. 273-72.
Gray, Foster L.: See—
West, Barry R., and Gray, Foster L. 3,516,807.
Gray, Samuel A., to Bell Aerospace Corporation. Electromagnetic force motor having linear output characteristics. 3,517,360, Cl. 335-230.
Gray, Theodore F., Jr., and Carroll, Max L., Jr., to Eastman Kodak Company. Thermoplastic polyester composition containing organic ester mold release agent. 3,516,957, Cl. 260-22.
Green, David Frederick: See—
Fisher, Norman Ernest, Whiteside, John, and Green, David Frederick 3,516,137.
Greenberg, Irving D.: See—
Dickson, Herbert F., Jr., Greenberg, Irving D., and Stone, Elmer O. 3,517,245.
Greenhall, Armand L.: See—
Pensa, Ildo E., and Greenhall, Armand L. 3,516,781.
Greenough, June B. Variable volume breast pad. 3,516,414, Cl. 128-481.
Greer, Donald L.: See—
Davidge, Ronald V., Greer, Donald L., McCormack, Richard W., and O'Daniel, Jerome B. 3,516,528.
Gregory, Kenneth J.: See—
Kuester, Frank E., Clark, Richard A., and Gregory, Kenneth J. 3,516,675.
Grengg, Walter: See—
Gilford, Saul R., and Grengg, Walter 3,517,201.
Griffiths, Leonard B.: See—
Mlavsky, Abraham I., and Griffiths, Leonard B. 3,517,281.
Griffiths, William O.: See—
Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z. 3,516,537.
Grigoraki, Nicholas Mark: See—
Field, Sheldon B., Pangalila, Frans V., Miller, Richard Lawrence, and Grigoraki, Nicholas Mark 3,516,377.
Grimaud, Edouard: See—
Tellier, Pierre, and Grimaud, Edouard 3,517,084.
Grossbach, Robert, to Loral Corporation. Tunable ferrimagnetic filter using a magic-T. 3,517,351, Cl. 333-73.
Grossman, Walter B., and Rabe, George B., to Thiokol Chemical Corporation. Rolling metal diaphragm. 3,516,578, Cl. 222-386.5.
Groszek, Aleksander Jerzy: See—
Andrews, George Inglis, Groszek, Aleksander Jerzy, and Witheridge, Rodney Ernest 3,516,933.
Grotheer, Morris P., Currey, John E., and Cook, Edward H., Jr., to Hooker Chemical Corporation. Alkali metal chlorate cell. 3,516,918, Cl. 204-266.
Grubben & Co. Aktiebolag: See—
Wallen, Emil Olof Lennart, and Neumann, Frank Peter August, 3,516,551.
Guardian Electric Manufacturing Company of California, Inc.: See—
Metzler, Albert, 3,517,218.
Gubela, Gunther. Traffic button or road marker. 3,516,337, Cl. 94-1.5.
Gudmestad, Ragnar, to Artos Engineering Company. Cut-off device for strip material. 3,516,313, Cl. 83-110.
Guier, William. Means for establishing visual communication in fluids resistant to light penetration. 3,516,723, Cl. 350-63.
Guinot, Gabriel L., to Societe Anonyme Poclain. Device for winding flexible tubing carrying fluid under pressure. 3,516,433, Cl. 137-355.26.
Gulf Oil Corporation: See—
Robb, Howard E., 3,516,961.
Gulstrom, Richard R., and Scheelke, Gerald F., to Potlatch Forests, Inc. Apparatus for separating and handling a cant and sideboards. 3,516,539, Cl. 209-74.
Gunsner, Peter, to Bosch, Robert, G.m.b.H. Thyristor control circuit with full load current by-pass, particularly for electrical vehicles. 3,517,290, Cl. 318-332.

- Gunst, Raymond: See—
Riat, Henri, Gunst, Raymond, and Hoelzle, Gerd 3,516,981.
Gurien, Harvey, Wagner, David Paul, and Rachlin, Albert Israel, to Hoffmann-La Roche Inc. Rosenmund process. 3,517,066, Cl. 260-599.
Gutman, Arnold D., and Freiberg, Ashley H., to Stauffer Chemical Company. Bis-phosphoramides, bis-phosphonamides, and phosphono-phosphoramides. 3,517,088, Cl. 260-928.
Guyot, Raymond F., Jr., to Fivrel Company. Reinforced tire. 3,516,465, Cl. 152-361.
Guyson Industrial Equipment Limited: See—
Thomson, Robert S., 3,516,205.
Hachtel, Guenter, to General Motors Corporation. Tamper-proof odometer one-way drive. 3,516,603, Cl. 235-95.
Hachtel, Wilhelm. Projecting rail. 3,516,113, Cl. 16-94.
Hadley-Webb, Michelle, to Triumph-Universa G.m.b.H. Brassiere. 3,516,415, Cl. 128-489.
Haentjens, Walter D. Stuffing box lubrication system. 3,516,759, Cl. 415-176.
Hager, Richard W., to Teledyne, Inc. Slip chip structure. 3,517,278, Cl. 317-234.
Hagge, Walter, Quaedvlieg, Mathieu, Heusch, Rudolf, Hebbel, Konrad, and Schiffmann, Richard, to Asfa Aktiengesellschaft. Photographic material containing a hydrophilic colloid and a sucrose ester. 3,516,833, Cl. 96-114.5.
Haggis, Geoffrey Arthur, to Imperial Chemical Industries Limited. Foamed polymers. 3,516,950, Cl. 260-2.5.
Hagiwara, Miyuki: See—
Kagiya, Tsutomu, Machi, Suetu, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko 3,516,912.
Hagstrom, Nils Olov Wilhelm: See—
Alwall, Nils, Ostergren, Bo Lennart, and Hagstrom, Nils Olov Wilhelm 3,516,548.
Hahn, Raymond P., to Raymar, Inc. Connector for tubular members. 3,516,697, Cl. 287-123.
Hakim, Salomon. Cerebral ventricular catheter. 3,516,410, Cl. 128-350.
Hale, Gordon B.: See—
Norton, Raymond F., and Hale, Gordon B. 3,517,184.
Hall, John A., Jr., to United Aircraft Corporation. Aluminum masking of active components during tantalum/nitride sputtering. 3,516,914, Cl. 204-192.
Hall, Lula S. Stand for a doll. 3,516,632, Cl. 248-176.
Ham, John E., and Wilkey, Merrill K., to Jackson, Byron, Inc. Power pipe tong transmission assembly. 3,516,308, Cl. 81-57.16.
Hamada, Yoshio: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio 3,517,113.
Hambright, Duane E., to Sutton Tool Company. Method and means for surface finishing a work piece. 3,516,203, Cl. 51-7.
Hamilton Die Cast, Inc.: See—
Woltering, Joseph A., 3,516,480.
Hammond, Robert M., to United Aircraft Corporation. Closed-loop rocket propellant cycle. 3,516,254, Cl. 60-260.
Hanafusa, Tutomu, to Ferasaki Denki Sangyo Kabushiki Kaisha. Circuit interrupter. 3,517,356, Cl. 335-16.
Handschack, Hugo Harry: See—
Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry 3,516,512.
Haner, Lambert, and James, Eugene F., to Avtron Manufacturing, Inc. Digital system for automatic splice control. 3,516,617, Cl. 242-58.2.
Hansen, Ben. Cranking action exercising bar. 3,516,661, Cl. 272-80.
Hanvy, Harry. Point gauges or measuring bars. 3,516,169, Cl. 33-168.
Harada, Eizi, and Matsumoto, Kazutoshi, to Nippon Gakki Seizo Kabushiki Kaisha. Action rail assembly. 3,516,325, Cl. 84-243.
Hardingham, Derek D., 50% to Coles, David D., and 50% to Moss, Donald M. Drain safety device. 3,516,541, Cl. 210-164.
Hardy, John C.: See—
Marroni, Michael A., Hardy, John C., and Baker, Mark E. 3,516,091.
Harkins, Allen A., Stoner, Richard G., and Caulkis, Bruce D., said Harkins assor. to said Stoner and said Caulkins. Seal structure. 3,516,471, Cl. 160-40.
Harper, Lee R., to Du Pont de Nemours, E. I., and Company. Process for preparing composite sheet material. 3,516,883, Cl. 156-77.
Harr, John A., Taylor, Frank F., and Ulrich, Werner, to Bell Telephone Laboratories, Incorporated. Scanner control means for a stored program controlled switching system. 3,517,123, Cl. 179-18.
Harriman, Allen C.: See—
Becka, Michael M., and Harriman, Allen C. 3,516,892.
Harris, George V., and Borgen, Arden L., to Harris Metals, Inc. Core making machine. 3,516,477, Cl. 164-157.
Harris, Henry E.: See—
Mallonee, William C., and Harris, Henry E. 3,516,900.
Harris Metals, Inc.: See—
Harris, George V., and Borgen, Arden L. 3,516,477.
Harris, Michael R., to Baldwin, D. H., Company. Electronic piano. 3,516,321, Cl. 84-1.13.
Harrison, Charles H.: See—
Andersen, Harold Willids, Andersen, Harold W., and Harrison, Charles H. 3,516,223.
Hart, William Barrie, to Hovercraft Development Limited. Electromagnetically-propelled vehicle. 3,516,361, Cl. 104-23.

- Hartman, Richard E., to Goodrich, B. F., Company, The. Aircraft skin laminates. 3,516,895, Cl. 161-68.
Hashimoto, Tadashi: See—
Masuda, Tadashi, and Hashimoto, Tadashi 3,516,287.
Hatcher, John B.: See—
Anderson, Kenneth G., Anderson, James R., and Hatcher, John B. 3,517,316.
Hatkevich, Albert, to Anchor Hocking Corporation. Gasketed metal closure cap. 3,516,565, Cl. 215-40.
Hauffe, Dieter, to Hooker Chemical Corporation. Automatic control method. 3,516,876, Cl. 148-6.15.
Haugwitz, Rudiger D., to Olin Mathieson Chemical Corporation. Boron-containing salts of 2-mercaptopyridine-N-oxides. 3,517,017, Cl. 260-294.8.
Haugwitz, Rudiger D., to Olin Mathieson Chemical Corporation. Formaldehyde adducts of 2-mercaptopyridine-N-oxide. 3,517,018, Cl. 260-294.8.
Haveman, Gerrit, to Dow Chemical Company, The. Separating and reclaiming of components from metallic-plastic laminate structures. 3,516,841, Cl. 106-193.
Hayakawa, Shohai, Kanematsu, Yoshiko, and Fujiwara, Takashi, to Shionogi & Co., Ltd. Process for the preparation of hexahydroindane dicarboxylic acid derivatives. 3,516,908, Cl. 195-51.
Hayden, Howard Wayne, Jr.: See—
Trapp, Robert Howard, Hayden, Howard Wayne, Jr., and Brophy, Jere Hall 3,516,804.
Hayes, Brice E., to Hayes Track Appliance Company. Derail and signal unit. 3,517,186, Cl. 246-163.
Hayes Track Appliance Company: See—
Hayes, Brice E., 3,517,186.
Hazard, Allyn B. Globe-clock with single bearing. 3,516,243, Cl. 58-44.
Healey, Gordon Terry: See—
Andrews, Edward George David, Oldfield, Harry, and Healey, Gordon Terry 3,516,251.
Healy, James W.: See—
Boynton, Ira D., Di Maggio, Carmelo A., and Healy, James W. 3,516,889.
Hebbel, Konrad: See—
Hagge, Walter, Quaedvlieg, Mathieu, Heusch, Rudolf, Hebbel, Konrad, and Schiffmann, Richard 3,516,833.
Hecker, Robert W., Jr., and Beckwith, Robert C., to American Home Products Corporation. Dockboard. 3,516,103, Cl. 14-71.
Hedrei, Constantin, to Forano Limited. Guides for twin blade saws. 3,516,458, Cl. 143-22.
Hedrick, Ross M., and Mowry, David T., to Monsanto Company. Clarification of water. 3,516,932, Cl. 210-53.
Heeter, Victor L., and Shockey, Howard J., to Excel Corporation. Method of bedding panels into frames using an adhesive coated preform. 3,516,884, Cl. 156-106.
Heggie, Henry W., to U.S. Industries, Inc. Circular knit stocking with integral garter loops and method of manufacturing. 3,516,266, Cl. 66-41.
Heimlicher, Paul, to Winkler, Fallert & Co., Ltd. Displaceable ink and dampener rolls for reversible printing unit. 3,516,354, Cl. 101-142.
Heinemann Electric Company: See—
Bakes, Hal H., 3,517,357.
Heinkel, Ernst, Aktiengesellschaft: See—
Benz, Manfred, and Klein, Ernst 3,516,295.
Heinolan Faneritehdas, Zachariassen & Co.: See—
Kalla, Anjal Aulia, 3,516,851.
Heima, Herbert L., to Mobay Chemical Company. Polyisocyanates containing isocyanurate groups. 3,517,002, Cl. 260-248.
Heitzer, Heinrich, to Demag-Lauchhammer Maschinenbau und Stahlbau G.m.b.H. Conveyor axle support. 3,516,534, Cl. 198-192.
Helle, Delbert V., to Sawmill Hydraulics, Inc. Incremental feeding apparatus. 3,516,330, Cl. 91-36.
Helms, Jerry L.: See—
Willmann, Norman L., and Helms, Jerry L. 3,516,863.
Hemphill, Adley W., to Grace, W. R., & Co. Spaced wall container with desiccant spacer ring between walls. 3,516,567, Cl. 220-14.
Henderson, Alvin E., to United States of America, Navy. Lossy material for antenna decoupling. 3,516,936, Cl. 252-63.2.
Hendricks, Grover E. Ammunition cartridge. 3,516,357, Cl. 102-45.
Heagater, J., K.G. Zahlerfabrik: See—
Kreidler, Helmut, and Kruger, Manfred 3,517,275.
Henkel & Cie., GmbH: See—
Ploog, Uwe, Stein, Werner, and Barnstorf, Joachim, 3,516,954.
Henkler, Herbert: See—
Floss, Josef Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans 3,516,828.
Henning, Lester A.: See—
Sekmatas, Kazys, Gauger, Edward A., Jr., and Henning, Lester A. 3,516,913.
Hepworth Iron Company Limited, The: See—
Glover, John Benjamin, 3,516,693.
Herbst, David R.: See—
Koo, Charles M. C., Pattison, Thomas W., and Herbst, David R. 3,516,987.
Hercules Incorporated: See—
Saunders, Robert H., 3,516,899.
Herman, Elvin E., and Froud, William H., to United States of America, Navy, mesne. Line-by-line tracker with automatically correcting beam deflection circuit. 3,517,118, Cl. 178-67.

- Herman, James A.: See—
Hines, Eugene W., McGrath, Timothy, Lorenz, James E., and Herman, James A. 3,516,777.
- Herman Pneumatic Machine Company: See—
Dougherty, William E., 3,516,475.
Dougherty, William E., 3,516,481.
- Herman, Ralph Bertrand, Renwick, William, and Walters, Leonard Charles, to Plessey Company Limited, The. Duo-binary frequency modulators. 3,517,338, Cl. 332-11.
- Hermann, Otto, to LeBlond, R. K., Machine Tool Company. Tracer controlled feed mechanism for machine tools. 3,516,309, Cl. 82-14.
- Hermetic Coil Co., Inc.: See—
Davis, DhuAine J., 3,517,358.
- Herndon, Richard A., to Honeywell Inc. Arithmetic circuits with field effect transistor in input network. 3,517,178, Cl. 235-194.
- Herndon, Richard A., to Honeywell Inc. Arithmetic circuits for division and square root extraction with field effect transistor in feedback network of amplifier. 3,517,179, Cl. 235-196.
- Herrick, Aaron B.: See—
Story, Julian R., Herrick, Aaron B., and Jungermann, Eric 3,516,937.
- Herrn, Dr. Phil Alfred Hanten: See—
Mertens, Franz H., 3,516,178.
- Hertel, Hasso: See—
Kirst, Werner, and Hertel, Hasso 3,516,780.
- Hess, Hans-Jürgen E.: See—
Cronin, Timothy H., and Hess, Hans-Jürgen E. 3,517,005.
- Hester, John P., to Curtis, Margaret A. Beverage decanter. 3,516,580, Cl. 222-465.
- Heusch, Rudolf: See—
Hagge, Walter, Quaedvlieg, Mathieu, Heusch, Rudolf, Heibel, Konrad, and Schiffmann, Richard 3,516,833.
- Heuser, Halmut C., to Bokum Tool Company, Inc. Adjustable spot facer. 3,516,134, Cl. 29-105.
- Hewlett-Packard Company: See—
Cochran, David S., 3,517,199.
Miller, Arthur, 3,517,282.
Rendina, John F., 3,516,771.
- Heyman, Kerry, to Heyman Manufacturing Company. Universal bushing. 3,516,111, Cl. 16-2.
- Heyman Manufacturing Company: See—
Heyman, Kerry, 3,516,111.
- Hickey, John J., and Marathay, Arvind S., to Technical Operations, Incorporated, mesne. Multipass interferometric optical modulator. 3,516,727, Cl. 350-160.
- Hicks, Morris R., and Le Veque, Joseph C., to Bardons & Oliver, Inc. Low fluid pressure actuated fluid jet interrupter means. 3,516,439, Cl. 137-610.
- Hilborn, Edwin H.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,516,185.
- Hilgartner, George H., Jr.: See—
Sexstone, John H., and Hilgartner, George H., Jr. 3,516,885.
- Hilgers, Raymond H., to Resinite Corporation. Coil form with embedded terminals. 3,517,365, Cl. 336-208.
- Hillaiet, Claude A., and Lecadre, Jean H. M. Electronic harmonica with individual reed pickups and tone generator system. 3,516,320, Cl. 84-1-06.
- Himmelman, Louis F. Gas control valve for gas shielded electric welding torches. 3,516,639, Cl. 251-257.
- Hines, Eugene W., McGrath, Timothy, Lorenz, James E., and Herman, James A., to Prencio Manufacturing Company. Apparatus for supplying mixture of burnable fluid waste material and air to incinerator burner. 3,516,777, Cl. 431-354.
- Hines, James R. Surgical expanding arm dilator. 3,517,128, Cl. 128-345.
- Hinman, Clyde D., Slomba, Albert F., and Stoddart, Hugh F., to Perkin-Elmer Corporation, The. Sampling arrangement for laser-Raman systems. 3,516,744, Cl. 356-75.
- Hinton, Sanford H.: See—
Kelty, Glenn L., and Hinton, Sanford H. 3,516,524.
- Hirahara, Katsuiji, to FMC Corporation. Apparatus for melting a frozen food product. 3,516,398, Cl. 126-343.5.
- Hiranami, Hiroshi: See—
Nakazawa, Chuichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro 3,516,229.
- Hiroko Ino: See—
Ino, Kizaburo, 3,516,536.
- Hirose, Katsumi: See—
Kano, Hideo, Takahashi, Shiro, Kido, Ryonosuke, and Hirose, Katsumi 3,516,999.
- Hirshmann, Walter, to Siemens Aktiengesellschaft. Horizontal deflection circuit for picture tube of television system. 3,517,250, Cl. 315-19.
- Hiserich, Charles A. Marking machine. 3,516,163, Cl. 33-19.
- Hitachi Cable Ltd.: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio 3,517,113.
- Hogland, Mary Ellen, and Duling, Irl N., to Sun Oil Company. Adamantane copolycarbonate. 3,516,969, Cl. 260-47.
- Hobart Manufacturing Company, The: See—
Allen, Kenneth C., 3,516,504.
- Hobbs, Howard H., Kunkle, Calvin S., and Cataline, Acial L., to Brumco Inc. Washing and drying apparatus. 3,516,104, Cl. 15-3.13.
- Hodowanec, Gregory: See—
Lee, Hon Chiu, and Hodowanec, Gregory 3,517,272.
- Hoelzle, Gerd: See—
Riat, Henri, Gunst, Raymond, and Hoelzle, Gerd 3,516,981.
- Hofer, Arnold, and Lautenschlager, Ernst, to SCM Corporation. Low temperature acrylic polymerization. 3,516,976, Cl. 260-89.5.
- Hoffer, Jerry B., Ogawa, Francis T., and Wallace, Robert H., to Honeywell Inc. Flash apparatus with automatic light termination using light activated silicon controlled rectifier. 3,517,255, Cl. 315-151.
- Hoffman, Lewis C., to Du Pont de Nemours, E. I., and Company. Copper/vanadium oxide compositions. 3,516,949, Cl. 252-514.
- Hoffman, Michael L., to McDonnell Douglas Corporation. Gas mixture separation by distillation with feed-column heat exchange and intermediate plural stage work expansion of the feed. 3,516,261, Cl. 62-24.
- Hoffmann-La Roche Inc.: See—
Gloor, Urs, Ruegg, Rudolf, and Schwieter, Ulrich, 3,517,070.
Gurien, Harvey, Wagner, David Paul, and Rachlin, Albert Israel, 3,517,066.
- Hojfors, Rune J.V., and Sjostrand, Monica, to Perstorp AB. Stabilization of polyacetals with metal salts of 2-mercaptobenzimidazole. 3,516,962, Cl. 260-45.75.
- Holbrook, Stanley E.: See—
Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z. 3,516,537.
- Holdstock, Norman G., to General Electric Company. Carboxyalkylsiloxane esters of castor oil and castor oil derivatives. 3,517,038, Cl. 260-400.
- Holle, Kurt: See—
Kirchhoff, Heinrich, Pfeleiderer, Gerhard, and Holle, Kurt 3,516,907.
- Holly, Frederick W.: See—
Walton, Edward, and Holly, Frederick W. 3,516,985.
- Holtzman, Warren L. Adjustable dolly-type vehicle. 3,516,367, Cl. 105-381.
- Honda, Makoto: See—
Inoue, Goro, Honda, Makoto, and Kobayashi, Takashi 3,517,046.
- Honda, Toshikazu, and Minato, Tadaaki, to Toyo Kogyo Company Limited. Rail mounted drilling machine for furnace tap hole. 3,516,651, Cl. 266-42.
- Honerlagen, Hans: See—
Mennsen, Hans Georg, and Honerlagen, Hans 3,517,269.
- Honeywell Inc.: See—
Crowell, William H., 3,517,177.
Herndon, Richard A., 3,517,178.
Herndon, Richard A., 3,517,179.
Hoffer, Jerry B., Ogawa, Francis T., and Wallace, Robert H., 3,517,255.
Owens, Wiley H., 3,517,196.
Poeschl, George J., and Platt, Earl A., 3,517,197.
- Hooker Chemical Corporation: See—
Grotheer, Morris P., Currey, John E., and Cook, Edward H., Jr., 3,516,918.
Hauffe, Dieter, 3,516,876.
Mekjean, Matthew, 3,517,151.
Rausch, Werner, Oei, Han Yong, and Edler, Hans-Joachim, 3,516,875.
- Hopper, James H., to United Aircraft Corporation. Aspirator and control therefor. 3,516,405, Cl. 128-276.
- Hopps, John H., Jr., to Nashua Corporation. Electroresponsive recording material. 3,516,911, Cl. 204-2.
- Horai Tekko Sho Co., Ltd.: See—
Suzuki, Hirofumi, 3,516,315.
- Horeth, Dietmar: See—
Rekewitz, Rudolf, and Horeth, Dietmar 3,517,124.
- Horgan, William J., Jr., to Blumcraft of Pittsburgh. Handrail support means. 3,516,644, Cl. 256-65.
- Horigome, Toshinori: See—
Matsuoka, Tohru, and Horigome, Toshinori 3,517,347.
- Horn, Lutz, and Philipp, Fritz, to Varta Aktiengesellschaft. Safety valve for electric storage cells. 3,516,870, Cl. 136-178.
- Hosaki, Yoshihiko: See—
Kagiya, Tsutomu, Machi, Sueo, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko 3,516,912.
- Hotta, Seiji: See—
Akamatsu, Takashi, Kenmochi, Hiobito, Suda, Hideaki, and Hotta, Seiji 3,517,013.
- Houlihan, William J., to Sandoz-Wander, Inc. Bridged 1,5-diazacyclodecanes. 3,517,004, Cl. 260-251.
- Houlihan, William J., and Manning, Robert E., to Sandoz-Wander, Inc. Benzylidene-substituted nitrogenous heterocyclic compounds. 3,516,993, Cl. 260-240.
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- Houser, Richard W., and Woodlock, David F., to Boeing Company, The. Aircraft steerable main landing gear. 3,516,625, Cl. 244-50.
- Hovercraft Development Limited: See—
Hart, William Barrie, 3,516,361.
- Howell, Robert B. Slider for a concealed slide fastener. 3,516,127, Cl. 24-205.14.
- Howell, Robert B. Slide fastener employing skin closure appliances and techniques. 3,516,409, Cl. 128-335.

- Howlett, Donald E.: See—
McKown, Daniel C., Howlett, Donald E., and DiTommaso, Anthony 3,516,743.
- Hrdina, Jiri, to Ceskoslovenska akademie ved. Measuring cell with gas and particle collection. 3,516,752, Cl. 356-246.
- Hronik, Richard H.: See—
Wallen, James, Jr., and Hronik, Richard H. 3,517,307.
- Hu, Kuang-Chi: See—
Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi 3,517,387.
- Hubbard, James R., Martin, Dalton W., and McDonald, John C., to Vidar Corporation. Voltage to frequency converter having symmetrical waveshape output with fundamental frequency proportional to input signal. 3,517,339, Cl. 332-14.
- Huber, Bernd: See—
Bastam, Hans-Dieter, Huber, Bernd, and Wahl, Josef 3,517,142.
- Huber, Richard A., to Bunker-Ramo Corporation, The. Regulated power supply. 3,517,301, Cl. 323-20.
- Hubin, Anthony S., to Kimberly-Clark Corporation. Apparatus for applying film to blanks. 3,516,891, Cl. 156-521.
- Hudspeth, Thomas: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,268.
- Huffaker, Philip A.: See—
Martinson, Edwin O., and Huffaker, Philip A. 3,516,462.
- Huggins, Ralph T., and Meller, Frederick D., to Addressograph-Multi-graph Corporation. Image fusing assembly. 3,517,164, Cl. 219-388.
- Hughes Aircraft Company: See—
Picus, Gerald S., and Van Atta, Lynette B., 3,517,244.
Powell, William W., and Ammons, Thomas J., 3,516,881.
- Hughes, Kenneth Edward. Turn signal monitor. 3,517,383, Cl. 340-79.
- Hughes, Robert W., to Ingersoll-Rand Company. Pilot operated valve. 3,516,443, Cl. 137-625.66.
- Humby, Edward Thomas, to Plessey Company, The. Pickup-arm control in automatic record-playing devices. 3,516,677, Cl. 274-9.
- Hunter, Don L.: See—
LeFevre, Cecil W., and Hunter, Don L. 3,516,817.
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- Hunter Douglas International Ltd.: See—
Ledoux, Pierre A. J., 3,516,486.
- Hunt-Wesson Foods, Inc.: See—
Ferguson, Kenneth F., 3,516,641.
- Hydriil Company: See—
Lewis, George E., 3,516,491.
- Hydro-Clear Corporation: See—
Ross, David S., 3,516,930.
- Hyster Company: See—
Olsen, Lawrence O., 3,516,341.
- Ichikawa, Yoshio: See—
Nakazawa, Chuichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro 3,516,229.
- I.C.I. Organics Inc.: See—
Perrino, Albert C., 3,517,068.
- Ikeda, Chuki: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio 3,517,113.
- Ikeda, Koichi, Minagawa, Katsuiji, and Tanaka, Shigeo, to Nippon Electric Company, Limited. Face-bonded semiconductor device utilizing solder surface tension balling effect. 3,517,279, Cl. 317-234.
- Ilna, Inna Ivanovna: See—
Shashkov, Andrei Nikolaevich, Asinovskaya, Gnesa Abramovna, and Ilna, Inna Ivanovna 3,516,825.
- Imada, Kunihiko: See—
Koike, Eiji, Kuriyama, Ryoze, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko 3,516,779.
- Imaging Industries, Inc.: See—
Moshier, Terry Allen, 3,516,102.
- Imgrund, Heinrich, to Tarex S.A. Lock mechanism. 3,516,303, Cl. 74-527.
- Imperial Chemical Industries Limited: See—
Fielding, Harold Crosbie, 3,517,065.
Haggis, Geoffrey Arthur, 3,516,950.
- Indian Head, Inc.: See—
Gatchet, George L., and Decker, Matthew J., 3,516,811.
- Indiana Brass Co., Inc.: See—
Reagan, Cleo A., 3,516,094.
- Industrial Development Company Establishment: See—
Capras, Rene, 3,516,683.
- Industrial Timer Corporation: See—
Papa, Frank J., Jr., 3,516,244.
- Ingersoll-Rand Company: See—
Hughes, Robert W., 3,516,443.
- Ingle, James F.: See—
Anderson, Theodore C., and Ingle, James F. 3,517,306.
- Immont Corporation: See—
Carlick, Daniel J., 3,516,958.
- Ino, Kizaburo, to Hiroko Ino. Dispenser closure. 3,516,536, Cl. 206-42.
- Inoue, Goro, Honda, Makoto, and Kobayashi, Takashi, to Asahi Kasei Kogyo Kabushiki Kaisha. Process for isomerizing cis-1,2-dicyanocyclobutane. 3,517,046, Cl. 260-464.
- Institut de Recherches de la Siderurgie Francaise Saint Germain-en-Laye: See—
Bonnivard, Georges, 3,516,822.
- Institut Francais du Pétrole, des Carburants et Lubrifiants: See—
Fenault, Philippe, 3,516,793.
- Joubert, Philippe, and Castela, Andre, 3,516,488.
- Institut für Silikon- und Fluorkarbon-Chemie: See—
Muller, Richard, Dathe, Christian, and Mross, Dieter, 3,517,043.
- Institut für Werkzeugmaschinen: See—
Klaus, Rolf, Tittel, Harald, and Wagner, Renate, 3,516,436.
- Institute of Gas Technology: See—
Rosenberg, Robert B., and Larson, Dennis H., 3,516,773.
- Institutional Research Council, Inc.: See—
Taub, Stephen E., 3,516,281.
- Instrumentation Laboratories, Inc.: See—
Balkmer, David E., 3,517,325.
- International Business Machines Corporation: See—
Andrews, Douglas R., Atrubin, Allan J., Baumgartner, Richard J., Bond, Milton F., and Hu, Kuang-Chi, 3,517,387.
Davidge, Ronald V., Greer, Donald L., McCormack, Richard W., and O'Daniel, Jerome B., 3,516,528.
Goll, Frederick M., and Baldwin, Edwin C., 3,516,855.
Lentz, John J., 3,517,391.
Lynch, Robert John, 3,517,258.
Murphy, Daniel W., 3,517,224.
Rosier, Laurence L., 3,517,280.
Rynders, Raymond G., 3,517,130.
Shah, Bankim R., 3,517,337.
Steranko, James J., 3,516,156.
Taylor, Jackson C., Yates, Robert E., and Zell, Michael N., 3,516,604.
Yarborough, James Lowell, 3,517,149.
- International Harvester Company: See—
Butler, James F., 3,516,500.
Johnson, Otto E., 3,516,499.
- International Minerals & Chemical Corporation: See—
Lira, Emil P., and Freytag, Arthur H., 3,516,815.
- International Nickel Company, Inc.: See—
O'Neill, Charles E., Queneau, Paul E., and Warner, John S., 3,516,818.
Trapp, Robert Howard, Hayden, Howard Wayne, Jr., and Brophy, Jere Hall, 3,516,804.
Ward, David Marshall, Fontaine, Paul Isidore, and Fleetwood, Michael John, 3,516,826.
- International Standard Electric Corporation: See—
Knight, Ronald George, Butcher, John Anthony Weeks, Pullum, Geoffrey George, and Willson, Michael John, 3,517,133.
Leech, Ronald Francis, 3,516,150.
- International Telephone and Telegraph Corporation: See—
Bower, Richard Raymond, 3,516,130.
Buckley, Joseph William, 3,517,371.
DeRose, Ralph A., Mottl, Anton J., and Madden, Richard A., 3,516,142.
Field, Joseph P., 3,517,134.
Jones, James W., 3,517,386.
Malm, Marvin F., 3,517,315.
Ray, William Alton, 3,516,332.
Ribner, Morris, 3,517,137.
Thierstein, Ernest, Jr., 3,517,146.
- Inwood, Alvin, to Coastal Abrasive and Tool Company, Inc. Tool mount. 3,516,585, Cl. 224-5.
- Ishikawajima-Harima Jukogyo Kabushiki Kaisha: See—
Endo, Sukeharu, 3,516,649.
- Itami, Yasuo, and Takahashi, Akira, to Japan Development and Construction Co., Ltd. Method of forming vertical bores through the ground. 3,516,256, Cl. 61-41.
- I-T-E Imperial Corporation: See—
Zubaty, Martin V., and Thomas, Robert W., 3,517,354.
- Itek Corporation: See—
Oliver, Donald Sears, 3,517,206.
- Ives, Wayne S.: See—
Lathrope, Gerald A., Thompson, Reuel E., and Ives, Wayne S., 3,516,360.
- Ivey, Kenneth H., Chastain, Sidney J., and Shell, Hankiel R., to United States of America, Interior. Glass-bonded crystalline minerals and method of production. 3,516,810, Cl. 65-33.
- Iwaasa, Noboru: See—
Yamamoto, Hisao, and Iwaasa, Noboru 3,516,800.
- Izumi Sigeyasu: See—
Okamura, Toshio, Izumi Sigeya, and Watanabe, Isao 3,517,263.
- Jablonski, Raymond C. Low beam signaling apparatus. 3,517,384, Cl. 340-83.
- Jackson, Byron, Inc.: See—
Ham, John E., and Willsey, Merrill K., 3,516,308.
- Jackson, Carroll V.: See—
Robertson, Dean S., and Jackson, Carroll V. 3,516,313.
Robertson, Dean S., and Jackson, Carroll V. 3,516,555.
- Jackson, John M.: See—
Grable, Donovan B., and Jackson, John M. 3,516,762.
- Jackson, Joseph F., to Pratt Precision Hydraulics Limited. Hydraulic torque amplifiers. 3,516,333, Cl. 91-380.

Jackson, Robert V.: See—
Burkett, Wilford B., and Jackson, Robert V. 3,517,293.
Jackson, Winston J., Jr.: See—
Caldwell, John R., and Jackson, Winston J., Jr. 3,517,071.
Jacoby, Frederick J.: See—
Earhart, Howard F., Jacoby, Frederick J., and Starck, Clemens B. 3,516,832.
Jaffe, Gilbert, and Kuhn, Joseph A., Jr., to United States of America, Navy. Direction and rate of flow measuring instrument. 3,516,291, Cl. 73-189.
Jaffe, Joseph, to Chevron Research Company. Hydrogenation of aromatics with metal phosphate-containing catalysts. 3,516,927, Cl. 208-143.
Jaffe, Sam, and Thompson, Gregory L., to Johnson-March Corporation. Anti-air pollution device. 3,516,647, Cl. 261-24.
James, Eugene F.: See—
Haner, Lambert, and James, Eugene F. 3,516,617.
Jamon, Henri H., to Etablissement Satra, Societe Achat et Transactions. Cable connector. 3,517,373, Cl. 339-94.
Janssen, Edward W., and Pieterick, Jerome A., to Minnesota Mining and Manufacturing Company. Adhesive strip. 3,516,852, Cl. 117-122.
Janssens, Gilbert Armand, to Burndy Corporation. Fixed bracket for an electric conductor specifically designed for high tension. 3,516,630, Cl. 248-55.
Japan Atomic Energy Research Institute: See—
Kagiya, Tsutomu, Machi, Sueo, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko, 3,516,912.
Japan Broadcasting Corporation: See—
Goto, Naohiro, and Shidara, Keichi, 3,517,241.
Japan Development and Construction Co., Ltd.: See—
Itami, Yasuo, and Takahashi, Akira, 3,516,256.
Jaume, Rene. Stacked, identical filter elements. 3,516,542, Cl. 210-168.
Javan, Ali: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,328.
Jeffery, Robert W.: See—
Bolz, Ralph C., and Jeffery, Robert W. 3,516,768.
Jeffrey Galtion Inc.: See—
Bennett, John E., and Munger, Fay E., 3,516,712.
Jenne, Rudolf: See—
Gaydou, Francois, and Jenne, Rudolf 3,516,919.
Jensen, Leland D. Apparatus and method for replacing a prolapsed uterus. 3,516,406, Cl. 128-303.
Jentoft, Arthur Philip, and Couture, Paul Archille, to Wasco Products, Inc., mesne. Fire and smoke relief ventilator sky-light dome. 3,516,210, Cl. 52-1.
Jergins, Allen A. Offshore drilling and well completion apparatus. 3,516,489, Cl. 166-0.5.
Jeronimus, Eppo Hemmo: See—
Timmerbeil, Ewald Rudolf, De Ruiter, Rudolf, and Jeronimus, Eppo Hemmo 3,516,590.
Jessee, Joseph S., and Rolovich, Ivan, to Chrysler Corporation. Air door control. 3,516,201, Cl. 49-324.
Jetrut Inc.: See—
Radloff, Harvey L., Jr., 3,516,725.
Johnson, Dee Lym, to Eastman Kodak Company. Cyclic polymethylene monothiolcarbonates and their preparation. 3,517,029, Cl. 260-327.
Johnson, Douglas, to General Motors Corporation. Fuel unit for a gas turbine power plant. 3,516,880, Cl. 149-2.
Johnson, Fay O., Johnson, William L., Sr., and Johnson, William L., Jr. Lightweight rideable green mower. 3,516,233, Cl. 56-6.
Johnson, Ford L.: See—
Bennett, John D., Johnson, Ford L., Mayes, Fred M., and Peret, John W. 3,516,502.
Johnson, Otto E., to International Harvester Company. Flexible tandem implement. 3,516,499, Cl. 172-261.
Johnson Products, Inc.: See—
Dadd, Morris V., 3,516,393.
Johnson Service Company: See—
Klein, Carl F., 3,517,225.
Johnson, William F., to Superior Continental Corporation. Encapsulated electronic components and method of making same. 3,517,111, Cl. 174-52.
Johnson, William L., Jr.: See—
Johnson, Fay O., Johnson, William L., Sr., and Johnson, William L., Jr. 3,516,233.
Johnson, William L., Sr.: See—
Johnson, Fay O., Johnson, William L., Sr., and Johnson, William L., Jr. 3,516,233.
Johnson-March Corporation: See—
Jaffe, Sam, and Thompson, Gregory L., 3,516,647.
Johnston, James H., to United States of America, Navy. External impulse launcher. 3,516,380, Cl. 114-238.
Johnston, Roy C.: See—
Coburn, Herbert D., Johnston, Roy C., and Kelly, Gilbert H. 3,516,510.
Jonas, Donald Moore, to Berk Limited. Solid polymer compositions having flame retardant and drip resistant properties and additive compositions for imparting said properties thereto. 3,516,959, Cl. 260-28.
Jones, Elwyn David, to Canadian Industries Limited. Method for heat-sealing plastic film. 3,516,887, Cl. 156-272.

Jones, Frank B., to Dunlop Company Limited, The. Breaker strip for pneumatic tires. 3,516,468, Cl. 152-361.
Jones, Gordon H., and Klabunde, Steven E., to Giddings & Lewis, Inc. Machine tool with longitudinally adjustable and hydraulically clamped rotary machining spindle. 3,516,328, Cl. 90-11.
Jones, James W., to International Telephone and Telegraph Corporation. Visual pattern recognition system. 3,517,386, Cl. 340-146.3.
Jones, Morton E., to Texas Instruments, Incorporated. Color display screen employing two layers of phosphors, particles in the inner layer being small with respect to those in the outer layer and discontinuous in coverage. 3,517,243, Cl. 313-92.
Jones, Roy E., Sr., to U-Sonics, Inc. Ultrasonic piezoelectric transducer with acoustic lens. 3,517,226, Cl. 310-8.5.
Jones, Wilford Donald, Baldino, James Peter, and Melamed, Sidney, to Rohm & Haas Company. Novel modacrylic fiber. 3,516,903, Cl. 161-175.
Jones, Willburn Lewis: See—
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yin, and Challiss, John Van Hoesen 3,516,274.
Jorda, Robert M.: See—
Barkman, James H., Jr., Darley, Henry C. H., Jorda, Robert M., and Tuttle, Robert N. 3,516,496.
Jordan, Robert D., to United States of America, Navy. Protective footgear. 3,516,181, Cl. 36-7.5.
Jorgensen, Adam A.: See—
Bentley, Robert W., Cieslak, Arthur B., and Jorgensen, Adam A. 3,517,273.
Joslyn Mfg. and Supply Co.: See—
Misare, Donald O., 3,517,367.
Joubert, Philippe, and Castela, Andre, to Institut Francais du Pétrole, des Carburants et Lubrifiants. Device for introducing tools or instruments into an underwater well from a floating installation. 3,516,488, Cl. 166-0.5.
Joyce, Edward F., III. Hinge. 3,516,114, Cl. 16-150.
Juhl, William G., Knox, Walter R., Koons, Russell E., and Rosenberger, Frederick E., to Monsanto Company. Thermal hydrodealkylation of alkyl aromatic hydrocarbons. 3,517,076, Cl. 260-672.
Julie, Loebe, to Julie Research Laboratories, Inc. Circuit for producing a synthesized impedance. 3,517,303, Cl. 323-100.
Julie Research Laboratories, Inc.: See—
Julie, Loebe, 3,517,303.
Jungermann, Eric: See—
Story, Julian R., Herrick, Aaron B., and Jungermann, Eric 3,516,937.
Justice, Charles R. Portable vehicle-operated gate. 3,516,202, Cl. 49-131.
Juvinall, James W., Kock, Erhard, Smart, William L., and Williams, Herschel A., to Ransburg Electro-Coating Corporation. Component connecting means for electrostatic spray apparatus. 3,517,262, Cl. 317-3.
Kabushikigaisha Nakao Netsukagaku Kenkyusho: See—
Nakamura, Yozo, and Ozaki, Yoshihisa, 3,516,805.
Kabusiki Kaisha Toyosha: See—
Tanoue, Tatsuo, 3,516,235.
Kagiya, Tsutomu, Machi, Sueo, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko, to Japan Atomic Energy Research Institute. Radiation polymerization of ethylene using carbon dioxide as reaction medium. 3,516,912, Cl. 204-159.22.
Kahr Bearing Corporation: See—
Carter, Willard J., and Turner, Edwin John, 3,516,136.
Kaika, Anjal Aulis, to Heinolan Faneritehdas, Zachariassen & Co. Method of treatment of a porous substance, especially treatment of semisolid wallboard with fire- and other extinguishing substances. 3,516,851, Cl. 117-111.
Kaim, John W., to Amsted Industries Incorporated. Slack adjuster. 3,516,696, Cl. 287-61.
Kaiser Aluminum & Chemical Corporation: See—
Bigelow, James T., 3,516,597.
Kaiser Industries Corporation: See—
Parlee, Norman A. D., and Mahin, William E., 3,516,819.
Kaiser Steel Corporation: See—
Tokola, Alpo J., 3,516,259.
Kalart Company Inc., The: See—
Schwartz, Morris, Castedello, William, and Kaprelian, Edward K., 3,516,739.
Kalman, Gabor U., to Carson Laboratories, Inc. Image conversion system. 3,517,200, Cl. 250-216.
Kalsey, John. Cigarette filter element. 3,516,419, Cl. 131-267.
Kamborian, Jacob S.: See—
Becka, Michael M., and Harriman, Allen C., 3,516,892.
Kan, Takashi: See—
Nakazawa, Chuichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro 3,516,229.
Kandler, Joachim: See—
Sennewald, Kurt, Vogt, Wilhelm, Kandler, Joachim, and Sorbe, Gunter 3,516,789.
Kanematsu, Yoshiko: See—
Hayakawa, Shohai, Kanematsu, Yoshiko, and Fujiwara, Takashi 3,516,908.
Kano, Hideo, Takahashi, Shiro, Kido, Ryonosuke, and Hirose, Katsumi, to Shionogi & Co., Ltd. Benzimidazole derivatives. 3,516,999, Cl. 260-247.5.
Kansas City Plywood Co.: See—
Blackwood, Richard D., 3,516,633.

Kaplan, Robert P., to Sperry Rand Corporation. Positional control means for a material handling and storage system. 3,516,557, Cl. 214-16.4.
Kaprelian, Edward K.: See—
Schwartz, Morris, Castedello, William, and Kaprelian, Edward K. 3,516,739.
Karady, Sandor: See—
Pinea, Seemon H., Karady, Sandor, and Slettinger, Meyer 3,517,057.
Karr, Anthony M., to Birch, William B. Flasher circuit. 3,517,261, Cl. 315-241.
Karraker, Edward L., III: See—
Molotaky, Hyman M., and Karraker, Edward L., III 3,516,952.
Kato, Rikitaro, Nagato, Syoichi, and Suzuki, Juro, to Daicel Ltd. Process for the polymerization of β -lactones. 3,516,973, Cl. 260-78.3.
Katsuragi, Sumio, to Tokyo Shibaura Electric Co., Ltd. Code checking systems. 3,517,385, Cl. 340-146.1.
Kaulfersch, Helmut: See—
Brunner, Julius, Rainer, Erich, and Kaulfersch, Helmut 3,517,289.
Kavick, Edward M., to Moore, Samuel, and Company. Strand tensioning device. 3,516,621, Cl. 242-129.8.
Kawakami, Waichiro: See—
Kagiya, Tsutomu, Machi, Sueo, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko 3,516,912.
Kearney & Trecker Corporation: See—
Stobbe, Richard E., 3,517,286.
Kegan, Robert E., to General Electric Company. Apparatus for hydrogen generation. 3,516,798, Cl. 23-282.
Keiser, John T., to General Electric Company. Heat pipe with control. 3,516,487, Cl. 165-32.
Kelco Company: See—
Colegrove, George T., 3,516,983.
Keller, Willi, to Vickers-Zimmer Aktiengesellschaft Planung und Bau von Industrieanlagen. Spinning device. 3,516,119, Cl. 18-8.
Kelly, Donald A. Closed cycle-tangential flow turbine. 3,516,245, Cl. 60-24.
Kelly, Gilbert H.: See—
Coburn, Herbert D., Johnston, Roy C., and Kelly, Gilbert H. 3,516,510.
Kelly, Gilbert H.: See—
Coburn, Herbert D., and Kelly, Gilbert H. 3,516,509.
Kelsey-Hayes Company: See—
Fielek, Anthony C., Jr., and Weber, Francis J., 3,516,715.
Kelty, Glenn L., and Hinton, Sanford H., to Garrett Corporation, The. Fluid coupling with lock-up clutch. 3,516,524, Cl. 192-3.3.
Kendall, Giles Arthur, to Menasco Manufacturing Company. Suspension system. 3,516,628, Cl. 248-18.
Kenmochi, Hiohito: See—
Akamatsu, Takashi, Kenmochi, Hiohito, Suda, Hideaki, and Hotta, Seiji 3,517,013.
Kennedy, Daniel W., to United States of America, Navy, mesne. Rotating-mirror optical scanning system with optical path length compensation. 3,517,202, Cl. 250-219.
Kerk, Merritt C., Jr., to Sun Oil Company. Process for upgrading propylene. 3,516,923, Cl. 208-49.
Ketley, Arthur D., to Grace, W. R., & Co. Process for preparing monoacetin from propylene. 3,517,054, Cl. 260-491.
Kido, Ryonosuke: See—
Kano, Hideo, Takahashi, Shiro, Kido, Ryonosuke, and Hirose, Katsumi 3,516,999.
Kieninger & Obergfell: See—
Scheer, Erich, 3,517,143.
Kim, Dong H., and Santilli, Arthur A., to American Home Products Corporation. 5-Acetamido-4-pyrimidinecarboxamides, 5-acetamido-4-pyrimidinecarboxylic acid hydrazides and related compounds. 3,517,007, Cl. 260-256.4.
Kim, Dong H., and Santilli, Arthur A., to American Home Products Corporation. 1-Alkyl-6-substituted isoxazolo[3,4-d]pyrimidin-3(1H)-ones. 3,517,008, Cl. 260-250.4.
Kim, Dong H., and Santilli, Arthur A., to American Home Products Corporation. 4-Hydroxy(lower)alkylamino-N,2-disubstituted-5-pyrimidinecarboxamides. 3,517,009, Cl. 260-256.4.
Kim, Dong H., and Santilli, Arthur A., to American Home Products Corporation. 5-Acetamido-4-pyrimidinecarboxylic acids and related compounds. 3,517,010, Cl. 260-256.4.
Kim, Dong H., Santilli, Arthur A., and Childress, Scott J., to American Home Products Corporation. N-amidino-4-amino-2-substituted-5-pyrimidinecarboxamide. 3,517,011, Cl. 260-256.4.
Kimberley, Walter R., to Lear Siegler, Inc. Furnace and combustion chamber therefor. 3,516,397, Cl. 126-110.
Kimberly-Clark Corporation: See—
Hubin, Anthony S., 3,516,891.
Kinberg, Benjamin. Music box operated musical toy. 3,516,322, Cl. 84-95.
Kinetic Objects Inc.: See—
Engleman, Donald Max, and Beerebo, John J., 3,516,193.
King, William Ronald, and Thomas, William Llewelyn, to British Petroleum Company Limited, The. Method of preparation of lubricating oils. 3,516,928, Cl. 208-308.
Kinney, S. P., Engineers, Inc.: See—
Carr, Hugh B., 3,516,550.
Kinoshita, Mashiho, and Senada, Tsuyoshi, to Osaka Prefecture. Color radiography with the mixture of dyes containing sudan III and a dye

of the group consisting of aniline methyl red blue, quinoline blue, naphthol yellow and meta. 3,517,192, Cl. 250-65.
Kipnis, Ardon Y. Continuously-adjustable variable mechanisms and machine tools incorporating same. 3,516,206, Cl. 51-46.
Kirchhoff, Heinrich, Pfeleiderer, Gerhard, and Holle, Kurt, to Zellulosefabrik Waldhof. Method for producing 5'-mononucleotides. 3,516,907, Cl. 195-28.
Kirk, Norbert A. Limb-attachable ball paddles. 3,516,668, Cl. 273-67.
Kirkpatrick, John H., Jr.: See—
Wood, George C., and Kirkpatrick, John H., Jr. 3,516,238.
Kirst, Werner, and Hertel, Hanso, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the production of water-insoluble azo-dyes on textile material of cellulose fibers or protein fibers. 3,516,780, Cl. 8-44.
Kitamura, Tadakatsu: See—
Shirayama, Kenzo, and Kitamura, Tadakatsu 3,517,086.
Kitasaki, Kiyoshi: See—
Hunter, Don L., Kitasaki, Kiyoshi, and Crawford, Robert F. 3,516,986.
Klabunde, Steven E.: See—
Jones, Gordon H., and Klabunde, Steven E. 3,516,328.
Klanner, Rudolf, and Merkle, Josef, to Maschinenfabrik Augsburg-Nürnberg Aktiengesellschaft. Cross country vehicles. 3,516,682, Cl. 280-104.5.
Klassen, Stephen L., to Thermo Electric Co., Inc. Spring loaded thermocouple with a flared tip. 3,516,872, Cl. 136-221.
Klaus, Rolf, Tittel, Harald, and Wagner, Renate, to Institut für Werkzeugmaschinen. Arrangement for interconnecting logical operational units for pneumatic controls. 3,516,436, Cl. 137-561.
Kleid, Robert E. Combined toy storage amusement device for children. 3,516,659, Cl. 272-1.
Klein, Carl F., to Johnson Service Company. Electrostatically driven apparatus. 3,517,225, Cl. 310-6.
Klein, Ernst: See—
Benz, Manfred, and Klein, Ernst 3,516,295.
Klein, Klaus, and Verheyden, Luc, to European Atomic Energy Community (Euratom), The. Apparatus for producing calibrated leaks. 3,516,278, Cl. 73-1.
Klein, Samuel. Flammable mixture utilized in serving of food. 3,516,837, Cl. 99-144.
Klensch, Richard J., to RCA Corporation. Device for producing line halftone images similar to the images produced by the woodcut type method of printing. 3,517,119, Cl. 178-6.7.
Klenz, Karl A., to Rheem Manufacturing Company. Apparatus for vacuum sealing casings and the like. 3,516,222, Cl. 53-79.
Klinker, John J., Jr., to Diamond International Corporation. Heat transfer decalcomania for application to plastic bottles made from a laminate of a polyamide adhesive, a printed layer, and a wax like heat release layer. 3,516,904, Cl. 161-227.
Klinker, John J., Jr., and Sessel, Robert N., Jr., to Diamond International Corporation. Heat transfer label. 3,516,842, Cl. 117-3.4.
Knapp, George P.: See—
Gallant, James O., Knapp, George P., and Depuy, Francis A. 3,516,135.
Kneisel, Otto: See—
Fisch, Albert, and Kneisel, Otto 3,517,135.
Knight, John W., to Sani-Systems, Inc. Refuse collection vehicle. 3,516,562, Cl. 214-302.
Knight, Ronald George, Butcher, John Anthony Weeks, Pullum, Geoffrey George, and Wilson, Michael John, to International Standard Electric Corporation. Four wire telephone system using phantom signaling circuit. 3,517,133, Cl. 179-18.
Knolinski, Robert E.: See—
Stein, Frank S., and Knolinski, Robert E. 3,517,382.
Knoll A.G. Chemische Fabriken: See—
Suranyi, Laszlo A., and Cyrus, Richard, 3,517,049.
Knowlton, Benjamin A., Jr. Diazo paper sensitizing process. 3,516,843, Cl. 117-34.
Knox, Leon J., Jr., to California Tube Products, Inc. Collector for automobile exhaust system. 3,516,247, Cl. 60-32.
Knox, Walter R.: See—
Juhl, William G., Knox, Walter R., Koons, Russell E., and Rosenberger, Frederick E. 3,517,076.
Knudsen, James B., to Moore Business Forms, Inc. High capacity stackers. 3,516,657, Cl. 271-68.
Kobayashi, Takashi: See—
Inoue, Goro, Honda, Makoto, and Kobayashi, Takashi 3,517,046.
Kobayashi, Yoshio: See—
Taniguchi, Isao, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo 3,517,085.
Kobler, Richard, Fagan, William F., and Feldman, Edward, to McGraw-Edison Company. Phonographic audio-visual teaching machine. 3,516,175, Cl. 35-8.
Kock, Erhard: See—
Juvinall, James W., Kock, Erhard, Smart, William L., and Williams, Herschel A. 3,517,262.
Koehler, Dale R.: See—
Bennett, William O., and Koehler, Dale R. 3,517,288.
Koehring-Waterous, Ltd.: See—
Martinson, Edwin O., and Huffaker, Philip A., 3,516,462.
Koerner, Ralph J., to Bunker-Ramo Corporation, The, mesne. Navigation apparatus. 3,516,173, Cl. 33-222.

- Kohlbrener, Philip John: See—
Bach, Frederick Louis, Cohen, Elliott, and Kohlbrener, Philip John 3,517,069.
- Koike, Eiji, Kuriyama, Ryoze, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko, to Sumitomo Chemical Company, Ltd. Process for dyeing polyolefinic materials. 3,516,779, Cl. 8-32.
- Koleske, Otto, to Wilson Manufacturing Corporation. Plastic hinge. 3,516,115, Cl. 16-150.
- Komma, Gerhard: See—
Pfeuffer, Alfred, and Komma, Gerhard 3,516,650.
- Konishi, Nobukiyo: See—
Takano, Tadayoshi, Kurtia, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko 3,516,997.
- Koo, Charles M. C., Pattison, Thomas W., and Herbst, David R., to American Home Products Corporation. 1-Methylsulfonyl-7-methoxy-2,3,4,5-tetrahydro-1H-1-benzazepine. 3,516,987, Cl. 260-239.
- Koons, Russell E.: See—
Juhl, William G., Knox, Walter R., Koons, Russell E., and Rosenberger, Frederick E. 3,517,076.
- Kopelman, Bernard: See—
Brooks, David N., and Kopelman, Bernard 3,517,182.
- Kopp, Manfred K.: See—
Borkowski, Casimer J., and Kopp, Manfred K. 3,517,194.
- Koppers Company, Inc.: See—
Calistrat, Mircea, 3,516,532.
- Korhonen, Martti. Rotary vane hydraulic motor. 3,516,769, Cl. 418-175.
- Kornblau, Marvin J.: See—
Finnie, Lies N., and Kornblau, Marvin J. 3,516,945.
- Kovacic, Joseph M.: See—
Gates, Robert H., and Kovacic, Joseph M. 3,517,310.
- Kowalski, Tadeusz. Structure for reducing the drag between a fluid and a solid body. 3,516,376, Cl. 114-67.
- Kozaki, Tatsuo, to Aisin Seiki Company Limited. Zigzag sewing mechanism. 3,516,374, Cl. 112-158.
- Kozicki, James A., to Chrysler Corporation. Vehicle brake fluid leakage warning system. 3,517,381, Cl. 340-52.
- KRACHT Pumpen- und Motorenfabrik K.G.: See—
Schumacher, Hans, 3,516,435.
- Krakower, Gerald W., to Squibb, E. R., & Sons, Inc. Synthesis of 4-oxa steroids. 3,517,034, Cl. 260-343.
- Kramer Design: See—
Batley, Ray E., 3,516,195.
- Kramer, Robert A.: See—
Batley, Ray E., 3,516,195.
- Kramlick, Emil S.: See—
Bigley, Arthur C., Jr., and Kramlick, Emil S. 3,516,820.
- Krampe, Josef. Wire and cable stripping device. 3,516,307, Cl. 81-9.5.
- Kratt, Henry J.: See—
Allport, Davies, and Kratt, Henry J. 3,516,253.
- Krauer, Otto Albert, Brooks, Kenneth Raymond, and Benjamin, Sidney Howard, to Otis Elevator Company. Elevator control system. 3,516,518, Cl. 187-29.
- Krause, John T., to Bell Telephone Laboratories, Incorporated. Composite delay line structure. 3,517,345, Cl. 333-30.
- Kreidler, Helmut, and Kruger, Manfred, to Hengstler, J., K.G. Zahlerfabrik. Plug frame for counter unit. 3,517,275, Cl. 317-117.
- Kreig, Galen W. Welded coupling construction with bonded liner. 3,516,690, Cl. 285-55.
- Krieger, Stanley: See—
Udell, Robert F., Beane, David J., and Krieger, Stanley 3,516,252.
- Krohn, Lawrence H., and Stout, Charles D., to Bendix Corporation. The. Methods and apparatus for determining body compositions. 3,516,400, Cl. 128-2.06.
- Kroneder, Hermann: See—
Dullinger, Karl, 3,516,297.
- Kruger, Manfred: See—
Kreidler, Helmut, and Kruger, Manfred 3,517,275.
- Kuchinsky, Saul, and Wolfe, Roger W., to Burroughs Corporation. Indicator tube for displaying a plurality of characters. 3,517,257, Cl. 315-169.
- Kuentler, Robert E., Jr. Fencing swords. 3,516,662, Cl. 273-1.
- Kuester, Frank E., Clark, Richard A., and Gregory, Kenneth J., to Brunswick Corporation. Golf game apparatus. 3,516,675, Cl. 273-176.
- Kuhlman Machine Company: See—
Kuhlman, Walter F., 3,516,517.
- Kuhlman, Walter F., to Kuhlman Machine Company. Air lubrication system. 3,516,517, Cl. 184-55.
- Kuhn, Edgar, to Bosch, Robert, G.m.b.H. Voltage control circuit for A-C generator subject to widely varying drive speeds. 3,517,296, Cl. 321-5.
- Kuhn, Joseph A., Jr.: See—
Jaffe, Gilbert, and Kuhn, Joseph A., Jr. 3,516,291.
- Kuhnle, Ernst, and Schwarz, Josef, to Bizerba-Werke Wilhelm Kraut K.G. Weighing scales. 3,516,507, Cl. 177-216.
- Kulischenko, Walter, to Pennwalt Corporation, mesne. Abrading apparatus. 3,516,204, Cl. 51-8.
- Kundler, Walter, to Anschutz & Co., G.m.b.H. Electrical automatic pilot for rudder-controlled vehicles, particularly for ships. 3,517,285, Cl. 318-18.
- Kunkle, Calvin S.: See—
Hobbs, Howard H., Kunkle, Calvin S., and Cataline, Aciel L. 3,516,104.
- Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry, to Eisenbau Karl Ladwig BSB. Mobile scaffold. 3,516,512, Cl. 182-16.
- Kurasz, George W.: See—
Maker, James H., and Kurasz, George W. 3,516,874.
- Kuriyama, Ryoze: See—
Koike, Eiji, Kuriyama, Ryoze, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko 3,516,779.
- Kurth, Johannes, Glaser, Josef, and Strohschein, Manfred, to Mannesmann Aktiengesellschaft. Water cooled continuous casting mold. 3,516,479, Cl. 164-282.
- Kurtia, Masaru: See—
Takano, Tadayoshi, Kurtia, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko 3,516,997.
- Kurz, John C. Removable storm shutter. 3,516,470, Cl. 160-35.
- Kyoei Kaihatsu Co., Ltd.: See—
Nakamura, Tatsuo, 3,516,554.
- Kyowa Hakko Kogyo K.K. (Kyowa Fermentation Industry Co., Ltd.): See—
Fujimoto, Yasuo, and Naruse, Masao, 3,517,006.
- Laakkonen, Launo, and Purhonen, Matti. Rapidly closing stop valve for air raid shelters. 3,516,348, Cl. 98-119.
- Ladwig, Karl-Heinz: See—
Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry 3,516,512.
- Ladwig, Peter: See—
Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry 3,516,512.
- Ladyjenski, Jacques E. Device and a process for continuously forming a sheet of thermoplastic material. 3,516,116, Cl. 18-4.
- Laflamme, George D., to Matthews Equipment Company. Helper for the outer curved end of a picker stick check strap. 3,516,450, Cl. 139-165.
- Lagos, Costas C., to Sylvania Electric Products, Inc. Europium activated BaO. MgO P₂O₅ phosphors. 3,516,940, Cl. 252-301.4.
- L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procédes Georges Claude: See—
Destival, Pierre, 3,516,756.
- Lake, John E., to General Electric Company. Squirrel cage rotor and method of building the same. 3,517,238, Cl. 310-211.
- La Marca, John. Lathe tool. 3,516,311, Cl. 82-38.
- Lambert, James R.: See—
Gaines, Donald R., Brothers, James L., and Lambert, James R. 3,517,141.
- Lambert, Robert E.: See—
Daley, William C., and Lambert, Robert E. 3,517,181.
- Lambrecht, Franz. Cooling system. 3,516,390, Cl. 122-7.
- Landree, Raymond L., and Raupp, Ray J., to Bendix Corporation, The. Filter with automatic shutoff. 3,516,540, Cl. 210-137.
- Landwehr, Gilbert L., and Schindler, Charles A., to Boeing Company, The. Thin film deposition fixture. 3,516,386, Cl. 118-49.
- Lang, Theo O., and Quist, George F. Injection molding machine. 3,516,123, Cl. 81-30.
- Lange, Klaus Peter: See—
Mahlo, Heinz, Lange, Klaus Peter, Beckstein, Hellmut, and Schellenberger, Guenter 3,517,204.
- Langley London Limited: See—
Cooper, Peter John Frederick, Wainwright, John, and Lindfield, Michael John 3,516,154.
- Langwell, John D., to Witrick, Louis Alexander, Herman, and Sandelman, Bernhard. Assembly of sheets stapled to a backing member, and associated methods of installation. 3,516,687, Cl. 281-25.
- Lapuyade, Robert Henri, to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme). Charging device for electrochemical generators. 3,517,295, Cl. 320-32.
- Largman, Theodore, and Newallis, Peter E., to Allied Chemical Corporation. Indoline phosphates useful as insecticides. 3,517,027, Cl. 260-326.11.
- Larkin, Francis J. Waste treatment apparatus. 3,516,545, Cl. 210-195.
- Larsen, Christian M.: See—
Grantham, Le Roy F., and Larsen, Christian M. 3,516,796.
- Larsen, Howard F., to Donnelly, R. R., & Sons Company. Protective container for books and the like. 3,516,593, Cl. 229-33.
- Larsen, Reidar G.: See—
Sarazen, John C., Pierini, John M., and Larsen, Reidar G. 3,517,376.
- Larson, Dennis H.: See—
Rosenberg, Robert B., and Larson, Dennis H. 3,516,773.
- Lathrop, Gerald A., Thompson, Reuel E., and Ives, Wayne S., to Olin Mathieson Chemical Corporation. Shot container. 3,516,360, Cl. 102-95.
- Laurent, Jean-Leon. Fabric with elastic warp, treated for the purpose of improving speed. 3,516,896, Cl. 161-77.
- Lautenschlager, Ernst: See—
Hofer, Arnold, and Lautenschlager, Ernst 3,516,976.
- Law, Andrew B.: See—
Miller, George A., Lewis, Sheldon N., and Law, Andrew B. 3,517,022.

- Law, Delman A.: See—
Sandstrom, Donald J., and Law, Delman A. 3,516,878.
- Lawrence, Paul Anthony, Aitken, Robert William, and Bennett, Robert Neil, to British Petroleum Company Limited, The. Catalytic conversion of hydrocarbons. 3,516,925, Cl. 208-111.
- Lawson, Ethel Nelson: See—
Lawson, Ivar S. 3,516,637.
- Lawson, Harry Wibur, Jr. Electronic ignition system. 3,516,396, Cl. 123-148.
- Lawson, Ivar S., deceased (by Lawson, Ethel Nelson, executrix), to AVM Corporation. Mirror supporting device. 3,516,637, Cl. 248-477.
- Lay, Clark M., to United States of America, Atomic Energy Commission. Phase detector. 3,517,322, Cl. 328-133.
- Leach, Ian Campbell, and Sack, Kevin Howard, to Fielden Electronics (Australia) Proprietary Limited. Dewpoint detection apparatus. 3,516,282, Cl. 73-17.
- Lear Siegler, Inc.: See—
Kimberley, Walter R., 3,516,397.
- Leavitt, George A., to United States of America, Atomic Energy Commission. High intensity X-ray tube. 3,517,195, Cl. 250-90.
- LeBlond, R. K., Machine Tool Company: See—
Hermann, Otto, 3,516,309.
- Lecadre, Jean H. M.: See—
Hillairet, Claude A., and Lecadre, Jean H. M. 3,516,320.
- Le Douarec, Jean-Claude: See—
Regnier, Gilbert, Canevari, Roger, and Le Douarec, Jean-Claude 3,517,012.
- Ledoux, Pierre A. J., to Hunter Douglas International Ltd. Heated or cooled ceiling or wall structures. 3,516,486, Cl. 165-54.
- Lee, Arthur L., and Coval, Arthur B., to Consolidation Coal Company, mesne. Flexible shuttle car. 3,516,508, Cl. 180-85.
- Lee, Hon Chiu, and Hodowanec, Gregory, to RCA Corporation. Microwave circuit with coaxial package semiconductor device. 3,517,272, Cl. 317-101.
- Lee, Wing-Kai: See—
Tesoro, Giuliana C., Lee, Wing-Kai, and Domovs, Kelvin B. 3,516,853.
- Leech, Ronald Francis, to International Standard Electric Corporation. Method of manufacturing solid electrolytic capacitors. 3,516,150, Cl. 29-570.
- LeFevre, Cecil W.: See—
Hunter, Don L., and LeFevre, Cecil W. 3,516,816.
- LeFevre, Cecil W., and Hunter, Don L., to United States Borax & Chemical Corporation. Herbicidal compositions and method utilizing alkyleneiminoquinazoline-4-imino-2-one compounds. 3,516,817, Cl. 71-92.
- Leffler, Dennis F., to Pelton & Crane Company. Dental aspirating cuspidor. 3,516,160, Cl. 32-33.
- Lehner, Erwin, to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft. Apparatus for molding and aligning prismatic bricks having a substantially trapezoidal base. 3,516,128, Cl. 25-67.
- Lehovec, Kurt, to Sprague Electric Company. Visual display of time variable electric information. 3,516,242, Cl. 58-23.
- Leiner, William. Heater control. 3,517,163, Cl. 219-364.
- Leitz, Ernst, GmbH: See—
Schmidt, Horst, 3,516,734.
- Lemanski, Savarian F. Tool mount and accessory. 3,516,310, Cl. 82-36.
- Lenten, Hendrik, to N.V. Machinefabriek 'Oost-Groningen'. Method of and apparatus for winding a web of material on a core. 3,516,620, Cl. 242-67.1.
- Lentz, John J., to International Business Machines Corporation. Digital computer. 3,517,391, Cl. 340-172.5.
- Leshner, George Y., to Sterling Drug Inc. 5-Nitro-2-furaldehyde 1-(lower-alkyl)-3-carboxy-1,4-dihydro-4-oxo-1,8-naphthyridine-7-hydrazone. 3,516,994, Cl. 260-240.
- Leshner, George Y., to Sterling Drug Inc. Method of preparing 8-hydroxyquinoline-3-carboxylic acids. 3,517,014, Cl. 260-287.
- Le Vasseur, Gilbert Edward, Sr.: See—
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yin, and Challiss, John Van Hoesen 3,516,274.
- Le Veque, Joseph C.: See—
Hicks, Morris R., and Le Veque, Joseph C. 3,516,439.
- Levine, Seymour D., to Squibb, E. R., & Sons, Inc. 2-Oxa-5β cyanoandrostane derivatives. 3,517,035, Cl. 260-343.2.
- Lew, Jem Yin: See—
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yin, and Challiss, John Van Hoesen 3,516,274.
- Lewallen, Daniel A. Liner puller. 3,516,143, Cl. 29-234.
- Lewis, Arlin C., to Lewis, Gloria B. Method of producing electric current utilizing a copper oxide thermoelectric generator. 3,516,871, Cl. 136-201.
- Lewis, Donald E., and Shenton, Clarence R., to Melpar, Inc. Integral reed tuning fork. 3,517,230, Cl. 310-25.
- Lewis, George E., to Hydrol Company. Underwater control system. 3,516,491, Cl. 166-0.6.
- Lewis, Gloria B.: See—
Lewis, Arlin C., 3,516,871.
- Lewis, Harry M., to Modern Engraving and Machine Corporation. Cam actuated locking device. 3,516,352, Cl. 101-23.
- Lewis, Oliver N., and Badali, Joseph A., to Olin Mathieson Chemical Corporation. Magazine with movable feed tips and guide fingers. 3,516,189, Cl. 42-50.
- Lewis, Sheldon N.: See—
Miller, George A., Lewis, Sheldon N., and Law, Andrew B. 3,517,022.
- Lewis, Sheldon N., and Miller, George A., to Rohm & Haas Company. Onium salts of bis-dithiocarbamate transition metal chelates. 3,517,040, Cl. 260-429.
- Lich, Richard L., to General Steel Industries, Inc. Motorized railway car truck. 3,516,365, Cl. 105-133.
- Lichtenberger, Joseph Alois: See—
Brandts, Theodor Gerardus, and Lichtenberger, Joseph Alois 3,517,052.
- Liebl, Helmut J. Scanning ion microprobe with magnetic sector lens to purify the primary ion beam. 3,517,191, Cl. 250-49.5.
- Liedtke, Kurt: See—
Focke, Heinz, Liedtke, Kurt, and Friedhoff, Horst 3,516,214.
- Lilly, Eli, and Company: See—
Shah, Ramesh M., 3,516,801.
- Limberger, Walter, to Lumoprint Zindler KG. Silver salt diffusion apparatus for carrying out the transfer process. 3,516,344, Cl. 95-89.
- Lincoln Manufacturing Company, Inc.: See—
Rhoads, Delmar D., and MacKay, Robert H., 3,516,485.
- Linde Aktiengesellschaft: See—
Mantel, Wilhelm, and Wolff, Lothar, 3,517,155.
- Lindfield, Michael John: See—
Cooper, Peter John Frederick, Wainwright, John, and Lindfield, Michael John 3,516,154.
- Lindquist, Larry B., to Dale Electronics, Inc. Potentiometer. 3,517,368, Cl. 338-180.
- Linhardt, Jiri George, to European Atomic Energy Community (Euratom). Magnetic piston. 3,517,228, Cl. 310-11.
- Linsley, Douglas F. Rudder attachment for outboard marine drives. 3,516,378, Cl. 114-165.
- Liobis, Aldona: See—
Liobis, Vytautas A. 3,516,170.
- Liobis, Vytautas A., deceased (by Liobis, Aldona Freedman, David), to New Brunswick Scientific Corporation. Freeze drying apparatus. 3,516,170, Cl. 34-53.
- Lippoldt, Richard F., and Woods, Warren W., to Continental Oil Company. Mulch sheets and seed mats and method Process for the preparation of substantially pure. 3,516,196, Cl. 47-56.
- Lira, Emil P., and Freytag, Arthur H., to International Minerals & Chemical Corporation. Seed germination enhancement. 3,516,815, Cl. 71-77.
- Litt, Morton H., and Roth, Sorrell, to Allied Chemical Corporation. Carbon nitrogen backbone chain copolymers as gelling agents. 3,516,944, Cl. 252-316.
- Livingstone, Gregory W., to Safety Flames Corporation, mesne. Torch. 3,516,774, Cl. 431-323.
- Lloyd, Eric, to Garrard Engineering Limited. Self-starting synchronous electric motors. 3,517,237, Cl. 310-162.
- Lockard, Miles L., to United States of America, National Aeronautics and Space Administration. Leak detector. 3,516,284, Cl. 73-45.5.
- Loeffler, George F., to Thomas Machinery Corporation. Bottle cleaning machine. 3,516,108, Cl. 15-304.
- Loeffler, Larry J., to Merck & Co., Inc. Anti-fibrinolytic agent. 3,517,055, Cl. 260-514.
- Lombardo, Pasquale: See—
Newallis, Peter E., Lombardo, Pasquale, and Spano, Francis A. 3,517,089.
- Lonza Ltd.: See—
Volker, Theodor, and Schindelmann, Erika, borne Pichler, 3,517,059.
- Loose, Sheldon D.: See—
Pemberton, Paul E., and Loose, Sheldon D. 3,516,474.
- Loral Corporation: See—
Grossbach, Robert, 3,517,351.
- Lorenz, James E.: See—
Hines, Eugene W., McGrath, Timothy, Lorenz, James E., and Herman, James A. 3,516,777.
- Louverdrape, Inc.: See—
Rosenquist, Kurt E., 3,516,473.
- Lovett, John R., and Schmall, Edwin A., to Esso Research and Engineering Company. Continuous process for the synthesis of difluoramine. 3,516,802, Cl. 23-356.
- Lowe, Jack Graham, to Burton Delingpole & Company Limited. Scaffold couplings. 3,516,695, Cl. 287-54.
- Lowe, William H.: See—
Metcalfe, Kenneth A., and Lowe, William H. 3,516,934.
- Lowry, Ned W.: See—
Shank, Herbert C., Jr., and Lowry, Ned W. 3,516,849.
- Lucas, James W. Projection head for compact overhead projector. 3,516,733, Cl. 350-202.
- Lucas, Joseph, (Industries) Limited: See—
Freeman, Frank George, 3,516,334.
- Manton, Stanley Michael, 3,516,763.
- Morrell, Donald H., and Williams, Alan, 3,516,275.
- Skinner, Robert Thomas John, 3,516,758.
- Luck, Allan J.: See—
Salava, Otto G., Luck, Allan J., and Schafernak, Dale E. 3,516,634.

- Luescher, Rene, to Ciba Limited. Roll-type magazine for photographic printing paper to be used in automatic copiers. 3,516,342, Cl. 95-31.
Lumoprint Zindler KG: See—
Limberger, Walter, 3,516,344.
Lutzenberger, Kurt: See—
Bailey, James R., and Lutzenberger, Kurt 3,517,140.
Lynch, Robert John, to International Business Machines Corporation. Solid state display device using light emitting diodes. 3,517,258, Cl. 315-169.
Lyons, Robert J. Emergency-releasable holddown mechanism for hinged cover of a hatchway. 3,516,197, Cl. 49-1.
Lyons, Robert J. Emergency release latch mechanism for smoke hatch. 3,516,198, Cl. 49-1.
MacDonnell, Robert W., to Allied Filter Engineering, Inc. Filter. 3,516,549, Cl. 210-351.
MacGeorge, William D., and Beavers, Robert J., to Thwing-Albert Instrument Company. Press inkometer. 3,516,289, Cl. 73-150.
Machefert-Tassin, Yves, to Societe M T E. Resilient supporting device for a railway linear motor. 3,516,364, Cl. 105-49.
Machi, Sueso: See—
Kagiya, Tautomu, Machi, Sueso, Kawakami, Waichiro, Hagiwara, Miyuki, and Hosaki, Yoshihiko 3,516,912.
MacKay, Robert H.: See—
Rhoads, Delmar D., and MacKay, Robert H. 3,516,485.
MacKenzie, Ramona K. Automatic wig cleaning device. 3,516,269, Cl. 68-96.
Mackey, E. Scudder, Mayhew, Raymond L., and Gantz, George M., to GAF Corporation. Coating compositions comprising alpha-sulfo lower alkyl ester of a C₇ to C₁₈ fatty acid. 3,516,835, Cl. 96-114.5
MacLeod, Gardner J.: See—
MacLeod, Hugh W., and MacLeod, Gardner J. 3,516,192.
MacLeod, Hugh W., and MacLeod, Gardner J. Detachable slip sinker and drop-off sinker. 3,516,192, Cl. 43-43.12
MacMillan Bloedel Limited: See—
Barnes, Derek, 3,516,388.
Mac Zura, George: See—
Gitzel, Walter H., and Mac Zura, George 3,516,840.
Madden, Donald A.: See—
Madden, Richard, and Madden, Donald A. 3,516,596.
Madden, Richard A.: See—
DeRose, Ralph A., Mottl, Anton J., and Madden, Richard A. 3,516,142.
Madden, Richard, and Madden, Donald A. Citrus fruit and vegetable shipping container. 3,516,596, Cl. 229-42.
Maeda, Ryota, to Maruzen Sewing Machine Co., Ltd. Sewing machine attachment for producing monograms. 3,516,373, Cl. 112-102.
Maemoto, Ken-ichi: See—
Taniguchi, Isoji, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo 3,517,085.
Maga, Joseph G. Adhesive activating machine for shoes. 3,517,160, Cl. 219-215.
Magalhaes, Frank M., to Bell Telephone Laboratories, Incorporated. Circulator having conductive post capacitively coupled between first and second transmission line conductors for broadbanding purposes. 3,517,340, Cl. 333-1.1
Magnavox Company, The: See—
Firth, Donald, 3,517,211.
Magnusson, Gustav G.: See—
Gravoll, Halvor, 3,516,226.
Maher, Philip K., and Scherzer, Julius, to Grace, W. R., & Co. Method of preparing microcrystalline faujasite-type zeolite. 3,516,786, Cl. 23-113.
Mahin, William E.: See—
Parlee, Norman A. D., and Mahin, William E. 3,516,819.
Mahlo, Heinz: See—
Mahlo, Heinz, Lange, Klaus Peter, Beckstein, Hellmut, and Schellenberger, Guenter, 3,517,204.
Mahlo, Heinz, Lange, Klaus Peter, Beckstein, Hellmut, and Schellenberger, Guenter, to Mahlo, Heinz. Method and apparatus for ascertaining and controlling the angular deviation of weft threads in moving webs of fabric. 3,517,204, Cl. 250-219.
Maier, Richard J., to Synco Corporation. Heat sink construction for electrical generator. 3,517,234, Cl. 310-68.
Majesko, George A.: See—
Gottlieb, Arnold J., and Majesko, George A. 3,516,824.
Makabe, Hideki: See—
Shibata, Kazuo, and Makabe, Hideki 3,516,746.
Maker, James H., and Kurasz, George W., to Associated Spring Corporation. Method of increasing the fatigue life of metal parts. 3,516,874, Cl. 148-4.
Makin, Earle C., Jr.: See—
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr. 3,517,079.
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr. 3,517,080.
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr. 3,517,081.
Malavard, Lucien C., Marty, Pierre M., and Renard, Guy C., to Centre National de la Recherche Scientifique. Impedance network hybrid computer. 3,517,169, Cl. 235-150.5
Malec, Robert E., to Armour Industrial Chemical Company, mesne. Fuel oil stabilizer. 3,516,806, Cl. 44-12.
Mallonee, William C., and Harris, Henry E., to Monsanto Company. Gas activated bonding of polyamides. 3,516,900, Cl. 161-150.
Mallory, P. R., & Co., Inc.: See—
Dotto, Gianni A., 3,517,259.
Malloy, George L., and Dold, Edward L. Safety control for aerial bucket truck. 3,516,514, Cl. 182-46.
Malm, Marvin F., to International Telephone and Telegraph Corporation. Mobile telephone transmitter selector circuit. 3,517,315, Cl. 325-54.
Mancini, Lloyd, to Berg Electronics, Inc. Crimping terminal for coaxial cable. 3,517,375, Cl. 339-177.
Manion, Jean P., and Davies, Daniel J., to Allis-Chalmers Manufacturing Company. Apparatus for magnetic stirring of discharge plasma in chemical synthesis. 3,516,921, Cl. 204-311.
Mannesmann Aktiengesellschaft: See—
Kurth, Johannes, Glaser, Josef, and Strohschein, Manfred, 3,516,479.
Manninen, Paavo, and Asikainen, Niilo, to Oy Tampella AB. Fin stabilized projectile. 3,516,358, Cl. 102-49.1
Manning, Robert E.: See—
Houlihan, William J., and Manning, Robert E. 3,516,993.
Houlihan, William J., and Manning, Robert E. 3,516,995.
Manning, Thomas J., Jr., and Glover, Alfred H., to Thiokol Chemical Corporation. Expanding apparatus for assembling and inserting insulation into a rocket motor case. 3,516,453, Cl. 141-59.
Mantel, Wilhelm, and Wolff, Lothar, to Linde Aktiengesellschaft. Method of submerged-arc welding of thick metallic plates. 3,517,155, Cl. 219-73.
Manton, Stanley Michael, to Lucas, Joseph, (Industries) Limited. Fluid pressure operable pumping apparatus. 3,516,763, Cl. 417-403.
Mantz, Jack G., to Addressograph-Multigraph Corporation. Platen for a source data machine. 3,516,356, Cl. 101-269.
Marais, Frank L.: See—
Bercier, Newton L., 3,516,159.
Marasco, Harold E., to Marasco Shoe Machinery Company. Turret type sole press. 3,516,101, Cl. 12-36.8
Marasco Shoe Machinery Company: See—
Marasco, Harold E., 3,516,101.
Marathay, Arvind S.: See—
Hickey, John J., and Marathay, Arvind S. 3,516,727.
Margaira, Rinaldo, to Fiat Societa per Azioni. Alternating current generator. 3,517,233, Cl. 310-68.
Marin, Emil. Tree prop. 3,516,200, Cl. 47-43.
Marine Swimming Pool Equipment Co.: See—
Bellinson, Bernard, and Young, Henry R., 3,516,660.
Markofsky, Sheldon B.: See—
Tsuk, Andrew G., Ferington, Thomas E., and Markofsky, Sheldon B. 3,516,795.
Marroni, Michael A.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,516,185.
Marroni, Michael A., Hardy, John C., and Baker, Mark E., to United Aircraft Corporation. Omnidirectional joint. 3,516,091, Cl. 2-2.1
Marschik, John F., and Rylander, Paul N., to Engelhard Minerals and Chemicals Corporation. 4-Amino-3-cyanopyridines and methods of preparation. 3,517,021, Cl. 260-294.9
Marshall, Richard S., and Summers, Alan S., to Plessey Company Limited. The. Voltage variable capacitance tuned circuit having diode means coupled to each terminal of the applied input tuning voltage. 3,517,352, Cl. 334-15.
Martin, Dalton W.: See—
Hubbard, James R., Martin, Dalton W., and McDonald, John C. 3,517,339.
Martin, Ross E. Flexible grade stake with driving tool. 3,516,171, Cl. 33-74.
Martin-Marietta Corporation: See—
Vandrey, Julius Friedrich, and Bryant, William L., 3,516,280.
Martins, Joseph G., and Mowry, Norman I., to Monsanto Company. Polyvinyl alcohol compositions with improved oxygen barrier properties. 3,516,960, Cl. 260-33.4
Martins, Ruben de Freitas. Container for records, documents and the like. 3,516,598, Cl. 229-72.
Martinson, Edwin O., and Huffaker, Philip A., to Koehring-Waterous, Ltd. Apparatus for harvesting trees. 3,516,462, Cl. 144-3.
Marty, Pierre M.: See—
Malavard, Lucien C., Marty, Pierre M., and Renard, Guy C. 3,517,169.
Maruzen Sewing Machine Co., Ltd.: See—
Maeda, Ryota, 3,516,373.
Maschinenfabrik Augsburg-Nurnberg A.G.: See—
Scobel, Hugo, and Steidle, Franz, 3,516,716.
Maschinenfabrik Augsburg-Nurnberg Aktiengesellschaft: See—
Klanner, Rudolf, and Merkle, Josef, 3,516,682.
Masonite Corporation: See—
Salava, Otto G., 3,516,552.
Salava, Otto G., Luck, Allan J., and Schafernak, Dale E., 3,516,634.
Thrasher, Elbridge W., 3,516,460.
Thrasher, Elbridge W., 3,516,461.
Massachusetts Institute of Technology: See—
Mila, Nicholas A., and Arzoumanidis, Grigorios G., 3,517,032.
Massar, Ernst, to Siemens Aktiengesellschaft. Turbogenerator having rotating superconducting excitation winding. 3,517,231, Cl. 310-52.

- Massey-Shaw, Frederick: See—
Straniti, Salvatore, and Massey-Shaw, Frederick 3,516,482.
Master Pneumatic-Detroit, Inc.: See—
Bertva, John T., and Thrasher, George E., Jr., 3,516,516.
Mastriukov, Lev Alexandrovich. Current-limiting reactor. 3,517,364, Cl. 336-185.
Masuda, Tadashi, and Hashimoto, Tadashi, to Missan Jidosha Kabushiki Kaisha. Device for programmed operation of an automobile on a test platform. 3,516,287, Cl. 73-117.
Masuoka, Nobuo: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio 3,517,113.
Mate Punch and Die Co.: See—
Sundquist, Nils E., and Patterson, Clinton E., 3,516,317.
Mathes, Kenneth N., to General Electric Company. Process for producing cryogenic capacitors. 3,516,132, Cl. 29-25.41
Matson, Gale W., to Minnesota Mining and Manufacturing Company. Microcapsule-containing paper. 3,516,846, Cl. 117-36.2
Matson, Gale W., to Minnesota Mining and Manufacturing Company. Microcapsules and process of making. 3,516,941, Cl. 252-316.
Masuoka, Tohru, and Horigome, Toshinori, to Nippon Electric Company, Limited. Broad-band coupled cavity slow-wave structure. 3,517,347, Cl. 333-31.
Mattel-Aquarium, Inc.: See—
Willinger, Allan H., 3,516,543.
Matteucci, Giampiero, to S.p.A. Officine Meccaniche F.LLI Daldi & Matteucci. Machines for the noise testing of gears. 3,516,290, Cl. 73-162.
Matthews Equipment Company: See—
Laflamme, George D., 3,516,450.
Matthews, Robert E.: See—
Freedlander, Abraham L., Matthews, Robert E., and Garrett, Wayne C. 3,516,236.
Mattner, Heinrich, GmbH: See—
Dieterle, Horst, and Rabe, Peter, 3,516,776.
Rabe, Peter, 3,516,775.
Mattox, John R., and Mattox, Thomas W. Tire retreading mold apparatus having locking means. 3,516,121, Cl. 18-18.
Mattox, Thomas W.: See—
Mattox, John R., and Mattox, Thomas W. 3,516,121.
Matumoto, Kazutoshi: See—
Harada, Eizi, and Matumoto, Kazutoshi 3,516,325.
Mauer, Paul Bernard, to Eastman Kodak Company. Thin film coating for sunglasses. 3,516,720, Cl. 350-2.
Maul Bros., Inc.: See—
Donnelly, Joseph W., and Bracken, Robert S., 3,516,812.
Maulini, Maurizio, and Aiello, Franco. Automatic packaging machine. 3,516,336, Cl. 93-36.01
Maurer, Carl Max, to Perma Gesellschaft mit beschränkter Haftung. Game board dice agitator. 3,516,672, Cl. 273-134.
Maurer, Frank C.: See—
Durso, August J., Maurer, Frank C., and Panczysyn, George A. 3,516,563.
Maurin, Alexandre. Cathode protection device. 3,516,917, Cl. 204-196.
Maxey, Alexander R., to Westel Company. Method of assembling a helical scanning assembly. 3,516,146, Cl. 29-434.
May, Douglas H. Double plenum air distribution system. 3,516,347, Cl. 98-31.
Mayer, Edward H., and Moore, Robert J., to Bell Telephone Laboratories, Incorporated. Sputtering technique. 3,516,915, Cl. 204-192.
Mayer, Ernest F., Brannon, Ward, Schaller, Edwin S., Jr., and Pickard, Frank C., to United States of America, Interior. Electrically controlled and powered submarine rotary corer system. 3,516,503, Cl. 175-6.
Mayer, Kurt: See—
Dimroth, Peter, and Mayer, Kurt 3,516,982.
Mayes, Fred M.: See—
Bennett, John D., Johnson, Ford L., Mayes, Fred M., and Peret, John W. 3,516,502.
Mayhew, Raymond L.: See—
Mackey, E. Scudder, Mayhew, Raymond L., and Gantz, George M. 3,516,835.
Maziarka, Robert J., to Alphamatic Corporation. Method for adjusting a pressure operated switch utilizing the nonlinear properties of a biasing means. 3,516,279, Cl. 73-4.
McAttee, William L.: See—
Wasielewski, John Paul, and McAttee, William L. 3,517,311.
McCain John P., Jr. Panel scribing apparatus. 3,516,167, Cl. 33-41.
McCarroll, Raymond A., to Acme Precision Products, Inc. Method of machining a two piece pulley assembly. 3,516,138, Cl. 29-159.
McCarthy, William F., to United States of America, Navy. Navigation signal simulator. 3,517,108, Cl. 35-10.2
McCormick, James F. Automatic measuring device. 3,516,164, Cl. 33-127.
McCormick, Joseph F., to Delta Hydraulics Company. Suspension assembly for bobbin in servo-valve. 3,516,441, Cl. 137-625.61
McCormack, Richard W.: See—
Davidge, Ronald V., Greer, Donald L., McCormack, Richard W., and O'Daniel, Jerome B. 3,516,528.
McCulloch Corporation: See—
Burkett, Wilford B., and Jackson, Robert V., 3,517,293.
McCullough, Stuart, to True-Trace Corporation. Machine tool control. 3,517,283, Cl. 318-18.
McDermond, Duane K., to United States of America, National Aeronautics and Space Administration. Synchronous counter. 3,517,318, Cl. 328-42.
McDonald, Bruce L. Power operated flexible wall section. 3,516,469, Cl. 160-26.
McDonald, John C.: See—
Hubbard, James R., Martin, Dalton W., and McDonald, John C. 3,517,339.
McDonald, Michael, and Schaefer, Herman F. Circuit arrangement for an electric muscle stimulator. 3,516,413, Cl. 128-422.
McDonnell Douglas Corporation: See—
Bernstein, Joseph T., 3,516,262.
Hoffman, Michael L., 3,516,261.
Washburn, Robert M., 3,516,965.
McEwen, Malcolm, to Monsanto Company. Thermodynamic fluids. 3,516,248, Cl. 60-36.
McGill, Howard L., to Schlumberger Technology Corporation. Well packer apparatus. 3,516,493, Cl. 166-140.
McGrath, Timothy: See—
Hines, Eugene W., McGrath, Timothy, Lorenz, James E., and Herman, James A. 3,516,777.
McGraw-Edison Company: See—
Kobler, Richard, Fagan, William F., and Feldman, Edward, 3,516,175.
Oberley, Gene L., 3,516,184.
Roods, John F., and Buschman, Jerome A., 3,516,456.
Mc Intosh, Harold A., and Wagner, Edmond M., to Robertshaw Controls Company, mesne. Soldering assembly and method. 3,517,150, Cl. 219-9.5
McKown, Daniel C., Howlett, Donald E., and DiTommaso, Anthony, to General Dynamics Corporation. Laser radar system. 3,516,743, Cl. 356-4.
McMurray, William, to General Electric Company. Power converter circuits having a high frequency link. 3,517,300, Cl. 321-60.
McNamara, Albert C., Jr., to Esquire, Inc. Emergency lighting system for gaseous-discharge lamps. 3,517,254, Cl. 315-91.
McWilliams, William J.: See—
Edmonds, Harold D., Goodman, Gilbert, and McWilliams, William J. 3,517,271.
Mead, John A. Differential transformer flux valve. 3,517,362, Cl. 336-135.
Mecaplast S. A.: See—
Gallay, Pierre-Henri, 3,516,118.
Meincke, Edmund R., to General Tire & Rubber Company, The. Ethylene-vinyl acetate polymers prepared with polyoxyalkylene compounds. 3,516,975, Cl. 260-80.8
Meisert, Ernst: See—
Wagner, Kuno, Meisert, Ernst, and Mennicken, Gerhard 3,517,039.
Mekjean, Matthew, to Hooker Chemical Corporation. Heat storage. 3,517,151, Cl. 219-10.49
Melamed, Sidney: See—
Jones, Wilford Donald, Baldino, James Peter, and Melamed, Sidney 3,516,903.
Meller, Frederick D.: See—
Huggins, Ralph T., and Meller, Frederick D. 3,517,164.
Melpar, Inc.: See—
Fawcett, Kenneth J., Jr., Fuhr, William H., Pefferman, Ernest B., and Stone, William M., 3,517,176.
Goodell, William V., 3,516,735.
Lewis, Donald E., and Shenton, Clarence R., 3,517,230.
Smith, Richard C., Moulton, Charles W., and Feldman, Charles, 3,516,133.
Wallen, James, Jr., and Hronik, Richard H., 3,517,307.
Menasco Manufacturing Company: See—
Kendall, Giles Arthur, 3,516,628.
Menasha Corporation: See—
Van Antwerpen, Lloyd D., 3,516,538.
Menkes, Cirel K., and Tasem, Maynard A., to United States of America, Navy. Glass dosimeter washing technique and apparatus. 3,516,861, Cl. 134-1.
Mennicken, Gerhard: See—
Wagner, Kuno, Meisert, Ernst, and Mennicken, Gerhard 3,517,039.
Menssen, Hans Georg, and Honerlagen, Hans, to Nattermann, A., & Cie GmbH. Process for recovering active concentrates rich in sennosides from senna pods. 3,517,269, Cl. 260-210.
Mera, Masashi: See—
Takano, Tadayoshi, Kurita, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko 3,516,997.
Merboth, John A.: See—
Nordberg, Calvin T., Merboth, John A., and Siverson, Robert D. 3,516,312.
Merck & Co., Inc.: See—
Bolhofer, William A., 3,517,051.
Chemenda, John Martin, and Slettinger, Meyer, 3,517,028.
Loeffler, Larry J., 3,517,055.
Pines, Seemon H., Karady, Sandor, and Slettinger, Meyer, 3,517,057.
Walton, Edward, and Holly, Frederick W., 3,516,985.
Meredith Corporation: See—
Skinner, Burrhus F., 3,516,177.
Merkle, Josef: See—
Klanner, Rudolf, and Merkle, Josef 3,516,682.

- Merser, Francis G., to Dennison Manufacturing Company. Connector for holding articles together. 3,516,124, Cl. 24-16.
- Mertens, Franz H., 1/2 to Herrn, Dr. Phil Alfred Hanten. Simulator for teaching how to drive. 3,516,178, Cl. 35-11.
- Messer Griesheim GmbH: See—
Pfeuffer, Alfred, and Komma, Gerhard, 3,516,650.
- Messrs. Centropa, Handelsgesellschaft m.b.H.: See—
Szilagyi, Istvan, 3,517,247.
- Mestre, Luis. Sheet sorter having automatic sheet feed control and restart. 3,516,654, Cl. 270-58.
- Metcalfe, Kenneth A., and Lowe, William H., to Commonwealth of Australia. The Liquid developer for electrostatic images. 3,516,934, Cl. 252-62.1
- Metzler, Albert, to Guardian Electric Manufacturing Company of California, Inc. Frequency control circuit. 3,517,218, Cl. 307-265.
- Meyer, Arthur Brackett. Experimental modular animal maze. 3,516,389, Cl. 119-1.
- Meyer, Emilio G., to Mine Safety Appliances Italiana, S.p.A. Infrared gas analyzer wherein the detector comprises two optically spaced thermistors separated by an absorbing gas. 3,517,189, Cl. 250-43.5
- Meyer, Robert E., to United States of America, Navy, mesne. Strip processing system. 3,516,345, Cl. 95-89.
- Meyer, William H.: See—
Trbovich, Nicholas D., and Meyer, William H. 3,517,359.
- Micallef, Lewis A., to Wise, Robert D. Toggle type closure. 3,516,581, Cl. 222-529.
- Mickas, George, to Ex-Cell-O Corporation. Machining apparatus with automatic tool changing means. 3,516,149, Cl. 29-568.
- Microwave Development Laboratories, Inc.: See—
Wilson, Ronald Arthur, 3,516,327.
- Mikos, Aloysius J., to Seng Company, The. Sofa bed. 3,516,096, Cl. 5-13.
- Mila, Nicholas A., and Arzoumanidis, Grigoris G., to Massachusetts Institute of Technology. Trioxides. 3,517,032, Cl. 260-338.
- Miller, Arthur, to Hewlett-Packard Company. Variable capacitance transducer. 3,517,282, Cl. 317-249.
- Miller, George A.: See—
Lewis, Sheldon N., and Miller, George A. 3,517,040.
- Miller, George A., Lewis, Sheldon N., and Law, Andrew B., to Rohm & Haas Company. Certain 2-carbamoyl-1,2-benzisothiazolones. 3,517,022, Cl. 260-304.
- Miller, Ralph A.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R., 3,516,571.
- Miller, Richard Lawrence: See—
Field, Sheldon B., Pangalila, Frans V., Miller, Richard Lawrence, and Grigoraki, Nicholas Mark 3,516,377.
- Milochewitch, Alexandre, to Compagnie Generale d'Electricite. Apparatus for continuously welding optical elements without deformation. 3,517,159, Cl. 219-121.
- Minagawa, Katsuji: See—
Ikeda, Koichi, Minagawa, Katsuji, and Tanaka, Shigezo 3,517,279.
- Minato, Tadaaki: See—
Honda, Toshikazu, and Minato, Tadaaki 3,516,651.
- Mine Safety Appliances Italiana, S.p.A.: See—
Meyer, Emilio G. 3,517,189.
- Minieri, Pasquale P. Fungicidal compositions and methods employing dialkyltin, 1,4-endoalkylene-2,3-dihydrophthalates and -1,2,3,6-tetrahydrophthalates. 3,517,104, Cl. 424-288.
- Minnesota Mining and Manufacturing Company: See—
Janssen, Edward W., and Pieterick, Jerome A., 3,516,852.
- Matson, Gale W., 3,516,846.
- Matson, Gale W., 3,516,941.
- Mirdadian, Mohammad Kian. Apparatus and method for testing electronic counting systems. 3,517,308, Cl. 324-68.
- Misare, Donald O., to Joslyn Mfg. and Supply Co. Frangible fuse cap. 3,517,367, Cl. 337-203.
- Miskel, John J., Neary, Edward R., and Schlesinger, Walter, to Schering Corporation. Method of treating hyperpigmentation. 3,517,105, Cl. 424-315.
- Missan Jidosha Kabushiki Kaisha: See—
Masuda, Tadashi, and Hashimoto, Tadashi, 3,516,287.
- Mitsui Real Estate Co., Ltd.: See—
Akamatsu, Tatsuo, 3,516,255.
- Mix, Joseph E.: See—
Cox, John R., and Mix, Joseph E. 3,516,681.
- Mixell, Ronald G., and Cerny, Daryl D., to Ball Corporation. Method for forming and curing continuous elastomeric strip. 3,517,097, Cl. 264-177.
- Miyagi, Masahisa, to Nippon Electric Company, Limited. Variable emphasis frequency modulation signal transmission system. 3,517,314, Cl. 325-46.
- Mizuk, John, to Aluminum Company of America. Pie pan. 3,516,573, Cl. 220-72.
- Mravsky, Abraham I., and Griffiths, Leonard B., to Tyco Laboratories, Inc. Light emitting silicon carbide semiconductor junction devices. 3,517,281, Cl. 317-237.
- Mobay Chemical Company: See—
Heiss, Herbert L., 3,517,002.
- Nason, Beverly R., 3,517,063.
- Powers, Eugene L., 3,517,062.
- Modern Engraving and Machine Corporation: See—
Lewis, Harry M., 3,516,352.
- Modic, Frank J., to General Electric Company. Platinum catalyst composition for hydrosilation reactions. 3,516,946, Cl. 252-429.
- Modrey, Henry J. Key ring. 3,516,272, Cl. 70-459.
- Moffitt, John Edward. System for identifying and feeding animals. 3,516,575, Cl. 222-52.
- Molotsky, Hyman M., and Karraker, Edward L., III, to CPC International Inc. Curable and cured epoxy-carbohydrate polyether resin compositions. 3,516,952, Cl. 260-9.
- Moltzan, Herbert J., and Fyffe, De Winn, to Texas Instruments, Incorporated. Method for the purification of trichlorosilane. 3,516,803, Cl. 23-366.
- Monden, Tuneso, Ozu, Masao, and Watanabe, Makoto, to Tokyo Shibaura Electric Co., Ltd. Rotary compressor. 3,516,766, Cl. 418-63.
- Monforte, Frank R., and Schnettler, Frank J., to Bell Telephone Laboratories, Incorporated. Compacted body and method of formation. 3,516,935, Cl. 252-62.56
- Monpetit, Louis: See—
Bassot, Jacques, and Monpetit, Louis 3,516,395.
- Monsanto Company: See—
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,079.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,080.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,517,081.
- Brennan, Wendell E., 3,516,664.
- Dunn, Stanley A., and Rakestraw, Lawrence F., 3,516,478.
- Fitzhugh, Andrew F., and Snelgrove, James A., 3,516,858.
- Hedrick, Ross M., and Mowry, David T., 3,516,932.
- Juhl, William G., Knox, Walter R., Koons, Russell E., and Rosenberger, Frederick E., 3,517,076.
- Mallonee, William C., and Harris, Henry E., 3,516,900.
- Martins, Joseph G., and Mowry, Norman I., 3,516,960.
- McEwen, Malcolm, 3,516,248.
- Salyer, Ival O., 3,517,083.
- Monsanto Research Corporation: See—
Schaar, John L., and Weesner, William E., 3,517,041.
- Montanti, Vincent L. Arterial bypass. 3,516,408, Cl. 128-334.
- Montoya, Ralph N., to Singer Company, The. Scale beam and poise. 3,516,505, Cl. 177-44.
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- Moore, Arthur H., and Bacevius, Joseph G., to Bridgeport Metal Goods Manufacturing Company, The. Rechargeable flashlight and recharging stand. 3,517,185, Cl. 240-10.63
- Moore Business Forms, Inc.: See—
Knudsen, James B., 3,516,657.
- Moore, George H., to United States of America, Navy. Field modulation method for observing ultra-high-speed ferromagnetic domain dynamics. 3,516,747, Cl. 356-115.
- Moore, Ned W. Internal thread gage. 3,516,166, Cl. 33-199.
- Moore, Robert E., and Duling, Irl N., to Sun Oil Company. Polycarbonates from adamantyl bisphenols. 3,516,968, Cl. 260-47.
- Moore, Robert G., Jr., to Bendix Corporation, The. Fuel control system for turbo-shaft engines. 3,516,250, Cl. 60-39.16
- Moore, Robert J.: See—
Mayer, Edward H., and Moore, Robert J. 3,516,915.
- Moore, Samuel, and Company: See—
Kavick, Edward M., 3,516,621.
- Moreau, Michel: See—
Cledat, Jean, Moreau, Michel, and Rappeneau, Jean 3,516,948.
- Morey, Thomas H., Pope, Karl D., III, and Tierney, Robert R. Mounting structure for removable surfboard fin. 3,516,099, Cl. 9-310.
- Morgan, Carl W. Lid covered container. 3,516,570, Cl. 220-42.
- Morgan Construction Company: See—
Pratt, Edgar Harry, 3,516,139.
- Morgan, George W., to North American Rockwell Corporation. Flexible underwater riser containing electrical conductors and material conduits. 3,517,110, Cl. 174-47.
- Morgan, Paul E., to Wiley, Bruce. Oscillating piston internal combustion engine. 3,516,392, Cl. 123-43.
- Moroni, Eneo C., and Neuworth, Martin B., to Consolidation Coal Company, mesne. High purity 2,6-xyleneol. 3,517,072, Cl. 260-621.
- Morrell, Donald H., and Williams, Alan, to Lucas, Joseph, (Industries) Limited. Method of manufacturing battery plate grids. 3,516,275, Cl. 72-198.
- Mortensen, Curt Adolf Manfred: See—
Kupke, Rudolf Manfred, Ladwig, Karl-Heinz, Ladwig, Peter, Mortensen, Curt Adolf Manfred, and Handschack, Hugo Harry 3,516,512.
- Mortenson, Victor A., to Anderson Power Products, Inc. Thermal expansion compensating modular high current switch. 3,517,147, Cl. 200-166.
- Moses, Clayton Small. Method of smoking and means therefor. 3,516,417, Cl. 131-8.
- Moshier, Terry Allen, to Imagineering Industries, Inc., mesne. Method of making street shoes. 3,516,102, Cl. 12-142.
- Moss, Donald M.: See—
Hardingham, Derek D., 3,516,541.
- Motorola, Inc.: See—
Gibson, James G., and Wunderlich, Louis J., 3,517,220.

- Mottl, Anton J.: See—
DeRose, Ralph A., Mottl, Anton J., and Madden, Richard A. 3,516,142.
- Mottus, Edward H., and Orr, Morris R. Polymerization of olefinic compounds and catalysts therefor. 3,516,978, Cl. 260-94.9
- Moulton, Charles W.: See—
Smith, Richard C., Moulton, Charles W., and Feldman, Charles 3,516,133.
- Mount Hope Machine Company, Incorporated: See—
Gallant, James O., Knapp, George P., and Depuy, Francis A., 3,516,135.
- Mowry, David T.: See—
Hedrick, Ross M., and Mowry, David T. 3,516,932.
- Mowry, Norman I.: See—
Martins, Joseph G., and Mowry, Norman I. 3,516,960.
- Moyer, Ronald G.: See—
Paige, Hilliard W., and Moyer, Ronald G. 3,516,622.
- Mross, Dieter: See—
Muller, Richard, Dathe, Christian, and Mross, Dieter 3,517,043.
- Muckinhaupt, Robert J. Control cable holding clamp. 3,516,300, Cl. 74-501.
- Muller, Johann, to Friedrich Deckel Prazisions Mechanik und Maschinenbau. Boring head for machine tools. 3,516,306, Cl. 77-1.
- Muller, Richard, Dathe, Christian, and Mross, Dieter, to Institut fur Silikon- und Fluorkarbon-Chemie. Method for the preparation of salts of organo-fluosilicic acids in non-aqueous solvents. 3,517,043, Cl. 260-448.2
- Muly, Emil C., Jr., and Oman, Robert M., to National Research Corporation. Sputtering apparatus. 3,516,920, Cl. 204-298.
- Munch, Walter, Jr., to Baldwin, D. H., Company. Simulated brushed cymbal tone generating system for electronic organs. 3,516,319, Cl. 84-1.05
- Munger, Fay E.: See—
Bennett, John E., and Munger, Fay E. 3,516,712.
- Munroe, William O., to Anot Controls Corporation. Modular valve and operator for fluid logic and control system. 3,516,442, Cl. 137-625.66
- Murono, Yoshiaki: See—
Nakano, Hiroshi, Takai, Hideo, Murono, Yoshiaki, and Nakajima, Fumio 3,516,241.
- Murphy, Daniel W., to International Business Machines Corporation. Regulated transistorized current source having temperature compensation. 3,517,224, Cl. 307-297.
- Murty, Dasika R. K., and Florey, Klaus, to Squibb, E. R., & Sons, Inc. Apparatus and method for determining thyroid function. 3,516,794, Cl. 23-230.
- Muto, Yuhei: See—
Yokota, Ryosuke, Muto, Yuhei, Nakajima, Saburo, and Fukuda, Kiyoshi 3,516,939.
- Muttart, Vincent H. Ejector pin retraction mechanism for molding operation. 3,516,302, Cl. 74-527.
- Myers, Richard A.: See—
Barak, Anthony J., Beckenhauer, Harriet C., Myers, Richard A., and Wilger, Roy N. 3,516,292.
- Myklestad, Nils O. Latch device. 3,516,700, Cl. 292-49.
- Nader, Donald J. Convertible high chair. 3,516,709, Cl. 297-153.
- Nagai, Saburo: See—
Yoda, Kenji, and Nagai, Saburo 3,517,266.
- Nagato, Syoichi: See—
Kato, Rikitaro, Nagato, Syoichi, and Suzuki, Juro 3,516,973.
- Naito, Seizo: See—
Koike, Eiji, Kuriyama, Ryozi, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko 3,516,779.
- Nakagawa, Rituko: See—
Takano, Tadayoshi, Kurtia, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko 3,516,997.
- Nakajima, Fumio: See—
Nakano, Hiroshi, Takai, Hideo, Murono, Yoshiaki, and Nakajima, Fumio 3,516,241.
- Nakajima, Saburo: See—
Yokota, Ryosuke, Muto, Yuhei, Nakajima, Saburo, and Fukuda, Kiyoshi 3,516,939.
- Nakamura, Tatsuo, to Kyoei Kaihatsu Co., Ltd. Two-stage extensible boom. 3,516,554, Cl. 212-55.
- Nakamura, Yozo, and Ozaki, Yoshihisa, to Kabushikigaisha Nakao Netsukagaku Kenkyusho. Electrodes for electric resistance welding and method of manufacture thereof. 3,516,805, Cl. 29-196.3
- Nakano, Hiroshi, Takai, Hideo, Murono, Yoshiaki, and Nakajima, Fumio, to Asahi Kasei Kogyo Kabushiki Kaisha. Process for the manufacture of crimped spun yarn. 3,516,241, Cl. 57-157.
- Nakazawa, Chuichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro, to American Cyanamid Company. Deserating apparatus. 3,516,229, Cl. 55-193.
- Naruse, Masao: See—
Fujimoto, Yasuo, and Naruse, Masao 3,517,006.
- Naruse, Norio: See—
Ohno, Masaji, and Naruse, Norio 3,517,047.
- Nashua Corporation: See—
Hopps, John H., Jr. 3,516,911.
- Nason, Beverly R., to Mobay Chemical Company. Hydrogenation of dinitrotoluene to tolylene diamine. 3,517,063, Cl. 260-580.
- National Cash Register Company, The: See—
Austen, Herman E., 3,516,152.
- Brockett, Bruce W., 3,516,845.
- Brynko, Carl, and Olderman, Gerald M., 3,516,943.
- Scarpelli, Joseph A., 3,516,942.
- Touchman, William S., 3,517,236.
- National Distillers and Chemical Corporation: See—
Quackenbush, John J., and Corbett, Herbert O., 3,516,886.
- National Gypsum Company: See—
Sauer, Gale E., 3,516,213.
- National Lead Company: See—
Smith, Rollin P., 3,516,785.
- National Research Corporation: See—
Muly, Emil C., Jr., and Oman, Robert M., 3,516,920.
- National Research Development Corporation: See—
Bryer, Denis William, and Walshe, Denis Eugene Joseph, 3,516,640.
- Fish, Daniel Cecil Edward, 3,516,568.
- Nattermann, A., & Cie GmbH: See—
Mensen, Hans Georg, and Honerlagen, Hans, 3,517,269.
- Neary, Edward R.: See—
Miskel, John J., Neary, Edward R., and Schlesinger, Walter 3,517,105.
- Nee, Claude, Pathe, Claude, and Charnay, Claude, to Nord-Aviation Societe Nationale de Constructions Aeronautiques. Electric batteries with thermal activation. 3,516,868, Cl. 136-90.
- Neier, Reinhard: See—
Dore, Jacky, and Neier, Reinhard 3,516,979.
- Dore, Jacky, and Neier, Reinhard 3,516,980.
- Nelson, Charles A.: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,221.
- Nelson, Gladwyn D., and Pluegar, Lowell B., to Tool Research & Engineering Corporation. Magnetically converted pin-type lock construction. 3,516,271, Cl. 70-383.
- Nelson, Howard I.: See—
Darwin, Clifford, and Nelson, Howard I. 3,516,449.
- Nelson, Kenneth E., to Foxboro Company, The. Electrical circuit having pulse output with duration proportional to input signal. 3,517,212, Cl. 307-228.
- Nelson, Patrick R. Interlocking cargo containers. 3,516,556, Cl. 214-10.5
- Neu, Max Gerhard. Protective covering for molten metal. 3,516,821, Cl. 75-96.
- Neumann, Frank Peter August: See—
Wallen, Emil Olof Lennart, and Neumann, Frank Peter August 3,516,551.
- Neuworth, Martin B.: See—
Moroni, Eneo C., and Neuworth, Martin B. 3,517,072.
- Neville, Donald G., and Straits, Ernest J., to Plastiglide Mfg. Corporation. Acoustic damping glide. 3,516,112, Cl. 16-42.
- New Brunswick Scientific Corporation: See—
Liobis, Vytautas A., 3,516,170.
- Newallis, Peter E.: See—
Largman, Theodore, and Newallis, Peter E. 3,517,027.
- Newallis, Peter E., Lombardo, Pasquale, and Spano, Francis A., to Allied Chemical Corporation. N-phenyl-N-alkylester phosphate acetamides. 3,517,089, Cl. 260-942.
- Nichols, Roy G. Device for simultaneously advancing intake cam lobes and retarding exhaust cam lobes of an internal combustion engine while the engine is running. 3,516,394, Cl. 123-90.
- Nielsen, Alfred Thygesen. Drying apparatus, particularly for green crops. 3,516,172, Cl. 34-136.
- Nielsen, Alfred Thygesen. Apparatus for briquetting loose, fibrous, or tangled material, particularly dried green crops. 3,516,351, Cl. 100-139.
- Nigrelli, Biagio J., Standley, Wendell E., and Whittmann, Richard B., to Container Corporation of America. Machine for folding and sealing cartons. 3,516,219, Cl. 53-48.
- Nikaido, Hiroo: See—
Takano, Tadayoshi, Kurtia, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko 3,516,997.
- Nilsson, Bengt Erik, to Aktiebolaget Electrolux. Horizontal tank-type vacuum cleaner having soft covering. 3,516,110, Cl. 15-325.
- Nippon Denso Kabushiki Kaisha: See—
Oishi, Kazuo, 3,517,260.
- Nippon Electric Company, Limited: See—
Ikeda, Koichi, Minagawa, Katsuji, and Tanaka, Shigezo, 3,517,279.
- Matsuoka, Tohru, and Horigome, Toshinori, 3,517,347.
- Miyagi, Masahisa, 3,517,314.
- Okubo, Toshio, 3,517,219.
- Uchimaru, Kiyoshi, and Yoshida, Yukitoshi, 3,517,249.
- Yamato, Shigeki, Watanabe, Tatsuki, Shimasaki, Nobuhiko, and Tashiro, Shunji, 3,517,312.
- Yoda, Kenji, and Nagai, Saburo, 3,517,266.
- Nippon Gakki Seizo Kabushiki Kaisha: See—
Harada, Eizi, and Matsumoto, Kazutoshi, 3,516,325.
- Nischk, Gunther: See—
Rinkler, Heinrich, Braden, Rudolf, and Nischk, Gunther 3,516,974.
- Nissin Electric Co. Ltd.: See—
Okamura, Toshio, Izumi Sigeya, and Watanabe, Isao, 3,517,263.
- Nord-Aviation Societe Nationale de Constructions Aeronautiques: See—
Nee, Claude, Pathe, Claude, and Charnay, Claude, 3,516,868.
- Nordberg, Calvin T., Merboth, John A., and Siverson, Robert D., to General Mills, Inc. Rotatable cutting apparatus. 3,516,312, Cl. 83-42.

Normand, Gerard, and Boca, Michel, to Societe Francaise d'Agrafe Industriel par abjévation Sofragraf. Fastener applicator. 3,516,144, Cl. 29-243.57

Norris, Anthony: See—
Sainsbury, Jeffrey J., and Norris, Anthony 3,517,205.

North American Rockwell Corporation: See—
Grantham, Le Roy F., and Larsen, Christian M., 3,516,796.
Morgan, George W., 3,517,110.
Treuthart, Robert L., 3,517,327.

Northern Electric Company Limited: See—
Fairbairn, Rhys A., 3,517,136.

Norton, Raymond F., and Hale, Gordon B., to Outboard Marine Corporation. Clamp for telescoping shaft. 3,517,184, Cl. 240-7.5

Norwich Pharmacal Company, The: See—
Alaimo, Robert James, 3,517,019.

Noss, Jeffrey S., to Textron Inc. Lock type excess flow valve. 3,516,434, Cl. 137-514.5

N.V. Machinefabriek 'Oost-Groningen': See—
Lenten, Hendrik, 3,516,620.

Oberley, Gene L., to McGraw-Edison Company. Flatwork ironer chest. 3,516,184, Cl. 38-56.

O'Brien, John J., to Olin Mathieson Chemical Corporation. Fastener and guiding attachment therefor. 3,516,323, Cl. 85-10.

O'Daniel, Jerome B.: See—
Davidge, Ronald V., Greer, Donald L., McCormack, Richard W., and O'Daniel, Jerome B., 3,516,528.

O'Donnell, Miles C., to Eastman Kodak Company. Projector system with automatic cut-out switch for control units during high speed operation. 3,516,588, Cl. 226-43.

Oei, Han Yong: See—
Rausch, Werner, Oei, Han Yong, and Edler, Hans-Joachim 3,516,875.

Oelrich, John A., and Andersen, Joseph J., to Chandler Evans Inc. Time modulated hydraulically actuated control mechanism. 3,516,331, Cl. 91-47.

Ogawa, Francis T.: See—
Hoffer, Jerry B., Ogawa, Francis T., and Wallace, Robert H. 3,517,255.

O'Hagan, Thomas J., Yoke, Michael P., and VanHoutte, James J., to Dresser Industries, Inc. Inside repair clamp. 3,516,446, Cl. 138-97.

Ohlson, B Erik: See—
Bayless, Frank K., Descaries, Raymond, Ohlson, B Erik, and Anderson, James 3,516,107.

Ohno, Masaji, and Naruse, Norio, to Toyo Rayon Kabushiki Kaisha. Linear aliphatic γ -cyanoaldehydes and preparation thereof. 3,517,047, Cl. 260-465.9

Oishi, Kazuo, to Nippon Denso Kabushiki Kaisha. Transistorized condenser discharge ignition system with a vacuum regulator. 3,517,260, Cl. 315-223.

Okamoto, Yujiro: See—
Fukuda, Kenji, and Okamoto, Yujiro 3,516,239.

Okamura, Toshio, Izumi Sigeya, and Watanabe, Isao, to Nissin Electric Co. Ltd. Capacitor voltage transformer. 3,517,263, Cl. 317-12.

Okubo, Toshio, to Nippon Electric Company, Limited. Scanning pulse generator. 3,517,219, Cl. 307-269.

Olderman, Gerald M.: See—
Bryanko, Carl, and Olderman, Gerald M. 3,516,943.

Oldfield, Harry: See—
Andrews, Edward George David, Oldfield, Harry, and Healey, Gordon Terry 3,516,251.

Olin Mathieson Chemical Corporation: See—
Butler, David F., 3,516,246.
Clark, Sheldon L., Polak, Roger J., and Wojtowicz, John A., 3,517,030.
Haugwitz, Rudiger D., 3,517,017.
Haugwitz, Rudiger D., 3,517,018.
Lathrope, Gerald A., Thompson, Reuel E., and Ives, Wayne S., 3,516,360.
Lewis, Oliver N., and Badali, Joseph A., 3,516,189.

O'Brien, John J., 3,516,323.

O'Link, Maurice H., to Stearns Manufacturing Company. Floatable life preserver seat insert. 3,516,098, Cl. 9-12.

Oliver, Donald Sears, to Itek Corporation. Apparatus and method for optical read-out of internal electric field. 3,517,206, Cl. 250-225.

Olsen, Lawrence O., to Hyster Company. Vibratory compactor. 3,516,341, Cl. 94-50.

Olsson, Billy E., to Berg Electronics, Inc. Memory frame magnet wire terminal. 3,517,377, Cl. 339-273.

Olympia Werke AG: See—
Behrens, Herbert, 3,516,601.

Oman, Robert M.: See—
Muly, Emil C., Jr., and Oman, Robert M. 3,516,920.

Omark Industries, Inc.: See—
Silvon, Kay, Buttner, Horace J., and Carter, Russell E., 3,516,459.

O'Neill, Charles E., Queneau, Paul E., and Warner, John S., to International Nickel Company, Inc. The fire refining of nickel-containing metallurgical intermediates and scrap. 3,516,818, Cl. 75-23.

Onishi, Hachiro: See—
Nakazawa, Chirichi, Hiranami, Hiroshi, Kan, Takashi, Ichikawa, Yoshio, and Onishi, Hachiro 3,516,229.

Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio, to Hitachi Cable Ltd. Cable insertion unit or use in electric cable joint and terminal. 3,517,113, Cl. 174-75.

Orchard, Henry J., and Sheahan, Desmond F., to Automatic Electric Laboratories, Inc. Circuit for simulating two mutually coupled inductors and filter stage utilizing the same. 3,517,342, Cl. 333-24.

Ort, Morris R.: See—
Mottus, Edward H., and Ort, Morris R. 3,516,978.

Osaka Prefecture: See—
Kinoshita, Mashiro, and Sunada, Tsuyoshi, 3,517,192.

Osdene, Thomas S.: See—
Santilli, Arthur A., and Osdene, Thomas S. 3,517,061.

Osdene, Thomas S., and Santilli, Arthur A., to American Home Products Corporation. 4-Amino-2-aryl-7-alkylamino-6-pteridinecarboxamides. 3,516,998, Cl. 260-247.5

Ossfeldt, Bengt E., to Telefonaktiebolaget L M Ericsson. Method of localizing a fault in a system including at least two parallelly working computers. 3,517,174, Cl. 235-153.

Ostergren, Bo Lennart: See—
Alwall, Nils, Ostergren, Bo Lennart, and Hagstrom, Nils Olov Wilhelm 3,516,548.

Otis Elevator Company: See—
Krauer, Otto Albert, Brooks, Kenneth Raymond, and Benjamin, Sidney Howard, 3,516,518.

Ott, Hans: See—
Dueringer, Heinrich, and Ott, Hans 3,517,251.

Ott, Hans, to Sandoz-Wander, Inc. Tetrahydro-isoquinol[2,1-d][1,4]-benzodiazepines. 3,517,015, Cl. 260-288.

Outboard Marine Corporation: See—
Norton, Raymond F., and Hale, Gordon B., 3,517,184.

Overhead Door Corporation: See—
Pemberton, Paul E., and Loose, Sheldon D., 3,516,474.

Owen, Joseph R.: See—
Petrocelli, Edward A., and Owen, Joseph R. 3,517,121.

Owen, Joseph R., to United States of America, Navy. Selective image obliteration in electronic synthesizers. 3,517,122, Cl. 178-6.

Owens, Wiley H., to Honeywell Inc. Pyrotechnic device for interrupting the light output of a flashbulb. 3,517,196, Cl. 250-201.

Owens-Corning Fiberglass Corporation: See—
Underwood, John T., Palmer, Burton M., Canfield, Sheldon A., and Pitt, Richard E., 3,516,809.

Oy Tampella AB: See—
Manninen, Paavo, and Asikainen, Niilo, 3,516,358.

Ozaki, Yoshihisa: See—
Nakamura, Yozo, and Ozaki, Yoshihisa 3,516,805.

Ozu, Masao: See—
Monden, Tuncu, Ozu, Masao, and Watanabe, Makoto 3,516,766.

Pace, George A.: See—
Binford, Robert F., Rodgers, Otis N., and Pace, George A. 3,516,689.

Pacific Measurements, Inc.: See—
Britton, Ralph H. Jr., 3,517,213.

Packham, Derek W.: See—
Cleary, Alan, Packham, Derek W., and Pashley, Jack C. 3,516,176.

Padday, John Frank, to Eastman Kodak Company. Coating of gelatin silver halide photographic emulsions. 3,516,844, Cl. 117-34.

Paige, Hilliard W., and Moyer, Ronald G., to General Electric Company. Longitude keeper. 3,516,622, Cl. 244-1.

Pako Corporation: See—
Gallistel, Albert F., and Tierney, Myrel T., 3,516,890.

Palmer, Burton M.: See—
Underwood, John T., Palmer, Burton M., Canfield, Sheldon A., and Pitt, Richard E. 3,516,809.

Panczynski, George A.: See—
Durno, August J., Maurer, Frank C., and Panczynski, George A. 3,516,563.

Pangalia, Frans V.: See—
Field, Sheldon B., Pangalia, Frans V., Miller, Richard Lawrence, and Grigoraki, Nicholas Mark 3,516,377.

Panik, Joseph J.: See—
Seedorf, Alexander Nicholas P., and Panik, Joseph J. 3,516,147.

Panopix Research Inc.: See—
Wells, Leon W., 3,516,738.

Papa, Frank J., Jr., to Industrial Timer Corporation. Front chassis assembly for time delay or interval timers. 3,516,244, Cl. 58-22.9

Papafingos, Pandelis, and Bernath, Kornel, to American Metal Climax, Inc. Process for producing corrosion-resistant coating on article of aluminum alloy, and product. 3,516,877, Cl. 148-6.27

Pappadis, Nicholas P., to Zenith Radio Corporation. Potential gradient stabilized cathode-ray tube. 3,517,242, Cl. 313-70.

Paquette, Charles F.: See—
Sedlock, Edward J., and Paquette, Charles F. 3,517,239.

Paris, Francois Gilbert, and Giraud, Francois L., to Societe de l'Aerotrain. Guide track for ground effect machine. 3,516,362, Cl. 104-23.

Parlee, Norman A. D., and Mahin, William E., to Kaiser Industries Corporation. Environmental control process for gaseously removing oxygen from liquid metals. 3,516,819, Cl. 75-51.

Partyka, Richard A.: See—
Buchanan, Ronald L., and Partyka, Richard A. 3,517,024.

Pashley, Jack C.: See—
Cleary, Alan, Packham, Derek W., and Pashley, Jack C. 3,516,176.

Patent & Development, Incorporated: See—
Wood, George C., and Giles, George W., 3,516,237.
Wood, George C., and Kirkpatrick, John H., Jr., 3,516,238.

Pathe, Claude: See—
Nee, Claude, Pathe, Claude, and Charnay, Claude 3,516,868.

Patrichi, Mihai D. Thermal relay, double pole; normally-open and normally-closed. 3,517,366, Cl. 337-148.

Patterson, Clinton E.: See—
Sundquist, Nils E., and Patterson, Clinton E. 3,516,317.

Patterson, William J., to United States of America, National Aeronautics and Space Administration. Synthesis of siloxane-containing epoxy polymers. 3,516,964, Cl. 260-46.5

Pattison, Thomas W.: See—
Koo, Charles M. C., Pattison, Thomas W., and Herbst, David R. 3,516,987.

Patton, John T., to Esso Research and Engineering Company. Recovery of shale oil. 3,516,495, Cl. 166-272.

Patz Company: See—
Patz, Paul, 3,516,535.

Patz, Paul, to Patz Company. Flight cleaner for material moving mechanism. 3,516,535, Cl. 198-229.

Paxton, Allen D., Paxton, Stanley K., and Paxton, Kenneth P., to Paxton Sales Corporation. Automatic bagging machine. 3,516,221, Cl. 53-63.

Paxton, Douglas R. Paxton vapor engine cycle. 3,516,249, Cl. 60-38.

Paxton, Kenneth P.: See—
Paxton, Allen D., Paxton, Stanley K., and Paxton, Kenneth P. 3,516,221.

Paxton Sales Corporation: See—
Paxton, Allen D., Paxton, Stanley K., and Paxton, Kenneth P. 3,516,221.

Paxton, Stanley K.: See—
Paxton, Allen D., Paxton, Stanley K., and Paxton, Kenneth P. 3,516,221.

Pechard, Lucien, to Service d'Exploitation Industrielle des Tabacs et des Allumettes. Device for the direct reintroduction of cut end trimmings from cigar bunches and cigars in a cigar-making machine. 3,516,418, Cl. 131-23.

Peck, Daniel A., to United Aircraft Corporation. Hydraulic control valve. 3,516,444, Cl. 137-625.69

Pedrazzoli, Andrea, and Dall'Asta, Leone, to Societe d'Etudes de Recherches det d'Applications Scientifiques & Medicales E.R.A.S.M.E.N. (β -Alkoxy- β -phenyl-ethyl)-piperidine derivatives. 3,517,016, Cl. 260-294.3

Pefferman, Ernest B.: See—
Fawcett, Kenneth J., Jr., Fuhr, William H., Pefferman, Ernest B., and Stone, William M. 3,517,176.

Pelton & Crane Company: See—
Leffler, Dennis F., 3,516,160.

Pemberton, Paul E., and Loose, Sheldon D., to Overhead Door Corporation. Door brace structure. 3,516,474, Cl. 160-209.

Pemberton, Russell V., Jr. Combination suitcase and ironing board. 3,516,523, Cl. 190-11.

Pennington Garment Company: See—
Terry, Trent B., 3,516,093.

Pennington, Keith S.: See—
Collier, Robert J., and Pennington, Keith S. 3,516,721.

Pennwalt Corporation: See—
Block, Burton Peter, and Dahl, Gerd Helmut, 3,517,060.
Kulischenko, Walter, 3,516,204.
Schuster, Ludwig K., and Tongyai, Singkata, 3,516,847.

Pensa, Ildo E., and Greenhall, Armand L., to Stevens, J. P., & Co., Inc. Novel modifying process. 3,516,781, Cl. 8-115.7

Peppier, William S.: See—
Baker, Leroy D., and Peppier, William S. 3,516,227.

Perdue, Richard R.: See—
Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z. 3,516,537.

Pereira, Celso Rivada: See—
Bertullo, Victor H., and Pereira, Celso Rivada 3,516,349.

Peret, John W.: See—
Bennett, John D., Johnson, Ford L., Mayes, Fred M., and Peret, John W. 3,516,502.

Perkin-Elmer Corporation, The: See—
Hinman, Clyde D., Slomba, Albert F., and Stoddart, Hugh F., 3,516,744.

Perkins, Edgar L., to Sperry Rand Corporation. Power transmission. 3,516,767, Cl. 418-81.

Perkins, Glen E. Road grooving process and apparatus. 3,516,339, Cl. 94-45.

Perkins, Glen E. Concrete pavement grooving process and apparatus. 3,516,340, Cl. 94-45.

Perleman, David Eric, to Eastman Kodak Company. Complementary emitter follower. 3,517,324, Cl. 330-17.

Perma Gesellschaft mit beschränkter Haftung: See—
Maurer, Carl Max, 3,516,672.

Perriman Enterprises, Inc.: See—
Pittman, James H., Jr., 3,516,447.

Perrine, Walter E. Game prize with interlocking door entrance means and token dispenser. 3,516,663, Cl. 273-1.

Perrino, Albert C., to I.C.I. Organics Inc. Vinyl ethyl ether or thioether sulfones. 3,517,068, Cl. 260-607.

Pernstorp AB: See—
Hofors, Rune J.V., and Sjostrand, Monica, 3,516,962.

Petersen, William H., to Shell Oil Company. Underwater wellhead connector. 3,516,492, Cl. 164-0.6

Peterson, Donald J., to Procter & Gamble Company. The Trialkyl(silyl)(substituted)methyl alkylmetal compounds. 3,517,042, Cl. 260-448.2

Peterson, George R., to United States of America, Atomic Energy Commission. Process for preparing high-density isotropic graphite structures. 3,517,092, Cl. 264-29.

Peterson, Norman E., and Courchee, Ernest E., Jr., to Digitech, Inc. Automatic communication circuit evaluation and sensory system. 3,517,125, Cl. 178-69.

Peterson, Victor W., to General Motors Corporation. Bearing. 3,516,717, Cl. 308-189.

Petrocelli, Edward A., and Owen, Joseph R., to United States of America, Navy. Electronic periscope panning apparatus. 3,517,121, Cl. 178-6.8

Petty, Gilbert L. Apparatus for turning tubular articles. 3,516,583, Cl. 223-39.

Peyton, Robert C., to RCA Corporation. Arrangement for handling printable character bit codes. 3,517,165, Cl. 235-61.9

Pfeffer, Arnold Z. Picture hanging. 3,516,165, Cl. 33-180.

Pfeuffer, Alfred, and Komma, Gerhard, to Messer Griesheim GmbH. Cutting device with slidably linked supporting points. 3,516,650, Cl. 266-23.

Pfizer, Chas., & Co., Inc.: See—
Cameron, Donald P., and Stephens, Charles R., 3,517,031.
Cronin, Timothy H., and Heas, Hans-Jurgen E., 3,517,005.

Pfleiderer, Gerhard: See—
Kirchhoff, Heinrich, Pfeleiderer, Gerhard, and Holle, Kurt 3,516,907.

Plugfelder, Bernard, to Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine. Process for obtaining thiocarbamathohalokanes. 3,517,044, Cl. 260-455.

Philco-Ford Corporation: See—
Doyle, Walter M., and White, Matthew B., 3,517,330.
Frank, Howard S., 3,516,566.

Philipp, Fritz: See—
Horn, Lutz, and Philipp, Fritz 3,516,870.

Phillip, Herbert R., to General Electric Company. Light emitting and absorbing devices. 3,517,198, Cl. 250-211.

Phillips Petroleum Company: See—
Rasmussen, Ole-Bendt, 3,517,098.

Pickard, Frank C.: See—
Mayer, Ernest F., Brannon, Ward, Schaller, Edwin S., Jr., and Pickard, Frank C. 3,516,503.

Picus, Gerald S., and Van Atta, Lynette B., to Hughes Aircraft Company. Bulk crystal semiconductor electroluminescent light source. 3,517,244, Cl. 313-108.

Piech, Ferdinand, and Schrag, Rolf, to Porsche KG, Firma. Axial cooling air blower for internal combustion engines. 3,517,207, Cl. 290-1.

Pierini, John M.: See—
Sarazen, John C., Pierini, John M., and Larsen, Reidar G. 3,517,376.

Pierrel S.p.A.: See—
Rokovich, Ivan, and Sorrentino, Pasquale, 3,517,102.

Pieterick, Jerome A.: See—
Janssen, Edward W., and Pieterick, Jerome A. 3,516,852.

Piggott, Richard G., to Spraying Systems Co. Indexable sprayer with plural nozzle orifices. 3,516,611, Cl. 239-391.

Piggott, Richard G., to Spraying Systems Co. Flow diverter ball valve. 3,516,638, Cl. 251-175.

Pilkington Brothers Limited: See—
Baybutt, William Edward, 3,517,107.

Pillsbury Company, The: See—
Shea, Richard A., 3,516,836.

Pines, Seemon H., Karady, Sandor, and Slettinger, Meyer, to Merck & Co., Inc. Preparation of optically active amino acid. 3,517,057, Cl. 260-519.

Pintach Bamag Aktiengesellschaft: See—
Schenkel, Fritz, Von Hayn, Ernst, and Andrea, Helmut, 3,516,533.

Pirelli S.p.A.: See—
Ferrentino, Antonio, 3,516,158.

Pitney-Bowes, Inc.: See—
Schmeck, Robert E., 3,516,655.

Pitt, Peter, to Shadon Scientific Industries Limited. Syringes. 3,516,577, Cl. 222-309.

Pitt, Richard E.: See—
Underwood, John T., Palmer, Burton M., Canfield, Sheldon A., and Pitt, Richard E. 3,516,809.

Pittman, James H., Jr., to Permian Enterprises, Inc. Cement-lined pipe having end inserts associated therewith. 3,516,447, Cl. 138-109.

Plastiglide Mfg. Corporation: See—
Neville, Donald G., and Straits, Ernest J., 3,516,112.

Platt, Earl A.: See—
Poeschl, George J., and Platt, Earl A. 3,517,197.

Plegat, Alain Edouard, to Societe Anonyme des Usines Chausson. Device for subjecting the movement of a travelling saw to the advance speed of a work part to be cut by said saw. 3,516,314, Cl. 83-295.

Plessey Company Limited, The: See—
Herman, Ralph Bertrand, Renwick, William, and Walters, Leonard Charles, 3,517,338.
Marshall, Richard S., and Summers, Alan S., 3,517,352.
Say, Alan W., 3,516,629.
Skates, Ronald E. J., 3,516,445.
Williams, Raymond T.F., 3,517,175.

- Plessey Company, The: See—
Humbly, Edward Thomas, 3,516,677.
- Ploog, Uwe, Stein, Werner, and Barnstorf, Joachim, to Henkel & Cie., GmbH. Novel compositions for preparing polyurethane coatings. 3,516,954, Cl. 260-18.
- Pluegar, Lowell B.: See—
Nelson, Gladwyn D., and Pluegar, Lowell B. 3,516,271.
- Poeschl, George J., and Platt, Earl A., to Honeywell Inc. Pyrotechnic means for interrupting the light output of a flashbulb. 3,517,197, Cl. 250-201.
- Pohlentz, Elmer E., to Aluminum Company of America. Nipple assembly and package. 3,516,564, Cl. 215-11.
- Poingt, Roger, to Etablissements Proner, S.A. Insulating protector for clips used in electrical connections. 3,517,370, Cl. 339-59.
- Polak, Roger J.: See—
Clark, Sheldon L., Polak, Roger J., and Wojtowicz, John A. 3,517,030.
- Pomagalski, Jean, S.A.: See—
Pomagalski, Jean, and Durand, Marcel, 3,516,642.
- Pomagalski, Jean, and Durand, Marcel, to Pomagalski, Jean, S.A. Hoiat. 3,516,642, Cl. 254-167.
- Ponnet, Jules P.: See—
Thoma, Jozef A., Ponnet, Jules P. J., and Coonen, Joeh A.M.J. 3,517,058.
- Poor & Company: See—
Gilbert, George T., 3,516,613.
- Pope, Karl D., III: See—
Morey, Thomas H., Pope, Karl D., III, and Tierney, Robert R. 3,516,099.
- Porsche KG, Firma: See—
Piech, Ferdinand, and Schrag, Rolf, 3,517,207.
- Portec, Inc.: See—
Robards, Preston O., 3,517,187.
- Porter, Myra L., to Combination hair curling and straightening iron. 3,516,420, Cl. 132-7.
- Potlatch Forests, Inc.: See—
Gulstrom, Richard R., and Scheelke, Gerald F., 3,516,539.
- Powell Magnetic Industries, Inc.: See—
Williams, Harley H., and Brundick, Charles L., 3,517,208.
- Powell, William W., and Ammons, Thomas J., to Hughes Aircraft Company. Method of etching a magnetic element for increase in coercivity. 3,516,881, Cl. 156-17.
- Powers, Eugene L., to Mobay Chemical Company. Process for the preparation of substantially pure 4,4'-diaminodiphenylmethane. 3,517,062, Cl. 280-570.
- Pranor Industries, Inc.: See—
Wasielewski, John Paul, and McAtee, William L., 3,517,311.
- Pratt, Edgar Harry, to Morgan Construction Company. Coil forming apparatus. 3,516,139, Cl. 29-200.
- Pratt Precision Hydraulics Limited: See—
Jackson, Joseph F., 3,516,333.
- Preisling, Richard William. Self-sealing valve. 3,516,432, Cl. 137-329.02.
- Prencio Manufacturing Company: See—
Hines, Eugene W., McGrath, Timothy, Lorenz, James E., and Herman, James A., 3,516,777.
- Priestman, Francis Dennis, to Rootes Motors Limited. Raising and lowering regulators. 3,516,199, Cl. 49-40.
- Procter & Gamble Company, The: See—
Peterson, Donald J., 3,517,042.
- Proctor, Aurion M.: See—
Bradford, Dudley M., and Proctor, Aurion M. 3,516,366.
- Proud, William H.: See—
Herman, Elvin E., and Proud, William H. 3,517,118.
- Pullum, Geoffrey George: See—
Knight, Ronald George, Butcher, John Anthony Weeks, Pullum, Geoffrey George, and Willson, Michael John 3,517,133.
- Pumpenfabrik Urach: See—
Dettinger, Willi, 3,516,760.
- Purhonen, Matti: See—
Laakkonen, Launo, and Purhonen, Matti 3,516,348.
- Pusch, Gunter, to Electro GmbH. Optical deflection device. 3,516,722, Cl. 350-7.
- Quackenbush, John J., and Corbett, Herbert O., to National Distillers and Chemical Corporation. Multi-web laminated extrusion process. 3,516,886, Cl. 156-244.
- Quaedvlieg, Mathieu: See—
Hagge, Walter, Quaedvlieg, Mathieu, Heusch, Rudolf, Hebbel, Konrad, and Schiffmann, Richard 3,516,833.
- Queneau, Paul E.: See—
O'Neill, Charles E., Queneau, Paul E., and Warner, John S. 3,516,818.
- Quist, George F.: See—
Lang, Theo O., and Quist, George F. 3,516,123.
- Rabe, George B.: See—
Grossman, Walter B., and Rabe, George B. 3,516,578.
- Rabe, Peter: See—
Dieterle, Horst, and Rabe, Peter 3,516,776.
- Rabe, Peter, to Mattner, Heinrich, GmbH. Lighter. 3,516,775, Cl. 431-344.
- Rachlin, Albert Israel: See—
Gurien, Harvey, Wagner, David Paul, and Rachlin, Albert Israel 3,517,066.
- Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard, 50% to Chubb & Son's Lock and Safe Company Limited, and 50% to Smiths Industries Limited. Token controlled access-control equipment and item-dispensing systems including such equipment. 3,516,527, Cl. 194-4.
- RAI Research Corporation: See—
D'Agostino, Vincent F., and Brieff, Philip, 3,516,670.
- Rainer, Erich: See—
Brunner, Julius, Rainer, Erich, and Kaulfersch, Helmut 3,517,289.
- Rainer, Norman B.: See—
Reedy, Ora Lee, Twilley, Ian C., and Rainer, Norman B. 3,516,956.
- Rakestraw, Lawrence F.: See—
Dunn, Stanley A., and Rakestraw, Lawrence F. 3,516,478.
- Ransburg Electro-Coating Corporation: See—
Juvinall, James W., Kock, Erhard, Smart, William L., and Williams, Herschel A., 3,517,262.
- Rappeneau, Jean: See—
Cledat, Jean, Moreau, Michel, and Rappeneau, Jean 3,516,948.
- Raschke, Herbert A., to Bullard, E. D., Company. Head suspension for safety hat. 3,516,092, Cl. 2-3.
- Raskhodoff, Nicholas M., to United States of America, Navy. Bus bar assembly with circuit breakers. 3,517,274, Cl. 317-112.
- Rasmussen, Ole-Bendt, to Phillips Petroleum Company. Process of film stretching over grooved bar. 3,517,098, Cl. 264-288.
- Ratliff, Harvey L., Jr., to Jetru Inc. Two-ocular panoramic viewing device. 3,516,725, Cl. 350-131.
- Raupp, Ray J.: See—
Landree, Raymond L., and Raupp, Ray J. 3,516,540.
- Rausch, Werner, Oei, Han Yong, and Edler, Hans-Joachim, to Hooker Chemical Corporation. Process for coating ferrous surfaces. 3,516,875, Cl. 148-6.15.
- Rawdon, Albert H., to Riley Stoker Corporation. Steam generating unit. 3,516,391, Cl. 122-491.
- Ray, William Alton, to International Telephone and Telegraph Corporation. Hydraulic system. 3,516,332, Cl. 91-48.
- Raycon Corporation: See—
Check, John M., 3,517,153.
- Raymar, Inc.: See—
Hahn, Raymond P., 3,516,697.
- RCA Corporation: See—
Carpenter, David H., 3,517,114.
- Reagan, Cleo A., to Indiana Brass Co., Inc., The. Toilet flushing apparatus. 3,516,094, Cl. 4-41.
- Rebres, Robert P., to Bausch & Lomb Incorporated. Microscope illuminator. 3,517,183, Cl. 240-2.
- Rech, Jakob, to Burroughs Corporation. Machine for assembling electronic components with printed circuit boards. 3,516,141, Cl. 29-203.
- Reed, Charles G.: See—
Sleater, Roland G., and Reed, Charles G. 3,517,217.
- Reedy, Ora Lee, Twilley, Ian C., and Rainer, Norman B., to Allied Chemical Corporation. Spinnable compositions comprising a fiber forming polyamide, a fiber forming polyester and a spinning aid. 3,516,956, Cl. 260-22.
- Rees, Mackworth G.: See—
Gaines, Donald R., Brothers, James L., and Lambert, James R., 3,517,141.
- Regie Nationale des Usines Renault: See—
Saubesty, Jean, 3,516,230.
- Regnier, Gilbert, Canevari, Roger, and Le Douarec, Jean-Claude, to Societe en nom collectif 'Science Union et Cie. 1,4-Diaza-bicyclo-(4,4,0) benzo-(1,2,h)-decane compounds. 3,517,012, Cl. 260-268.
- Reich, Karl M., Maschinenfabrik: See—
Andre, Herbert, and Cast, Adolf, 3,516,574.
- Reifel, Harry, and Di Benedetto, Vito J., to Stevens-Arnold Inc. Shielded transformer. 3,517,361, Cl. 336-84.
- Reilly, James J., Jr.: See—
Wiswall, Richard H., Jr., and Reilly, James J., Jr. 3,516,263.
- Reinbold, Emmett Burton, to General Tire & Rubber Company, The. Processability of elastomers having a narrow molecular weight distribution. 3,516,977, Cl. 260-94.7.
- Reinke, Richard F., Bandage winder. 3,516,618, Cl. 242-60.
- Rekewitz, Rudolf, and Horeth, Dietmar, to Siemens Aktien-gesellschaft. Device for adjusting a type carrier in teletype or data teletype machines. 3,517,124, Cl. 178-34.
- Renard, Guy C.: See—
Malavard, Lucien C., Marty, Pierre M., and Renard, Guy C. 3,517,169.
- Renckhoff, Gustav: See—
Wolfe, Wolfgang, and Renckhoff, Gustav 3,516,972.
- Rendahl, Phillip R., Cutting tool for valve seats. 3,516,329, Cl. 90-12.5.
- Rendina, John F., to Hewlett-Packard Company. Burner for spectroscopic use. 3,516,771, Cl. 431-126.
- Renella, Joseph Gerald, to American Cyanamid Company. Isolation of nystatin. 3,517,100, Cl. 424-123.

- Rennick, John L., to Zenith Radio Corporation. Arrangement for converting a PAL color television signal to an NTSC color signal. 3,517,116, Cl. 178-5.4.
- Renwick, William: See—
Herman, Ralph Bertrand, Renwick, William, and Walters, Leonard Charles 3,517,338.
- Research Instruments & Controls, Inc.: See—
Anderson, Kenneth G., Anderson, James R., and Hatcher, John B., 3,517,316.
- Resinite Corporation: See—
Hilgers, Raymond H., 3,517,365.
- Reske, Albert E., to Tel-E-Lect, Inc. Boom construction. 3,516,553, Cl. 212-55.
- Rexford, Donald L., to General Electric Company. Fluidic rectifier device. 3,516,428, Cl. 137-81.5.
- Rexford, Donald L., to General Electric Company. Fluidic multiplier circuit. 3,516,605, Cl. 235-200.
- Rheem Manufacturing Company: See—
Draper, Everett J., 3,516,676.
- Klenz, Karl A., 3,516,222.
- Rhoads, Delmar D., and Mackay, Robert H., to Lincoln Manufacturing Company, Inc. Food container. 3,516,485, Cl. 165-27.
- Rhone-Poulenc S.A.: See—
Bonneau, Claude, 3,516,902.
- Riat, Henri, Gunst, Raymond, and Hoelzle, Gerd, to Ciba Limited. Mono azo reactive dyestuffs. 3,516,981, Cl. 262-153.
- Ribner, Morris, to International Telephone and Telegraph Corporation. Combination voice and data telephone sub-set. 3,517,137, Cl. 179-81.
- Richer, John G., to United States of America, Navy. Comparator. 3,517,215, Cl. 307-235.
- Richman, Peter L. Harmonic-insensitive gated A. C. to D. C. converter. 3,517,298, Cl. 321-9.
- Riester, William C., to Trico Products Corporation. Latch release system. 3,516,704, Cl. 296-65.
- Rieva, Johann Jacob, to Beton- und Monierbau AG. Internally prestressed reinforcement rod. 3,516,211, Cl. 52-230.
- Rigal, Waldo A., Folding walker assembly. 3,516,425, Cl. 135-45.
- Riley Stoker Corporation: See—
Rawdon, Albert H., 3,516,391.
- Rilling, Karl: See—
Scholl, Hermann, and Rilling, Karl 3,517,287.
- Rimlinger, Donald C., to Stromberg-Carlson Corporation. Gated amplifier circuit arrangement for time division multiplex switching system. 3,517,132, Cl. 179-15.
- Rinkler, Heinrich, Braden, Rudolf, and Nuech, Gunther, to Farbenfabriken Bayer Aktiengesellschaft. Acrylonitrile copolymers containing sulfonic acid groups. 3,516,974, Cl. 260-79.3.
- R. I. Patents, Inc.: See—
Arnold, Roman F., 3,517,156.
- Ritchie, David S., to Barr & Stroud Limited. Optical system for reading the scales of azimuth measuring instruments. 3,516,748, Cl. 356-139.
- Robards, Preston O., to Portec, Inc. Freight car retarding system. 3,517,187, Cl. 246-182.
- Robb, Howard E., to Gulf Oil Corporation. Polyamide compositions. 3,516,961, Cl. 260-41.
- Robens, Erich Maria: See—
Sandstede, Gerd, and Robens, Erich Maria 3,516,429.
- Robertshaw Controls Company: See—
Chambers, William W., 3,516,484.
- Di Pilla, Anthony A., 3,517,148.
- McIntosh, Harold A., and Wagner, Edmond M., 3,517,150.
- Robertson, Dean S., and Jackson, Carroll V., to Baldwin-Lima-Hamilton Corporation. Method and apparatus for leveling self-erecting platform structures. 3,516,513, Cl. 182-19.
- Robertson, Dean S., and Jackson, Carroll V., to Baldwin-Lima-Hamilton Corporation. Traveling crane. 3,516,555, Cl. 212-140.
- Roblee, Melvin A., Method and apparatus for alleviating discomfort in the lithotomy position. 3,516,652, Cl. 269-328.
- Rockwell-Standard Company: See—
Gage, Arthur F., 3,516,591.
- Rodgers, Otis N.: See—
Binford, Robert F., Rodgers, Otis N., and Pace, George A. 3,516,689.
- Roefaro, Thomas A. Tool for dressing freshly cut meat. 3,516,106, Cl. 15-236.
- Roerig, Arnold J., and Brown, Kenton J., to Beloit Corporation. Chip feeder valve. 3,516,714, Cl. 302-14.
- Roesch, Edouard, to Dixi S.A. Gate relaxation oscillator. 3,517,326, Cl. 331-57.
- Rohm & Haas Company: See—
Brodynya, John G., 3,516,897.
- Jones, Wilford Donald, Baldino, James Peter, and Melamed, Sidney, 3,516,903.
- Lewis, Sheldon N., and Miller, George A., 3,517,040.
- Miller, George A., Lewis, Sheldon N., and Law, Andrew B., 3,517,022.
- Rohr Corporation: See—
Urquhart, George R., 3,516,511.
- Rolls-Royce (Composite Materials) Limited: See—
Baker, William Andrew, 3,516,448.
- Rolls-Royce Limited: See—
Andrews, Edward George, David, Oldfield, Harry, and Healey, Gordon Terry, 3,516,251.
- Bishop, Basil T. G., 3,516,547.
- Rolovich, Ivan: See—
Jessee, Joseph S., and Rolovich, Ivan 3,516,201.
- Rolovich, Ivan, and Sorrentino, Pasquale, to Pierrel S.p.A. Oxytetracycline antibiotic compositions employing N-(beta-ox-ethyl)piperazine or N-N'bis-(beta-ox-ethyl)piperazine and magnesium chloride. 3,517,102, Cl. 424-227.
- Roods, John F., and Buschman, Jerome A., to McGraw-Edison Company. Power lathe. 3,516,456, Cl. 142-1.
- Rootes Motors Limited: See—
Priestman, Francis Dennis, 3,516,199.
- Roper, Charles R.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R. 3,516,571.
- Roper, Frank: See—
Roper, William H., Roper, Robert E., and Roper, Charles R., 3,516,571.
- Roper, Robert E.: See—
Roper, William H., Roper, Robert E., and Roper, Charles R. 3,516,571.
- Roper, William H., Roper, Robert E., and Roper, Charles R., 1/5 to Roper, Frank, and 1/5 to Miller, Ralph A. Container and cover therefor. 3,516,571, Cl. 220-60.
- Rosenberg, Marvin: See—
Graham, Stanley Lewis, Rosenberg, Marvin, Le Vasseur, Gilbert Edward, Sr., Jones, Willburn Lewis, Lew, Jem Yia, and Challas, John Van Hoesen 3,516,274.
- Rosenberg, Robert B., and Larson, Dennis H., to Institute of Gas Technology, Burner. 3,516,773, Cl. 431-284.
- Rosenberger, Frederick E.: See—
Juhl, William G., Knox, Walter R., Koons, Russell E., and Rosenberger, Frederick E. 3,517,076.
- Rosenquist, Kurt E., to Louverdrap, Inc. Interlocking cap for foldable door. 3,516,473, Cl. 160-183.
- Rosier, Laurence L., to International Business Machines Corporation. Four layer diode device insensitive to rate effect and method of manufacture. 3,517,280, Cl. 317-235.
- Rosmarin, Philip F., to Goodman, H., & Sons, Inc. Hair rollers. 3,516,421, Cl. 132-33.
- Ross, David S., to Hydro-Clear Corporation. Method of treating liquid waste effluent. 3,516,930, Cl. 210-32.
- Ross, John J.: See—
Scarpelli, August F., Ferguson, Millard A., and Ross, John J. 3,517,154.
- Rosow, Vernon J., to United States of America, National Aeronautics and Space Administration. Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma. 3,517,302, Cl. 324-34.
- Roth, Sorrell: See—
Litt, Morton H., and Roth, Sorrell 3,516,944.
- Rottman, Joel: See—
Trimble, James W., and Rottman, Joel 3,516,666.
- Ruben, Murray A., to Tyco Laboratories, Inc. Battery charger. 3,517,294, Cl. 320-24.
- Rubinstein, Richard B., to General Instrument Corporation. FET dynamic data inverter. 3,517,210, Cl. 307-205.
- Rudin, Harry R., Jr., to Bell Telephone Laboratories, Incorporated. Four-quadrant phase shifter. 3,517,323, Cl. 328-155.
- Ruegg, Rudolf: See—
Gloor, Urs, Ruegg, Rudolf, and Schwieter, Ulrich 3,517,070.
- Ruggero, Santo L., Inflatable intranasal tampon. 3,516,407, Cl. 128-325.
- Ruppel, Friedrich: See—
Braun, Siegfried, Ruppel, Friedrich, and Schippers, Heinz 3,516,120.
- Rylander, Paul N.: See—
Marschik, John F., and Rylander, Paul N. 3,517,021.
- Rynders, Raymond G., to International Business Machines Corporation. Communication multiplexing circuit featuring non-synchronous scanning. 3,517,130, Cl. 179-15.
- Sack, Kevin Howard: See—
Leach, Ian Campbell, and Sack, Kevin Howard 3,516,282.
- Safety Flames Corporation: See—
Livingstone, Gregory W., 3,516,774.
- Sage Laboratories, Inc.: See—
Giacobbe, Joseph R., 3,517,152.
- Sainsbury, Jeffrey J., and Norris, Anthony, to Fords (Finbury) Limited. Apparatus for detecting dirt in transparent bottles. 3,517,205, Cl. 250-223.
- Saito, Ituo: See—
Arakawa, Teruaki, and Saito, Ituo 3,517,353.
- Salava, Otto G., to Masonite Corporation. Article support system and fixture. 3,516,552, Cl. 211-87.
- Salava, Otto G., Luck, Allan J., and Schafernak, Dale E., to Masonite Corporation. Fixture assembly for perforated panel. 3,516,634, Cl. 248-223.
- Sallay, Stephen L., to American Home Products Corporation. Intermediates for total synthesis of iboga alkaloids and means of preparation. 3,516,989, Cl. 260-239.3.
- Salyer, Ival O., to Monsanto Company. Polyblenda. 3,517,083, Cl. 260-878.
- Sandelman, Bernhard: See—
Langwell, John D., 3,516,687.
- Sanders Associates, Inc.: See—
Williams, Roy M., Jr., 3,517,252.

Sandoz A.G.: See—
Dore, Jacky, and Neier, Reinhard, 3,516,980.
Sandoz Ltd.: See—
Dore, Jacky, and Neier, Reinhard, 3,516,979.
Dore, Jacky, and Neier, Reinhard, 3,516,980.
Sandoz-Wander, Inc.: See—
Eberle, Marcel K., 3,517,020.
Houlihan, William J., and Manning, Robert E., 3,516,995.
Houlihan, William J., 3,517,004.
Ott, Hans, 3,517,015.
Sandoz-Warner, Inc.: See—
Houlihan, William J., and Manning, Robert E., 3,516,993.
Sandstede, Gerd, and Robens, Erich Maria, to Sartorius Werke, G.m.b.H. System for automatic control of gas pressure. 3,516,429, Cl. 137-87.
Sandstrom, Donald J., and Law, Delman A., to United States of America, Atomic Energy Commission. Ultra-high-strength pressure vessel. 3,516,878, Cl. 148-142.
Sani-Systems, Inc.: See—
Knight, John W., 3,516,562.
Sano, Kazuo, to Tokyo Shibaura Electric Co., Ltd. Cooling means for electrical machines. 3,517,232, Cl. 310-59.
Sano, Shunichi: See—
Yamada, Tatsuya, and Sano, Shunichi, 3,517,126.
Santilli, Arthur A.: See—
Ondene, Thomas S., and Santilli, Arthur A., 3,516,998.
Kim, Dong H., and Santilli, Arthur A., 3,517,007.
Kim, Dong H., and Santilli, Arthur A., 3,517,008.
Kim, Dong H., and Santilli, Arthur A., 3,517,009.
Kim, Dong H., and Santilli, Arthur A., 3,517,010.
Kim, Dong H., Santilli, Arthur A., and Childress, Scott J., 3,517,011.
Santilli, Arthur A., and Ondene, Thomas S., to American Home Products Corporation. SH-1,4-benzodiazepin-5-ones. 3,517,061, Cl. 260-558.
Santucci, Kenneth E. Cable clamp. 3,516,631, Cl. 248-71.
Sarazen, John C., Pierini, John M., and Larsen, Reidar G., to Texas Instruments, Incorporated. Connector for use between an integrated circuit and a circuit panel. 3,517,376, Cl. 339-192.
Sartorius Werke, G.m.b.H.: See—
Sandstede, Gerd, and Robens, Erich Maria, 3,516,429.
Sato, Kimio: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio, 3,517,113.
Saubesty, Jean, to Regie Nationale des Usines Renault. Paint plants with ventilation and paint-particle recovery system. 3,516,230, Cl. 55-228.
Sauer, Gale E., to National Gypsum Company. Fireproofing of steel columns. 3,516,213, Cl. 52-725.
Saunders, Robert H., to Hercules Incorporated. Bonded nonwoven fabric. 3,516,899, Cl. 161-148.
Sawagata, Shinichi: See—
Yoshida, Hidehiko, and Sawagata, Shinichi, 3,516,131.
Sawmill Hydraulics, Inc.: See—
Helle, Delbert V., 3,516,330.
Sawyer, Charles W., to Celotex Corporation, The. Ceiling suspension system and panel. 3,516,212, Cl. 52-592.
Say, Alan W., to Plessey Company Limited, The. Spring-supported unit plates, more particularly for gramophone record players. 3,516,629, Cl. 248-20.
Sayous, Leon: See—
Barbier, Maurice, and Sayous, Leon, 3,517,380.
Scarborough, James Anthony. Golf putter. 3,516,674, Cl. 273-169.
Scarpelli, August F., Ferguson, Millard A., and Ross, John J., to General Motors Corporation. Electrical discharge machining apparatus. 3,517,154, Cl. 219-69.
Scarpelli, Joseph A., to National Cash Register Company, The. Process for drying capsule walls of hydrophilic polymeric material. 3,516,942, Cl. 252-316.
Schaar, John L., and Weesner, William E., to Monsanto Research Corporation. (Alkyl amino alkylene) alkyl silylalkylene malonic acid, ester derivatives and acid addition salts. 3,517,041, Cl. 260-448.2
Schaefer, Donald L., to General Electric Company. Etching silicon dioxide by direct photolysis. 3,516,346, Cl. 76-36.
Schaefer, Herman F.: See—
McDonald, Michael, and Schaefer, Herman F., 3,516,413.
Schafernak, Dale E.: See—
Salava, Otto G., Luck, Allan J., and Schafernak, Dale E., 3,516,634.
Schaller, Edwin S., Jr.: See—
Mayer, Ernest F., Brannon, Ward, Schaller, Edwin S., Jr., and Pickard, Frank C., 3,516,503.
Scheelke, Gerald F.: See—
Gulstrom, Richard R., and Scheelke, Gerald F., 3,516,539.
Scheer, Erich, to Kleninger & Obergfell. Electrical program control device for domestic appliances. 3,517,143, Cl. 200-38.
Schellenberger, Guenter: See—
Mahlo, Heinz, Lange, Klaus Peter, Beckstein, Hellmut, and Schellenberger, Guenter, 3,517,204.
Schenkel, Fritz, Von Hayn, Ernst, and Andres, Hellmut, to Pintsch Bamag Aktiengesellschaft. Machine for handling an elongated work-piece to enable machining operations thereon. 3,516,533, Cl. 198-179.

Scherer Corporation: See—
Miskel, John J., Neary, Edward R., and Schlesinger, Walter, 3,517,105.
Scherzer, Julius: See—
Maher, Philip K., and Scherzer, Julius, 3,516,786.
Schiffmann, Richard: See—
Hagge, Walter, Quaedvlieg, Mathieu, Heusch, Rudolf, Heibel, Konrad, and Schiffmann, Richard, 3,516,833.
Schindelmann, Erika, borne Pichler: See—
Volker, Theodor, and Schindelmann, Erika, borne Pichler, 3,517,039.
Schindler, Charles A.: See—
Landwehr, Gilbert L., and Schindler, Charles A., 3,516,386.
Schippers, Heinz: See—
Braun, Siegfried, Ruppel, Friedrich, and Schippers, Heinz, 3,516,120.
Schlesinger, Walter: See—
Miskel, John J., Neary, Edward R., and Schlesinger, Walter, 3,517,105.
Schlueter, Ernest. Fastener mounting. 3,516,125, Cl. 24-73.
Schlumberger Technology Corporation: See—
McGill, Howard L., 3,516,493.
Walling, Walter W., 3,516,385.
Schmall, Edwin A.: See—
Lovett, John R., and Schmall, Edwin A., 3,516,802.
Schmeck, Robert E., to Pitney-Bowes, Inc. Method and means for fold adjustment in a buckle chute folding machine. 3,516,655, Cl. 270-68.
Schmidlin, Reinhard. Building elements with concealable connecting means and extracting means therefor. 3,516,194, Cl. 46-26.
Schmidt, Hermann: See—
Benteler, Erich, Schmidt, Hermann, Schmidt, Wilhelm, and Beermann, Wilhelm, 3,516,483.
Schmidt, Horst, to Leitz, Ernst, GmbH. Lens system for positioning an image recorder remotely from an aperture. 3,516,734, Cl. 350-216.
Schmidt, Wilhelm: See—
Benteler, Erich, Schmidt, Hermann, Schmidt, Wilhelm, and Beermann, Wilhelm, 3,516,483.
Schmidt, Wilhelm Emil Albert, to Western Electric Company, Incorporated. Method of sealing the ends of electrical components. 3,516,856, Cl. 117-212.
Schmieder, Robert W. Acceleration sensitive device. 3,516,294, Cl. 73-516.
Schmitt, Helmut, to Gossen, P., & Co. G.m.b.H. Electronic exposure meter using two indicator elements. 3,516,750, Cl. 356-224.
Schmitt, Josef. 1,4-Benzodiazepine-2-ones having a carboxylic acid ester or amide group in the 3-position. 3,516,988, Cl. 260-239.3
Schmitt, Wilhelm, to Freudenberg, Carl. Sealing arrangement. 3,516,679, Cl. 277-51.
Schmucke, Donald A., to Weldon Tool Company, The. Pump. 3,516,770, Cl. 103-123.
Schneider, Kuno, to U.S. Philips Corporation, mesne. Electrodynamic transducer and method of manufacturing same. 3,516,151, Cl. 29-594.
Schneider, Robert A., to Bell & Howell Company, The. Method for making an improved high frequency signal bead for magnetic storage medium. 3,516,153, Cl. 29-603.
Schnettler, Frank J.: See—
Monforte, Frank R., and Schnettler, Frank J., 3,516,935.
Scholl, Hermann, and Rilling, Karl, to Bosch, Robert, G.m.b.H. Servo gear shift arrangement for automotive vehicles. 3,517,287, Cl. 318-33.
Scholle Container Corporation: See—
Scholle, William R., 3,516,452.
Scholle, William R., to Scholle Container Corporation. Dispensing container. 3,516,452, Cl. 141-18.
Schowalter, Lewis G., to Case, J. I., Company. Electro draft control mechanism. 3,516,498, Cl. 172-9.
Schrage, Rolf: See—
Piech, Ferdinand, and Schrage, Rolf, 3,517,207.
Schreck, Seymour, and Siegel, Reuben, to Townley Chemical Corporation. Photographic products and processes using an image receiving web. 3,516,827, Cl. 96-29.
Schumacher, Hans, to KRACHT Pumpen- und Motorenfabrik K.G. Actuating mechanism of flap and slide valves, particularly for tankers. 3,516,435, Cl. 137-553.
Schuman, Mark. Apparatus for gas analysis using a closed cylinder containing a free floating piston. 3,516,745, Cl. 356-85.
Schuster, Ludwig K., and Tongyai, Singkata, to Pennwalt Corporation. Coating cementitious articles. 3,516,847, Cl. 117-46.
Schwartz, Jacob L., to Shell Oil Company. Apparatus for making integral containers having parallel vertical walls. 3,516,122, Cl. 18-19.
Schwartz, Larry M. Coupling sleeve. 3,516,694, Cl. 285-236.
Schwartz, Marvin: See—
Schwartz, Robert, Schwartz, Marvin, and Zussman, Ronald, 3,517,305.
Schwartz, Morris, Castedello, William, and Kaprelian, Edward K., to Kalart Company Inc., The. Strip film projector. 3,516,739, Cl. 353-95.
Schwartz, Robert, Schwartz, Marvin, and Zussman, Ronald, to United States of America, Navy. Magnetic tape tester in which, after comparison with a standard, an erroneous signal is stored for later analysis. 3,517,305, Cl. 324-34.

Schwarz, Josef: See—
Kuhle, Ernst, and Schwarz, Josef, 3,516,507.
Schwieter, Ulrich: See—
Gloor, Urs, Ruegg, Rudolf, and Schwieter, Ulrich, 3,517,070.
SCM Corporation: See—
Hofer, Arnold, and Lautenschlager, Ernst, 3,516,976.
Scobel, Hugo, and Steidle, Franz, to Maschinenfabrik Augsburg-Nürnberg A.G. Crankshaft bearing bushings for internal combustion engines. 3,516,716, Cl. 308-23.
Scott Paper Company: See—
Taylor, Ruel E., Jr., and Wedge, Norman C., 3,516,658.
Scraper, Richard M., to Reactive Metals, Inc., 3,516,476, Cl. 164-52.
Scroggins, Elva J., to Drilling Well Control, Inc. Fluid actuated hydraulic pump. 3,516,761, Cl. 417-259.
Sedlock, Edward J., and Paquette, Charles F., to United Aircraft Corporation. High speed commutator and brush assembly. 3,517,239, Cl. 310-237.
Seedorff, A. P., & Co., Inc.: See—
Seedorff, Alexander Nicholas P., and Panik, Joseph J., 3,516,147.
Seedorff, Alexander Nicholas P., and Panik, Joseph J., to Seedorff, A. P., & Co., Inc. Method of fabrication of metallic frames. 3,516,147, Cl. 29-472.1
Seesselberg, Henry A., to Singer Company, The. Control circuits for electromagnetic clutch-brake driving devices. 3,516,526, Cl. 192-12.
Seidler, David. Cosmetic article applicator. 3,516,423, Cl. 132-88.7
Selmakas, Kazys, Gauger, Edward A., Jr., and Henning, Lester A., to DeSoto, Inc. Electrodeposition of heat-hardenable water-dispersible hydroxy-functional hydrophilic resins of low acid value and mixtures thereof with water insoluble aminoplast resins. 3,516,913, Cl. 204-181.
Sello, Stephen B., and Tesoro, Giuliana C., to Stevens, J. P., & Co., Inc. Permanent creasing of wool-containing fabrics. 3,516,782, Cl. 8-127.6
Sel-Rex Corporation: See—
Foulke, Donald Gardner, and Simonian, Atkin, 3,516,848.
Semotan, Zinovia. Artificial lighting system. 3,517,180, Cl. 240-1.1
Seney, John Seymour, to Du Pont de Nemours, E. I., and Company. Performance analyzer and comparator for a pneumatic. 3,516,285, Cl. 73-69.
Seng Company, The: See—
Mikos, Aloysius J., 3,516,096.
Sennwald, Kurt, Vogt, Wilhelm, Kandler, Joachim, and Sorbe, Gunter. Process for the manufacture of hydrocyanic acid. 3,516,789, Cl. 23-151.
Sensel, Robert N., Jr.: See—
Klinker, John J., Jr., and Sensel, Robert N., Jr., 3,516,842.
Serota, Stanley. Grab with adjustable guide mast. 3,516,183, Cl. 37-116.
Service d'Exploitation Industrielle des Tabacs et des Allumettes: See—
Pechard, Lucien, 3,516,418.
Servotronics, Inc.: See—
Trbovich, Nicholas D., and Meyer, William H., 3,517,359.
Seholtz, Walter, to Sterco Industries, Inc. Underwater aquarium filter. 3,516,544, Cl. 210-169.
Sextstone, John H., and Hilgartner, George H., Jr., to Brown & Williamson Tobacco Corporation. Method of making a bonded filter rod for smoking articles. 3,516,885, Cl. 156-203.
Shadon Scientific Industries Limited: See—
Pitt, Peter, 3,516,577.
Shah, Bankim R., to International Business Machines Corporation. Modulation of scanning beams in injection lasers. 3,517,337, Cl. 332-7.51
Shah, Ramesh M., to Lilly, Eli, and Company. Laboratory support ring. 3,516,801, Cl. 23-292.
Shakespeare, Horacio, to General Motors Corporation. Brake splash shield. 3,516,684, Cl. 280-124.
Shank, Herbert C., Jr., and Lowry, Ned W., to Anchor Hocking Corporation. Method and means for surface coating moving rows of glassware. 3,516,849, Cl. 117-94.
Shashkov, Andrei Nikolaevich, Asinovskaya, Gnesa Abramovna, and Ilina, Inna Ivanovna. Solder for soldering or brazing cast iron. 3,516,825, Cl. 75-134.
Shea, Richard A., to Pillsbury Company, The. Fruit containing baking mixes. 3,516,836, Cl. 99-94.
Sheahan, Desmond F.: See—
Orchard, Henry J., and Sheahan, Desmond F., 3,517,342.
Shell, Haskiel R.: See—
Ivey, Kenneth H., Chastain, Sidney J., and Shell, Haskiel R., 3,516,810.
Shell Oil Company: See—
Petersen, William H., 3,516,492.
Schwartz, Jacob L., 3,516,122.
Shelton, Clifford D., to Westvaco Corporation. Steam application system. 3,516,607, Cl. 239-13.
Shenton, Clarence R.: See—
Lewis, Donald E., and Shenton, Clarence R., 3,517,230.
Sherbert, Thomas Leroy, and Sherbert, Tillison Myron, to D.C. Transit System, Inc. Fold-down backrest and passenger vehicle improvements. 3,516,710, Cl. 297-379.
Sherbert, Tillison Myron: See—
Sherbert, Thomas Leroy, and Sherbert, Tillison Myron, 3,516,710.
Sherman, Herbert P. Means for feeding sheet paper into machines. 3,516,656, Cl. 271-52.

Shibata, Kazuo, and Makabe, Hideki, to Shimadzu Seisakusho Ltd. Cross slide spectrophotometer with a diffusing element between sample cell and photoelectric tube. 3,516,746, Cl. 356-96.
Shidara, Keiichi: See—
Goto, Naohiro, and Shidara, Keiichi, 3,517,241.
Shimadzu Seisakusho Ltd.: See—
Shibata, Kazuo, and Makabe, Hideki, 3,516,746.
Shimasaki, Nobuhiko: See—
Yamato, Shigeki, Watanabe, Tatsuki, Shimasaki, Nobuhiko, and Tashiro, Shunji, 3,517,312.
Shimoda, Koichi: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,328.
Shionogi & Co., Ltd.: See—
Hayakawa, Shohei, Kanematsu, Yoshiko, and Fujiwara, Takashi, 3,516,908.
Kano, Hideo, Takahashi, Shiro, Kido, Ryonosuke, and Hirose, Katsumi, 3,516,999.
Shirayama, Kenzo, and Kitamura, Tadakatsu, to Sumitomo Chemical Co., Ltd. Nucleated blend of polypropylene, polyethylene, and ethylene/propylene copolymer. 3,517,086, Cl. 260-897.
Shively, Richard R.: See—
Gilmartin, Michael J., Jr., and Shively, Richard R., 3,517,173.
Shlesinger, Bernard Edward, Jr. Temperature changing circuit programming apparatus. 3,517,166, Cl. 235-61.11
Shockey, Howard J.: See—
Heeter, Victor L., and Shockey, Howard J., 3,516,884.
Shockey, Howard J. Apparatus for bedding a panel into a frame. 3,516,117, Cl. 18-4.
Short, Oliver A., to Du Pont de Nemours, E. I., and Company. Palladium-silver-ceramic contacts. 3,516,857, Cl. 117-212.
Shurtliff, Russell A., to Singer Company, The. Keyboard lock. 3,516,529, Cl. 197-107.
Sidi, Henri, to Tenneco Chemicals, Inc. Process for the preparation of trialkylhydrazines. 3,517,064, Cl. 260-583.
Siebert, Karl: See—
Ackermann, Karl, 3,516,916.
Siegel, Reuben: See—
Schreck, Seymour, and Siegel, Reuben, 3,516,827.
Siemens Aktiengesellschaft: See—
Abel, Konrad, 3,517,209.
Brunner, Julius, Rainer, Erich, and Kaulfersch, Helmut, 3,517,289.
Fisch, Albert, and Kneisel, Otto, 3,517,135.
Gerland, Heinz, and Gotze, Werner, 3,516,859.
Hirshmann, Walter, 3,517,250.
Massar, Ernst, 3,517,231.
Rekewitz, Rudolf, and Horeth, Dietmar, 3,517,124.
Signal Computer Corporation: See—
Sleater, Roland G., and Reed, Charles G., 3,517,217.
Silversmith, Ernest Frank: See—
Gordon, Mendel T., and Silversmith, Ernest Frank, 3,517,074.
Silvon, Kay, Buttner, Horace J., and Carter, Russell E., to Omark Industries, Inc. Sharpeners for chain saws. 3,516,459, Cl. 143-32.
Simmonds, Milo R.: See—
Boward, Robert M., and Simmonds, Milo R., 3,516,797.
Simmons, Charles A., to Singer Company, The. Method of forming a magnetic recording medium. 3,516,860, Cl. 117-236.
Simonetta, Massimo, to Societa Italiana Resine S.p.A. Process for producing benzene by the hydrodealkylation of cumene bottoms. 3,517,077, Cl. 260-672.
Simonetta, Massimo, to Societa Italiana Resine S.p.A. Preparation of benzene from toluene. 3,517,078, Cl. 260-672.
Simonian, Atkin: See—
Foulke, Donald Gardner, and Simonian, Atkin, 3,516,848.
Sims, Clark D. Tire with automatic wear indicating means. 3,516,467, Cl. 152-330.
Sinclair Research, Inc.: See—
Van Nordstrand, Robert A., 3,516,787.
Sinden, Frank W., to Bell Telephone Laboratories, Incorporated. Station keeping system. 3,516,623, Cl. 244-1.
Singer Company, The: See—
Crim, William H., 3,517,343.
Montoya, Ralph N., 3,516,505.
Seesselberg, Henry A., 3,516,526.
Shurtliff, Russell A., 3,516,529.
Simmons, Charles A., 3,516,860.
Singer-General Precision Systems, Inc.: See—
Finnie, Lies N., and Kornblau, Marvin J., 3,516,945.
Sinyvsky, Adolf Pinkhusovich, and Bedeker, Viktor Alexandrovich. Device for automatic charging of diffuser magazines with pulpwood. 3,516,531, Cl. 198-33.
Sire, Gerard. Multi-source signal coupling system using hybrid junctions to compensate for source amplitude unbalance. 3,517,317, Cl. 325-128.
Siverson, Robert D.: See—
Nordberg, Calvin T., Merboth, John A., and Siverson, Robert D., 3,516,312.
Sjostrand, Monica: See—
Hoffora, Rune J.V., and Sjostrand, Monica, 3,516,962.
Skaggs, Billy J. Vehicle power take-off and brake control. 3,516,525, Cl. 192-4.
Skeates, Ronald E. J., to Plessey Company Limited, The. Hydraulic actuating systems. 3,516,445, Cl. 137-625.67

- Skinner, Burrhus F., to Meredith Corporation. Teaching device with invisible answer indicator. 3,516,177, Cl. 35-9.
- Skinner, Robert Thomas John, to Lucas, Joseph, (Industries) Limited. Liquid displacement pumps. 3,516,758, Cl. 415-126.
- Skoog, Harold A. Boat anchor. 3,516,379, Cl. 114-206.
- Sleater, Roland G., and Reed, Charles G., to Signal Computer Corporation. Semiconductor relay switching circuit. 3,517,217, Cl. 307-252.
- Slettinger, Meyer: See—
Chemerd, John Martin, and Slettinger, Meyer 3,517,028.
- Pines, Seemon H., Karady, Sandor, and Slettinger, Meyer 3,517,057.
- Slomba, Albert F.: See—
Hinman, Clyde D., Slomba, Albert F., and Stoddart, Hugh F. 3,516,744.
- Slosberg, David K., to American Biltrite Rubber Co., Inc. Floor construction. 3,516,894, Cl. 161-39.
- Smalling, Charles E., and Waguespack, Otis J., to Black, Sivals & Bryson, Inc. Method and apparatus for producing an off-shore well. 3,516,490, Cl. 166-05.
- Smart, William L.: See—
Juvinall, James W., Kock, Erhard, Smart, William L., and Williams, Herschel A. 3,517,262.
- Smit, Michael. Spiked tires for automotive vehicles. 3,516,466, Cl. 152-208.
- Smith, Bart A., to FMC Corporation. Packing apparatus. 3,516,454, Cl. 141-68.
- Smith, Benjamin Gilbert. Method for production of pelleted fertilizer with controlled feed particle size. 3,516,813, Cl. 71-64.
- Smith, Charles W., to Bunker-Ramo Corporation, The. Method and apparatus for assembling electrical components. 3,516,155, Cl. 29-626.
- Smith, Donald Sinclair: See—
Baird, Kenneth Mac Clure, and Smith, Donald Sinclair 3,517,331.
- Smith, Edward A., and Day, Robert L. Corner bracket and structures fabricated thereby. 3,516,215, Cl. 52-656.
- Smith, Herchel: See—
Teller, Daniel M., Douglas, George H., and Smith, Herchel 3,516,990.
- Smith Industries International, Inc.: See—
Garrison, Erskine P., and Tachirky, John E., 3,516,718.
- Smith, Richard C., Moulton, Charles W., and Feldman, Charles, to Melpar, Inc. High temperature bulk capacitor. 3,516,133, Cl. 29-2542.
- Smith, Rollin P., to National Lead Company. Method for selective recovery of magnesium chloride from mixed salt solutions. 3,516,785, Cl. 23-91.
- Smith, Ronald L., to General Electric Company. Room temperature vulcanizing silicone rubber foam. 3,516,951, Cl. 260-25.
- Smith, Thomas R. Binder assembly. 3,516,755, Cl. 402-9.
- Smiths Industries Limited: See—
Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard, 3,516,527.
- Snelgrove, James A.: See—
Fitzhugh, Andrew F., and Snelgrove, James A. 3,516,858.
- Snook, Brooks Ray. Rotary mowers. 3,516,234, Cl. 56-254.
- Snow, William Z.: See—
Dreyfus, Robert L., Griffiths, William O., Holbrook, Stanley E., Perdue, Richard R., and Snow, William Z. 3,516,537.
- Societa Italiana Resine S.p.A.: See—
Simonetta, Massimo, 3,517,077.
- Simonetta, Massimo, 3,517,078.
- Societe Anonyme des Usines Chausson: See—
Plegat, Alain Edouard, 3,516,314.
- Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine: See—
Pflugfelder, Bernard, 3,517,044.
- Societe Anonyme Poclair: See—
Guinot, Gabriel L., 3,516,433.
- Societe d'Etudes de Recherches det d'Applications Scientifiques & Medicales E.R.A.S.M.E.: See—
Pedrazzoli, Andrea, and Dall'Asta, Leone, 3,517,016.
- Societe d'Etudes et d'Exploitation de Procèdes pour l'Industrie Alimentaire: See—
Faucheron, Jean, 3,516,225.
- Societe de l'Aerotrain: See—
Paris, Francois Gilbert, and Giraud, Francois L., 3,516,362.
- Societe des Accumulateurs Fixes et de Traction (Societe Anonyme): See—
Lapuyade, Robert Henri, 3,517,295.
- Societe des Procèdes Modernes d'Injection Soproni: See—
Bassot, Jacques, and Monpetit, Louis, 3,516,395.
- Societe en nom collectif 'Science Union et Cie: See—
Regnier, Gilbert, Cancvari, Roger, and Le Douarec, Jean-Claude, 3,517,012.
- Societe Francaise d'Agrafe Industriel par abjection Sofragraf: See—
Normand, Gerard, and Boca, Michel, 3,516,144.
- Societe General de Construction Electriques et Mecaniques (Alstom): See—
Warszawski, Bernard, 3,516,866.
- Societe M T E: See—
Machefert-Tassin, Yves, 3,516,364.
- Societe Metallurgique d'Imphy: See—
Wache, Xavier, 3,516,823.
- Societe Nationale des Petroles d'Aquitaine: See—
Barbier, Maurice, and Sayous, Leon, 3,517,380.
- Solartron Electronic Group Limited, The: See—
Abbotts, William Edward, 3,516,283.
- Solfrehe Macchine S.p.A.: See—
Caccini, Augusto, 3,516,224.
- Sorbe, Gunter: See—
Sennewald, Kurt, Vogt, Wilhelm, Kandler, Joachim, and Sorbe, Gunter 3,516,789.
- Sorrentino, Pasquale: See—
Rolvich, Ivan, and Sorrentino, Pasquale 3,517,102.
- Southern Pacific Transportation Company: See—
Woodbury, James R., 3,517,117.
- S.p.A. Officine Meccaniche F.LLI Daldi & Matteucci: See—
Matteucci, Giampiero, 3,516,290.
- Spano, Francis A.: See—
Newallis, Peter E., Lombardo, Pasquale, and Spano, Francis A. 3,517,089.
- Spector Industries, Inc.: See—
Bruce, Harry J., 3,516,706.
- Sperry Rand Corporation: See—
Bolz, Ralph C., and Jeffery, Robert W., 3,516,768.
- Flowers, Theodore R., and Godel, Siegfried, 3,517,235.
- Kaplan, Robert P., 3,516,557.
- Perkins, Edgar L., 3,516,767.
- Wagstaff, Robert A., 3,516,713.
- Splinter, William E.: See—
Bowen, Henry D., and Splinter, William E. 3,516,608.
- Sprague Electric Company: See—
Lehovec, Kurt, 3,516,242.
- Urfer, Ernest N., Accello, Salvatore J., and Collins, David W., 3,517,277.
- Spraying Systems Co.: See—
Piggott, Richard G., 3,516,611.
- Piggott, Richard G., 3,516,638.
- Spross, Fred R., to United States of America, National Aeronautics and Space Administration. Biological isolation garment. 3,516,404, Cl. 128-1425.
- Spuhl A.-G.: See—
Spuhl, Walter, 3,516,451.
- Spuhl, Walter, to Spuhl A.-G. Machines for manufacturing spring interiors. 3,516,451, Cl. 140-928.
- Squibb, E. R., & Sons, Inc.: See—
Diassi, Patrick A., 3,517,036.
- Krakower, Gerald W., 3,517,034.
- Levine, Seymour D., 3,517,035.
- Murty, Dasika R. K., and Florey, Klaus, 3,516,794.
- Staats, Louis T., Sr.: See—
De Francis, Dominick J., Fooks, James M., and Staats, Louis T., Sr. 3,516,589.
- Stahr, Peter Anton, to Teleflex, Incorporated. Remote control assembly. 3,516,301, Cl. 74-501.
- Stalder, John R. Twin bicycle connecting frame. 3,516,686, Cl. 280-209.
- Stamcarbon N.V.: See—
Thoma, Jozef A., and Coonen, Joseph A.M.J., 3,517,048.
- Thoma, Jozef A., Ponnet, Jules P. J., and Coonen, Josh A.M.J., 3,517,058.
- Standley, Wendell E.: See—
Nigrelli, Biagio J., Standley, Wendell E., and Whittmann, Richard B. 3,516,219.
- Starck, Clemens B.: See—
Earhart, Howard F., Jacoby, Frederick J., and Starck, Clemens B. 3,516,832.
- Stauffer Chemical Company: See—
Gutman, Arnold D., and Freiberg, Ashley H., 3,517,088.
- Stearns Manufacturing Company: See—
O'Link, Maurice H., 3,516,098.
- Steidle, Franz: See—
Scobel, Hugo, and Steidle, Franz 3,516,716.
- Stein, Frank S., and Knolinski, Robert E., to General Motors Corporation. Audible fire alarm. 3,517,382, Cl. 340-57.
- Stein, Philip C. Limited leakage seal. 3,516,678, Cl. 277-27.
- Stein, Werner: See—
Ploog, Uwe, Stein, Werner, and Barnstorf, Joachim 3,516,954.
- Stenman, Erkki Antero: See—
Agren, Sven Birger, and Stenman, Erkki Antero 3,516,520.
- Stenzel, Donald W., and Stenzel, Robert N. Fastenerless tote box. 3,516,594, Cl. 229-34.
- Stenzel, Robert N.: See—
Stenzel, Donald W., and Stenzel, Robert N. 3,516,594.
- Stephens, Charles R.: See—
Cameron, Donald P., and Stephens, Charles R. 3,517,031.
- Steranko, James J., to International Business Machines Corporation. Circuit package assembly process. 3,516,156, Cl. 29-627.
- Sterling Drug Inc.: See—
Leshner, George Y., 3,516,994.
- Leshner, George Y., 3,517,014.
- Stern, Max H., to Eastman Kodak Company. Syntheses of quaternary phosphonium salts. 3,517,067, Cl. 260-6065.
- Sternco Industries, Inc.: See—
Sesholtz, Walter, 3,516,544.

- Stevens, Derek Norman, to General Motors Corporation. Windscreen wiper and washer mechanisms. 3,516,610, Cl. 239-284.
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Pensa, Ildo E., and Greenhall, Armand L., 3,516,781.
- Sello, Stephen B., and Tesoro, Giuliana C., 3,516,782.
- Tesoro, Giuliana C., Lee, Wing-Kai, and Domovs, Kelvin B., 3,516,853.
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Reifel, Harry, and Di Benedetto, Vito J., 3,517,361.
- Sterlin, Hans. Absorption refrigeration system and method for its operation. 3,516,264, Cl. 62-101.
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Hinman, Clyde D., Slomba, Albert F., and Stoddart, Hugh F. 3,516,744.
- Stone, Elmer O.: See—
Dickson, Herbert F., Jr., Greenberg, Irving D., and Stone, Elmer O. 3,517,245.
- Stone, Morris Denor, to United Engineering and Foundry Company. Strip thickness measuring device for use in a rolling mill and like apparatus. 3,516,273, Cl. 72-21.
- Stone, William M.: See—
Fawcett, Kenneth J., Jr., Fuhr, William H., Pefferman, Ernest B., and Stone, William M. 3,517,176.
- Stoner, Richard G.: See—
Harkins, Allen A., Stoner, Richard G., and Caulkis, Bruce D. 3,516,471.
- Story, Julian R., Herrick, Aaron B., and Jungermann, Eric, to Armour and Company. Sustained action detergent product containing encapsulated sodium tripolyphosphate. 3,516,937, Cl. 252-110.
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- Stout, Charles D.: See—
Krohn, Lawrence H., and Stout, Charles D. 3,516,400.
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Neville, Donald G., and Straits, Ernest J. 3,516,112.
- Strance, John S., and Cruger, Robert W. Aircraft launching system. 3,516,626, Cl. 244-63.
- Straniti, Salvatore, and Mamey-Shaw, Frederick, to Avco Corporation. Rotary regenerator with rectangular matrix sections. 3,516,482, Cl. 165-7.
- Strauss, Robert F., to Astrosystems International, Inc. Opaque light source. 3,516,772, Cl. 431-158.
- Strehler, Hugo: See—
Floss, Josef, Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans 3,516,828.
- Stribling, John Brian, to Caval Developments Limited. Furnaces. 3,516,370, Cl. 110-7.
- Strohschein, Manfred: See—
Kurt, Johannes, Glaser, Josef, and Strohschein, Manfred 3,516,479.
- Stromberg-Carlson Corporation: See—
Bendley, Robert W., Cieslak, Arthur B., and Jorgensen, Adam A., 3,517,273.
- Rimlinger, Donald C., 3,517,132.
- Structural Electric Products Corporation: See—
Daley, William C., and Lambert, Robert E., 3,517,181.
- Sturtevant Industries, Inc.: See—
Fellner, Philip J., 3,516,228.
- Suda, Hideaki: See—
Akamatsu, Takashi, Kenmochi, Hiohito, Suda, Hideaki, and Hotta, Seiji 3,517,013.
- Sugiyama, Hiroshi: See—
Koike, Eiji, Kuriyama, Ryozo, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko 3,516,779.
- Sullivan, John Vincent, and Walsh, Alan, to Commonwealth Scientific and Industrial Research Organization. Electric discharge spectral lamp with means in addition to the discharge electrodes for vaporizing solid samples. 3,517,188, Cl. 250-43.
- Sulzberger, Johann: See—
Weigle, Gebhard, and Sulzberger, Johann 3,516,105.
- Sumitomo Chemical Co., Ltd.: See—
Shirayama, Kenzo, and Kitamura, Tadakatsu, 3,517,086.
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Koike, Eiji, Kuriyama, Ryozo, Naito, Seizo, Sugiyama, Hiroshi, and Imada, Kunihiko, 3,516,779.
- Taniguchi, Isao, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo, 3,517,085.
- Summers, Alan S.: See—
Marshall, Richard S., and Summers, Alan S. 3,517,352.
- Sun Oil Company: See—
Antonsen, Donald H., 3,517,053.
- Bennett, John D., Johnson, Ford L., Mayes, Fred M., and Peret, John W., 3,516,502.
- Davis, Joseph R., Jr., Tice, John D., and Benner, Robert I., 3,516,926.
- Hoegland, Mary Ellen, and Duling, Ir N., 3,516,969.
- Kerk, Merritt C., Jr., 3,516,923.
- Moore, Robert E., and Duling, Ir N., 3,516,968.
- Sunada, Tsuyoshi: See—
Kinoshita, Mashiro, and Sunada, Tsuyoshi 3,517,192.
- Sundquist, Nils E., and Patterson, Clinton E., to Mate Punch and Die Co. Corner rounding punch and die assembly. 3,516,317, Cl. 83-467.
- Sundi, Maurice Eugene, and Wagner, Walter K., to Albuquerque Gravel Products Co. Direct digital system for the accurate volumetric batching of liquid solutions over a wide range of required amounts. 3,516,431, Cl. 137-266.
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Akamatsu, Takashi, Kenmochi, Hiohito, Suda, Hideaki, and Hotta, Seiji, 3,517,013.
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Johnson, William F., 3,517,111.
- Suranyi, Laszlo A., and Cyrus, Richard, to Knoll A.G. Chemische Fabriken. Isolation of L- α -(E,4-di-methoxybenzyl)- α -alanine methyl ester. 3,517,049, Cl. 260-471.
- Susi, Peter Vincent, and Arthen, Frank Joseph, Jr., to American Cyanamid Company. Hydroxyalkyl quaternary ammonium ethers as antistatic agents. 3,517,045, Cl. 260-459.
- Sutton Research Corporation: See—
Briskin, Theodore S., and Ward, Geoffrey R., 3,516,416.
- Sutton Tool Company: See—
Hambright, Duane E., 3,516,203.
- Suzuki, Hirofumi, to Horai Tekko Sho Co., Ltd. Vertical-horizontal cutting device for a sheet material. 3,516,315, Cl. 83-408.
- Suzuki, Juro: See—
Kato, Rikitaro, Nagato, Syoichi, and Suzuki, Juro 3,516,973.
- Swarbrick, Richard: See—
Radford, Arthur Stanley, Blakey, George Thomas Allan, Constable, Geoffrey Ernest Patrick, Cullen, Graeme E., and Swarbrick, Richard 3,516,527.
- Swartz, Gaylord A., to Electra/Midland Corporation. Non-destructive test method for determining destruction characteristics of electrical components. 3,517,304, Cl. 324-28.
- Sweet, Ralph W. Ball and socket and depth control connection for cultivating implements. 3,516,501, Cl. 172-314.
- Sweetheart Plastics, Inc.: See—
Davis, Paul, 3,516,572.
- Switchcraft, Inc.: See—
Bailey, James R., and Lutzenberger, Kurt, 3,517,140.
- Syke, George, to British Iron and Steel Research Association, The. Remote measuring devices. 3,516,749, Cl. 356-171.
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Brooks, David N., and Kopelman, Bernard, 3,517,182.
- de Vos, Hendrik A. J., and Wierzbicki, Julian J., 3,517,372.
- Dickson, Herbert F., Jr., Greenberg, Irving D., and Stone, Elmer O., 3,517,245.
- Dodds, Robert E., 3,516,784.
- Lagos, Costas C., 3,516,940.
- Symanski, Jerome J. Single element thin film oscillator. 3,517,336, Cl. 331-107.
- Synco Corporation: See—
Maier, Richard J., 3,517,234.
- Szilagyi, Istvan, to Meara. Centropa, Handelsgesellschaft m.b.H. Spark plug with transparent insulating ore. 3,517,247, Cl. 313-123.
- Taft David D., to Ashland Oil & Refining Company. Curable compositions containing an epoxy, an unsaturated polyester, and a polymerizable vinyl monomer. 3,516,955, Cl. 260-22.
- Takahashi, Akira: See—
Itami, Yasuo, and Takahashi, Akira 3,516,256.
- Takahashi, Shiro: See—
Kano, Hideo, Takahashi, Shiro, Kido, Ryonosuke, and Hirose, Katsumi 3,516,999.
- Takai, Hideo: See—
Nakano, Hiroshi, Takai, Hideo, Muroto, Yoshiaki, and Nakajima, Fumio 3,516,241.
- Takano, Tadayoshi, Kurtia, Masaru, Nikaido, Hiroo, Mera, Masashi, Konishi, Nobukiyo, and Nakagawa, Rituko, to Fujisawa Pharmaceutical Co., Ltd. 3,7-Di-substituted cephalosporin compounds and preparation thereof. 3,516,997, Cl. 260-243.
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- Tanaka, Shigezo: See—
Ikeda, Koichi, Minagawa, Katsuji, and Tanaka, Shigezo 3,517,279.
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- Tanoue, Tatsuo, to Kabusiki Gaisha Toyosha. Lawn mower. 3,516,235, Cl. 56-26.
- Tarex S.A.: See—
Imgrund, Heinrich, 3,516,303.
- Tasem, Maynard A.: See—
Menkes, Cirel K., and Tasem, Maynard A. 3,516,861.
- Tashiro, Shunji: See—
Yamato, Shigeki, Watanabe, Tatsuki, Shimasaki, Nobuhiko, and Tashiro, Shunji 3,517,312.
- Tatsukami, Yoshiharu: See—
Taniguchi, Isao, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo 3,517,085.

Taub, Stephen E., to Institutional Research Council, Inc. Wear-testing method. 3,516,281, Cl. 73-7.

Taverna, Sergio: See—
Bracco, Cesare, and Taverna, Sergio 3,516,277.

Taylor, Frank F.: See—
Harr, John A., Taylor, Frank F., and Ulrich, Werner 3,517,123.

Taylor, Harvey S.: See—
Durio, John R., and Taylor, Harvey S. 3,517,297.

Taylor, Jackson C., Yates, Robert E., and Zell, Michael N., to International Business Machines Corporation. Sequential keyboard interlock. 3,516,604, Cl. 235-145.

Taylor, Ruel E., Jr., and Wedge, Norman C., to Scott Paper Company. Method and apparatus for stacking thin sheets in an even-edged stack. 3,516,658, Cl. 271-88.

Technical Operations, Incorporated: See—
Hickey, John J., and Marathay, Arvind S. 3,516,727.

Tedmon, Craig S., Jr., and White, Donald W., to General Electric Company. Electrochemical cell including iron-chromium alloy conductor connected to cathode. 3,516,865, Cl. 136-86.

Teijin Limited: See—
Fukuda, Kenji, and Okamoto, Yujiro, 3,516,239.

Teledyne, Inc.: See—
Augustin, Eugene P. 3,517,341.
Hager, Richard W. 3,517,278.

Teleflex, Incorporated: See—
Conrad, Winthrop B. 3,516,299.
Stahr, Peter Anton, 3,516,301.

Telefonaktiebolaget L M Ericsson: See—
Ossfeldt, Bengt E. 3,517,174.

Tel-E-Lect, Inc.: See—
Reske, Albert E. 3,516,553.

Tell, Benjamin: See—
Ashkin, Arthur, and Tell, Benjamin 3,517,333.

Teller, Daniel M., Douglas, George H., and Smith, Herchel, to American Home Products Corporation. 13-Alkyl-5a-gonanediy-bis-(N-alkyl-N-heterocyclic halides). 3,516,990, Cl. 260-239.5

Tellier, Pierre, and Grimaud, Edouard, to Ugine Kuhlmann. Graft copolymers with a backbone of an acrylic ester and benzyl acrylate. 3,517,084, Cl. 260-881.

Templeton, Charles A. Dampener release, running and pulling tool. 3,516,703, Cl. 294-86.17

Tenneco Chemicals, Inc.: See—
Forrest, Norman, 3,517,094.
Sidi, Henri, 3,517,064.

Terry, Trent B., to Pennington Garment Company. Garment. 3,516,093, Cl. 2-83.

Tesoro, Giuliana C.: See—
Sello, Stephen B., and Tesoro, Giuliana C. 3,516,782.

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Texas Instruments, Incorporated: See—
Anderson, Walter M., Jr. 3,517,264.
Coburn, Herbert D., and Kelly, Gilbert H. 3,516,509.
Coburn, Herbert D., Johnston, Roy C., and Kelly, Gilbert H. 3,516,510.
Curry, James W. 3,516,854.
Jones, Morton E. 3,517,243.
Moltzan, Herbert J., and Efyte, De Winn, 3,516,803.
Sarazen, John C., Pierini, John M., and Larsen, Reidar G. 3,517,376.
Wakefield, Gene F. 3,516,850.
West, Barry R., and Gray, Foster L. 3,516,807.

Textron Inc.: See—
Noss, Jeffrey S. 3,516,434.

Thaddey, Kurt, to Ciba Limited. Apparatus for making prints from color negatives. 3,516,741, Cl. 355-88.

Thermo Electric Co., Inc.: See—
Bonkowski, William S., and Corallo, Nunzio Ralph, 3,516,873.
Klassen, Stephen L. 3,516,872.

Thiele, Tom N., to Allis-Chalmers Manufacturing Company. Transistor power switching circuit for pulse modulation system. 3,517,292, Cl. 318-341.

Thierstein, Ernest, Jr., to International Telephone and Telegraph Corporation. Momentary contact electric switch with axially extending contact portion. 3,517,146, Cl. 200-153.

Thiokol Chemical Corporation: See—
Grossman, Walter B., and Rabe, George B. 3,516,578.
Manning, Thomas J., Jr., and Glover, Alfred H. 3,516,453.

Thoma, Jozef A., and Coonen, Joseph A.M.J., to Stamicarbon N.V. Preparation of methionine-nitrile. 3,517,048, Cl. 260-465.5

Thoma, Jozef A., Ponnet, Jules P. J., and Coonen, Joeh A.M.J., to Stamicarbon N.V. Preparation of beta-mercaptopropionic acid. 3,517,058, Cl. 260-526.

Thomas Machinery Corporation: See—
Loeffler, George F. 3,516,108.

Thomas, Robert W.: See—
Zubaty, Martin V., and Thomas, Robert W. 3,517,354.

Thomas, William Llewelyn: See—
King, William Ronald, and Thomas, William Llewelyn 3,516,928.

Thompson, Gregory L.: See—
Jaffe, Sam, and Thompson, Gregory L. 3,516,647.

Thompson, Reuel E.: See—
Lathrope, Gerald A., Thompson, Reuel E., and Ives, Wayne S. 3,516,360.

Thomson Corporation, The: See—
Briggs, Sidney, III, 3,517,158.

Thomson, Robert S., to Guyson Industrial Equipment Limited. Shot-blasting apparatus. 3,516,205, Cl. 51-8.

Thrasher, Elbridge W., to Masonite Corporation. Mounting for guided circular saws. 3,516,460, Cl. 143-155.

Thrasher, Elbridge W., to Masonite Corporation. Saw guide apparatus. 3,516,461, Cl. 143-160.

Thrasher, George E., Jr.: See—
Bertva, John T., and Thrasher, George E., Jr. 3,516,516.

Thurston, Helen E.: See—
Thurston, Herbert O. 3,516,180.

Thurston, Herbert O., deceased (by Thurston, Helen E., executrix). Anti-chafing leg guard. 3,516,180, Cl. 36-2.5

Thwing-Albert Instrument Company: See—
MacGeorge, William D., and Beavers, Robert J. 3,516,289.

Tice, John D.: See—
Davis, Joseph R., Jr., Tice, John D., and Benner, Robert I. 3,516,926.

Tiemann, Jerome J., to General Electric Company. Magnetostrictive delay line pulse sequence generator. 3,517,320, Cl. 328-56.

Tierney, Myrel T.: See—
Gallistel, Albert F., and Tierney, Myrel T. 3,516,890.

Tierney, Robert R.: See—
Morey, Thomas H., Pope, Karl D., III, and Tierney, Robert R. 3,516,099.

Timmerbeil, Ewald Rudolf, De Ruiter, Rudolf, and Jeronimus, Eppo Hemmo, to VERPA Draadindustrie N.V. Fastener applying implement. 3,516,590, Cl. 227-123.

Tittel, Harald: See—
Klaus, Rolf, Tittel, Harald, and Wagner, Renate 3,516,436.

Tokola, Alpo J., to Kaiser Steel Corporation. Offshore structure method and apparatus. 3,516,259, Cl. 61-46.5

Tokyo Shibaura Electric Co., Ltd.: See—
Katsuragi, Sumio, 3,517,385.
Monden, Tunes, Ozu, Masao, and Watanabe, Makoto, 3,516,766.
Sano, Kazuo, 3,517,232.
Yamada, Tatsuya, and Sano, Shinichi, 3,517,126.
Yokota, Ryosuke, Muto, Yuhei, Nakajima, Saburo, and Fukuda, Kiyoshi, 3,516,939.
Yoshida, Hidehiko, and Sawagata, Shinichi, 3,516,131.

Toll, Kal Greenlie, to Du Pont de Nemours, E. I., and Company. Method for installing a thermoplastic pipe branching saddle on an operating thermoplastic main. 3,516,426, Cl. 137-15.

Toloczko, Henry A.: See—
Bidak, John, and Toloczko, Henry A. 3,516,369.

Tompkins, Gordon R.: See—
Best, Howard S., and Tompkins, Gordon R. 3,517,157.

Tongyai, Singkata: See—
Schuster, Ludwig K., and Tongyai, Singkata 3,516,847.

Tool Research & Engineering Corporation: See—
Nelson, Gladwyn D., and Plugear, Lowell B. 3,516,271.

Torongo, Richard E.: See—
Whitlock, Huber M., Bartley, Douglas M., and Torongo, Richard E. 3,516,440.

Toth, Alexander. Dental gum stimulator. 3,516,402, Cl. 128-66.

Touchman, William S., to National Cash Register Company, The. Stepping motors. 3,517,236, Cl. 310-96.

Townley Chemical Corporation: See—
Schreck, Seymour, and Siegel, Reuben, 3,516,827.

Toyo Kogyo Company Limited: See—
Honda, Toshikazu, and Minato, Tadaaki, 3,516,651.

Toyo Rayon Kabushiki Kaisha: See—
Ohno, Masaji, and Naruse, Norio, 3,517,047.

Toyo Spinning Co., Ltd.: See—
Taniguchi, Isao, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo, 3,517,085.

Trapp, Gloria Worthington: See—
Trapp, Robert Howard, Hayden, Howard Wayne, Jr., and Brophy, Jere Hall 3,516,804.

Trapp, Robert Howard, deceased (by Trapp, Gloria Worthington, executrix), Hayden, Howard Wayne, Jr., and Brophy, Jere Hall, to International Nickel Company, Inc. The. Coinage material. 3,516,804, Cl. 29-190.

Trbovich, Nicholas D., and Meyer, William H., to Servotronics, Inc. Electro-magnetic actuator armature assembly. 3,517,359, Cl. 335-230.

Treuthart, Robert L., to North American Rockwell Corporation. Laser output coupler. 3,517,327, Cl. 331-94.5

Triax Company, The: See—
Atwater, Wayne G. 3,516,558.

Trico Products Corporation: See—
Riester, William C. 3,516,704.

Trimble, James W., and Rottman, Joel. Telescopic goal post. 3,516,666, Cl. 273-55.

Triumph-Universa G.m.b.H.: See—
Hadley-Webb, Michelle, 3,516,415.

True-Trace Corporation: See—
McCullough, Stuart, 3,517,283.

TRW Inc.: See—
Glatt, Leonard, and Althuler, Saul, 3,517,334.

Techirky, John E.: See—
Garrison, Erskine P., and Techirky, John E. 3,516,718.

Teuk, Andrew G., Ferington, Thomas E., and Markofsky, Sheldon B., to Grace, W. R., & Co. Analysis of acrylate polymers. 3,516,795, Cl. 23-230.

Tuchen, Gerd A.: See—
Curtis, Hazen, III, and Tuchen, Gerd A. 3,517,363.

Tuinenga, William: See—
Gates, Robert H., and Tuinenga, William 3,517,168.

Tunney, Gilbert H. Camera-positioning apparatus. 3,516,343, Cl. 95-82.

Turner, Edwin John: See—
Carter, Willard J., and Turner, Edwin John 3,516,136.

Tuttle, Robert N.: See—
Barkman, James H., Jr., Darley, Henry C. H., Jorda, Robert M., and Tuttle, Robert N. 3,516,496.

Twilley, Ian C.: See—
Reedy, Ora Lee, Twilley, Ian C., and Rainer, Norman B. 3,516,956.

Tyco Laboratories, Inc.: See—
Mlavsky, Abraham I., and Griffiths, Leonard B. 3,517,281.
Ruben, Murray A. 3,517,294.

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Ugine Kuhlmann: See—
Tellier, Pierre, and Grimaud, Edouard, 3,517,084.

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Ulrich, Werner: See—
Harr, John A., Taylor, Frank F., and Ulrich, Werner 3,517,123.

Underwood, John T., Palmer, Burton M., Canfield, Sheldon A., and Pitt, Richard E., to Owens-Corning Fiberglass Corporation. Apparatus for forming fibers and control therefor. 3,516,809, Cl. 65-9.

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Babcock, Wayne R., and Cattaneo, Alfredo G. 3,516,286.
Barnes, Philip Earle, 3,516,427.
De Maria, Anthony J. 3,517,332.
Hall, John A., Jr. 3,516,914.
Hammond, Robert M. 3,516,254.
Hopper, James H. 3,516,405.
Marroni, Michael A., Hardy, John C., and Baker, Mark E. 3,516,091.
Peck, Daniel A. 3,516,444.
Sedlock, Edward J., and Paquette, Charles F. 3,517,239.

Udell, Robert F., Beane, David J., and Krieger, Stanley, 3,516,252.

United Engineering and Foundry Company: See—
Stone, Morris Denor, 3,516,273.

United States Borax & Chemical Corporation: See—
Fusby, Lloyd L. 3,516,788.

Hunter, Don L., and LeFevre, Cecil W. 3,516,816.

Hunter, Don L., Kitanski, Kiyoshi, and Crawford, Robert F. 3,516,986.

LeFevre, Cecil W., and Hunter, Don L. 3,516,817.

United States of America
Air Force: See—
Dausin, Lawrence R. 3,517,389.

Army: See—
Arsenault, Joseph R., and Bogle, William N. 3,517,144.

Army: See—
Drogia, Edwin M. 3,517,319.

Atomic Energy Commission: See—
Borkowski, Casimir J., and Kopp, Manfred K. 3,517,194.
Bradford, Robert W. 3,517,265.
Lay, Clark M. 3,517,322.
Leavitt, George A. 3,517,195.
Mook, Herbert A., Jr., Wilkinson, Michael K., Clark, Grady W., and Bates, Donald D. 3,517,193.
Peterson, George R. 3,517,092.
Sandstrom, Donald J., and Law, Delman A. 3,516,878.
Wiswall, Richard H., Jr., and Reilly, James J., Jr. 3,516,263.

Health, Education and Welfare: See—
Yalman, Richard G. 3,517,026.

Interior: See—
Curran, George P., and Gorin, Everett, 3,516,808.

Interior: See—
Ivey, Kenneth H., Chastain, Sidney J., and Shell, Haskiel R. 3,516,810.

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Javan, Ali, and Shimoda, Koichi Method and apparatus for stabilizing a gaseous optical maser. 3,517,328, 6-23-70 Cl. 331-94.5

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Avizienis, Algirdas A. 3,517,171.

National Aeronautics and Space Administration: See—
Dane, Dan H. 3,516,179.
Dane, Dan H. 3,516,711.
Lockard, Miles L. 3,516,284.
McDermond, Duane K. 3,517,318.
Patterson, William J. 3,516,964.
Rosow, Vernon J. 3,517,302.
Spross, Fred R. 3,516,404.

Navy: See—
Banham, James W., Jr. 3,517,170.

Navy: See—
Barrett, Robert E. 3,517,378.
Boegeman, Dwight E. 3,517,214.

Navy: See—
Chervenak, John, 3,517,379.
Dillard, George M. 3,517,172.

Navy: See—
Eckel, Robert A. 3,517,248.

Navy: See—
Edleson, Stuart K. 3,516,702.
Henderson, Alvin E. 3,516,936.

Navy: See—
Herman, Elvin E., and Proud, William H. 3,517,118.

Navy: See—
Jaffe, Gilbert, and Kuhn, Joseph A., Jr. 3,516,291.
Johnston, James H. 3,516,380.
Jordan, Robert D. 3,516,181.

Navy: See—
Kennedy, Daniel W. 3,517,202.

Navy: See—
McCarthy, William F. 3,517,108.
Menkes, Cirl K., and Tasem, Maynard A. 3,516,861.

Navy: See—
Meyer, Robert E. 3,516,345.

Navy: See—
Moore, George H. 3,516,747.
Owen, Joseph R. 3,517,122.
Petrocelli, Edward A., and Owen, Joseph R. 3,517,121.
Raskhodoff, Nicholas M. 3,517,274.
Richer, John G. 3,517,215.
Schwartz, Robert, Schwartz, Marvin, and Zusman, Ronald, 3,517,305.
Welk, Horace B., Jr., and Young, Robert W. 3,516,293.
Wentzel, Joseph J. 3,517,093.
Zisman, William A., and Burnett, Marianne K. 3,516,938.

Veterans Affairs and/or Army: See—
Barak, Anthony J., Beckenbauer, Harriet C., Myers, Richard A., and Wilger, Roy N. 3,516,292.

Universal Oil Products Company: See—
Forbes, James T. 3,516,924.
Gleim, William K.T. 3,516,792.

Upjohn Company, The: See—
Walker, Bradford H. 3,516,991.

Urfer, Ernest N., Acello, Salvatore J., and Collins, David W., to Sprague Electric Company. Method and capacitor with electrode areas over weak dielectric areas removed. 3,517,277, Cl. 317-230.

Urquhart, George R., to Rohr Corporation. Method and apparatus for augmenting the thrust and suppressing the noise of an aircraft jet engine. 3,516,511, Cl. 181-35.

U.S. Industries, Inc.: See—
Foreman, Caley A. 3,516,268.
Heggie, Henry W. 3,516,266.

U.S. Philips Corporation: See—
De Lang, Hendrik, and Bouwhuis, Gijbertus, 3,517,329.
Schneider, Kuno, 3,516,151.

U.S. Plywood-Champion Papers Inc.: See—
Cyr, Joseph F. 3,516,464.

U-Sonics, Inc.: See—
Jones, Roy E., Sr. 3,517,226.

Valentine, Harry M., to Bendix-Westinghouse Automotive Air Brake Company. Automatic drain valve. 3,516,430, Cl. 137-204.

Van Antwerpen, Lloyd D., to Menasha Corporation. Cushioning and packaging strip. 3,516,538, Cl. 206-62.

Van Atta, Lynette B.: See—
Picus, Gerald S., and Van Atta, Lynette B. 3,517,244.

Vandale Corporation: See—
Buschhorn, Floyd E., 3,517,369.

Van de Vegte, John, to Boland Development Company Limited. Work platform. 3,516,257, Cl. 61-45.

van der Grinten, Willem J., to General Electric Company. Rechargeable alkaline-zinc cell with porous matrix containing trapping material to eliminate zinc dendrites. 3,516,862, Cl. 136-30.

van der Wal, Jurjen. Conveyor system with portions operable at different speeds. 3,516,363, Cl. 104-25.

Vandervell Products Limited: See—
Fisher, Norman Ernest, Whiteside, John, and Green, David Frederick, 3,516,137.

Vandrey, Julius Friedrich, and Bryant, William L., to Martin-Marietta Corporation. Fluid mass gyroscope. 3,516,280, Cl. 74-5.7.

VanHoutte, James J.: See—
O'Hagan, Thomas J., Yoke, Michael P., and VanHoutte, James J. 3,516,446.

Van Nordstrand, Robert A., to Sinclair Research, Inc. Recovery of oil and aluminum for oil shale. 3,516,787, Cl. 23-143.

Varian Associates: See—
Dow, Daniel G., 3,517,335.

Varta Aktiengesellschaft: See—
Horn, Lutz, and Philippi, Fritz, 3,516,870.

Vasile, Joseph A. Amplitude elimination and restoration system. 3,517,313, Cl. 325-32.

Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft: See—
Lehner, Erwin, 3,516,128.

Verge, Kenneth W.: See—
Boydjiff, George I., and Verge, Kenneth W. 3,516,765.

Verheyden, Luc: See—
Klein, Klaus, and Verheyden, Luc, 3,516,278.

Vermette, Howard H. Safety catch mechanism. 3,516,304, Cl. 74-527.

Vermillion, Raymond K. Common source modulation of multiple countermeasures transmitters. 3,517,388, Cl. 343-18.

VERPA Draadindustrie N.V.: See—
Timmerbeil, Ewald Rudolf, De Ruiter, Rudolf, and Jeronimus, Eppo Hemmo, 3,516,590.

Vickers-Zimmer Aktiengesellschaft Planung und Bau von Industrieanlagen: See—
Keller, Willi, 3,516,119.

Vidar Corporation: See—
Hubbard, James R., Martin, Dalton W., and McDonald, John C., 3,517,339.

Vige, Maurice: See—
Audran, Roger G. L., Delest, Philippe F., and Vige, Maurice 3,516,834.

Villagrasa, Isidro Ventura. Method and apparatus for stretching and securing flexible sheets to a stiff support. 3,516,145, Cl. 29-243.58.

Virtanen, Valdemar. Razor blade stropper. 3,516,209, Cl. 51-153.

Vitramon Incorporated: See—
Edmonds, Harold D., Goodman, Gilbert, and McWilliams, William J., 3,517,271.

Vogt, Wilhelm: See—
Sennewald, Kurt, Vogt, Wilhelm, Kandler, Joachim, and Sorbe, Gunter, 3,516,789.

Voigtlander A.G.: See—
Donitz, Dieter, 3,516,742.

Volker, Theodor, and Schindelmann, Erika, borne Pichler, to Lonza Ltd. Preparation of methacrylic acid. 3,517,059, Cl. 260-533.

Volkswagenwerk Aktiengesellschaft: See—
Goes, Friedrich A., 3,516,569.

Von Hayn, Ernst: See—
Schenkel, Fritz, Von Hayn, Ernst, and Andres, Helmut, 3,516,533.

Wache, Xavier, to Societe Metallurgique d'Imphy. Nonmagnetic ferromagnetic alloys of low thermoelastic coefficient. 3,516,823, Cl. 75-128.

Wagner, David Paul: See—
Gurien, Harvey, Wagner, David Paul, and Rachlin, Albert Israel 3,517,066.

Wagner, Edmond M.: See—
McIntosh, Harold A., and Wagner, Edmond M. 3,517,150.

Wagner Electric Corporation: See—
Ashton, Donald M., Jr., and Dubois, Richard, Jr., 3,516,724.

Wagner, Kuno, Meisner, Ernst, and Mennicken, Gerhard, to Farbenfabriken Bayer Aktiengesellschaft. Process for preparing acylated urea diisocyanates. 3,517,039, Cl. 260-404.5.

Wagner, Renate: See—
Klaus, Rolf, Tittel, Harald, and Wagner, Renate, 3,516,436.

Wagner, Walter K.: See—
Sundt, Maurice Eugene, and Wagner, Walter K. 3,516,431.

Wagstaff, Robert A., to Sperry Rand Corporation. Hydraulic cylinder mount for a forage harvester. 3,516,713, Cl. 302-61.

Waguespack, Otis J.: See—
Smalling, Charles E., and Waguespack, Otis J. 3,516,490.

Wahl, Frederick William, to AMP Incorporated. Electrical terminal connector for sodium cable. 3,517,112, Cl. 174-75.

Wahl, Josef: See—
Bastan, Hans-Dieter, Huber, Bernd, and Wahl, Josef, 3,517,142.

Wainwright, John: See—
Cooper, Peter John Frederick, Wainwright, John, and Lindfield, Michael John, 3,516,154.

Wakayama Tetsuko Kabushiki Kaisha: See—
Azuma, Hiroshi, 3,516,619.

Wakefield, Gene F., to Texas Instruments, Incorporated. Process for metal coating a hydrogen permeable material. 3,516,850, Cl. 117-95.

Walker, Bradford H., to Upjohn Company, The. Chemical process. 3,516,991, Cl. 260-239.5.

Wallace & Tiernan Inc.: See—
Booth, George M., 3,517,284.

Wallace, Marshall Eugene, to General Motors Corporation. Padded steering wheel horn switch. 3,517,145, Cl. 200-61.55.

Wallace, Robert H.: See—
Hoffer, Jerry B., Ogawa, Francis T., and Wallace, Robert H. 3,517,255.

Wallen, Emil Olof Lennart, and Neumann, Frank Peter August, to Grubben & Co. Aktiebolag. Cyclone separator. 3,516,551, Cl. 210-512.

Wallen, James, Jr., and Hronik, Richard H., to Melpar, Inc. Track profile and gauge measuring system. 3,517,307, Cl. 324-61.

Wallentowitz, Klaus D., to General Time Corporation. Electronic timer synchronized to alternating current supply line. 3,517,222, Cl. 307-293.

Walling, Walter W., to Schlumberger Technology Corporation. Apparatus for coating the interior of tubular members. 3,516,385, Cl. 118-7.

Walsh, Alan: See—
Sullivan, John Vincent, and Walsh, Alan, 3,517,188.

Walsh, Denis Eugene Joseph: See—
Bryer, Denis William, and Walsh, Denis Eugene Joseph 3,516,640.

Walter, Eldon G. Wheelchair handling apparatus. 3,516,559, Cl. 214-75.

Walters, Leonard Charles: See—
Herman, Ralph Bertrand, Renwick, William, and Walters, Leonard Charles, 3,517,338.

Walton, Edward, and Holly, Frederick W., to Merck & Co., Inc. Indole ribofuranosides. 3,516,985, Cl. 260-211.5.

Ward, David Marshall, Fontaine, Paul Isidore, and Fleetwood, Michael John, to International Nickel Company, Inc., The. Nickel-chromium alloys. 3,516,826, Cl. 75-171.

Ward, Geoffrey R.: See—
Brakin, Theodore S., and Ward, Geoffrey R. 3,516,416.

Ward, Warren F. Migratory scraper and valve. 3,516,494, Cl. 166-175.

Warner, John S.: See—
O'Neill, Charles E., Queneau, Paul E., and Warner, John S. 3,516,818.

Warszawski, Bernard, to Societe General de Construction Electriques et Mecaniques (Alstom). Compact fuel cell battery. 3,516,866, Cl. 136-86.

Wasco Products, Inc.: See—
Jentoft, Arthur Philip, and Couture, Paul Archille, 3,516,210.

Washburn, Robert M., to McDonnell Douglas Corporation, mesne. Composition of polyepoxide and organophosphorus amide curing agent and product thereof. 3,516,965, Cl. 260-47.

Wasielewski, John Paul, and McAtee, William L., to Franor Industries, Inc. Pulse accumulating without measuring system. 3,517,311, Cl. 324-142.

Watanabe, Isao: See—
Okamura, Toshio, Izumi Sigeya, and Watanabe, Isao, 3,517,263.

Watanabe, Makoto: See—
Monden, Tuneso, Ozu, Masao, and Watanabe, Makoto, 3,516,766.

Watanabe, Tatsuki: See—
Yamato, Shigeki, Watanabe, Tatsuki, Shimazaki, Nobuhiko, and Tashiro, Shunji, 3,517,312.

Waterson, Arthur P. Land leveler. 3,516,497, Cl. 172-4.5.

Wayne, William C., Jr., to Baldwin, D. H., Company. Frequency changer employing opto-electronics. 3,516,318, Cl. 84-1.01.

Weaver, W. R., Company: See—
Weaver, William R., 3,516,736.

Weaver, William R., to Weaver, W. R., Company. Focusing objective for telescope sights. 3,516,736, Cl. 350-255.

Weber, Francis J.: See—
Fielek, Anthony C., Jr., and Weber, Francis J. 3,516,715.

Weber, Rudolf, and Winterhalter, Walter, to Gebrüder Junghans G.m.b.H. Centrifugal spiral band locking device, especially for self-destructing fuzes. 3,516,359, Cl. 102-79.

Wedge, Norman C.: See—
Taylor, Ruel E., Jr., and Wedge, Norman C. 3,516,658.

Weesner, William E.: See—
Schaar, John L., and Weesner, William E. 3,517,041.

Wei, Peter H. L., and Bell, Stanley C., to American Home Products Corporation. 1-Alkylthiazolo [2,3-C] [1,2,4] benzothiadiazine-2-carboxylic acid, 5,5-dioxide esters. 3,516,996, Cl. 260-243.

Weiberg, Otto, to Deutsche Gold- und Silber-Scheideanstalt vormals Roesler. Process for the production of ϵ -caprolactone and its alkyl derivatives. 3,517,033, Cl. 260-343.

Weigle, Gebhard, and Sulzberger, Johann. Automatic device for washing motor vehicles passing therethrough. 3,516,105, Cl. 15-21.

Weiner, Karl I.: See—
Grasvoll, Halvor, 3,516,226.

Weinig, Michael, KG.: See—
Betzler, Otto, 3,516,463.

Weisbat, Sidney A. Protected point-of-sale display rack. 3,516,719, Cl. 312-216.

Weiss, Marvin, to Burroughs Corporation. Rise time discriminator. 3,517,321, Cl. 328-114.

Weich, Fredrick M., to Allis-Chalmers Manufacturing Company. Rotating biological reactor in a combined sewer. 3,516,929, Cl. 210-17.

Weldon Tool Company, The: See—
Schnecks, Donald A., 3,516,770.

Weik, Horace B., Jr., and Young, Robert W., to United States of America, Navy. Fluidic position transducer. 3,516,293, Cl. 73-432.

Wells, Leon W., to Panoptix Research Inc. Motion picture projector. 3,516,738, Cl. 352-158.

Wentzel, Joseph J., to United States of America, Navy. Method for producing lead zirconate-titanate transducer materials by slip casting. 3,517,093, Cl. 264-61.

Werkzeugmaschinenfabrik Adolf Waldrich Coburg: See—
Eich, Edmund, and Gerner, Heinz, 3,516,208.

West, Barry R., and Gray, Foster L., to Texas Instruments, Incorporated. Apparatus for producing hydrogen gas by the partial oxidation of a carbonaceous fuel containing hydrogen. 3,516,807, Cl. 48-107.

Westel Company: See—
Maxey, Alexander R., 3,516,146.

Westerlund, Gothe O., to Chemed Engineering Ltd. Process and apparatus for preparing chlorine dioxide. 3,516,790, Cl. 23-152.

Western Electric Company, Incorporated: See—
Bohannon, William D., Jr., 3,516,140.

Brown, William B., 3,516,157.

Schmidt, Wilhelm Emil Albert, 3,516,856.

Weston Chemical Corporation: See—
Friedman, Lester, 3,516,963.

Friedman, Lester, 3,517,090.

Westvaco Corporation: See—
Shelor, Clifford D., 3,516,607.

Wheaton, Ellis G.: See—
Willmann, Norman L., and Wheaton, Ellis G. 3,516,864.

Whinnery, John R., to Bell Telephone Laboratories, Incorporated. Beam focusing by acoustic waves. 3,516,731, Cl. 350-179.

White, Donald W.: See—
Tedmon, Craig S., Jr., and White, Donald W. 3,516,865.

White, Matthew B.: See—
Doyle, Walter M., and White, Matthew B. 3,517,330.

Whitehead, Layne. High power acoustic radiator. 3,517,390, Cl. 340-384.

Whiteley, Thomas E., to Eastman Kodak Company. Photographic silver halide emulsions and elements. 3,516,830, Cl. 96-67.

Whiteside, John: See—
Fisher, Norman Ernest, Whiteside, John, and Green, David Frederick, 3,516,137.

Whitlock, Huber M., Bartley, Douglas M., and Torongo, Richard E., to C.H.W. Inc. Control valve for directing the flow of gases. 3,516,440, Cl. 137-625.44.

Whitney, Wiley. Auxiliary telephone line circuit for call-waiting service. 3,517,139, Cl. 179-84.

Whittmann, Richard B.: See—
Nigrelli, Biagio J., Standley, Wendell E., and Whittmann, Richard B. 3,516,219.

Wickenburg, Chester H. Dispenser for paper rolls or the like. 3,516,615, Cl. 242-55.2.

Wierzbicki, Julian J.: See—
de Vos, Hendrik A. J., and Wierzbicki, Julian J. 3,517,372.

Wiley, Bruce: See—
Morgan, Paul E., 3,516,392.

Wilfert, Karl, to Daimler-Benz Aktiengesellschaft. Motor vehicle body. 3,516,707, Cl. 296-91.

Wilger, Roy N.: See—
Barak, Anthony J., Beckenhauer, Harriet C., Myers, Richard A., and Wilger, Roy N. 3,516,292.

Wilhelm, Hans: See—
Floss, Josef Georg, Brodt, Rudolf, Henkler, Herbert, Strehler, Hugo, and Wilhelm, Hans, 3,516,828.

Wilkinson, Michael K.: See—
Mook, Herbert A., Jr., Wilkinson, Michael K., Clark, Grady W., and Bates, Donald D. 3,517,193.

Will, George A. Ultrasonic warning system. 3,516,384, Cl. 116-137.

Williams, Alan: See—
Morrell, Donald H., and Williams, Alan, 3,516,275.

Williams, George F., and Bowditch, Hoel L., to Foxboro Company, The. Fluid system connection assembly of flexible tube means to solid unit means. 3,516,691, Cl. 285-137.

Williams, Harley H., and Brundick, Charles L., to Powell Magnetic Industries, Inc., mesne. Frequency regulation for a turbogenerator. 3,517,208, Cl. 290-40.

Williams, Herschel A.: See—
Juvinal, James W., Kock, Erhard, Smart, William L., and Williams, Herschel A. 3,517,262.

Williams, Raymond T.F., to Plessey Company Limited, The. Digital signal comparators. 3,517,175, Cl. 235-177.

Williams, Roy M., Jr., to Sanders Associates, Inc. Linearity correction apparatus for magnetically deflected cathode ray tubes. 3,517,252, Cl. 315-24.

Williams, William H. Kicking tee. 3,516,667, Cl. 273-55.

Willinger, Allan H., to Mattel-Aquarium, Inc., mesne. Water conditioning device. 3,516,543, Cl. 210-169.

Willis, Donald H., to RCA Corporation. Automatic chroma control circuit. 3,517,115, Cl. 178-54.

Willits, Glenn D.: See—
Gable, Charles E., and Willits, Glenn D. 3,516,627.

Willmann, Norman L., and Helms, Jerry L., to General Motors Corporation. Battery plate structure. 3,516,863, Cl. 136-58.

Willmann, Norman L., and Wheaton, Ellis G., to General Motors Corporation. Battery grid and terminal therefor. 3,516,864, Cl. 136-58.

Willsey, Merrill K.: See—
Ham, John E., and Willsey, Merrill K. 3,516,308.

Willson, Michael John: See—
Knight, Ronald George, Butcher, John Anthony Weeks, Pullam, Geoffrey George, and Willson, Michael John, 3,517,133.

Wilson Manufacturing Corporation: See—
Koleske, Otto, 3,516,115.

Wilson, Ronald Arthur, to Microwave Development Laboratories, Inc. Automatic feed and depth controller. 3,516,327, Cl. 90-11.

Windsor, Lynne E., to Carter, James B., Ltd. Apparatus for manufacturing frost shields. 3,516,387, Cl. 118-238.

Winkler, Fallert & Co., Ltd.: See—
Heimlicher, Paul, 3,516,354.

Winterhalter, Walter: See—
Weber, Rudolf, and Winterhalter, Walter, 3,516,359.

Winters, Samuel. Hand held miter guide for use with a power saw. 3,516,457, Cl. 143-6.

Wise, Robert D.: See—
Micallef, Lewis A., 3,516,581.

Wiswall, Richard H., Jr., and Reilly, James J., Jr., to United States of America, Atomic Energy Commission. Method of storing hydrogen. 3,516,263, Cl. 62-48.

Witheridge, Rodney Ernest: See—
Andrews, George Inglis, Groszek, Aleksander Jerry, and Witheridge, Rodney Ernest, 3,516,933.

Witrick, Louis: See—
Langwell, John D., 3,516,687.

Wojtowicz, John A.: See—
Clark, Sheldon L., Polak, Roger J., and Wojtowicz, John A. 3,517,030.

Wolf, Lloyd J. Vehicle brake actuator. 3,516,521, Cl. 188-119.

Wolf, Wilfred L., and Beckett, Clark, to Eastman Kodak Company. Multicolor photographic elements containing both 4-equivalent and 2-equivalent color-forming couplers. 3,516,831, Cl. 96-74.

Wolfe, Roger W.: See—
Kuchinsky, Saul, and Wolfe, Roger W. 3,517,257.

Wolff, Wolfgang, and Reschhoff, Gustav, to Chemische Werke Witten GmbH. Process for the preparation of polyamides in finely divided form. 3,516,972, Cl. 260-78.

Wolff, Lothar: See—
Mantel, Wilhelm, and Wolff, Lothar, 3,517,155.

Wolk, Reuben: See—
Fultz, Russell E., and Wolk, Reuben, 3,516,901.

Wollnack, John C., to Ethyl Corporation. Method of defoliating plants with organomercurials. 3,516,814, Cl. 71-70.

Woltering, Joseph A., to Hamilton Die Cast, Inc. Shot tube for a die casting type machine. 3,516,480, Cl. 164-312.

Wood, Ernest Herbert. Granular, free-flowing, synthetic thermosetting aminoplast resin molding composition containing defiberized aliphatic pulp of a certain fiber length wherein said fiber is substantially the sole filler present. 3,516,953, Cl. 260-17.3.

Wood, George C., and Giles, George W., to Patent & Development, Incorporated. Adjustable draw bar for side delivery rakes. 3,516,237, Cl. 56-376.

Wood, George C., and Kirkpatrick, John H., Jr., to Patent & Development, Incorporated. Rotary side delivery rake. 3,516,238, Cl. 56-377.

Wood, John O., and Young, Philip B., to Dunlop Company Limited, The. Spinning of plasticized elastomeric block copolymer. 3,517,096, Cl. 264-176.

Wood, Remsen V. Self-adhesive diffraction gratings. 3,516,730, Cl. 350-162.

Wood, William W., Jr., to Bell Telephone Laboratories, Incorporated. Vibrating cable-laying plow. 3,516,260, Cl. 61-72.6.

Woodbury, James R., to Southern Pacific Transportation Company, mesne. Bandwidth reduction coding technique. 3,517,117, Cl. 178-6.

Woodlock, David F.: See—
Houser, Richard W., and Woodlock, David F. 3,516,625.

Woods, Warren W.: See—
Lippoldt, Richard F., and Woods, Warren W. 3,516,196.

Worcester, John L., to E-H Research Laboratories, Inc. Pulse generator circuit. 3,517,346, Cl. 333-31.

Wragg, Reginald T., to Dunlop Company Limited, The. Thiol-substituted s-triazines. 3,517,003, Cl. 260-249.6.

Wright, Edward S., to Blaw-Knox Company. Self-loading and unloading railroad car. 3,516,368, Cl. 105-455.

Wunderlich, Louis J.: See—
Gibson, James G., and Wunderlich, Louis J. 3,517,220.

Wykert, Jeffery I. Self-levelling irrigation ditcher machine. 3,516,182, Cl. 37-97.

Yalman, Richard G., to United States of America, Health, Education and Welfare. Porphyrin synthesis. 3,517,026, Cl. 260-314.

Yamada, Tatsuya, and Sano, Shunichi, to Tokyo Shibaura Electric Co., Ltd. Light value television projection system with deformable membrane and thin film target electrode. 3,517,126, Cl. 178-7.5.

- Yamadera, Reizo: See—
Taniguchi, Isaji, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo 3,517,085.
- Yamamoto, Hideo, and Iwasa, Noboru. Synthesis reaction apparatus equipped with means for temperature control of catalyst bed. 3,516,800, Cl. 23-288.
- Yamato, Shigeki, Watanabe, Tatsuki, Shimasaki, Nobuhiko, and Tashiro, Shunji, to Nippon Electric Company, Limited. Telephone and telegraph switching system utilizing a stationary satellite. 3,517,312, Cl. 325-4.
- Yarborough, James Lowell, to International Business Machines Corporation. Actuator for diaphragm type switch. 3,517,149, Cl. 200-172.
- Yasumura, Tomohide: See—
Taniguchi, Isaji, Maemoto, Ken-ichi, Tatsukami, Yoshiharu, Kobayashi, Yoshio, Yasumura, Tomohide, and Yamadera, Reizo 3,517,085.
- Yates, Robert E.: See—
Taylor, Jackson C., Yates, Robert E., and Zell, Michael N. 3,516,604.
- Yoda, Kenji, and Nagai, Saburo, to Nippon Electric Company, Limited. Interframe side-mounted distribution panelboard. 3,517,266, Cl. 317-99.
- Yoder, Harvey H. Slip form for casting concrete. 3,516,129, Cl. 25-124.
- Yoke, Michael P.: See—
O'Hagan, Thomas J., Yoke, Michael P., and VanHoutte, James J. 3,516,446.
- Yokota, Ryosuke, Muto, Yuhei, Nakajima, Saburo, and Fukuda, Kiyoshi, to Tokyo Shibaura Electric Co., Ltd. Vitreous composition for measuring neutron fluence. 3,516,939, Cl. 252-301.1.
- Yoshida, Hidehiko, and Sawagata, Shinichi, to Tokyo Shibaura Electric Co., Ltd. Apparatus for assembling a multielement electron gun member. 3,516,131, Cl. 29-25.19.
- Yoshida, Yukitoshi: See—
Uchimaru, Kiyoshi, and Yoshida, Yukitoshi 3,517,249.
- Yoshioka, Masayuki: See—
Ono, Takahisa, Masuoka, Nobuo, Yoshioka, Masayuki, Hamada, Yoshio, Ikeda, Chuki, and Sato, Kimio 3,517,113.
- Young, Henry R.: See—
Bellinson, Bernard, and Young, Henry R. 3,516,660.
- Young, Hinland: See—
United States of America, National Aeronautics and Space Administration, Administrator, 3,517,109.
- Young, Philip B.: See—
Wood, John O., and Young, Philip B. 3,517,096.
- Young, Robert W.: See—
Welk, Horace B., Jr., and Young, Robert W. 3,516,293.
- Zadiraka, Allan J., to Babcock & Wilcox Company, The. Photoelectric time delay switch circuit. 3,517,276, Cl. 317-124.
- Zell, Michael N.: See—
Taylor, Jackson C., Yates, Robert E., and Zell, Michael N. 3,516,604.
- Zellstoffabrik Waldhof: See—
Kirchhoff, Heinrich, Pfeleiderer, Gerhard, and Holle, Kurt, 3,516,907.
- Zenith Radio Corporation: See—
Adler, Robert, 3,516,729.
- Pappadis, Nicholas P., 3,517,242.
- Rennick, John L., 3,517,116.
- Zippay, James G. Sanitary napkin incinerator. 3,516,371, Cl. 110-8.
- Zisman, William A., and Bennett, Marianne K., to United States of America, Navy. Displacing organic liquids from solid surfaces. 3,516,938, Cl. 252-171.
- Zubat, Martin V., and Thomas, Robert W., to I-T-E Imperial Corporation. High sensitivity magnetic trip unit. 3,517,354, Cl. 335-9.
- Zussman, Ronald: See—
Schwartz, Robert, Schwartz, Marvin, and Zussman, Ronald 3,517,305.
- Zveibil, Salvador M. Expandable roofs formed by plates. 3,516,472, Cl. 160-136.
- Zyma S.A.: See—
Courbat, Pierre, 3,516,984.

LIST OF DEFENSIVE PUBLICATIONS

APPLICANTS TO WHOM
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OF JUNE, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O. G. 687.

- Addington, Darryl S., and G. W. Spangler. High modulus polyethylene terephthalate. 875,021, 6-23-70, Cl. 260-75.
- Altmann, Heinz C., C. B. Bushnell, and H. L. West. Apparatus for tilting wound rolls. 875,022, 6-23-70, Cl. 214-1.
- Bushnell, Clifford B.: See—
Altmann, Heinz C., Bushnell, and West. 875,022.
- Collings, John F.: See—
Dulat, Joseph, Collings, Rosenfelder, and Schofield. 875,020.
- Dulat, Joseph, J. F. Collings, W. J. Rosenfelder, and J. M. Schofield, to United States Borax & Chemical Corp. Enzyme-containing detergent compositions. 875,020, 6-23-70, Cl. 252-188.
- Ford Motor Co.: See—
Haddad, Charles J., Riley, and Scott. 875,019.
- Haddad, Charles J., R. W. Riley, and R. O. Scott, to Ford Motor Co. Adjustable diameter steering wheel. 875,019, 6-23-70, Cl. 74-552.
- Knowles, M. B., H. J. Lewis, and B. C. Stephens. Continuous melt phase manufacture of low molecular weight polyamides. 875,023, 6-23-70, Cl. 260-78.
- Lewis, Harrell J.: See—
Knowles, M. B., Lewis, and Stephens. 875,023.
- Riley, Robert W.: See—
Haddad, Charles J., Riley, and Scott. 875,019.
- Rosenfelder, Walter J.: See—
Dulat, Joseph, Collings, Rosenfelder, and Schofield. 875,020.
- Schofield, John M.: See—
Dulat, Joseph, Collings, Rosenfelder, and Schofield. 875,020.
- Scott, Richard O.: See—
Haddad, Charles J., Riley, and Scott. 875,019.
- Spangler, Gordon W.: See—
Addington, Darryl S., and Spangler. 875,021.
- Stephens, Roy C.: See—
Knowles, M. B., Lewis, and Stephens. 875,023.
- United States Borax & Chemical Corp.: See—
Dulat, Joseph, Collings, Rosenfelder, and Schofield. 875,020.
- West, Henry L.: See—
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LIST OF REISSUE PATENTEEES

TO WHOM
PATENTS WERE ISSUED ON THE 23RD DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Affiliated Mfg. Corp.: See—
Austin, Benson M. Re. 26,916.
- Austin, Benson M., to Affiliated Mfg. Corp. Radiant energy method and apparatus of determining physical characteristics. Re. 26,916, 6-23-70, Cl. 209-74.
- Bell Telephone Laboratories, Inc.: See—
Chapin, Daryl M. Re. 26,918.
- Hagelberger, David W., Hall, and Malthaner. Re. 26,919.
- Cade, Phillip J., to Electronics Corp. of America. Scanner apparatus. Re. 26,916, 6-23-70, Cl. 250-239.
- Chapin, Daryl M., to Bell Telephone Laboratories, Inc. Multibit magnetic transducer. Re. 26,918, 6-23-70, Cl. 346-74.
- Dickenbrock, Frank, to General Motors Corp. Transmission and control system. Re. 26,917, 6-23-70, Cl. 74-730.
- ESB Inc.: See—
Lewis, Gerald P., and Ruetschi. Re. 26,913.
- Electric & Musical Industries Ltd.: See—
Rand, Walter L., and Zouch. Re. 26,911.
- Electronics Corp. of America: See—
Cade, Phillip J. Re. 26,916.
- General Motors Corp.: See—
Dickenbrock, Frank. Re. 26,917.
- Hagelberger, David W., W. G. Hall, and W. A. Malthaner, to Bell Telephone Laboratories, Inc. Information storage and retrieval system. Re. 26,919, 6-23-70, Cl. 340-172.5.
- Hall, William G.: See—
Hagelberger, David W., Hall, and Malthaner. Re. 26,919.
- Kendall Co., The: See—
Scheler, Stanley C. Re. 26,912.
- Kent-Owens Machine Co.: See—
Tremblay, Albert F. Re. 26,914.
- Klein, Martin L., H. C. Morgan, and R. B. Rush, to North American Rockwell Corp. High speed data conversion and handling. Re. 26,910, 6-23-70, Cl. 340-172.5.
- Lewis, Gerald P., and P. Ruetschi, to ESB Inc. Multistage process for the concentration of heavy water in feed water comprising a mixture of water and heavy water. Re. 26,913, 6-23-70, Cl. 204-101.
- Malthaner, William A.: See—
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- Morgan, Harry C.: See—
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- North American Rockwell Corp.: See—
Klein, Martin L., Morgan, and Rush. Re. 26,910.
- Parapetti, Nicolas. Diamond dressing device. Re. 26,920, 6-23-70, Cl. 125-11.
- Rand, Walter L., and L. E. Zouch, to Electric & Musical Industries Ltd. Automatic production of gramophone records. Re. 26,911, 6-23-70, Cl. 264-107.
- Ruetschi, Paul: See—
Lewis, Gerald P., and Ruetschi. Re. 26,913.
- Rush, Richard B.: See—
Klein, Martin L., Morgan, and Rush. Re. 26,910.
- Scheler, Stanley C., to The Kendall Co. Pile diaper. Re. 26,912, 6-23-70, Cl. 128-284.
- Tremblay, Albert F., to Kent-Owens Machine Co. Apparatus for producing gear teeth or the like. Re. 26,914, 6-23-70, Cl. 72-216.
- Zouch, Leslie E.: See—
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- Bordier, Ernest P., to Bordier's Nursery, Inc. Raphiolepis indica. 2,972, 6-23-70, Cl. 54.
- Bordier's Nursery, Inc.: See—
Bordier, Ernest P. 2,972.
- Kerrigan, Howard. Asalea plant. 2,971, 6-23-70, Cl. 55.
- Scanlon, Edward H. Norway maple tree. 2,973, 6-23-70, Cl. 51.
- Skaggs, Everett R.: See—
Walker, John V., and Skaggs. 2,970.
- Walker, John V., and E. R. Skaggs, said Skaggs assor. to said Walker. Navel orange tree. 2,970, 6-23-70, Cl. 45.

LIST OF DESIGN PATENTEEES

- Alvarez, Fernando, to Morgantown Glassware Guild Inc. Goblet or similar article. 217,878, 6-23-70, Cl. D36-8.
- Andre, Dan M. High intensity lamp. 217,881, 6-23-70, Cl. D48-20.
- Andre, Dan M. High intensity lamp. 217,882, 6-23-70, Cl. D48-20.
- Asin, Samson: See—
Logan, Earl A., and Asin. 217,884.
- Bard, C. R., Inc.: See—
Logan, Earl A., and Asin. 217,884.
- Bartee, Edward L., 1/4 to B. B. Greene. Four-way pallet. 217,860, 6-23-70, Cl. D14-3.
- Bartee, Edward L., 1/4 to B. B. Greene. Pallet. 217,861, 6-23-70, Cl. D4-3.
- Blemond, Cornelius. Amphibious aircraft. 217,888, 6-23-70, Cl. D71-1.

Blolik, Alexander. Combined baby feeding spoon and thermometer or the like. 217,879, 6-23-70, Cl. D44-29.
 Bleeker, Albert: See—
 Shmurak, Benjamin, Bleeker, Brenner, Paulson, and Projain. 217,869.
 Boatel Co., Inc.: See—
 Johnson, Logan W. 217,862.
 Brenner, Edward: See—
 Shmurak, Benjamin, Bleeker, Brenner, Paulson, and Projain. 217,869.
 Cable Car Burgers, Inc.: See—
 Miller, Albert J. 217,856.
 Colgate-Palmolive Co.: See—
 Grandjean, Fred G. 217,849.
 Koenigsberg, Victor. 217,889.
 Koenigsberg, Victor. 217,890.
 Koenigsberg, Victor. 217,891.
 Schwartz, Ira W. 217,848.
 Damast, David. Ladies handbag lock. 217,845, 6-23-70, Cl. D8-129.
 Dashavey Co., The: See—
 Gerevitz, Rina. 217,887.
 Decorart & Playart Ltd.: See—
 Tong, Duncan. 217,876.
 Dunning, Fred R. and J. R. Ankle splint. 217,892, 6-23-70, Cl. D83-1.
 Dunning, Jean R.: See—
 Dunning, Fred R. and J. R. 217,892.
 French, Lawrence C. Roller skate. 217,874, 6-23-70, Cl. D34-14.
 Gerevitz, Rina, to The Dashavey Co. Railway passenger car. 217,887, 6-23-70, Cl. D66-1.
 Gompes, Simon, and H. Schepkor. Combined puzzle and whirling toy. 217,875, 6-23-70, Cl. D34-15.
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 Greene, Bernard B.: See—
 Bartee, Edward L. 217,860.
 Bartee, Edward L. 217,861.
 Hyer Hardware Mfg. Co.: See—
 Bulone, Rego A. 217,846.
 Itakura, Tsuyoshi, to Itakurayushi Kogyo Co., Ltd. Aquarium air pump. 217,886, 6-23-70, Cl. D65-1.
 Itakurayushi Kogyo Co., Ltd.: See—
 Itakura, Tsuyoshi. 217,886.
 Jenkins, Thomas A., and R. G. Reynolds, to Owens-Illinois, Inc. Bottle. 217,847, 6-23-70, Cl. D9-1.
 Johnson, Logan W., to Boatel Co., Inc. Snow vehicle. 217,862, 6-23-70, Cl. D14-24.
 Koenigsberg, Victor, to Colgate-Palmolive Co. Bar of soap or similar article. 217,889, 6-23-70, Cl. D73-1.
 Koenigsberg, Victor, to Colgate-Palmolive Co. Bar of soap or similar article. 217,891, 6-23-70, Cl. D73-1.
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 Mihlas, Spero. Barrel restaurant building. 217,858, 6-23-70, Cl. D13-1.
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 Miller, Albert J., to Norfish Sales Co., Inc. Exterior of the front of a restaurant building. 217,857, 6-23-70, Cl. D13-1.
 Morgantown Glassware Guild Inc.: See—
 Alvarez, Fernando. 217,878.
 Myers, Dean W., to Selectile Co., Inc. Bathtub. 217,804, 6-23-70, Cl. D23-55.
 Myers, Dean W., to Selectile Co., Inc. Bathtub. 217,805, 6-23-70, Cl. D23-56.
 Myers, Dean W. Shower stall. 217,867, 6-23-70, Cl. D23-57.
 Nelson, John R.: See—
 Lawton, Edward H., and Nelson. 217,850.
 Newman, Roy L. Dental instrument. 217,868, 6-23-70, Cl. D24-1.
 Norfish Sales Co., Inc.: See—
 Miller, Albert J. 217,857.
 Owens-Illinois, Inc.: See—
 Jenkins, Thomas A., and Reynolds. 217,847.
 Lawton, Edward H., and Nelson. 217,850.
 Parker, Wayland B., to Schlumberger Ltd. (Schlumberger N.V.). Chair. 217,863, 6-23-70, Cl. D15-1.
 Paulson, Maurice G.: See—
 Shmurak, Benjamin, Bleeker, Brenner, Paulson, and Projain. 217,869.
 Plone, Irving H.: See—
 Wernick, Marvin, and Plone. 217,852.
 Wernick, Marvin, and Plone. 217,853.
 Wernick, Marvin, and Plone. 217,854.
 Price, Marvin L.: See—
 Brenner, Edward, Price, and Shmurak. 217,870.
 Projain, Richard: See—
 Shmurak, Benjamin, Bleeker, Brenner, Paulson, and Projain. 217,869.
 Republic Corp.: See—
 Wernick, Marvin, and Plone. 217,852.
 Wernick, Marvin, and Plone. 217,853.
 Wernick, Marvin, and Plone. 217,854.
 Reynolds, Thomas A.: See—
 Jenkins, Thomas A., and Reynolds. 217,847.
 Schepkor, Herman: See—
 Gompes, Simon, and Schepkor. 217,875.
 Schlumberger Ltd. (Schlumberger N.V.): See—
 Parker, Wayland B. 217,863.
 Schwartz, Ira W., to Colgate-Palmolive Co. Combined bottle and cap therefor. 217,848, 6-23-70, Cl. D9-1.
 Selectile Co., Inc.: See—
 Myers, Dean W. 217,804.
 Myers, Dean W. 217,805.
 Myers, Dean W. 217,867.
 Sessions, Marc H., to Steiner Co. Combined dispenser base and mounting bracket. 217,872, 6-23-70, Cl. D83-30.
 Shmurak, Benjamin: See—
 Brenner, Edward, Price, and Shmurak. 217,870.
 Singer Co., The: See—
 Dreyfuss, Henry. 217,871.
 Steele, Thomas C. Golf club head. 217,873, 6-23-70, Cl. D34-5.
 Steiner Co.: See—
 Sessions, Marc H. 217,872.
 Stober, James R. Decorative light unit. 217,883, 6-23-70, Cl. D49-20.
 Textron Inc.: See—
 Cowan, Murray L. 217,880.
 Tong, Duncan, to Decorart & Playart Ltd. Toy electronic organ. 217,876, 6-23-70, Cl. D34-15.
 Wayne, Maury W. Car wash building. 217,855, 6-23-70, Cl. D13-1.
 Wernick, Marvin, and I. H. Plone, to Republic Corp. Jewelry box. 217,852, 6-23-70, Cl. D9-288.
 Wernick, Marvin, and I. H. Plone, to Republic Corp. Jewelry box. 217,853, 6-23-70, Cl. D9-289.
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ISSUED JUNE 23, 1970

NOTE—First number, class; second number, subclass; third number, patent number

2- 21 : 3,516,991	29- 68 : 3,516,152	56- 377 : 3,516,238	81- 57.16 : 3,516,308	116- 132 : 3,516,383	137- 596 : 3,516,438
3 : 3,516,992	611 : 3,516,153	57- 140 : 3,516,239	82- 14 : 3,516,309	37 : 3,516,384	610 : 3,516,439
83 : 3,516,998	611 : 3,516,154	157 : 3,516,240	36 : 3,516,310	34 : 3,516,385	611 : 3,516,440
4- 41 : 3,516,994	626 : 3,516,155	3,516,241	38 : 3,516,311	34 : 3,516,385	611 : 3,516,441
251 : 3,516,996	627 : 3,516,157	58- 229 : 3,516,242	83- 42 : 3,516,312	36.2 : 3,516,386	66 : 3,516,442
5- 13 : 3,516,996	627 : 3,516,156	23 : 3,516,243	110 : 3,516,313	46 : 3,516,386	67 : 3,516,443
323 : 3,516,997	30- 134 : 3,516,158	44 : 3,516,243	295 : 3,516,314	47 : 3,516,386	67 : 3,516,443
8- 10.2 : 3,516,778	169 : 3,516,159	60- 24 : 3,516,245	408 : 3,516,315	46 : 3,516,387	69 : 3,516,444
32 : 3,516,779	32- 33 : 3,516,160	26.11 : 3,516,246	419 : 3,516,316	47 : 3,516,387	138- 97 : 3,516,446
44 : 3,516,780	53 : 3,516,161	32 : 3,516,247	467 : 3,516,317	94 : 3,516,387	107 : 3,516,447
115.7 : 3,516,781	63 : 3,516,162	36 : 3,516,248	84- 1.01 : 3,516,318	95 : 3,516,387	144 : 3,516,448
127.6 : 3,516,782	28- 19 : 3,516,163	38 : 3,516,249	05 : 3,516,319	111 : 3,516,387	139- 24 : 3,516,449
9- 12 : 3,516,998	27 : 3,516,164	39.16 : 3,516,250	06 : 3,516,320	122 : 3,516,387	165 : 3,516,450
310 : 3,516,999	41 : 3,516,167	48 : 3,516,251	13 : 3,516,321	136 : 3,516,387	140- 92.8 : 3,516,451
3,516,100	50 : 3,516,168	74 : 3,516,252	95 : 3,516,322	161 : 3,516,387	141- 18 : 3,516,452
12- 26.8 : 3,516,101	74 : 3,516,171	77 : 3,516,253	243 : 3,516,325	212 : 3,516,387	59 : 3,516,453
142 : 3,516,102	168 : 3,516,169	260 : 3,516,254	85- 10 : 3,516,323	218 : 3,516,387	68 : 3,516,454
13- 18 : 3,516,107	180 : 3,516,165	61- 37 : 3,516,255	83 : 3,516,324	218 : 3,516,387	68 : 3,516,454
14- 71 : 3,516,103	199 : 3,516,166	41 : 3,516,256	89- 14 : 3,516,325	218 : 3,516,387	142- 1 : 3,516,455
15- 3.13 : 3,516,104	222 : 3,516,173	45 : 3,516,257	90- 11 : 3,516,327	236 : 3,516,389	143- 6 : 3,516,457
21 : 3,516,105	34- 45 : 3,516,174	46.5 : 3,516,258	12.5 : 3,516,328	236 : 3,516,389	22 : 3,516,458
226 : 3,516,106	58 : 3,516,170	72.6 : 3,516,260	91- 36 : 3,516,330	236 : 3,516,389	32 : 3,516,459
246 : 3,516,107	136 : 3,516,172	62- 24 : 3,516,261	47 : 3,516,331	238 : 3,516,387	155 : 3,516,460
304 : 3,516,108	35- 8 : 3,516,173	28 : 3,516,262	48 : 3,516,332	316 : 3,516,388	160 : 3,516,461
310 : 3,516,109	9 : 3,516,176	48 : 3,516,263	380 : 3,516,333	316 : 3,516,388	144 : 3,516,462
325 : 3,516,110	7.5 : 3,516,177	101 : 3,516,264	475 : 3,516,334	316 : 3,516,388	144 : 3,516,463
16- 2 : 3,516,111	10.2 : 3,516,178	65- 9 : 3,516,269	92- 176 : 3,516,335	316 : 3,516,388	144 : 3,516,463
42 : 3,516,112	11 : 3,516,179	33 : 3,516,270	93- 36.01 : 3,516,336	316 : 3,516,388	144 : 3,516,463
94 : 3,516,113	12 : 3,516,178	60 : 3,516,271	94- 1.5 : 3,516,337	316 : 3,516,388	144 : 3,516,463
150 : 3,516,114	36- 2.5 : 3,516,180	327 : 3,516,272	8 : 3,516,338	316 : 3,516,388	144 : 3,516,463
3,516,115	7.5 : 3,516,181	66- 9 : 3,516,265	45 : 3,516,339	316 : 3,516,388	144 : 3,516,463
18- 4 : 3,516,116	37- 97 : 3,516,182	41 : 3,516,266	50 : 3,516,341	316 : 3,516,388	144 : 3,516,463
3,516,117	116 : 3,516,183	56 : 3,516,267	95- 31 : 3,516,342	316 : 3,516,388	144 : 3,516,463
3,516,118	38- 56 : 3,516,184	56 : 3,516,267	82 : 3,516,343	316 : 3,516,388	144 : 3,516,463
3,516,119	40- 28 : 3,516,185	149 : 3,516,268	89 : 3,516,344	316 : 3,516,388	144 : 3,516,463
3,516,120	126 : 3,516,186	60- 96 : 3,516,269	89 : 3,516,344	316 : 3,516,388	144 : 3,516,463
3,516,121	131 : 3,516,187	70- 259 : 3,516,270	89 : 3,516,344	316 : 3,516,388	144 : 3,516,463
3,516,122	336 : 3,516,188	383 : 3,516,271	89 : 3,516,344	316 : 3,516,388	144 : 3,516,463
3,516,123	42- 50 : 3,516,189	459 : 3,516,272	96- 29 : 3,516,345	316 : 3,516,388	144 : 3,516,463
23- 4 : 3,516,123	43- 21.2 : 3,516,190	71- 64 : 3,516,273	35.1 : 3,516,346	316 : 3,516,388	144 : 3,516,463
51 : 3,516,124	25 : 3,516,191	70 : 3,516,274	36 : 3,516,346	316 : 3,516,388	144 : 3,516,463
91 : 3,516,125	43.12 : 3,516,192	77 : 3,516,275	50 : 3,516,347	316 : 3,516,388	144 : 3,516,463
113 : 3,516,126	44- 72 : 3,516,193	88 : 3,516,276	67 : 3,516,348	316 : 3,516,388	144 : 3,516,463
143 : 3,516,127	46- 1 : 3,516,194	92 : 3,516,277	74 : 3,516,349	316 : 3,516,388	144 : 3,516,463
149 : 3,516,128	26 : 3,516,195	72- 21 : 3,516,278	87 : 3,516,350	316 : 3,516,388	144 : 3,516,463
151 : 3,516,129	63 : 3,516,196	57 : 3,516,279	114 : 3,516,351	316 : 3,516,388	144 : 3,516,463
152 : 3,516,130	47- 43 : 3,516,200	198 : 3,516,280	5 : 3,516,352	316 : 3,516,388	144 : 3,516,463
209.1 : 3,516,131	56 : 3,516,201	216 : 3,516,281	3,516,353	316 : 3,516,388	144 : 3,516,463
216 : 3,516,132	48- 107 : 3,516,202	237 : 3,516,282	98- 31 : 3,516,354	316 : 3,516,388	144 : 3,516,463
225 : 3,516,133	197 : 3,516,203	446 : 3,516,283	119 : 3,516,355	316 : 3,516,388	144 : 3,516,463
230 : 3,516,134	49- 1 : 3,516,197	73- 1 : 3,516,284	99- 14 : 3,516,356	316 : 3,516,388	144 : 3,516,463
231 : 3,516,135	3,516,198	4 : 3,516,285	94 : 3,516,357	316 : 3,516,388	144 : 3,516,463
232 : 3,516,136	40 : 3,516,199	7 : 3,516,286	144 : 3,516,358	316 : 3,516,388	144 : 3,516,463
233 : 3,516,137	131 : 3,516,200	17 : 3,516,287	150 : 3,516,359	316 : 3,516,388	144 : 3,516,463
234 : 3,516,138	324 : 3,516,201	30 : 3,516,288	444 : 3,516,360	316 : 3,516,388	144 : 3,516,463
235 : 3,516,139	51- 7 : 3,516,203	45.5 : 3,516,289	100- 139 : 3,516,361	316 : 3,516,388	144 : 3,516,463
236 : 3,516,140	8 : 3,516,204	69 : 3,516,290	101- 23 : 3,516,362	316 : 3,516,388	144 : 3,516,463
237 : 3,516,141	46 : 3,516,205	116 : 3,516,291	118 : 3,516,363	316 : 3,516,388	144 : 3,516,463
238 : 3,516,142	135 : 3,516,206	117 : 3,516,292	142 : 3,516,364	316 : 3,516,388	144 : 3,516,463
239 : 3,516,143	143 : 3,516,207	1 : 3,516,293	183 : 3,516,365	316 : 3,516,388	144 : 3,516,463
240 : 3,516,144	153 : 3,516,208	150 : 3,516,294	269 : 3,516,366	316 : 3,516,388	144 : 3,516,463
241 : 3,516,145	52- 1 : 3,516,210	162 : 3,516,295	102- 45 : 3,516,367	316 : 3,516,388	144 : 3,516,463
242 : 3,516,146	230 : 3,516,211	189 : 3,516,296	49.1 : 3,516,368	316 : 3,516,388	144 : 3,516,463
243 : 3,516,147	592 : 3,516,212	221 : 3,516,297	79 : 3,516,369	316 : 3,516,388	144 : 3,516,463
244 : 3,516,148	656 : 3,516,213	432 : 3,516,298	95 : 3,516,370	316 : 3,516,388	144 : 3,516,463
245 : 3,516,149	725 : 3,516,214	516 : 3,516,299	104- 23 : 3,516,371	316 : 3,516,388	144 : 3,516,463
246 : 3,516,150	731 : 3,516,215	74- 5.7 : 3,516,300	25 : 3,516,372	316 : 3,516,388	144 : 3,516,463
247 : 3,516,151	731 : 3,516,216	230.17 : 3,516,301	105- 49 : 3,516,373	316 : 3,516,388	144 : 3,516,463
248 : 3,516,152	53- 24 : 3,516,217	395 : 3,516,302	133 : 3,516,374	316 : 3,516,388	144 : 3,516,463
249 : 3,516,153	25 : 3,516,218	427 : 3,516,303	378 : 3,516,375	316 : 3,516,388	144 : 3,516,463
250 : 3,516,154	48 : 3,516,219	501 : 3,516,304	381 : 3,516,376	316 : 3,516,388	144 : 3,516,463
251 : 3,516,155	59 : 3,516,220	516 : 3,516,305	455 : 3,516,377	316 : 3,516,388	144 : 3,516,463
252 : 3,516,156	62 : 3,516,221	516 : 3,516,306	106- 39 : 3,516,378	316 : 3,516,388	144 : 3,516,463
253 : 3,516,157	63 : 3,516,222	516 : 3,516,307	65 : 3,516,379	316 : 3,516,388	144 : 3,516,463
254 : 3,516,158	79 : 3,516,223	516 : 3,516,308	193 : 3,516,380	316 : 3,516,388	144 : 3,516,463
255 : 3,516,159	112 : 3,516,224	516 : 3,516,309	108- 138 : 3,516,381	316 : 3,516,388	144 : 3,516,463
256 : 3,516,160	180 : 3,516,225	516 : 3,516,310	110- 7 : 3,516,382	316 : 3,516,388	144 : 3,516,463

166-272 : 3,516,495	208-143 : 3,516,927	239-15 : 3,516,908	260-78 : 3,516,972	290-672 : 3,517,077	307-289 : 3,517,221
281 : 3,516,496	308 : 3,516,928	212 : 3,516,909	73 : 3,516,973	293 : 3,517,078	293 : 3,517,222
172-4.5 : 3,516,497	209-74 : 3,516,916	204 : 3,516,910	79.3 : 3,516,974	674 : 3,517,079	295 : 3,517,223
9 : 3,516,498	312 : 3,516,911	391 : 3,516,911	80.8 : 3,516,975	677 : 3,517,080	297 : 3,517,224
261 : 3,516,499	210-17 : 3,516,929	240-1.1 : 3,517,180	89.5 : 3,516,976	840 : 3,517,081	308-23 : 3,516,716
282 : 3,516,500	32 : 3,516,930	2 : 3,517,181	94.7 : 3,516,977	840 : 3,517,082	189 : 3,516,717
314 : 3,516,501	46 : 3,516,931	2 : 3,517,182	9 : 3,516,978	878 : 3,517,083	230 : 3,516,718
174-35 : 3,517,109	53 : 3,516,932	3 : 3,517,183	145 : 3,516,979	881 : 3,517,084	310-6 : 3,517,225
47 : 3,517,110	137 : 3,516,940	7.5 : 3,517,184	153 : 3,516,980	895 : 3,517,085	8.5 : 3,517,226
52 : 3,517,111	164 : 3,516,941	10.63 : 3,517,185	153 : 3,516,981	897 : 3,517,086	10 : 3,517,227
75 : 3,517,112	168 : 3,516,942	241-24 : 3,516,912	206 : 3,516,982	926 : 3,517,087	11 : 3,517,228
175-4.5 : 3,516,502	169 : 3,516,943	186 : 3,516,913	209 : 3,516,983	928 : 3,517,088	25 : 3,517,230
6 : 3,516,503	316 : 3,516,944	242-18 : 3,516,914	210 : 3,516,984	942 : 3,517,089	52 : 3,517,231
176-11 : 3,516,906	195 : 3,516,945	55.19 : 3,516,915	211.5 : 3,516,985	953 : 3,517,090	59 : 3,517,232
177-12 : 3,516,504	198 : 3,516,946	2 : 3,516,916	239 : 3,516,986	953 : 3,517,091	68 : 3,517,233
44 : 3,516,505	304 : 3,516,947	58.2 : 3,516,917	264-40 : 3,516,987	953 : 3,517,092	80 : 3,517,235
164 : 3,516,506	321 : 3,516,948	60 : 3,516,918	264-16 : 3,516,989	953 : 3,517,093	96 : 3,517,236
216 : 3,516,507	351 : 3,516,949	67.1 : 3,516,919	264-16 : 3,516,991	953 : 3,517,094	162 : 3,517,237
178-5.4 : 3,517,114	359 : 3,516,550	129.8 : 3,516,920	264-16 : 3,516,992	953 : 3,517,095	211 : 3,517,238
3,517,115	359 : 3,516,551	244-1 : 3,516,921	264-16 : 3,516,993	953 : 3,517,096	312-216 : 3,516,719
3,517,116	211-87 : 3,516,552	244-1 : 3,516,922	264-16 : 3,516,994	953 : 3,517,097	313-63 : 3,517,240
3,517,117	212-55 : 3,516,553	2 : 3,516,923	264-16 : 3,516,995	953 : 3,517,098	65 : 3,517,241
6 : 3,517,118	140 : 3,516,554	2 : 3,516,924	264-16 : 3,516,996	953 : 3,517,099	66 : 3,517,242
7 : 3,517,119	214-10.5 : 3,516,555	63 : 3,516,925	264-16 : 3,516,997	953 : 3,517,100	70 : 3,517,243
8 : 3,517,120	16.4 : 3,516,556	246-163 : 3,517,186	264-16 : 3,516,998	953 : 3,517,101	92 : 3,517,244
3,517,121	3,516,557	182 : 3,517,187	264-16 : 3,516,999	953 : 3,517,102	108 : 3,517,245
3,517,122	75 : 3,516,558	248-15 : 3,516,927	264-16 : 3,516,999	953 : 3,517,103	109.5 : 3,517,246
7.5 : 3,517,123	85 : 3,516,559	18 : 3,516,928	264-16 : 3,516,999	953 : 3,517,104	123 : 3,517,247
34 : 3,517,124	152 : 3,516,560	20 : 3,516,929	264-16 : 3,516,999	953 : 3,517,105	146 : 3,517,248
69 : 3,517,125	302 : 3,516,561	55 : 3,516,930	264-16 : 3,516,999	953 : 3,517,106	278 : 3,517,249
5 : 3,517,126	9 : 3,516,562	71 : 3,516,931	264-16 : 3,516,999	953 : 3,517,107	315-19 : 3,517,250
179-2 : 3,517,129	11 : 3,516,563	176 : 3,516,932	264-16 : 3,516,999	953 : 3,517,108	24 : 3,517,251
15 : 3,517,130	40 : 3,516,564	188 : 3,516,933	264-16 : 3,516,999	953 : 3,517,109	27 : 3,517,252
3,517,131	40 : 3,516,565	223 : 3,516,934	264-16 : 3,516,999	953 : 3,517,110	91 : 3,517,253
3,517,132	10.49 : 3,517,151	245 : 3,516,935	264-16 : 3,516,999	953 : 3,517,111	151 : 3,517,254
3,517,133	55 : 3,517,152	381 : 3,516,936	264-16 : 3,516,999	953 : 3,517,112	155 : 3,517,255
3,517,134	69 : 3,517,153	477 : 3,516,937	264-16 : 3,516,999	953 : 3,517,113	169 : 3,517,256
3,517,135	73 : 3,517,154	250-43 : 3,517,188	264-16 : 3,516,999	953 : 3,517,114	200 : 3,517,257
3,517,136	76 : 3,517,155	5 : 3,517,189	264-16 : 3,516,999	953 : 3,517,115	223 : 3,517,258
3,517,137	76 : 3,517,156	49.5 : 3,517,191	264-16 : 3,516,999	953 : 3,517,116	241 : 3,517,259
81 : 3,517,138	85 : 3,517,157	65 : 3,517,192	264-16 : 3,516,999	953 : 3,517,117	241 : 3,517,260
180-85 : 3,516,508	102 : 3,517,158	83.1 : 3,517,193	264-16 : 3,516,999	953 : 3,517,118	317-3 : 3,517,262
181-5 : 3,516,509	121 : 3,517,159	83.1 : 3,517,193	264-16 : 3,516,999	953 : 3,517,119	12 : 3,517,263
3,516,510	215 : 3,517,160	6 : 3,517,194	264-16 : 3,516,999	953 : 3,517,120	23 : 3,517,264
35 : 3,516,511	275 : 3,517,161	90 : 3,517,195	264-16 : 3,516,999	953 : 3,517,121	51 : 3,517,265
182-16 : 3,516,512	364 : 3,517,162	201 : 3,517,196	264-16 : 3,516,999	953 : 3,517,122	99 : 3,517,266
19 : 3,516,513	3,517,163	211 : 3,517,197	264-16 : 3,516,999	953 : 3,517,123	101 : 3,517,271
46 : 3,516,514	388 : 3,517,164	214 : 3,517,198	264-16 : 3,516,999	953 : 3,517,124	112 : 3,517,274
96 : 3,516,515	220-7 : 3,516,592	216 : 3,517,199	264-16 : 3,516,999	953 : 3,517,125	117 : 3,517,275
184-55 : 3,516,516	9 : 3,516,593	217 : 3,517,200	264-16 : 3,516,999	953 : 3,517,126	124 : 3,517,276
3,516,517	14 : 3,516,594	217 : 3,517,201	264-16 : 3,516,999	953 : 3,517,127	230 : 3,517,277
187-29 : 3,516,518	18 : 3,516,595	219 : 3,517,202	264-16 : 3,516,999	953 : 3,517,128	234 : 3,517,278
188-77 : 3,516,519	40 : 3,516,596	223 : 3,517,203	264-16 : 3,516,999	953 : 3,517,129	235 : 3,517,279
96 : 3,516,520	42 : 3,516,597	225 : 3,517,204	264-16 : 3,516,999	953 : 3,517,130	237 : 3,517,281
119 : 3,516,521	60 : 3,516,598	225 : 3,517,205	264-16 : 3,516,999	953 : 3,517,131	249 : 3,517,282
264 : 3,516,522	72 : 3,516,599	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,132	318-18 : 3,517,283
190-11 : 3,516,523	72 : 3,516,599	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,133	33 : 3,517,284
192-3.3 : 3,516,524	221-278 : 3,516,574	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,134	33 : 3,517,285
4 : 3,516,525	222-52 : 3,516,575	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,135	33 : 3,517,286
12 : 3,516,526	177 : 3,516,576	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,136	33 : 3,517,287
194-4 : 3,516,527	309 : 3,516,577	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,137	129 : 3,517,288
195-28 : 3,516,528	306.5 : 3,516,578	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,138	138 : 3,517,289
51 : 3,516,529	440 : 3,516,579	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,139	332 : 3,517,290
102 : 3,516,530	465 : 3,516,580	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,140	341 : 3,517,292
197-16 : 3,516,531	529 : 3,516,581	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,141	341 : 3,517,293
107 : 3,516,532	223-37 : 3,516,582	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,142	341 : 3,517,294
198-8 : 3,516,533	39 : 3,516,583	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,143	341 : 3,517,295
33 : 3,516,534	224-5 : 3,516,584	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,144	341 : 3,517,296
179 : 3,516,535	25 : 3,516,585	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,145	341 : 3,517,297
192 : 3,516,536	25 : 3,516,586	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,146	341 : 3,517,298
229 : 3,516,537	225 : 3,516,587	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,147	341 : 3,517,299
200-5 : 3,517,140	225 : 3,516,588	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,148	341 : 3,517,300
16 : 3,517,141	225 : 3,516,589	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,149	341 : 3,517,301
19 : 3,517,142	225 : 3,516,590	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,150	341 : 3,517,302
38 : 3,517,143	225 : 3,516,591	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,151	341 : 3,517,303
46 : 3,517,144	225 : 3,516,592	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,152	341 : 3,517,304
61.55 : 3,517,145	225 : 3,516,593	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,153	341 : 3,517,305
153 : 3,517,146	225 : 3,516,594	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,154	341 : 3,517,306
166 : 3,517,147	225 : 3,516,595	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,155	341 : 3,517,307
167 : 3,517,148	225 : 3,516,596	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,156	341 : 3,517,308
172 : 3,517,149	225 : 3,516,597	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,157	341 : 3,517,309
203-7 : 3,516,910	225 : 3,516,598	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,158	341 : 3,517,310
204-2 : 3,516,911	225 : 3,516,599	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,159	341 : 3,517,311
101 : 3,516,912	225 : 3,516,600	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,160	341 : 3,517,312
159.22 : 3,516,913	225 : 3,516,601	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,161	341 : 3,517,313
181 : 3,516,914	225 : 3,516,602	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,162	341 : 3,517,314
192 : 3,516,915	225 : 3,516,603	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,163	341 : 3,517,315
195 : 3,516,916	225 : 3,516,604	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,164	341 : 3,517,316
196 : 3,516,917	225 : 3,516,605	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,165	341 : 3,517,317
266 : 3,516,918	225 : 3,516,606	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,166	341 : 3,517,318
298 : 3,516,919	225 : 3,516,607	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,167	341 : 3,517,319
311 : 3,516,920	225 : 3,516,608	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,168	341 : 3,517,320
206-42 : 3,516,536	225 : 3,516,609	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,169	341 : 3,517,321
46 : 3,516,537	225 : 3,516,610	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,170	341 : 3,517,322
62 : 3,516,538	225 : 3,516,611	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,171	341 : 3,517,323
208-47 : 3,516,922	225 : 3,516,612	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,172	341 : 3,517,324
49 : 3,516,923	225 : 3,516,613	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,173	341 : 3,517,325
65 : 3,516,924	225 : 3,516,614	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,174	341 : 3,517,326
111 : 3,516,925	225 : 3,516,615	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,175	341 : 3,517,327
143 : 3,516,926	225 : 3,516,616	225 : 3,517,206	264-16 : 3,516,999	953 : 3,517,176	341 : 3,517,328

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

Alabama.....	1	Kentucky.....	21	Oregon.....	41
Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
American Samoa.....	3	Maine.....	23	Puerto Rico.....	43
Arizona.....	4	Maryland.....	24	Rhode Island.....	44
Arkansas.....	5	Massachusetts.....	25	South Carolina.....	45
California.....	6	Michigan.....	26	South Dakota.....	46
Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
Florida.....	12	Nevada.....	32	Virgin Islands.....	52
Georgia.....	13	New Hampshire.....	33	Washington.....	53
Guam.....	14	New Jersey.....	34	West Virginia.....	54
Hawaii.....	15	New Mexico.....	35	Wisconsin.....	55
Idaho.....	16	New York.....	36	Wyoming.....	56
Illinois.....	17	North Carolina.....	37	U.S. Air Force.....	57
Indiana.....	18	North Dakota.....	38	U.S. Army.....	58
Iowa.....	19	Ohio.....	39	U.S. Navy.....	59
Kansas.....	20	Oklahoma.....	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

PATENTS

1 : 3,516,179	6 : 3,516,274	6 : 3,516,796	6 : 3,517,341	9 : 3,517,235	17 : 3,516,142
3,516,453	3,516,286	3,516,797	3,517,342	3,517,239	3,516,174
3,516,664	3,516,296	3,516,816	3,517,343	3,517,241	3,516,191
3,516,711	3,516,302	3,516,817	3,517,346	3,517,241	3,516,219
3,516,964	3,516,308	3,516,819	3,517,360	3,517,332	3,516,227
4 : 3,516,945	3,516,329	3,516,861	3,517,366	3,517,378	3,516,234
3,516,519	3,516,332	3,516,873	3,517,371	3,516,279	3,516,279
3,516,524	3,516,363	3,516,877	3,517,383	3,516,330	3,516,330
3,516,559	3,516,392	3,516,881	3,517,386	3,516,335	3,516,335
3,516,586	3,516,398	3,516,927	3,517,388	3,516,339	3,516,339
3,516,663	3,516,416	3,516,936	3,517,378	3,516,340	3,516,340
3,516,673	3,516,419	3,516,945	3,517,383	3,516,383	3,516,383
3,516,674	3,516,424	3,516,965	3,517,386	3,516,384	3,516,384
3,516,898	3,516,442	3,516,983	3,517,388	3,516,407	3,516,407
3,517,031	3,516,452	3,516,986	3,517,388	3,516,425	3,516,425
3,517,217	3,516,454	3,517,005	3,517,388	3,516,499	3,516,499
3,517,220	3,516,460	3,517,008	3,517,388	3,516,545	3,516,545
3,517,311	3,516,461	3,517,110	3,517,388	3,516,549	3,516,549
5 : 3,516,457	3,516,473	3,517,117	3,517,388	3,516,552	3,516,552
3,516,504	3,516,484	3,517,118	3,517,388	3,516,553	3,516,553
6 : 3,516,910	3,516,491	3,517,127	3,517,388	3,516,559	3,516,559
3,516,091	3,516,496	3,517,146	3,517,388	3,516,597	3,516,597
3,516,092	3,516,503	3,517,150	3,517,388	3,516,611	3,516,611
3,516,099	3,516,505	3,517,167	3,517,388	3,516,615	3,516,615
3,516,100	3,516,511	3,517,171	3,517,388	3,516,631	3,516,631
3,516,112	3,516,515	3,517,172	3,517,388	3,516,634	3,516,634
3,516,122	3,516,529	3,517,191	3,517,388	3,516,638	3,516,638
3,516,130	3,516,541	3,517,195	3,517,388	3,516,656	3,516,656
3,516,146	3,516,556	3,517,199	3,517,388	3,516,668	3,516,668
3,516,147	3,516,571	3,517,213	3,517,388	3,516,696	3,516,696
3,516,148	3,516,580	3,517,214	3,517,388	3,516,706	3,516,706
3,516,153	3,516,584	3,517,215	3,517,388	3,516,729	3,516,729
3,516,155	3,516,588	3,517,218	3,517,388	3,516,773	3,516,773
3,516,156	3,516,641	3,517,224	3,517,388	3,516,774	3,516,774
3,516,163	3,516,660	3,517,244	3,517,388	3,516,792	3,516,792
3,516,167	3,516,665	3,517,248	3,517,388	3,516,806	3,516,806
3,516,173	3,516,669	3,517,265	3,517,388	3,516,815	3,516,815
3,516,181	3,516,671	3,517,278	3,517,388	3,516,840	3,516,840
3,516,198	3,516,676	3,517,283	3,517,388	3,516,882	3,516,882
3,516,215	3,516,699	3,517,293	3,517,388	3,516,913	3,516,913
3,516,220	3,516,718	3,517,297	3,517,388	3,516,924	3,516,924
3,516,221	3,516,719	3,517,299	3,517,388	3,516,937	3,516,937
3,516,222	3,516,727	3,517,301	3,517,388	3,516,952	3,516,952
3,516,243	3,516,731	3,517,302	3,517,388	3,517,116	3,517,116
3,516,247	3,516,733	3,517,327	3,517,388	3,516,991	3,516,991
3,516,249	3,516,743	3,517,330	3,517,388	3,517,123	3,517,123
3,516,253	3,516,747	3,517,334	3,517,388	3,517,185	3,517,185
3,516,259	3,516,754	3,517,335	3,517,388	3,517,190	3,517,190
3,516,261	3,516,762	3,517,336	3,517,388	3,517,200	3,517,200
3,516,271	3,516,788	3,517,339	3,517,388	3,517,222	3,517,222

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

PI 43

17 : 3,517,162	25 : 3,516,920	29 : 3,516,978	36 : 3,516,411	39 : 3,516,309	42 : 3,516,914
3,517,164	3,516,940	3,517,079	3,516,421	3,516,316	3,516,923
3,517,184	3,516,960	3,517,080	3,516,423	3,516,321	3,516,926
3,517,187	3,517,032	3,517,081	3,516,428	3,516,350	3,516,931
3,517,242	3,517,144	3,516,467	3,516,467	3,516,356	3,516,967
3,517,280	3,517,147	3,516,492	3,516,518	3,516,430	3,516,969
3,517,358	3,517,152	3,516,414	3,516,543	3,516,434	3,516,987
3,517,362	3,517,160	3,516,618	3,516,557	3,516,439	3,516,989
3,517,365	3,517,182	3,517,368	3,516,581	3,516,476	3,516,990
3,517,367	3,517,202	3,516,420	3,516,588	3,516,480	3,516,992
18 : 3,516,094	3,517,206	33 : 3,516,911	3,516,605	3,516,504	3,516,996
3,516,104	3,517,212	3,516,915	3,516,612	3,516,506	3,517,000
3,516,166	3,517,223	3,517,252	3,516,637	3,516,508	3,517,007
3,516,250	3,517,264	34 : Rr 26,916	3,516,657	3,516,513	3,517,008
3,516,304	3,517,277	Rr 26,918	3,516,670	3,516,517	3,517,009
3,516,369	3,517,281	Rr 26,919	3,516,687	3,516,522	3,517,010
3,516,371	3,517,282	3,516,097	3,516,704	3,516,546	3,517,011
3,516,372	3,517,294	3,516,111	3,516,720	3,516,555	3,517,022
3,516,485	3,517,298	3,516,114	3,516,728	3,516,558	3,517,037
3,516,564	3,517,325	3,516,164	3,516,732	3,516,565	3,517,040
3,516,627	3,517,361	3,516,170	3,516,827	3,516,566	3,517,050
3,516,705	3,517,363	3,516,175	3,516,829	3,516,596	3,517,051
3,516,717	3,517,372	3,516,244	3,516,830	3,516,617	3,517,055
3,516,801	3,517,376	3,516,260	3,516,831	3,516,621	3,517,060
3,516,863	26 : Rr 26,917	3,516,300	3,516,832	3,516,645	3,517,063
3,516,864	3,516,103	3,516,347	3,516,835	3,516,681	3,517,072
3,516,880	3,516,117	3,516,352	3,516,837	3,516,709	3,517,093
3,516,884	3,516,134	3,516,402	3,516,838	3,516,712	3,517,108
3,517,082	3,516,138	3,516,412	3,516,853	3,516,770	3,517,112
3,517,097	3,516,141	3,516,422	3,516,860	3,516,813	3,517,148
3,517,099	3,516,149	3,516,426	3,516,862	3,516,842	3,517,170
3,517,114	3,516,195	3,516,444	3,516,865	3,516,845	3,517,177
3,517,115	3,516,203	3,516,478	3,516,893	3,516,849	3,517,227
3,517,186	3,516,216	3,516,623	3,516,909	3,516,895	3,517,248
3,517,211	3,516,233	3,516,639	3,516,918	3,516,904	3,517,350
3,517,253	3,516,299	3,516,721	3,516,946	3,516,930	3,517,375
3,517,282	3,516,301	3,516,724	3,516,951	3,516,942	3,517,377
19 : 3,516,232	3,516,310	3,516,726	3,516,994	3,516,943	43 : 3,517,134
3,516,232	3,516,357	3,516,738	3,517,001	3,516,963	44 : Rr 26,912
3,516,236	3,516,373	3,516,772	3,517,014	3,516,975	3,516,950
3,516,243	3,516,393	3,516,781	3,517,019	3,516,977	3,516,991
3,516,247	3,516,397	3,516,782	3,517,023	3,517,026	3,517,068
3,516,266	3,516,400	3,516,794	3,517,024	3,517,041	45 : 3,516,843
3,516,269	3,516,432	3,516,802	3,517,029	3,517,042	47 : 3,516,270
3,516,290	3,516,437	3,516,812	3,517,038	3,517,083	3,516,957
3,516,297	3,516,440	3,516,824	3,517,067	3,517,071	3,517,071
3,517,089	3,516,469	3,516,848	3,517,073	3,517,139	3,517,092
21 : 3,516,318	3,516,471	3,516,872	3,517,091	3,517,145	3,517,193
3,516,319	3,516,516	3,516,884	3,517,100	3,517,168	3,517,194
3,516,328	3,516,540	3,516,944	3,517,101	3,517,201	3,517,315
3,516,604	3,516,591	3,516,958	3,517,104	3,517,236	3,517,322
3,516,632	3,516,599	3,516,985	3,517,130	3,517,259	3,517,384
3,516,685	3,516,603	3,516,993	3,517,132	3,517,262	48 : 3,516,162
3,516,961	3,516,616	3,516,995	3,517,151	3,517,276	3,516,171
22 : 3,516,143	3,516,675	3,517,004	3,517,157	3,517,310	3,516,190
3,516,159	3,516,684	3,517,020	3,517,161	40 : 3,516,196	3,516,202
3,516,381	3,516,685	3,517,021	3,517,183	3,516,426	3,516,385
3,516,761	3,516,694	3,517,027	3,517,198	3,516,404	3,516,404
3,516,799	3,516,715	3,517,028	3,517,203	3,516,525	3,516,447
23 : 3,516,210	3,516,745	3,517,030	3,517,210	3,516,648	3,516,474
3,516,406	3,516,765	3,517,034	3,517,238	3,516,723	3,516,489
3,516,658	3,516,767	3,517,035	3,517,240	3,516,787	3,516,492
24 : 3,516,157	3,516,768	3,517,036	3,517,245	3,516,492	3,516,492
3,516,280	3,516,777	3,517,045	3,517,258	3,516,493	3,516,493
3,516,291	3,516,809	3,517,053	3,517,261	3,516,494	3,516,494
3,516,532	3,516,814	3,517,056	3,517,271	3,516,502	3,516,502
3,516,561	3,516,820	3,517,057	3,517,273	3,516,509	3,516,509
3,516,567	3,516,991	3,517,064	3,517,288	3,516,510	3,516,510
3,516,602	3,517,141	3,517,066	3,517,300	3,516,515	3,516,521
3,516,661	3,517,153	3,517,069	3,517,303	3,516,700	3,516,521
3,516,667	3,517,154	3,517,105	3,517,305	3,516,273	3,516,702
3,516,725	3,517,158	3,517,119	3,517,309	3,516,289	3,516,703
3,516,730	3,517,234	3,517,131	3,517,319	3,516,293	3,516,736
3,516,740	3,517,304	3,517,173	3,517,320	3,516,305	3,516,803
3,516,786	3,517,354	3,517,180	3,517,321	3,516,311	3,516,807
3,516,795	3,517,381	3,517,246	3,517,324	3,516,343	3,516,850
3,516,810	27 : 3,516,098	3,517,257	3,517,337	3,516,368	3,516,854
3,516,938	3,516,217	3,517,272	3,517,340	3,516,443	3,516,888
3,517,054	3,516,317	3,517,306	3,517,349	3,516,446	3,517,076
3,517,216	3,516,379	3,517,323	3,517,351	3,516,470	3,517,156
3,517,274	3,516,553	3,517,333	3,517,355	3,516,475	3,517,208
3,517,291	3,516,613	3,517,345	3,517,359	3,516,481	3,517,243
3,517,318	3,516,836	3,517,357	3,517,391	3,516,487	3,517,254
3,517,379	3,516,846	35 : 3,516,431	3,516,121	3,516,514	3,517,308
25 : Rr 26,915	3,516,852	3,516,478	3,516,140	3,516,550	3,517,390
3,516,101	3,516,890	36 : 3,516,125	3,516,160	3,516,573	49 : 3,517,270
3,516,123	3,516,941	3,516,132	3,516,237	3,516,622	50 : 3,516,389
3,516,124	3,516,955	3,516,161	3,516,238	3,516,644	51 : 3,516,093
3,516,135	3,517,196	3,516,165	3,516,240	3,516,647	3,516,284
3,516,177	3,517,197	3,516,184	3,516,399	3,516,678	3,516,367
3,516,180	3,517,316	3,516,188	3,516,608	3,516,692	3,516,523
3,516,242	3,517,369	3,516,204	3,516,708	3,516,713	3,516,607
3,516,327	3,517,387	3,516,207	3,516,856	3,516,759	3,516,735
3,516,380	28 : 3,516,095	3,516,209	3,516,900	3,516,771	3,516,956
3,516,391	3,516,268	3,516,213	3,516,901	3,516,778	3,516,998
3,516,441	3,516,583	3,516,223	3,516,906	3,516,784	3,517,002
3,516,449	29 : 3,516,248	3,516,245	3,517,111	3,516,804	3,517,061
3,516,455	3,516,312	3,516,263	3,517,149	3,516,808	3,517,062
3,516,572	3,516,365	3,516,281	3,516,266	3,516,839	3,517,166
3,516,606	3,516,366	3,516,294	3,516,269	3,516,847	3,517,176
3,516,710	3,516,456	3,516,322	3,516,133	3,516,855	3,517,207
3,516,798	3,516,594	3,516,338	3,516,139	3,516,883	3,517,307
3,516,858	3,516,633	3,516,346	3,516,152	3,516,894	52 : 3,516,825
3,516,867	3,516,652	3,516,377	3,516,201	3,516,897	53 : 3,516,127
3,516,889	3,516,869	3,516,396	3,516,206	3,516,899	3,516,304
3,516,892	3,516,932	3,516,408	3,516,236	3,516,903	3,516,304

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

53 : 3,516,409 3,516,625 3,516,701 3,516,764 3,516,811	54 : 3,516,337 3,516,570 3,516,126 3,516,228 3,516,313	55 : 3,516,328 3,516,462 3,516,477 3,516,478 3,516,498	55 : 3,516,535 3,516,538 3,516,576 3,516,600 3,516,714	55 : 3,516,891 3,516,905 3,516,921 3,517,103	55 : 3,517,225 3,517,286 3,517,292 3,517,268
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Design Patents

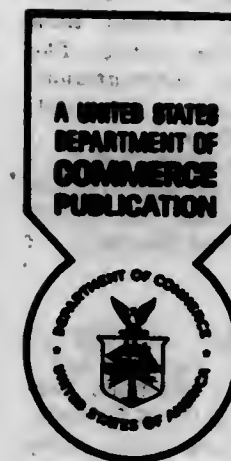
1 : 217,855 6 : 217,846 217,852 217,853 217,854 217,856 217,857	6 : 217,860 217,861 217,864 217,865 217,866 217,867 217,871	6 : 217,872 8 : 217,877 17 : 217,858 217,859 217,868 217,881 217,882	25 : 217,880 27 : 217,862 32 : 217,888 34 : 217,884 36 : 217,845 217,848 217,869	36 : 217,870 217,867 217,869 217,890 217,891 217,847 217,850	39 : 217,851 217,892 41 : 217,883 51 : 217,863 54 : 217,874 217,878
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Plant Patents

6 : 2,970	6 : 2,971	6 : 2,972	39 : 2,973		
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DEFENSIVE PUBLICATIONS APPLICATIONS
(Notice of Dec. 16, 1969, 869 O.G. 687)

26 : T875,019	36 : T875,022	47 : T875,021	47 : T875,023	80 : T875,020	
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U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 23, 1970

Volume 875

Number 4

TRADEMARKS NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 211,300 (PEPPY AND DESIGN), The Grapette Company, Incorporated, Nonalcoholic maltless beverages and sirups therefor, filed Apr. 21, 1966, D.C., W.D. Ark. (El Dorado), Doc. 1104, *Peppi Co., Inc. v. The Grapette Co., Inc.* Final judgment and decree, defendants are perpetually enjoined and restrained; said trademark is hereby cancelled, Apr. 17, 1970.

Reg. No. 350,152 (BENDIX), Bendix Aviation Corporation, Radio equipment and radio communication systems and equipment and parts and accessories therefor, including azimuth indicators, radio compasses, radio receiving and transmitting apparatus, radio direction finding apparatus, blind landing apparatus, etc. filed Dec. 18, 1969, D.C., C.D. Calif. (Los Angeles), Doc. 68-2493-R, *The Bendix Corporation v. Spacecraft Components Corporation*.

Reg. No. 373,318 (TEMP-O), Palm Beach Company, Men's, boys', and children's outer garments, consisting of coats, vests, pants, and trousers; Reg. No. 318,325 (TEMPO), The Joseph & Feiss Company, Men's tailored clothing—namely, suits, coats, vests, trousers, sport jackets, slacks, topcoats and overcoats; Reg. No. 363,623 (TEMPO INTERNATIONAL), same, Tailored men's wear—namely, suits, coats, topcoats, slacks, and jackets, filed Oct. 2, 1969, D.C., C.D. Calif. (Los Angeles), Doc. 69-1977-F, *The Joseph & Feiss Company v. George B. Winard and Harold Winard, Winard Sales Com-*

pany. Trademarks are good and valid and are owned by plaintiff. Action dismissed with prejudice to both parties, Mar. 16, 1970.

Reg. No. 523,512 (BANK OF AMERICA AND DESIGN), Bank of America National Trust and Savings Association, Commercial, savings and trust department banking services; Reg. No. 583,738 (BANK OF AMERICA), same, Commercial, savings, loan and trust department banking services; Reg. No. 606,900 (BANKAMERICARD), Credit financing services—namely, extending credit to customers who purchase at subscribing retail establishments and collecting from such customers through a central billing system; Reg. No. 583,900 (BANK OF AMERICA), same, Commercial, savings, loan, trust department, and credit financing banking services; Reg. No. 545,618 (BANKAMERICARD), Bankamerica Service, Credit financing services, including administering consumer credit plans and collecting through central billing systems, filed Mar. 26, 1970, D.C. Colo. (Denver), Doc. C-2172, *Bank of America National Trust & Savings Association v. Bank of America Industrial Bank (formerly Industrial Bank of America and Westland Industrial Bank) and Albert Purcell*.

Reg. No. 576,100 (CESSNA AND DESIGN), The Cessna Aircraft Company, Airplanes and parts therefor; Reg. No. 567,435 (CESSNA), same, filed Oct. 3, 1969, D.C., C.D. Calif. (Los Angeles), Doc. 69-1993-EC, *The Cessna Aircraft Co. v. Cessna Aircraft, Inc.* Final judgment and order, plaintiff owner of said trademarks; further use of "Cessna" shall be subject to an agreement dated Feb. 13, 1970, Mar. 9, 1970.

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1970

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]..... 24,172
Date of oldest new application..... June 2, 1969
Date of oldest amended application (filing date)..... October 20, 1966

C. M. WENDT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B.....		9-17-69	10-2-67
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 43, 45, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200.....		7-9-69	10-20-66
(III) C. E. FOWLER, Classes 10, 21, 22, 23, 24, 25, 35.....		9-4-69	11-2-66
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107.....		6-2-69	10-27-67
Renewals (All Classes).....		9-17-70	
Sec. 12(c) Publications (All Classes).....		3-17-70	

Applications filed during the month of April 1970—3,154

Registrations Issued 415—No. 893,080 to No. 893,494
Renewals Issued 120

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, \$20.50 per annum, foreign mailing \$5.75 additional; single copies, 40 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

Reg. No. 583,733. (See Reg. No. 523,612.)

Reg. No. 583,368 (AQUA NET), Rayette, Inc., Water soluble freon dispensed hair dressing, filed Apr. 7, 1970, D.C., N.D. Tex. (Fort Worth), Doc. CA-4-1428, *Faberge, Incorporated v. Robert A. Watson and Ronald C. Watson, doing business as R. A. Watson & Son et al.*

Reg. No. 587,721 (ROTO-ROOTER), Roto-Rooter Corporation, Municipal, industrial, and domestic sewer, drain, and pipe cleaning service; Reg. No. 745,984 (ROTO-ROOTER AND DESIGN), same, Cleaning sewer, oil and water pipes, field and drain tile conduits for electric cable, filed Sept. 18, 1968, D.C., S.D. Tex. (Houston), Doc. 68-H-788, *Roto-Rooter Corp. v. Pot Bauer, Inc.* Final consent judgment, said United States service mark registrations are valid. Defendant has infringed and hereby enjoined, Mar. 11, 1970.

Reg. No. 600,018 (PLAYBOY), HMH Publishing Co., Inc., Monthly magazine; Reg. No. 769,762, same, Operation of establishments which feature food, drink and entertainment, filed Feb. 4, 1970, D.C., N.D. Calif. (San Francisco), Doc. C-70-272, *HMH Publishing Co., Inc. et al. v. Arthur Charles Brincat et al.*

Reg. No. 606,999. (See Reg. No. 523,612.)

Reg. No. 738,130 (WEJ-IT), Wej-It Expansion Products, Inc., Expansion bolts; 3,277,770, A. G. McCulloch, MASONRY ANCHOR BOLT, filed Jan. 9, 1967, D.C. Minn. (Minneapolis), Doc. 4-67-C-8, *Wej-It Expansion Products, Inc. v. Langford Tool & Drill Co. et al.* Stipulation of dismissal, Dec. 15, 1969.

Reg. No. 745,984. (See Reg. No. 587,721.)

Reg. No. 769,762. (See Reg. No. 600,018.)

Reg. No. 774,870 (WHALER), The Fisher-Pierce Co., Inc., Motor-driven boats of the blunt bowed type; Reg. No. 800,611 (BOSTON WHALER), same; Reg. No. 802,130 (BOSTON WHALER SQUALL AND DESIGN), same, Dinghies, filed Dec. 22, 1969, D.C. Conn. (New Haven), Doc. 13603, *The Fisher-Pierce Co., Inc. v. General Fiberglass International, Inc. and General Fiberglass Italiana S.p.A.* Consent judgment, defendants permanently enjoined, Mar. 31, 1970.

Reg. No. 800,611. (See Reg. No. 774,870.)

Reg. No. 802,130. (See Reg. No. 774,870.)

Reg. No. 818,325. (See Reg. No. 373,318.)

Reg. No. 845,618. (See Reg. No. 523,612.)

Reg. No. 853,940. (See Reg. No. 523,612.)

Reg. No. 862,922. (See Reg. No. 373,318.)

Reg. No. 862,543 (TOWN AND COUNTRY), Stephen Bernat, Dance instruction, filed May 28, 1969, D.C., N.D. Okla. (Tulsa), Doc. 69-C-109, *Stephen Bernat v. Jack Klein, doing business as Town & Country Dance Studio & Club.* Trademark valid and plaintiff is sole owner thereof. Defendant, Jack Klein permanently enjoined, Mar. 26, 1970.

Reg. No. 867,435. (See Reg. No. 576,100.)

Reg. No. 873,804 (KARMA), Karma, Inc., Phonograph records and pre-recorded magnetic tapes, filed Mar. 26, 1970, D.C., N.D. Tex. (Dallas), Doc. CA-3-8738-C, *Karma, Inc. v. Capital Records Inc., and John Ono Lennon and Apple Records.*

3,277,770. (See Reg. No. 738,130.)

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 773, 87th Congress, approved Oct. 3, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 289,869. Balchem Corporation, Slate Hill, N.Y. Filed Jan 30, 1968. **Class 26—Measuring and Scientific Appliances**

BALCHEM

Class 100—Miscellaneous

For Development of and Conducting Feasibility Studies Relating to Micro-Encapsulation Processes (Int. Cl. 42). First use June 13, 1966.

Class 106—Material Treatment

For Micro-Encapsulation of Products (Int. Cl. 40). First use May 15, 1967.

SN 808,835. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed Oct. 4, 1968.

BS&B

Class 2—Receptacles

For Tanks, Vessels, Bins and Parts Thereof, for Storage, Treating and Processing, Both Bolted and Welded, for Agricultural and Industrial Uses (Int. Cl. 6). First use on or about May 25, 1967.

Class 12—Construction Materials

Supplies

For Prepunched Angles, Plates, Panels and Gussets Used in Construction of Platforms, Walkways, Racks, Stairways, and the Like; Prefabricated Shelters for Livestock (Int. Cl. 6). First use on or about May 25, 1967.

Class 13—Hardware and Plumbing and Steam-Fitting

For Safety Devices—Namely, Pressure Relief Valves, Safety Heads and Rupture Discs (Int. Cl. 6). First use on or about May 25, 1967.

Class 21—Electrical Apparatus, Machines, and Supplies Thereof

For Electrical Components, Instrumentation, and Controls—Namely, Coils and Transformers, Switches, Flow, Level, Start-Up, Timing, Transfer and Route Controls, Control Panels, Monitors, Automated, Local and Remote Control Systems and Stations, and Transmitters Therefor; Modular Circuits; and Other Equipment Utilizing Electric Circuitry—Namely, Oil-field Production Equipment (Int. Cl. 9). First use on or about Dec. 30, 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts

For Chemical, Petroleum and Oilfield Treatment, Processing and Handling Equipment—Namely, Oil and Gas Separators, Emulsion Treaters, Regenerators, Desulfurizers, Absorbers, Stabilizers, Free Water Knockouts, Oil-Skinners, Hydrocarbon Recovery Units, Pipeline Scrubbers, Blow Cases, Flow Splitters, Degassifiers, Reciprocating Pumps and Coalescers; Agricultural Treating, Processing, Storing and Handling Equipment for Farm and Commercial use—Namely, Grain Spreaders, Grain and Feed Aeration Units, Cleaners, Augers, Pneumatic Conveyors and Tank Loaders and Unloaders; Internal Combustion Engines; Centrifuge Systems With Automatic Controls; and Livestock Feeding Equipment (Int. Cl. 7). First use on or about May 25, 1967.

For Measuring and Metering Equipment—Namely, Metering Units, Flow Meters, Chambers, Treaters and Separators; Well Testing Systems, Digital Integrators, Analog to Digital Converters, Pulse Totalizers, Alarm Monitoring and Tele-metering Equipment, Test Programming and Recording Units and Capacitance Probes for Measurement of Fluid Interfaces and Contamination; Electrical, Mechanical and Pneumatic Controls, Including Time Cycle, Pressure, Liquid Level, Specific Gravity, Temperature, Switching, Monitoring, Transfer, Start-Up and Timing Controls and Parts, Mountings and Attachments therefor; Oil and Gas Well Test Systems; Phase Null Net Oil Computer; Hydrometer; Control Panels; and Nucleonic Measuring Instruments for Measuring Pipe Thickness and Density and Liquid Levels (Int. Cl. 9). First use on or about May 25, 1967.

Class 31—Filters and Refrigerators

For Filtration Type Water Treatment Plants for Industrial Use; Liquid Filters and Strainers; and Refrigeration Units for the Chemical, Oilfield and Petroleum Fields (Int. Cl. 11). First use on or about July 8, 1949.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Packaged Direct and Indirect Fired Petroleum Heaters and Heat Exchangers; Fan and Heater Units; Grain and Feed Drying Units and Parts Thereof—Namely, Treaters, Vaporizers, Dryers, Dehydrators, Heat Exchangers, Fans and Steam Generators; and Dehydration Plants and Equipment for Gas Wells Comprised of Dehydrators, Contactors, Heat Exchangers, Heaters, Condensers and Separators (Int. Cl. 11). First use on or about Aug. 8, 1957.

Class 100—Miscellaneous

For Engineering Services—Namely, the Designing of Processing, Handling and Storage Equipment, Systems and Plants for the Chemical, Petroleum and Oilfield Industries, as Well as for Agricultural Uses and for all Types of Dry Flowables (Int. Cl. 42). First use on or about December 1950.

Class 103—Construction and Repair

For Construction of Processing, Handling and Storage Equipment, Systems and Plants for the Chemical, Petroleum and Oilfield Industries, as Well as for Agricultural Uses and all Types of Dry Flowables (Int. Cl. 37). First use on or about December 1950.

SN 819,758. Formex Corporation, Elkhart, Ind. Filed Feb. 24, 1969.



Owner of Reg. Nos. 760,220 and 817,686.

Class 12—Construction Materials

For Flexible Dock Edging and Flotation Pieces (Int. Cl. 19).
First use May 1959.

Class 19—Vehicles

For Sailboats and Boat and Dock Bumpers (Int. Cl. 12).
First use Mar. 21, 1963.

Class 22—Games, Toys, and Sporting Goods

For Floating Lounges, Floating Rings, Water Games, Marking Floats, Floating Pads and Buoys (Int. Cl. 28).
First use Dec. 18, 1960.

SN 322,516. Application des Gaz, Paris, France. Filed Mar. 24, 1969.

CAMPING GAZ

Owner of U.S. Reg. Nos. 711,052, 737,154, and others.

Class 2—Receptacles

For Containers for Compressed and Liquefied Gases (Int. Cl. 6).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Portable Gas Burners for Cooking; Gas Burners for Use in Laboratories; Portable Gas Lamps for Lighting; Gas Cartridges for all Such Apparatus, and Parts of the Above Apparatus (Int. Cl. 11).
First use 1950.

SN 325,297. GAF Corporation, New York, N.Y. Filed Apr. 28, 1969.

GAF

Owner of Reg. Nos. 509,124, 837,005, and Others.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Tools—Namely, Knives and Utility Knives, Trowels, Seam Cutters, Computing Register Punches for Use With Business Forms, and Film Clips (Int. Cls. 8 and 16).
First use Feb. 29, 1968.

Class 26—Measuring and Scientific Appliances

For Photographic Processing Equipment—Namely, Tray Siphons, Variable Outlet Drain Controls, Drain Stoppers and Adjustable Drainage Control Combinations, Hose Connections Having Suction Cups, and Tube Dispensers (Int. Cl. 9).
First use on or before Feb. 29, 1968.

SN 326,820. Chatillon Societa Anonima Italiana per le Fibre Tessili Artificiali S.p.A. Milan, Italy. Filed May 9, 1969.

ACSA

Owner of Italian Reg. No. 284,957, dated Dec. 18, 1968.

Class 1—Raw or Partly Prepared Materials

For Raw Fibrous Textile Fibers and Staple; Textile Monofilaments; Padding and Stuffing Materials of Fibers and Feathers; and Horsehair (Int. Cl. 22).

Class 43—Thread and Yarn

For Threads and Yarns (Int. Cl. 23).

SN 337,180. Toyomenka, Inc., Chicago, Ill. Filed May 18, 1969.

BIGSTON**Class 21—Electrical Apparatus, Machines, and Supplies**

For Radios and Television Receivers (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Tape Recorders (Int. Cl. 9).

First use Aug. 15, 1968.

SN 327,800. Armour-Dial, Inc., Chicago, Ill. Filed May 21, 1969.



The mark consists of a stylized letter "A."

Class 4—Abrasives and Polishing Materials

For Floor Wax (Int. Cl. 8).

Class 6—Chemicals and Chemical Compositions

For Ammonia; Liquid Sizing Composition for Fabrics (Int. Cls. 1 and 3).

Class 46—Foods and Ingredients of Foods

For Canned Corned Beef Hash; Combination Package Consisting of Yeast, Flour Mixture and Pizza Sauce Used to Make Pizza Pies and other Pizza Products; Dog Food (Int. Cls. 29, 30, and 31).

Class 51—Cosmetics and Toilet Preparations

For Personal Deodorants (Int. Cl. 5).

Class 52—Detergents and Soaps

For Bath and Toilet Soaps; Hair Shampoo; and Household Detergent Used for General Cleaning Purposes (Int. Cl. 3).

First use on or prior to Feb. 19, 1969.

SN 331,566. Genova Products, Davison, Mich. Filed July 2, 1969.

GENO-WELD**Class 13—Hardware and Plumbing and Steam-Fitting Supplies**

For Plumbing Pipe and Fittings (Int. Cl. 6).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Pressure Guns for Use in Welding Plastic Joints by a Solvent Injection Process (Int. Cl. 7).

First use May 27, 1969.

SN 334,664. Wronzja Associates, Berkeley, Calif. Filed Aug. 7, 1969.

**Class 38—Prints and Publications**

For Motion Picture Films (Int. Cl. 9).

Class 107—Education and Entertainment

For Preparing Industrial Training Films, Motion Pictures and Sales Films for Others (Int. Cl. 41).

First use July 20, 1969.

SN 339,629. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

VONA**Class 51—Cosmetics and Toilet Preparations**

For Cologne and Dusting Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use July 31, 1969.

SN 339,631. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

MAGNIFISCENTS**Class 51—Cosmetics and Toilet Preparations**

For Dusting Powder and Cologne (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use July 31, 1969.

SN 339,632. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

THE TOTABLE**Class 51—Cosmetics and Toilet Preparations**

For Filled Powder Compact, After Shave Lotion, Talcum Powder, and Lipstick (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use July 31, 1969.

SN 339,633. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

WESKIT**Class 51—Cosmetics and Toilet Preparations**

For Talcum Powder and After Shave Lotion (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,635. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

JODPHUR**Class 51—Cosmetics and Toilet Preparations**

For After Shave Lotion and Talcum Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,636. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

WINDOWS**Class 51—Cosmetics and Toilet Preparations**

For Cologne and Dusting Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,637. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

COMMUNIQUE**Class 51—Cosmetics and Toilet Preparations**

For Cologne and Talcum Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,638. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

DEEP WOODS**Class 51—Cosmetics and Toilet Preparations**

For Talcum Powder and Cologne (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,640. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

OFFSHORE**Class 51—Cosmetics and Toilet Preparations**

For After Shave Lotion and Talcum Powder (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soap (Int. Cl. 3).

First use June 17, 1969.

SN 339,975. V-M Corporation, Benton Harbor, Mich. Filed Oct. 6, 1969.

VM

Owner of Reg. Nos. 683,593, 777,743, and others.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrical-Mechanical Apparatus for Recording and/or Playing Audio and Electrical Signals; Radio-Phonograph Consoles; Microphones; Amplifiers; Speakers; Tuners; and Headphones (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Phonographs; Phonograph Records; Record Changers; Dust Covers for Record Changers; Phonograph Spindle Adapters; Tape Recorders; Stereophonic Portable Component Systems Comprising Record Changer, Tone Arm, Amplifier and Speaker Systems; and Slide Projector Synchronizer for Tape Recorders (Int. Cl. 9).

First use in or about April 1949.

SN 347,992. Intertherm, Inc., St. Louis, Mo. Filed Jan. 8, 1970.

iland

The mark is a fanciful depiction of the word "iland" and design. Owner of Reg. Nos. 794,063 and 794,795.

Class 101—Advertising and Business

For Services Rendered to Others in Planning and Operating Mobile Home Parks and Modular Home Subdivisions, Including Site Selection, Architectural Design, Engineering, and Management Services (Int. Cl. 35).

Class 102—Insurance and Financial

For Financing Assistance, Specifically for Mobile Home Parks and Modular Home Subdivisions (Int. Cl. 36).

Class 103—Construction and Repair

For Construction Supervision of Mobile Home Parks and Modular Home Subdivisions (Int. Cl. 37).

First use Nov. 12, 1969.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.
A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 326,933. Winzen Research, Inc., Minneapolis, Minn. Filed May 9, 1969.

WINFLEXFor Plastic Film (Int. Cl. 17).
First use February 1969.

SN 338,014. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Sept. 16, 1969.

DOLITEFor Dolomitic Limestone for General Industrial Use (Int. Cl. 19).
First use at least as early as 1959.

SN 340,418. Old Orchard Gardens, Inc., Manchester, Mo. Filed Oct. 10, 1969.

THRIFTPLANTSFor House and Garden Plants (Int. Cl. 31).
First use Sept. 9, 1969.

SN 341,413. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALFTALATOwner of German Reg. No. 444,483, dated Feb. 19, 1932.
For Synthetic Resins (Int. Cl. 1).

SN 341,414. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALNOVOLOwner of German Reg. No. 491,385, dated Aug. 12, 1936.
For Synthetic Resins (Int. Cl. 1).

SN 341,415. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALDUROLOwner of German Reg. No. 556,063, dated July 28, 1941.
For Synthetic Resins (Int. Cl. 1).

SN 341,416. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALBERTOLOwner of German Reg. No. 163,151, dated July 18, 1912.
For Synthetic Resins (Int. Cl. 1).

SN 341,418. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALRESENOwner of German Reg. No. 459,724, dated Apr. 28, 1933.
For Synthetic Resins (Int. Cl. 1).

SN 341,419. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALRESATOwner of German Reg. No. 457,489, dated Apr. 28, 1933.
For Synthetic Resins (Int. Cl. 1).

SN 341,420. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

ALPRODUROwner of German Reg. No. 489,458, dated Aug. 12, 1936.
For Synthetic Resins (Int. Cl. 1).

SN 341,421. Reichhold-Albert-Chemie AG., Hamburg, Germany. Filed Oct. 22, 1969.

DUROPHENOwner of German Reg. No. 384,163 dated Feb. 1, 1928.
For Synthetic Resins (Int. Cl. 1).

SN 341,810. The General Tire & Rubber Company, Akron, Ohio. Filed Oct. 27, 1969.

NAUTAQUILTFor Vinyl Sheet Material for Marine Applications Such as Deck Coverings, Topping, Boat Covers, Upholstery and the Like (Int. Cl. 22).
First use Sept. 3, 1969.

SN 343,573. Monsanto Company, St. Louis, Mo. Filed Nov. 14, 1969.

LOPACFor Synthetic Resins (Int. Cl. 1).
First use Oct. 13, 1969.**Class 2—Receptacles**

SN 322,040. Centsable Products, Inc., Schiller Park, Ill. Filed Mar. 18, 1969.

BUTTER UPPERApplicant disclaims the word "Butter" apart from the mark as shown.
For Butter and Margarine Dispensers (Int. Cl. 21).
First use July 13, 1968.

SN 328,023. Akro-Mills, Inc., Akron, Ohio. Filed May 22, 1969.

BENCH-MATEOwner of Reg. No. 857,704.
For Portable Tool Holder With Compartments (Int. Cl. 21).
First use July 2, 1968.

SN 347,593. Egcart, Inc., Woodridge, N.Y. Filed Jan. 2, 1970.

EGCART-XFor Containers for the Retail Sale of Eggs (Int. Cl. 20).
First use July 1, 1969.

SN 347,610. Jackes-Evans Manufacturing Company, St. Louis, Mo. Filed Jan. 2, 1970.

COUNTRYSIDEFor Mail Boxes (Int. Cl. 6).
First use Dec. 10, 1969.

SN 352,055. Alton Box Board Company, Alton, Ill. Filed Feb. 24, 1970.

RWWFor Shipping Containers Made of Corrugated Paperboard (Int. Cl. 16).
First use Jan. 30, 1970.

SN 352,056. Alton Box Board Company, Alton, Ill. Filed Feb. 24, 1970.

AQUACORFor Shipping Containers Made of Corrugated Paperboard (Int. Cl. 16).
First use Jan. 30, 1970.**Class 4—Abrasives and Polishing Materials**

SN 307,795. Globus-Werke Fritz Schulz Jun., Neuburg, Donau (Bavaria), Germany. Filed Aug. 14, 1968.

globoFor Polishing and Cleaning Preparation Combined for Both Car and Household Use (Int. Cl. 3).
First use July 16, 1968; in commerce July 16, 1968.

SN 321,941. International Metal Polish Co., Inc., Indianapolis, Ind. Filed Mar. 17, 1969.

VINYL-ITEFor Self-Polishing Coating for Application to Vinyl, Leather, Plastic, and Rubber (Int. Cl. 3).
First use Jan. 25, 1969.**Class 5—Adhesives**

SN 333,763. Standard Brands Chemical Industries, Inc., Dover, Del. Filed July 28, 1969.

SBCIFor Glue, Paste, Resin Adhesives, and Liquid Adhesive Cement (Int. Cl. 1).
First use May 28, 1969.

SN 351,630. Ronco Teleproducts, Inc., Chicago, Ill. Filed Feb. 17, 1970.

HOLD-UP

For Pressure Sensitive Pad With Release Paper (Int. Cl. 16).
First use Dec. 4, 1969.

Class 6—Chemicals and Chemical Compositions

SN 325,623. Phillips Petroleum Company, Bartlesville, Okla. Filed Apr. 25, 1969.



The drawing is lined for the color red, no specific claim to the color is made. Applicant disclaims the word "Petroleum" apart from the mark as shown. Owner of Reg. No. 862,340.
For Polymers in Plastic Form (Int. Cl. 1).
First use Mar. 17, 1969.

SN 337,730. R. T. Vanuerbilt Company, Inc., New York, N.Y. Filed Sept. 11, 1969.

RODFORM

Owner of Reg. No. 501,351.
For Antioxidants (Int. Cl. 1).
First use Nov. 12, 1962.

SN 337,785. Conversion Chemical Corporation, Rockville, Conn. Filed Sept. 12, 1969.

KEN-ECTOR

For Plating Solutions for Tin—Namely, Brightener, Starter, Corrector, and Salts Formulations (Int. Cl. 1).
First use on or before Apr. 1, 1969.

SN 337,892. Conversion Chemical Corporation, Rockville, Conn. Filed Sept. 12, 1969.

KENCAD

For Plating Solutions for Cadmium—Namely, Brightener, Starter, Corrector, and Salts Formulations (Int. Cl. 1).
First use on or before Sept. 1, 1969.

SN 338,103. Adco, Inc., Sedalia, Mo. Filed Sept. 17, 1969.

ADCO-LITE

For Brightener for Drycleaning Garments (Int. Cl. 3).
First use Nov. 24, 1965.

SN 338,139. Eastman Kodak Company, Rochester, N.Y. Filed Sept. 17, 1969.

POLYMATIC

For Lithographic and Photographic Processing Chemicals (Int. Cl. 1).
First use July 8, 1969.

Class 7—Cordage

SN 319,811. Berwick Textile Products Co., Inc., Paramus, N.J. Filed Feb. 24, 1969.

THERE'S ALWAYS ONE THAT'S BEST

For Ribbons for Packaging and Package Decoration (Int. Cl. 26).
First use Sept. 15, 1968.

SN 330,899. Berwick Textile Products Co., Inc., Paramus, N.J. Filed June 25, 1969.

POLY-SATIN

For Ribbon for Decorative Packaging and Bows Therefor (Int. Cl. 26).
First use May 2, 1969.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 336,121. Robert D. Kachman, d.b.a. The Chek-R-Grip Company, Royal Oak, Mich. Filed Aug. 25, 1969.

CHEK·R·GRIP

For Embossed Plastic Onlays That are Adhesively Bonded to Rifle Stocks in the Pistol and Forearm Areas To Simulate Hand Checkering (Int. Cl. 13).
First use Sept. 7, 1968.

Class 10—Fertilizers

SN 315,319. Kalo Inoculant Company, Quincy, Ill. Filed Dec. 27, 1968.

NOCTIN

For Inoculant for Agricultural Seeds (Int. Cl. 1).
First use Dec. 4, 1968.

SN 340,612. Sequoia Forest Products Co., Dinuba, Calif. Filed Oct. 13, 1969.

TURF-N-TEE

For Composted Bark Humus Employed as a Soil Conditioner and Top Dressing for Lawns and the Like (Int. Cl. 1).
First use June 1, 1968.

SN 341,450. Emhart Corporation, Hartford, Conn. Filed Oct. 20, 1969.

IDEAL GOLDEN

Owner of Reg. Nos. 70,947 and 612,892.
For Fertilizers (Int. Cl. 1).
First use on or about Nov. 24, 1952.

Class 12—Construction Materials

SN 289,877. Compagnie de Saint-Gobain, Societe Anonyme, Neuilly-sur-Seine (Hauts-de-Seine), France. Filed Jan. 30, 1968.

PARSOL

Priority claimed under Sec. 44(d) on French Reg. No. 739,483, dated Sept. 15, 1967.
For Glass Used in Construction—Namely, Window Glass and Door Glass (Int. Cl. 19).

SN 303,158. Fulgurit-Vertriebsgesellschaft, m.b.H., Luthe Wunstorf, Germany. Filed July 19, 1968.



The drawing is lined for the color red. Owner of German Reg. No. 719,418, dated Nov. 22, 1957.

For Asbestos-Cement Products—Namely, Roof Slabs, Corrugated Roof Slabs, Gutters, Plane Structural Plates, Window Sills, Sewer and Ventilation Pipes (Int. Cl. 19).

SN 312,209. Rudolf Kurner, Stuttgart, Germany. Filed Nov. 14, 1968.

OMNIFIX

Owner of German Reg. No. 302,045, dated Sept. 30, 1964.
For Powder To Be Mixed With Water for Repairing, Sealing and Cementing Purposes (Int. Cl. 19).

SN 316,883. Construction Specialties, Inc., Cranford, N.J. Filed Jan. 17, 1969.

ACROVYN

For Impact Resistant Devices, Such as Corner Guards, Buffer Plates, Kick Plates and Push Plates, for Buildings (Int. Cl. 19).
First use Dec. 4, 1968.

SN 319,729. Preco Chemical Corporation, Plainview, N.Y. Filed Feb. 20, 1969.

QUIK-ROK

For Fast Setting Patching and Anchoring Cement (Int. Cl. 19).
First use July 10, 1959.

SN 320,745. Sensiplex Manufacturing and Research Inc., Hackensack, N.J. Filed Mar. 4, 1969.

STAINPLEX

For Plastic Stained Windows and Decorative Wall and Ceiling Panels (Int. Cl. 19).
First use Sept. 19, 1968.

SN 329,293. United Africa Company (Timber) Limited, London, England. Filed June 5, 1969.

CRESTELLA

Owner of British Reg. Nos. 844,336, dated Jan. 26, 1968; and 892,414, dated Mar. 25, 1968.

For Boards and Rigid Shaped Sections all Made Wholly or Mainly of Plastics; Sawn Timber; Plywood; Wood Veneers; Blockboards (Being Veneered Panels of Wood); Laminated Boards; Composition Boards; Non-Metallic Flush Doors; all for Use in Building and Construction (Int. Cl. 19).

SN 330,692. Bau-Stahlgewebe G.m.b.H., Dusseldorf-Oberkassel, Germany. Filed June 23, 1969.

CARI fabric

Owner of German Reg. No. 854,841, dated Nov. 28, 1968.
For Reinforcing Mats for Steel-Concrete (Int. Cl. 6).

SN 332,675. Variety Manufacturing & Engineering Co., Inc., Chicago, Ill. Filed July 16, 1969.

Fulton WINDOR

Owner of Reg. No. 638,288.
For Balanced Doors (Int. Cl. 19).
First use June 3, 1968.

SN 333,646. A & T Development Corporation, Cincinnati, Ohio. Filed July 28, 1969.

FORMULA

Applicant disclaims the word "Formula" apart from the mark as shown.
For Resin-Water Emulsion Blacktop Sealer (Int. Cl. 19).
First use May 16, 1968.

SN 333,890. Allied Compositions Corporation, Maspeth, N.Y. Filed July 30, 1969.

DASH PATCH

Without relinquishing any of its common law rights, applicant disclaims the word "Patch" apart from the mark as shown.

For Material To Apply to Cracks, Score Lines and Holes in Floors and Walls To Provide Smooth Even Surface (Int. Cl. 19).
First use February 1953.

SN 333,891. Allied Compositions Corporation, Maspeth, N.Y. Filed July 30, 1969.

LEV-L-ASTIC

For Latex and Plastic Material To Produce Smooth, Even Surface When Troweled Over Sub-Floor Preparatory to Installation of Floor Coverings (Int. Cl. 19).
First use May 1954.

SN 334,475. Johns-Manville Corporation, New York, N.Y. Filed Aug. 5, 1969.

GOLD-LINE

For Asbestos Felts (Int. Cl. 17).
First use at least on or about Dec. 13, 1967.

SN 336,144. William J. Navarre Corporation, Riverview, Mich. Filed Aug. 25, 1969.

MISER WALL

Without relinquishing applicant's common law rights, applicant herewith disclaims without prejudice the word "Wall" apart from the mark as shown.

For Demountable Partition Walls (Int. Cl. 19).
First use on or about Feb. 1, 1968.

SN 339,795. International Minerals & Chemicals Corporation, Skokie, Ill. Filed Oct. 6, 1969.

NOTCHLINE

For Refractory Aggregate for Lining High Temperature Vessels (Int. Cl. 19).
First use Aug. 9, 1969.

SN 340,218. International Minerals & Chemical Corporation, Skokie, Ill. Filed Oct. 9, 1969.

LAVKILN

Owner of Reg. Nos. 820,190 and 833,179.
For Refractory Shapes for Lining High Temperature Vessels (Int. Cl. 11).
First use May 21, 1969.

SN 341,763. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Oct. 27, 1969.

YORKTOWN WALNUT

Applicant disclaims exclusive rights to the word "Walnut" except when used in the combination shown.

For Plywood, Lumber, Wood, and Wood Fiber Products in the Construction, Building, Industrial and Furniture Fields, i.e., Panels for Walls, Doors, Partitions, and Furniture (Int. Cl. 19).
First use on or about July 1969.

SN 343,303. Johns-Manville Corporation, New York, N.Y. Filed Nov. 12, 1969.

PROFILE

For Acoustical Panels (Int. Cl. 19).
First use at least on or about June 27, 1968.

SN 343,303. Johns-Manville Corporation, New York, N.Y. Filed Nov. 12, 1969.

THRUSTITE

For Asbestos Cement Pipe and Couplings (Int. Cl. 19).
First use at least on or about Aug. 8, 1969.

SN 343,371. Aaronson Bros. Limited, Rickmansworth, England. Filed Nov. 13, 1969.

CONTIBOARD

For Partitions, Panels and Panelling; Boards and Veneers; Bonded Boards, Bonded Veneers and Boards Bonded With Veneers; All the Aforesaid Goods Being Either With or Without a Plastic Surface; and Timber (Other Than Unsawn Timber (Int. Cl. 19).
First use January 1964; in commerce Feb. 25, 1969.

SN 343,955. Cyclops Corporation, Pittsburgh, Pa. Filed Nov. 19, 1969.

CYCLO-PANEL

For Steel Roofing and Siding (Int. Cl. 6).
First use Aug. 15, 1969.

SN 344,743. Tension Structures, Inc., New York, N.Y. Filed Nov. 26, 1969.



For Prefabricated Housing, Constructed of Plastic Laminated Cellulose Fibers (Int. Cl. 19).
First use at least as early as Oct. 1, 1968.

SN 353,357. American Davits Corporation, Miami, Fla. Filed Mar. 9, 1970.

MARINECRETE

For Portland Cement Base Compound (Int. Cl. 19).
First use September 1968.

SN 354,558. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Mar. 19, 1970.

BB-III

For Plywood, Wood, and Wood Fiber Products, Plain or Textured, Used in the Construction, Industrial and Furniture Fields, i.e., Decorative Panels for Walls, Doors, and Partitions (Int. Cl. 19).
First use on or about Feb. 28, 1969.

SN 354,559. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Mar. 19, 1970.

BB-VII

For Plywood, Wood, and Wood Fiber Products, Plain or Textured, Used in the Construction, Industrial and Furniture Fields, i.e., Decorative Panels for Walls, Doors, and Partitions (Int. Cl. 19).
First use on or about Feb. 28, 1969.

SN 354,560. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Mar. 19, 1970.

BARNBOARD-THREE

For Plywood, Wood, and Wood Fiber Products, Plain or Textured, Used in the Construction, Industrial and Furniture Fields, i.e., Decorative Panels for Walls, Doors, and Partitions (Int. Cl. 19).
First use on or about Feb. 28, 1969.

SN 354,561. U.S. Plywood-Champion Papers Inc., New York, N.Y. Filed Mar. 19, 1970.

BARNBOARD-SEVEN

For Plywood, Wood, and Wood Fiber Products, Plain or Textured, Used in the Construction, Industrial and Furniture Fields, i.e., Decorative Panels for Walls, Doors, and Partitions (Int. Cl. 19).
First use on or about Feb. 28, 1969.

SN 354,570. American Olean Tile Company, Inc., Lansdale, Pa. Filed Mar. 19, 1970.

PRIMITIVE

For Ceramic Tile (Int. Cl. 19).
First use Mar. 4, 1970.

SN 354,571. American Olean Tile Company, Inc., Lansdale, Pa. Filed Mar. 19, 1970.



For Ceramic Tile (Int. Cl. 19).
First use Nov. 6, 1969.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 313,402. Everingham Brothers Limited, Toronto, Ontario, Canada. Filed Dec. 2, 1968.

BU-T-BRITE

Owner of Canadian Reg. No. 110,228, dated May 16, 1963.
For Non-Electrical Stainless Steel and Aluminum Coffee Pots, Tea Pots, Sauce Pans, Frying Pans, Roasters, and Double Boilers (Int. Cl. 21).

SN 321,662. The Lee Company, Westbrook, Conn. Filed Mar. 13, 1969.



For Hydraulic Inserts—Namely, Flow Restrictors (Int. Cl. 6).
First use on or before Jan. 1, 1964.

SN 321,663. The Lee Company, Westbrook, Conn. Filed Mar. 13, 1969.



For Hydraulic Inserts—Namely, Flow Restrictors (Int. Cl. 6).
First use on or before Jan. 1, 1964.

SN 321,665. The Lee Company, Westbrook, Conn. Filed Mar. 13, 1969.



For Hydraulic Inserts—Namely, Check Valves (Int. Cl. 6).
First use on or before Jan. 1, 1964.

SN 324,158. Amerock Corporation, Rockford, Ill. Filed Apr. 10, 1969.

VANITY FAIR

For Cabinet Hardware and Particular Pulls, Knobs, and Backplates (Int. Cl. 6).
First use June 1968.

SN 334,142. Textron, Inc., Providence, R.I. Filed July 31, 1969.

FANNER

Owner of Reg. Nos. 676,575, 676,577, and others.
For Devices for Gripping, Tying, Protecting, Armoring, Shielding, Connecting, Lashing, and Clamping Electrical and Non-Electrical Lines and Cables (Int. Cl. 6).
First use at least as early as 1944; in 1894 on related goods.

SN 339,069. Continental Nonferrous Foundry, Inc., Minneapolis, Minn. Filed Sept. 29, 1969.



For Cast Non-Precious Metal Objects—Namely, Mugs for Beer (Int. Cl. 21).
First use Sept. 15, 1969.

SN 342,930. David Allison Co., Inc., Woodbury, N.Y. Filed Nov. 7, 1969.

SUPERHINGE

For Hinges (Int. Cl. 6).
First use Sept. 9, 1969.

SN 343,868. Pretty Products, Inc., Coshocton, Ohio. Filed Nov. 18, 1969.

SN 343,421. Phillips Petroleum Company, Bartlesville, Okla. Filed Nov. 13, 1969.

PHILTAC

For Lubricating Oils (Int. Cl. 4).
First use Aug. 1, 1969.

SN 343,422. Phillips Petroleum Company, Bartlesville, Okla. Filed Nov. 13, 1969.

CYPRUS

For Lubricating Oils (Int. Cl. 4).
First use as early as Aug. 6, 1969.

SN 343,423. Phillips Petroleum Company, Bartlesville, Okla. Filed Nov. 13, 1969.

ANCUS

For Lubricating Oils (Int. Cl. 4).
First use as early as July 7, 1969.

SN 344,530. Avon Products, Inc., New York, N.Y. Filed Nov. 25, 1969.

DANCING LIGHTS

Applicant disclaims the word "Lights" apart from the mark as shown.
For Perfumed Candle (Int. Cl. 4).
First use Oct. 21, 1969.

SN 345,045. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Dec. 2, 1969.

ZEREX

Owner of Reg. No. 375,555.
For Gasoline Additive Which Prevents Freezing of Fuel Lines (Int. Cl. 1).
First use May 19, 1969.

Class 16—Protective and Decorative Coatings

SN 290,600. W. R. Grace & Co., New York, N.Y. Filed Feb. 8, 1968.

EPODUR

For Corrosion Inhibiting Protective Coating for Wood, Masonry and Metal Surfaces (Int. Cl. 2).
First use Dec. 6, 1967.

SN 338,617. The Sherwin-Williams Company, Cleveland, Ohio. Filed Sept. 22, 1969.

POLANE

For Polyurethane Based Coating (Int. Cl. 2).
First use August 1963.

SN 363,130. Cotter & Company, Chicago, Ill. Filed Mar. 5, 1970.

MARVELUSTRE

For House Paints—Namely, Enamels (Int. Cl. 2).
First use Jan. 1, 1922.

For Rubber, Wire, and Plastic Housewares and Accessories, Such as Stove Mats, Table Top Mats, Drain Board Mats, Sink Mats and Bath Mats, Trays, Plate Storage Racks, Dish Drainers, Silverware Drainers, Tumblers and Mugs, Pantry Ware, Pie and Cake Covers, Pitchers and Kitchen Aids Such as Napkin Holders, Butter Dishes, Colanders, Funnels, Dust Pans and Measuring Cups (Int. Cls. 21 and 27).
First use July 1, 1967.

Class 14—Metals and Metal Castings and Forgings

SN 322,953. The Anaconda Company, New York, N.Y. Filed Mar. 27, 1969.

"HI-BOND"

For Copper Foil (Int. Cl. 6).
First use Sept. 18, 1964.

SN 343,630. Neebars, Inc., Los Angeles, Calif. Filed Nov. 17, 1969.

DF-10

For Treated Steel Bars (Int. Cl. 6).
First use Aug. 26, 1969.

Class 15—Oils and Greases

SN 328,619. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 29, 1969.

RALLY

For Water Pump Lubricant; Additive for Gasoline and Motor Oil, and Transmission Additive (Int. Cls. 1 and 4).
First use Feb. 6, 1969.

SN 336,197. Vapco, Inc., Oklahoma City, Okla. Filed Aug. 25, 1969.

VAPOR TUNE

Applicant disclaims the word "Vapor" apart from the mark as shown.

For Chemical Additive Injectable Into the Fuel of Internal Combustion Engines To Improve Engine Performance (Int. Cl. 1).
First use Mar. 11, 1969.

SN 337,722. Sun Oil Company, Philadelphia, Pa. Filed Sept. 11, 1969.

WAYCLING

For Lubricating Oils (Int. Cl. 4).
First use May 22, 1968.

SN 353,252. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 6, 1970.

DEXLAR

For Coatings in the Nature of Paint (Int. Cl. 2).
First use Feb. 4, 1970.

Class 17—Tobacco Products

SN 318,819. Reemtsma Cigarettenfabriken G.m.b.H., Hamburg, Germany. Filed Feb. 10, 1969.

GELBE SORTE

The words "Gelbe Sorte" can be translated as "yellow brand." Owner of German Reg. No. 656,920, dated Mar. 20, 1954.
For Cigarettes (Int. Cl. 34).

SN 322,716. Larus & Brother Company, Richmond, Va. Filed Mar. 25, 1969.

FILTER

Without surrendering any of its common-law rights therein, applicant disclaims the terms "Filter" and "Export" apart from the mark in its entirety. Owner of Reg. Nos. 128,095, 705,800, and others.
For Cigarettes (Int. Cl. 34).
First use Mar. 14, 1969; 1895 as to the mark "Edgeworth."

SN 323,131. Rothmans of Pall Mall Limited, Zurich, Switzerland. Filed Mar. 28, 1969.



Owner of U.S. Reg. Nos. 865,629, 867,399, and 867,400.
For Cigarettes (Int. Cl. 34).
First use July 18, 1968; in commerce July 18, 1968.

SN 323,133. Schimmelpenninck Sigarenfabrieken V/H Gaurts & Van Schuppen N.V., Wageningen, Netherlands. Filed Mar. 28, 1969.

CON MIL AMORES

The English translation of "Con Mil Amores" is "with a thousand loves."
For Cigars (Int. Cl. 34).
First use January 1950; in commerce December 1955.

SN 350,062. Consolidated Cigar Corporation, New York, N.Y. Filed Jan. 30, 1970.

HIP-TIP

For Cigars (Int. Cl. 34).
First use Jan. 22, 1970.

SN 350,063. Consolidated Cigar Corporation, New York, N.Y. Filed Jan. 30, 1970.

STROLLER

For Cigars (Int. Cl. 34).
First use Nov. 5, 1969.

SN 350,064. Consolidated Cigar Corporation, New York, N.Y. Filed Jan. 30, 1970.

TRAVELER

For Cigars (Int. Cl. 34).
First use Nov. 6, 1969.

SN 350,065. Consolidated Cigar Corporation, New York, N.Y. Filed Jan. 30, 1970.

TRIPS

For Cigars (Int. Cl. 34).
First use Jan. 22, 1970.

Class 18—Medicines and Pharmaceutical Preparations

SN 320,831. Marion Laboratories, Inc., Kansas City, Mo. Filed Mar. 5, 1969.

SELSERT

For Suppositories for the Relief of Constipation (Int. Cl. 5).
First use Feb. 10, 1969.

SN 324,941. E. R. Squibb & Sons, Inc., New York, N.Y. Filed Apr. 18, 1969.

MINI-Q-DEE

For Oral Contraceptive Preparation (Int. Cl. 5).
First use Apr. 8, 1969.

SN 330,273. Fife Pharmaceuticals, Inc., Elberton, Ga. Filed June 17, 1969.

F-G LOTION

Applicant disclaims the word "Lotion" apart from the mark as shown.
For Medicated Lotion for Treating Skin Conditions, Such as Chafing and Prickly Heat (Int. Cl. 5).
First use Jan. 1, 1960.

SN 334,844. Gricelda Guerrero, Elmhurst, N.Y. Filed Aug. 8, 1969.

GRICELD HAIR CREAM

The words "Hair Cream" are disclaimed apart from the mark as shown.
For Hair Care Preparation for Use as a Scalp Treatment and for Dandruff and Conditioning the Hair (Int. Cl. 3).
First use January 1963.

SN 335,254. Phillips Roxane, Inc., New York, N.Y. Filed Aug. 13, 1969.

CANICTERO-BAC

For Veterinary Product—Namely, a Leptospira Canicola-icterohemorrhagiae Bacterin (Int. Cl. 5).
First use Aug. 1, 1968.

SN 336,356. The Vitarine Co., Inc., Springfield Gardens, N.Y. Filed Aug. 26, 1969.

FUN MATES

For Multiple Vitamin Preparation in Tablet Form (Int. Cl. 5).
First use July 31, 1969.

SN 336,548. Drug Guild Co-Operative, Inc., Brooklyn, N.Y. Filed Aug. 28, 1969.

ALL-ALERT

For Awakener Preparation (Int. Cl. 5).
First use February 1964.

SN 336,904. Alcon Laboratories, Inc., Fort Worth, Tex. Filed Sept. 3, 1969.

EPINAL

For Ophthalmic Preparations (Int. Cl. 5).
First use Aug. 11, 1969.

SN 337,096. The Purdue Frederick Company, Yonkers, N.Y. Filed Sept. 4, 1969.

ASTRODINE

For Antiseptic Germicide (Int. Cl. 5).
First use Sept. 2, 1969.

SN 337,270. Commerce Drug Co., Inc., Farmingdale, N.Y. Filed Sept. 8, 1969.

CALTRIM

For Aid to Appetite Control (Int. Cl. 5).
First use May 1967.

SN 338,110. American Cyanamid Company, Wayne, N.J. Filed Sept. 17, 1969.

STRESSTABS

Owner of Reg. No. 602,149.
For Multivitamin Preparation (Int. Cl. 5).
First use Aug. 29, 1969.

SN 338,351. Block Drug Company Inc., Jersey City, N.J. Filed Sept. 19, 1969.

GENRATE

For Dermatological Preparation (Int. Cl. 5).
First use on or about July 31, 1969.

SN 338,701. USV Pharmaceutical Corporation, New York, N.Y. Filed Sept. 23, 1969.

HISTASPAN-D

Owner of Reg. No. 875,501.
For Oral Decongestant (Int. Cl. 5).
First use Oct. 1, 1968.

SN 339,109. Abbott Laboratories, North Chicago, Ill. Filed Sept. 29, 1969.

PRAMILET

Owner of Reg. No. 687,482.
For Multiple Vitamin-Mineral Preparation (Int. Cl. 5).
First use Oct. 31, 1968.

SN 339,451. Pennwalt Corporation, Philadelphia, Pa. Filed Oct. 1, 1969.

DIMETHACOL

For Antispasmodic Anticholinergic (Int. Cl. 5).
First use July 22, 1968.

SN 339,550. Broemmel Pharmaceuticals, San Francisco, Calif. Filed Oct. 2, 1969.

SURF-EYES

For Sterile Ophthalmic Suspension (Int. Cl. 5).
First use Sept. 17, 1969.

SN 339,793. The Good Life, North Hollywood, Calif. Filed Oct. 6, 1969.

THE GOOD LIFE

For Food Supplement With Calcium and Vitamin D; a Vitamin C Preparation; and a Multiple Vitamin and Mineral Preparation (Int. Cl. 5).
First use Sept. 23, 1969.

SN 339,822. Ralston Purina Company, St. Louis, Mo. Filed Oct. 6, 1969.

MINK-PLUS

Owner of Reg. Nos. 663,369, 878,725, and others.
For Medicated Mink Feed (Int. Cl. 5).
First use March 1964.

SN 350,433. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 4, 1970.

MICRONASE

For Antidiabetic Agent (Int. Cl. 5).
First use Nov. 17, 1969.

SN 350,435. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 4, 1970.

ACTROGEN

Owner of Reg. No. 861,857.
For Antineoplastic Agent (Int. Cl. 5).
First use Nov. 17, 1969.

SN 350,437. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 4, 1970.

MEDROCORT

Owner of Reg. No. 702,149.
For Medicated Skin Preparation for the Treatment of Acne (Int. Cl. 5).
First use Nov. 17, 1969.

Class 19—Vehicles

SN 359,096. Graham Products Limited, Inglewood, Ontario, Canada, assignee of Excelite (Quebec) Limited, Montreal, Quebec, Canada. Filed Nov. 21, 1966.

HOBO

Priority claimed under Sec. 44(d) on Canadian application filed Sept. 20, 1966; Reg. No. 155,709, dated Feb. 23, 1968.
Owner of U.S. Reg. No. 843,600.
For Water Craft (Int. Cl. 12).
First use Sept. 21, 1966; in commerce Sept. 21, 1966.

SN 369,703. Transco Inc., Chicago, Ill. Filed Oct. 15, 1968.

TRANSCO

For Specialty Items for Railroad Cars for Storing and Bracing Loads—Namely, Flooring, Bulkheads and Dividers, Belt Rails, Cross Bars, and Racks and Parts Thereof (Int. Cl. 12).
First use 1934.

SN 316,492. White Motor Corporation, Cleveland, Ohio. Filed Jan. 13, 1969.



Owner of Reg. No. 828,469.
For Trucks, Highway Tractors, Campers, and Convertible Vehicles Usable Selectively as Highway Trucks or Self-Propelled Mobile Homes, and Parts Thereof (Int. Cl. 12).
First use during or about August 1966.

SN 326,274. Bruce Manufacturing, Inc., Bruce, Wis. Filed May 2, 1969.

PUG-LUG

For Trailer for Carrying and Supporting Vehicles (Int. Cl. 12).
First use Nov. 1, 1966.

SN 332,522. Crockey Peterson, d.b.a. Crockey Peterson Racing Enterprises, Flat River, Mo. Filed July 14, 1969.



The words "By Crockey Peterson Racing Entr" is disclaimed apart from the mark.
For Fiberglass Automobile Racing Bodies (Int. Cl. 12).
First use Oct. 16, 1968.

SN 336,690. Barry Galloway, Lawndale, Calif. Filed Aug. 29, 1969.



The drawing is lined for the colors red and silver.
For Shift Knobs, Steering Wheels, Wheel Hub Covers, and Floor Mats for Automobiles (Int. Cl. 12).
First use June 1, 1969.

SN 339,928. Polycell-Prout Limited, Welwyn Garden City, England. Filed Oct. 6, 1969.

Puffin



For Boats and Parts Thereof (Int. Cl. 12).
First use January 1969; in commerce May 1969.

SN 345,107. Coot Industries, San Francisco, Calif. Filed Dec. 3, 1969.



The representation of a vehicle, per se, is disclaimed apart from the mark as shown, without waiver of applicant's common law rights therein.
For Recreational and General Utility Motor Cars (Int. Cl. 12).
First use Nov. 11, 1969.

SN 345,109. Coot Industries, San Francisco, Calif. Filed Dec. 3, 1969.



For Recreational and General Utility Motor Cars (Int. Cl. 12).
First use Nov. 11, 1969.

SN 346,142. Winston Industries, Inc., Birmingham, Ala. Filed Dec. 12, 1969.

MARK III

For Mobile Homes (Int. Cl. 12).
First use Apr. 29, 1969.

SN 346,146. Winston Industries, Inc., Birmingham, Ala. Filed Dec. 12, 1969.

CRIMSON

For Mobile Homes (Int. Cl. 12).
First use Aug. 1, 1968.

SN 346,150. Winston Traveller, Inc., Haleyville, Ala. Filed Dec. 12, 1969.

ESCAPE

For Mobile Homes (Int. Cl. 12).
First use June 23, 1969.

SN 346,152. Winston Industries, Inc., Birmingham, Ala. Filed Dec. 12, 1969.

ENGLISH SQUIRE

For Mobile Homes (Int. Cl. 12).
First use Apr. 7, 1969.

SN 346,154. Winston Industries, Inc., Birmingham, Ala. Filed Dec. 12, 1969.

SALEM

For Mobile Homes (Int. Cl. 12).
First use Apr. 29, 1969.

SN 352,596. American Photocopy Equipment Company, Evanston, Ill. Filed Feb. 27, 1970.

MAGNUM MARINE

No claim is made to the word "Marine" apart from the mark as shown.
For Boats (Int. Cl. 12).
First use Jan. 6, 1970.

Class 20—Linoleum and Oiled Cloth

SN 322,048. Congoleum Industries, Inc., Kearny, N.J. Filed Mar. 18, 1969.

ALLURA

For Plastic Coverings of the Solid Surface, Resilient Type for Surfaces Such as Floors, Countertops, and the Like in the form of Rolls, Rugs, and Tiles (Int. Cl. 27).
First use Jan. 6, 1969.

SN 322,049. Congoleum Industries, Inc., Kearny, N.J. Filed Mar. 18, 1969.

PACEMAKER

For Plastic Coverings of the Solid Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the form of Rolls, Rugs, and Tiles (Int. Cl. 27).
First use Jan. 6, 1969.

SN 322,708. GAF Corporation, New York, N.Y. Filed Mar. 25, 1969.

SIERRA

For Vinyl Sheet Wall, Floor, and Table Top Coverings (Int. Cl. 27).
First use Feb. 22, 1969.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 288,769. Babcock Electronics Corporation, Costa, Mesa, Calif. Filed Jan. 15, 1968.

BABCOCK

For Electrical and Electronic Components—Namely, Transmitters, Receivers, Signal Generators, and Electromagnetic Relays (Int. Cl. 9).
First use May 19, 1959.

SN 300,546. Air Reduction Company, Incorporated, New York, N.Y. Filed June 17, 1968.

KRYOCONDUCTOR

For Electrical Superconducting Wire (Int. Cl. 9).
First use Mar. 12, 1968.

SN 313,954. Fansteel Inc., North Chicago, Ill., assignee of Mech-Tronics Corporation, Melrose Park, Ill. Filed Dec. 9, 1968.

MECH-TRONICS

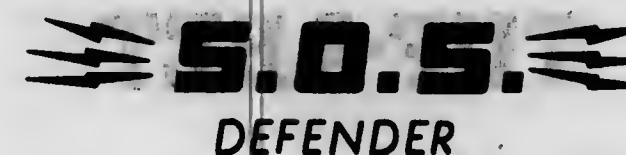
Owner of Reg. No. 690,476.
For Mechanical Components of Electronic Equipment Comprising Electronic Hardware, Equipment Housings and Mountings; Electronic Assemblies for Power Supply in Communication Units in Aerospace Vehicles, for Connecting Computers to Recorders, and for Controlling Paper Cutters for Printers; Electrical Instrument Components for Aircraft, Antennas and Components and Antenna Systems, Modules and Racks for Automatic Pilots and Electrical Navigation Units, Mechanical Frames and Subassemblies of Electronic Equipment for Space Vehicles; Welded Circuit Boards, Electronic Power Supply Modules, and Electronic Amplifiers and Preamplifiers (Int. Cl. 9).
First use July 7, 1948.

SN 315,422. The Lodestar Corporation, Los Angeles, Calif. Filed Dec. 30, 1968.

DUO-LUX

For Lighting Fixtures Utilizing an Electrically Energizable Light Source (Int. Cl. 11).
First use Dec. 2, 1968.

SN 319,737. Schwartz Protective Systems, Inc., Philadelphia, Pa. Filed Feb. 20, 1969.



For Automatic Electrical Burglar and Fire Alarm Systems (Int. Cl. 9).
First use July 12, 1960.

SN 325,716. Cerro Corporation, New York, N.Y. Filed Apr. 28, 1969.

CERROTROL

For Electrical Wire and Cable (Int. Cl. 9).
First use Mar. 21, 1969.

SN 328,999. James M. Nutton, d.b.a. J. M. Nutton Co., North Andover, Mass. Filed June 3, 1969.

DEMOULAS

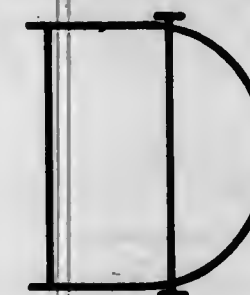
For Electrical Wiring Connector Devices (Int. Cl. 9).
First use Mar. 20, 1969.

SN 330,813. American Optical Corporation, Southbridge, Mass. Filed June 24, 1969.

SURE-GUARD

For Emergency Lighting Unit Comprising Lamps, Batteries and Controls for Automatically Supplying Illumination in the event of the Failure of a Normal Power Source (Int. Cl. 11).
First use Jan. 30, 1969.

SN 331,274. Dracon Industries, Van Nuys, Calif. Filed June 30, 1969.



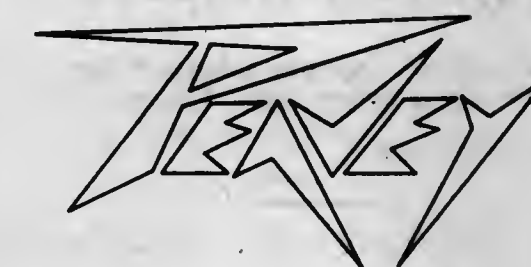
For Hardware for Telephone Equipment—Namely, Telephone Junction Boxes; and Clips, Clamps and Racks for Holding and Mounting Telephone Equipment (Int. Cl. 9).
First use at least as early as 1962.

SN 382,451. Cipher Data Products, San Diego, Calif. Filed July 14, 1969.

CIPHER

For Tape Transports for the Recording of Data in Digital Form (Int. Cl. 9).
First use Aug. 6, 1968.

SN 332,516. Hartley D. Peavey, d.b.a. Peavey Electronics, Meridian, Miss. Filed July 14, 1969.



The mark is the name "Peavey" in an angular script connoting Electronic Energy.
For Musical Instrument Amplifiers and Public Address Systems (Int. Cl. 9).
First use January 1965.

SN 332,954. Infnetics Inc., Wilmington, Del. Filed July 18, 1969.



For Magnetic Cores for Digital Electronic Circuitry (Int. Cl. 9).
First use July 1962.

SN 333,113. Eaton Yale & Towne Inc., Cleveland, Ohio. Filed July 22, 1969.

DYNAHERTZ

For Adjustable Variable Frequency Electric Power Supply for Electric Motors (Int. Cl. 9).
First use June 20, 1969.

SN 335,123. Conveyor Heat Products Corp., Cinnaminson, N.J. Filed Aug. 12, 1969.

SMOKONTROL

For Apparatus for Removing Smoke and Odors From the Air by Electro-Catalytic Action (Int. Cl. 9).
First use Nov. 14, 1968.

SN 335,274. The Telex Corporation, Tulsa, Okla. Filed Aug. 13, 1969.

AMPLITONE

For Headphone (Int. Cl. 9).
First use June 28, 1967.

SN 335,982. Anes Automotive Electronics, Inc., Culver City, Calif. Filed Aug. 22, 1969.

MOON-LITE

For Electrically Operated Multi-Chromatic Pattern Lamps (Int. Cl. 11).
First use July 10, 1969.

SN 341,981. Fedtro, Inc., Rockville Centre, N.Y. Filed Oct. 29, 1969.

BENCHMASTER

For Electrical Unit Comprising a Series of Electric Outlets Together With an Indicator Light, Fuse and Switch (Int. Cl. 9).

First use Oct. 17, 1969.

SN 348,057. S & C Electric Company, Chicago, Ill. Filed Jan. 8, 1970.

CURRENT-TRANSENDER

For Radio Transmitters Responsive to Current Flow (Int. Cl. 9).

First use on or about Jan. 21, 1967.

SN 348,563. Motorola, Inc., Franklin Park, Ill. Filed Jan. 14, 1970.

MICOR

For Radio Receivers and Radio Transmitters Used for Two-Way Voice Communication for Mobile and Fixed Station Installations (Int. Cl. 9).

First use Dec. 17, 1969.

SN 349,178. Gold Line Connector, Inc., Norwalk, Conn. Filed Jan. 21, 1970.

SAFETY FIRST

For Swimming Pool Alarms (Int. Cl. 9).

First use prior to Dec. 7, 1969.

Class 22—Games, Toys, and Sporting Goods

SN 274,193. Dentor Enterprises Limited, Toronto, Ontario, Canada. Filed June 19, 1967.

SNO KART

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 7, 1967; Reg. No. 156,638, dated May 3, 1968. For Sleights and Sleds (Int. Cl. 28).

First use Apr. 1, 1967; in commerce, Apr. 1, 1967.

SN 317,438. Richard L. Chapman, d.b.a. Iso-Weight Industries, Waterloo, Iowa. Filed Jan. 24, 1969.

ISO-WEIGHT

For Weight Lifting and Exercising Device (Int. Cl. 28).

First use July 24, 1968.

SN 321,994. Sifo Company, Minneapolis, Minn. Filed Mar. 17, 1969. Filed Mar. 17, 1969.

SAMMY SUN

For Child's Education Calendar Puzzle (Int. Cl. 28).

First use in or about March 1951.

SN 322,550. Peter A. Brett, Rowayton, Conn. Filed Mar. 24, 1969.

TUF-ABET

Owner of Reg. No. 850,527.

For Apparatus Comprising Lettered Cubes for Playing a Word Game (Int. Cl. 28).

First use Feb. 21, 1969.

SN 326,851. Columbia Industries, Inc., San Antonio, Tex. Filed May 9, 1969.

BEARCAT

For Bowling Balls (Int. Cl. 28).

First use Mar. 13, 1969.

SN 328,672. Cramer Products, Inc., Gardner, Kans. Filed May 29, 1969.

BULLDOG

For Mouthguards for Use During Athletic Activities (Int. Cl. 28).

First use during March 1967.

SN 328,823. Columbia Industries, Inc., San Antonio, Tex. Filed June 2, 1969.

SATURN

For Bowling Balls (Int. Cl. 28).

First use Mar. 13, 1969.

SN 329,002. The Orvis Company, Inc., Manchester, Vt. Filed June 3, 1969.

MADISON

For Fishing Rods and Fishing Reels (Int. Cl. 28).

First use at least as early as Mar. 5, 1969.

SN 338,483. Mattel, Inc., Hawthorne, Calif. Filed Sept. 22, 1969.

MYRTLE

For Female Doll Puppet (Int. Cl. 28).

First use Aug. 14, 1969.

SN 338,723. Mattel, Inc., Hawthorne, Calif. Filed Sept. 24, 1969.

SPORTY TALK

No claim of exclusive right is made to the word "Talk" apart from the mark.

For Toy Stuffed Doll (Int. Cl. 28).

First use July 31, 1969.

SN 339,102. Model Products Corporation, Mt. Clemens, Mich. Filed Sept. 29, 1969.

MPC

For Model Toy Kits (Int. Cl. 28).

First use on or prior to Jan. 28, 1964.

SN 340,723. Mattel, Inc., Hawthorne, Calif. Filed Oct. 15, 1969.

PICTURE PERFECT

No claim of exclusive right is made to the term "Picture" for the goods recited.

For Toy Drawing Set (Int. Cl. 28).

First use Aug. 28, 1969.

SN 340,888. Mattel, Inc., Hawthorne, Calif. Filed Oct. 16, 1969.

DOLLY DRAW-A-LOT

No claim of exclusive right is made to "Dolly" for the goods recited.

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).

First use Sept. 5, 1969.

SN 342,937. Northstar Athletic Industries, Inc., Minneapolis, Minn. Filed Nov. 7, 1969.

Pro-form

For Protective Mouthpieces for Sporting Use (Int. Cl. 28).

First use Oct. 15, 1969.

SN 345,243. Mattel, Inc., Hawthorne, Calif. Filed Dec. 4, 1969.

CHATTER WAGON CHUGGERS

No claim of exclusive right is made to "Wagons" for the goods recited.

For Toy Vehicle Having a Phonographic Device (Int. Cl. 28).

First use Oct. 9, 1969.

SN 352,802. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Feb. 25, 1970.

DON'T BE A DUMBELL

For Equipment, Including Modeling Compound, Sold as a Unit for Playing a Parlor Game (Int. Cl. 28).

First use on or about Jan. 30, 1970.

SN 352,308. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Feb. 25, 1970.

PLAY-STONE

Owner of Reg. No. 650,035.

For Modeling Compound (Int. Cl. 28).

First use on or about Jan. 30, 1970.

SN 352,809. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Feb. 25, 1970.

WOBBLE'N GOBBLE-IT

For Equipment Sold as a Unit for Playing Parlor-Type Amusement Game (Int. Cl. 28).

First use on or about Jan. 30, 1970.

SN 353,624. Mattel, Inc., Hawthorne, Calif. Filed Mar. 10, 1970.

FABULOUS FAKES

For Toy Jewelry and a Toy Kit for Making the Same (Int. Cl. 28).

First use Sept. 8, 1969.

SN 353,625. Mattel, Inc., Hawthorne, Calif. Filed Mar. 10, 1970.

FLO

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).

First use Mar. 5, 1969.

SN 354,085. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

LIVE WIRE

For Toy Miniature Automobile (Int. Cl. 28).

First use Nov. 25, 1969.

SN 354,263. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 17, 1970.

OCTRIX

For Apparatus Sold as a Unit for Playing a Card Game (Int. Cl. 28).

First use Nov. 28, 1969.

SN 354,357. Mattel, Inc., Hawthorne, Calif. Filed Mar. 18, 1970.

ROUNDSIES

For Doll, Doll Clothing, Doll Accessories, and a Unique Vehicle for a Doll (Int. Cl. 28).

First use Nov. 24, 1969.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 304,808. Novadel Limited, Wandsworth, London, England. Filed Aug. 9, 1968.

NOVADEL VARI-FEEDER

Priority claimed under Sec. 44(d) on British Reg. No. 925,283, dated May 15, 1968. Applicant makes no claim to "Vari-Feeder" as having any exclusive right thereto apart from its use with "Novadel."

For Automatic Feeding and Blending Units for Feeding Dry Products, Such as Powders, Granules and Pellets, in Batch and Continuous Process, and Parts Thereof (Int. Cl. 7).

SN 311,084. Sidney Zuritsky, Browns Mills, N.J. Filed Oct. 31, 1968.

DOG CADDY

No claim is made to the word "Caddy" apart from the mark as shown.

For Manually Operated Long-Handled Receptacles for Picking Up and Removing Dog Litter and Refuse (Int. Cl. 8). First use on or about Aug. 1, 1968.

SN 317,551. The Gates Rubber Company, Denver, Colo. Filed Jan. 27, 1969.

MillMaster

For Textile Machinery Accessories—Namely, Pickers, Strapping, Bumpers, and Roll Covering (Int. Cl. 7). First use Nov. 1, 1968.

SN 322,738. Star-New Era, Inc., South Hackensack, N.J., by change of name from Powers & Eaton Industries, Inc., South Hackensack, N.J. Filed Mar. 25, 1969.

AUTOPERF

For Tape Perforating Machines for Type Setting and Type Casting Machines (Int. Cl. 7). First use about January 1966.

SN 326,641. Edelbrock Equipment Company, El Segundo, Calif. Filed May 7, 1969.

STR

For Intake Manifolds for Internal Combustion Engines (Int. Cl. 7). First use Mar. 28, 1969.

SN 327,949. Medalist Industries, Inc., Milwaukee, Wis. Filed May 21, 1969.

PROGRAMATIC

For Automatic Band Saw (Int. Cl. 7). First use June 1968.

SN 327,969. Sunshine Chemical Corporation, Jacksonville, Fla. Filed May 21, 1969.

SEA BROOM

For Pumps for Skimming Floating Substances From the Surface of Bodies of Water (Int. Cl. 7). First use Apr. 21, 1969.

SN 330,128. G.E.M. Products, Inc., Carol Stream, Ill. Filed June 16, 1969.

GEM

For Internal Combustion Engines for Go-Karts and Snow Vehicles, and Parts for Said Engines (Int. Cl. 12). First use March 1960.

SN 330,508. Johann Hochreuter, d.b.a. Hochreuter & Baum, Ansbach, Middle Franconia, Germany, Filed June 19, 1969.

AEROSTAR

Priority claimed under Sec. 44(d) on German application filed Dec. 24, 1968; Reg. No. 857,597, dated May 20, 1969. For Machinery Shaft Couplings (Int. Cl. 7).

SN 330,912. Develco Manufacturing Co., Cleveland, Ohio. Filed June 2, 1969.

DEVELCO

For Specialized Products for Racing Cars—Namely, Clutch, Transmission, Differential and Other Drive Train Parts; Engine and Drive Train Bolts and Fasteners; Carburetor Parts and Accessories; and Valve Train Parts (Int. Cl. 12). First use on or about Oct. 1, 1965.

SN 332,596. Acme Metal Goods Mfg. Co., Newark, N.J. Filed July 15, 1969.

ACME

For Kitchen Items—Namely, Ice Picks, Vegetable Cutters, and Food Tongs (Int. Cl. 8). First use June 17, 1969.

SN 332,841. Modern Handling Systems, Alabaster, Ala. Filed July 17, 1969.

MODERN HANDLING SYSTEMS

Applicant disclaims the exclusive right to the words "Handling Systems" apart from the mark. For Belt Conveyors—Namely, Idler Rolls, Stands, Drives, and Supporting Framework Therefor (Int. Cl. 7). First use Jan. 3, 1967.

SN 333,410. KTS Industries, Inc., Kalamazoo, Mich. Filed July 24, 1969.

KALAMAZOO

For Metal Cutting Band Saws and Component Parts Therefor (Int. Cl. 7). First use October 1953.

SN 333,456. Textron Inc., Providence, R.I. Filed July 24, 1969.

PIERCED BAROQUE

For Stainless Steel Flatware (Int. Cl. 8). First use June 4, 1969.

SN 333,663. Black Clawson, Inc., Everett, Wash., by change of name from Black Clawson-Sumner, Inc., Everett, Wash. Filed July 28, 1969.

AIRMATIC

For Log Barking Machines (Int. Cl. 7). First use at least as early as June 18, 1969.

SN 333,713. John D. Hollingsworth on Wheels, Inc., Greenville, S.C. Filed July 28, 1969.

CARDMASTER

For Textile Carding Machines, Plates, Mounting Brackets, Pre-Opener Roll Assembly, Back Plates and Filler Plates (Int. Cl. 7). First use on or about June 6, 1968.

SN 334,583. Guyson Industrial Equipment Limited, Otley, England. Filed Aug. 6, 1969.

GUYSON

Owner of British Reg. No. B669,476, dated May 14, 1948. For Shotblast Cabinets and Shotblast Guns, All Being Parts of Shotblasting Machines; and Portable Shotblasting Machines (Int. Cl. 7).

SN 334,636. Stelchrome Manufacturing, Inc., Odessa, Tex. Filed Aug. 6, 1969.

STELCHROME

For Valves, Valve Seats and Inserts, All for Use in Internal Combustion Engines (Int. Cl. 7). First use May 25, 1959.

SN 334,819. G. W. Davis Corporation, Richmond, Ind. Filed Aug. 8, 1969.

DAVIS COMMANDO

Applicant disclaims any exclusive right to the use of the surname "Davis," except as a part of the mark as a whole. For Lawn Mowers (Int. Cl. 7). First use Jan. 21, 1969.

SN 344,242. Ingersoll-Rand Company, New York, N.Y. Filed Nov. 21, 1969.

WHISPERIZED

For Portable Gas Compressors (Int. Cl. 7). First use at least as early as July 3, 1968.

SN 344,875. Modern Plastic Machinery Corporation, Clifton, N.J. Filed Nov. 28, 1969.

MPM

For Plastic Processing Machinery—Namely, Extruders, Blow Molders, Injection Molders, Sheet and Continuous Film Producers, Slitting and Shredding Machines, and Parts of All Thereof (Int. Cl. 7). First use Dec. 28, 1948.

SN 347,971. Syllographic Machines, Inc., Amarillo, Tex. Filed Jan. 7, 1970.

SYLLOGRAPH

For Keyboard for Typewriters (Int. Cl. 16). First use June 30, 1969.

SN 347,972. Syllographic Machines, Inc., Amarillo, Tex. Filed Jan. 7, 1970.

SYLLOGRAPHIC

For Typewriters (Int. Cl. 16). First use Aug. 29, 1969.

SN 348,267. Conomix Corporation, Blackwood, N.J. Filed Jan. 12, 1970.

CONOMIX-R

For Portable Industrial Mixer for Mixing Fluids (Int. Cl. 7). First use June 26, 1969.

SN 348,366. Torrey's Engineering & Welding Services, Inc., Framingham Centre, Mass. Filed Jan. 12, 1970.

TORWEL

For Highway Sand Spreaders and Parts Thereof (Int. Cl. 12). First use Dec. 15, 1950.

SN 348,590. Stero Dishwashing Machine Mfg. Co., San Francisco, Calif. Filed Jan. 14, 1970.

Electro-Lift

For Dishwashing Machines, Especially the Kind Having a Pop-Up Door (Int. Cl. 7). First use Nov. 1, 1963.

SN 348,591. Stero Dishwashing Machine Mfg. Co., San Francisco, Calif. Filed Jan. 14, 1970.

STEROMATIC

For Dishwashing Machines (Int. Cl. 7). First use May 1, 1967.

SN 348,592. Symons Mfg. Company, Des Plaines, Ill. Filed Jan. 14, 1970.



For Vehicle-Mounted Telescopic Conveyors (Int. Cl. 7).
First use Oct. 24, 1969.

SN 348,679. Oneida Ltd., Oneida, N.Y. Filed Jan. 15, 1970.

ROSEWOOD

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use Jan. 6, 1970.

SN 349,005. Standard International Corporation, Andover, Mass. Filed Jan. 19, 1970.

PHOTO-TEX

For Calender Machines for Embossing Paper Goods—Namely, Pictures and Photographs (Int. Cl. 7).
First use Sept. 23, 1968.

SN 355,842. Morse Electro Products Corp., Ozone Park, N.Y. Filed Apr. 3, 1970.



Owner of Reg. Nos. 739,968 and 741,228.
For Sewing Machines and Parts Thereof (Int. Cl. 7).
First use Mar. 8, 1970.

Class 24—Laundry Appliances and Machines

SN 327,171. Susie J. Richards, d.b.a. Indian Nation Press Co., Yukon, Okla. Filed May 13, 1969.



BIG CHIEF

For Press Pads Used on Commercial Pressing Machine (Int. Cl. 7).
First use Apr. 28, 1969.

SN 346,267. McGraw-Edison Company, Elgin, Ill. Filed Dec. 15, 1969.

SAVE-O-SOLV

For Laundry Drying Tumblers (Int. Cl. 7).
First use May 1, 1958.

Class 25—Locks and Safes

SN 336,836. New England Lock and Hardware Company, South Norwalk, Conn. Filed Sept. 2, 1969.



For Locks, Lock Parts, and Keys (Int. Cl. 6).
First use June 25, 1969.

Class 26—Measuring and Scientific Appliances

SN 306,869. "Automatic" Sprinkler Corporation of America, Cleveland, Ohio. Filed Sept. 9, 1968.

GLO-ESCENT

Owner of Reg. No. 850,201.
For Illuminated Navigation Control Indicator Panels (Int. Cl. 9).
First use Feb. 8, 1968.

SN 319,798. Associated Research, Inc., Chicago, Ill. Filed Feb. 24, 1969.

HYJOULE

For Electrical Fault Location Equipment (Int. Cl. 9).
First use on or about Nov. 29, 1968.

SN 321,982. Robert N. Rehlaender, d.b.a. Plastic Engineered Products Company, San Carlos, Calif. Filed Mar. 17, 1969.

SCOPE SHELF

For Portable Test Equipment Leveler and Support (Int. Cl. 9).
First use Apr. 14, 1968.

SN 323,887. Moss Corporation, Lincolnwood, Ill. Filed Apr. 2, 1969.

FILMINDER

For X-Ray Developer and Cabinets (Int. Cl. 10).
First use in or about August 1955.

SN 324,547. Vicon Products Corp., Mamaroneck, N.Y. Filed Apr. 14, 1969.



For Fiber Optic Illumination System, Such as for Medical Instruments and Particularly Dental Instruments (Int. Cl. 10).
First use Jan. 15, 1969.

SN 324,758. Seminole Pollution Equipment Corp., Rochester, N.Y. Filed Apr. 16, 1969.



For Waterproof Cameras for Use in Conduits and Remote Controls and Towing Equipment Therefor (Int. Cl. 9).
First use Sept. 10, 1968.

SN 326,240. LKB-Produkter Aktiebolag, Stockholm-Bromma, Sweden. Filed May 2, 1969.

PYRAMITOME

For Forming, Shaping and Optical Apparatus for Use in Microtomy (Int. Cl. 9).
First use Sept. 1, 1968; in commerce Nov. 15, 1968.

SN 328,056. Information General Corporation, Woodland Hills, Calif. Filed May 22, 1969.



For Metric Conversion Scale in the Nature of a Slide Rule (Int. Cl. 9).
First use Apr. 14, 1969.

SN 329,036. Eduquip, Inc., Dorchester, Mass. Filed June 4, 1969.

EDUQUIPMENT

For Educational Testing Equipment—Namely, an Apparatus for Performing Experiments Requiring the Absence of Friction Comprising an Air Table, Pucks, Puck Launcher, and Components; and an Apparatus for Detecting the Visible Effect of Cigarette Smoke by Mechanically "puffing" a cigarette To Show the Resulting Color Stain on a Filter (Int. Cl. 9).
First use Apr. 12, 1969.

SN 331,735. Delta Design, Inc., La Mesa, Calif. Filed July 3, 1969.



For Temperature and Shock Environmental Test Chambers and Rate Programmers, Temperature Monitors and Controllers for Use With Environmental Tester Chambers (Int. Cl. 9).
First use July 15, 1960.

SN 331,887. Formulabs Industrial Inks, Incorporated, Escondido, Calif. Filed July 7, 1969.

FORMULABS

For Meters for Counting Wire Footage and Wire Insulation Tester-Respoolers (Int. Cl. 9).
First use Feb. 28, 1968, on wire insulation tester-respoolers.

SN 331,972. Technology Systems Incorporated, Cockeysville, Md. Filed Aug. 27, 1969.

SAFE-O-MATIC

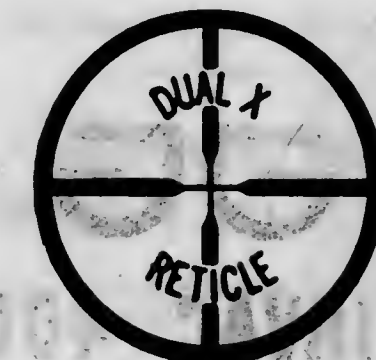
For Automatic Cash Handling Apparatus—Namely, Cash Register; Cash Receiver and Authenticator; Transaction Register; and Change Dispenser (Int. Cl. 9).
First use December 1968.

SN 336,655. Varian Techtron Pty. Limited, North Springvale, Victoria, Australia. Filed Aug. 29, 1969.

TECHTRON

Owner of Australian Reg. No. A188,073, dated June 3, 1964.
For Apparatus for Use in Chemical Analysis by the Technique of Atomic Absorption Spectroscopy—Namely, Atomic Absorption Spectrophotometers; Transistorized Instruments for Measuring the Total Amount of Dissolved Salt in Water—Namely, Salinity Bridges; Instruments Used for the Accurate Measurement of the Moisture Content in Certain Products Such as Timber—Namely, Moisture Meters; and Monochromators (Int. Cl. 9).
First use at least as early as Oct. 31, 1960; in commerce at least as early as Oct. 31, 1960.

SN 336,991. W. R. Weaver Company, El Paso, Tex. Filed Sept. 4, 1969.



Applicant disclaims exclusive rights to the word "Reticle" and to the representation of a reticle apart from the mark as shown.
For Reticles for Telescopic Gun Sights (Int. Cl. 9).
First use on or about Sept. 15, 1967.

SN 341,582. Electro Products Laboratories, Inc., Chicago, Ill. Filed Oct. 24, 1969.

MINI-SPEED

For Electronic Monitor Responsive to an Over or Under Speed Condition of a Rotating Element To Control the Machine Operation, an Alarm or the Like (Int. Cl. 9).
First use Apr. 25, 1969.

SN 347,609. Inventory Management Systems, Inc., Los Angeles, Calif. Filed Jan. 2, 1970.

MARKETRON RETAILER

For Merchandise Sales and Inventory Control Systems, Comprising Clerks' Sales Registers, Managers' Monitor Registers, Computer, Data Storage and Interconnecting Equipment (Int. Cl. 9).
First use Nov. 14, 1969.

SN 348,343. Scale Data Systems, Inc., Van Nuys, Calif. Filed Jan. 12, 1970.

CAL-O-PUTER

For Computing Devices for Computing the Caloric and Carbohydrate Content of Foods (Int. Cl. 9).
First use Dec. 1, 1969.

SN 348,827. Alumestate, Inc., Forest Park, Ill. Filed Jan. 19, 1970.

ALUMESTATE

For Alarm Devices, Specifically, Non-Electrical Heat Sensitive Fire Alarm Devices (Int. Cl. 9).
First use on or before Oct. 1, 1969.

Class 27 — Horological Instruments

SN 321,991. A. Schild A.G., Grenchen, Solothurn, Switzerland. Filed Mar. 17, 1969.

as2

Priority claimed under Sec. 44(d) on Swiss Reg. No. 234,854, dated Oct. 21, 1968.
For Regulating Devices for Fine Regulation of Watches and Chronometers (Int. Cl. 14).

SN 329,865. Jaquet-Girard S.A., Geneva, Switzerland. Filed June 12, 1969.

JG

AIRVAC 400

The design portion of the mark consists of a fanciful representation of the letters "JG." Owner of Swiss Reg. No. 232,106, dated Apr. 18, 1968.
For Wrist Watches (Int. Cl. 14).

SN 342,910. Sunbeam Corporation, Chicago, Ill. Filed Nov. 6, 1969.

BON TON

For Clocks (Int. Cl. 14).
First use June 13, 1969.

Class 28 — Jewelry and Precious-Metal Ware

SN 327,212. New York Merchandise Co., Inc., New York, N.Y. Filed May 14, 1969.

CELLINI ROMANESQUE

Applicant disclaims the term "Romanesque" apart from the mark as shown.
For Flatware Made of or Plated With Precious Metal (Int. Cl. 8).
First use Nov. 15, 1968.

SN 332,274. Hugo R. Norbeck, d.b.a. Viking Trading Company, Oakland, Calif. Filed July 10, 1969.

The Viking DRIP-STOPPER...

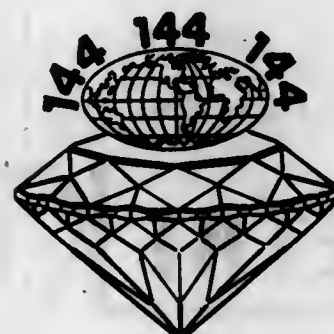
Applicant disclaims the word "Drip-Stopper" apart from the mark as shown.
For Dripless Pourer, Silverplated or Goldplated, for Dispensing Wine or Liquid (Int. Cl. 14).
First use Sept. 15, 1968.

SN 337,724. Textron, Inc., Providence, R.I. Filed Sept. 11, 1969.

TAMERAC

For Bracelets, Including Watch Bracelets (Int. Cl. 14).
First use Feb. 20, 1969.

SN 338,245. Huisman Bros. Inc., New York, N.Y. Filed Sept. 18, 1969.



For the purpose of registration, applicant disclaims the representation of the diamond apart from the mark as shown, but applicant does not waive any common law or other rights in the mark as shown or in any part thereof.
For Cut Diamonds (Int. Cl. 14).
First use Sept. 10, 1969.

SN 340,954. Telmont Corporation, St. Paul, Minn. Filed Oct. 16, 1969.

PASSEPORT

Owner of Reg. No. 870,875.
For Jewelry, Including Beads, Bracelets, Hair Ornaments, Pins, Rings, Pendants, and Earrings (Int. Cl. 14).
First use May 15, 1969.

SN 342,610. Aquarius, Ltd., St. Louis, Mo. Filed Nov. 4, 1969.

RUGGER

For Watchbands (Int. Cl. 14).
First use Oct. 10, 1968.

SN 342,904. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Silversmiths, Greenfield, Mass. Filed Nov. 6, 1969.

Malvern

For Sterling Silver Flatware (Int. Cl. 8).
First use Sept. 10, 1969.

Class 29 — Brooms, Brushes, and Dusters

SN 347,088. The Drackett Company, Cincinnati, Ohio. Filed Dec. 24, 1969.

POWER STRIP

Owner of Reg. No. 863,888.
For Sponge Mops and Sponge Refills (Int. Cl. 21).
First use Dec. 18, 1967.

Class 30 — Crockery, Earthenware, and Porcelain

SN 324,376. Wealey Van Gorden and Virginia Van Gorden (partnership), d.b.a. Clays in Calico, Cardwell, Mont. Filed Apr. 14, 1969.

CLAYS IN CALICO

Applicant disclaims the word "Clays" apart from the mark as shown.
For Flower Vases, Coffee Carafes, Pitchers and Mugs, Bowls for the Serving of Foods, Bean Pots, Plates, Teapots, Creamers and Sugars, Salt and Pepper Shakers, Beer Steins and Condiment Serving Jars Made of China, Porcelain or Earthenware (Int. Cl. 21).
First use October 1960.

Class 32 — Furniture and Upholstery

SN 330,714. Broyhill Furniture Industries, Lenoir, N.C. Filed June 23, 1969.

RELAXABLES

For Reclining Chairs (Int. Cl. 20).
First use Apr. 15, 1969.

SN 335,075. Textron, Inc., Providence, R.I. Filed Aug. 11, 1969.

CATAMARAN

For Counter Stools and Bar Stools (Int. Cl. 20).
First use July 1, 1969.

SN 347,372. Castro Convertible Corporation, New Hyde Park, N.Y. Filed Dec. 30, 1969.

FEATHERLIFT

For Convertible Sofa-Beds and Parts Therefor (Int. Cl. 20).
First use December 1967.

SN 350,372. Douglas Furniture Corporation, Chicago, Ill. Filed Feb. 3, 1970.

ADVENT

For Contemporary Furniture—Namely, Chairs, Sofas, and Tables (Int. Cl. 20).
First use Dec. 19, 1969.

Class 33 — Glassware

SN 340,420. Owens-Illinois, Inc., Toledo, Ohio. Filed Oct. 10, 1969.

GCP

For Glass Bottle-Type Containers Having Plastic Bases (Int. Cl. 21).
First use July 23, 1969.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 309,585. Hydronic Industries Inc., Pelham Manor, N.Y. Filed Oct. 14, 1968.

CENTRALTEMP

For Combination Heating and Cooling Units for Domestic Use, and Room Enclosures, Wall Sleeves, Heating Coils, Exterior Louvers, and Cooling Chassis (Int. Cl. 11).
First use Oct. 1, 1968.

SN 313,994. The Strong-Scott Manufacturing Company, Minneapolis, Minn. Filed Dec. 9, 1968.

CONTINUATOR

For Machines for Processing Solids by Heating, Drying, Cooling, Reacting, Blending, Contacting With Gases, and the Like (Int. Cl. 7).
First use on about Apr. 24, 1967.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 347,195. The Armstrong Rubber Company, West Haven, Conn. Filed Dec. 29, 1969.

TURF-TRAC

For Pneumatic Tires (Int. Cl. 12).
First use on or about Oct. 24, 1969.

Class 36 — Musical Instruments and Supplies Class 37 — Paper and Stationery

SN 330,245. Bell Accordion Corporation, New York, N.Y. Filed June 17, 1969.

SN 300,458. Kokuyo Co., Ltd., Higashinari-ku, Osaka, Japan. Filed June 14, 1968.

DUOVOX

For Accordions, Organs, and Accordion-Organ Combinations With Amplifiers, Generators and Amplifier-Generator Combinations Used in Connection Therewith (Int. Cl. 15).
First use Apr. 4, 1969.

SN 330,514. Kraskin Baton Company, Minneapolis, Minn. Filed June 19, 1969.

KRASKIN

For Twirling Batons (Int. Cl. 15).
First use as early as 1946.

SN 330,516. Kraskin Baton Company, Minneapolis, Minn. Filed June 19, 1969.

SUPER ROCKET

For Twirling Batons (Int. Cl. 15).
First use as early as June 1965.

SN 345,647. Kraskin Baton Company, Minneapolis, Minn. Filed Dec. 8, 1969.

HIGH FLYER

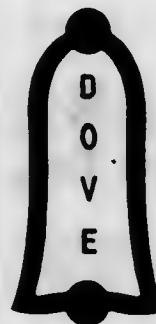
For Twirling Batons (Int. Cl. 15).
First use as early as May 1953.

SN 346,687. Data Packaging Corporation, Cambridge, Mass. Filed Dec. 19, 1969.

DYNASOUND

For Tape Cartridges and Cassettes (Int. Cl. 15).
First use Nov. 24, 1969.

SN 352,808. Gibson, Inc., Kalamazoo, Mich., Filed Mar. 2, 1970.



For Guitars (Int. Cl. 15).
First use at least as early as Dec. 22, 1962.



For Plastic Reinforcements for Loose Leaf Albums and for Punch Holes in Sheets of Paper or Sheets of Material Similar to Paper (Int. Cl. 16).
First use Dec. 21, 1962; in commerce Dec. 21, 1962.

SN 324,276. Berol Corporation, Danbury, Conn., assignee of Brooks-Melrose, Inc., Melrose, Mass. Filed Apr. 11, 1969.

FLING

Owner of Reg. No. 873,448.
For Fiber Point Pens (Int. Cl. 16).
First use May 2, 1967.

SN 331,134. Acme Visible Records, Inc., Crozet, Va. Filed June 27, 1969.

DESK-VUE

For Visible Record Card Index Systems Consisting of Sets of Paper Cards and Card Signals Arranged in Visible Index Form for the Keeping of Record Data; Partially Printed Visible Record and Index Cards, and Partially Printed Visible Card Books (Int. Cl. 16).
First use June 16, 1969.

SN 338,755. Combined Paper Mills, Inc., Combined Locks, Wis. Filed Sept. 24, 1969.

REVELATION

For Offset and Letterpress Printing Paper (Int. Cl. 16).
First use May 9, 1953.

SN 339,302. Consolidated Papers, Inc., Wisconsin Rapids, Wis. Filed Sept. 30, 1969.

ALTURA

For Coated Printing Paper (Int. Cl. 16).
First use Aug. 21, 1969.

SN 339,303. Consolidated Papers, Inc., Wisconsin Rapids, Wis. Filed Sept. 30, 1969.

MONTEGO

For Coated Printing Paper (Int. Cl. 16).
First use Aug. 21, 1969.

SN 339,804. Consolidated Papers, Inc., Wisconsin Rapids, Wis. Filed Sept. 30, 1969.

SN 327,400. National Bellas Hess, Inc., North Kansas City, Mo. Filed May 15, 1969.

PUMA

For Coated Printing Paper (Int. Cl. 16).
First use Aug. 21, 1969.

SN 341,044. Lincoln Pulp & Paper Co., Inc., Lincoln, Maine. Filed Oct. 17, 1969.

GLENWOOD

For Sulphite Bond, Mimeograph, Duplicator, and Offset Papers (Int. Cl. 16).
First use Jan. 22, 1969.

SN 346,013. Wisconsin Tissue Mills, Menasha, Wis. Filed Dec. 11, 1969.

WIS-TONE

For Paper Napkins (Int. Cl. 16).
First use June 19, 1969.

Class 38 — Prints and Publications

SN 316,498. Comput-A-Credit, Inc., New York, N.Y. Filed Jan. 14, 1969.

DIAL & BUY

For Print of a Chart for Attachment to a Pushbutton Telephone Set for Identifying Parties To Be Called (Int. Cl. 16).
First use July 1966.

SN 324,809. Pandora Productions, Inc., Wayzata, Minn. Filed Apr. 17, 1969.



For Adhesive-Backed Prints Which When Assembled Form a Mural To Be Placed on Walls (Int. Cl. 16).
First use Dec. 1, 1968.

SN 326,395. Marquis-Who's Who, Inc., Chicago, Ill. Filed May 5, 1969.

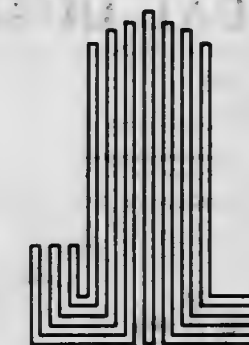
WHO'S WHO OF THE WILD WEST

Owner of Reg. Nos. 378,389, 769,591, and others.
For Biographical Guide on Notable Characters in American History Published From Time to Time (Int. Cl. 16).
First use Feb. 27, 1969; 1899 as to the words "Who's Who."

TREASURE TREK

For Periodical Buying Magazine (Int. Cl. 16).
First use May 1, 1968.

SN 334,492. The Soncino Press Limited, London, England. Filed Aug. 5, 1969.



The mark as presented is a stylized form of the letters "JL." For Series of Books (Int. Cl. 16).
First use May 25, 1969; in commerce May 25, 1969.

SN 334,973. The Bolen Company, San Francisco, Calif. Filed Aug. 11, 1969.



For Magazines (Int. Cl. 16).
First use May 20, 1969.

SN 339,827. Xerox Corporation, Rochester, N.Y. Filed Oct. 6, 1969.

THE WAY IT IS

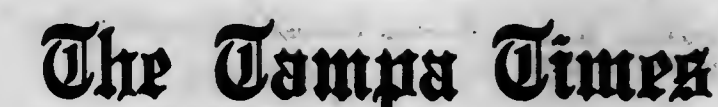
For Materials for Teaching and Encouraging Reading Consisting of Ten Separate Books, Five Phonograph Records, Students' Workbooks, and Teachers' Guide (Int. Cl. 16).
First use Nov. 27, 1967.

SN 340,180. National Association of Amateur Oarsmen, Philadelphia, Pa. Filed Oct. 8, 1969.

THE OARSMAN

For Magazine Published Quarterly (Int. Cl. 16).
First use May 1969.

SN 341,295. The Tribune Company, Tampa, Fla. Filed Oct. 21, 1969.



For Daily Newspaper (Int. Cl. 16).
First use 1958.

SN 341,552. The Sheriffs' Association of Texas, Austin, Tex. Filed Oct. 23, 1969.

THE TEXAS LAWMAN

For Monthly Magazine (Int. Cl. 16).
First use Oct. 1, 1956.

SN 344,019. G. Schirmer, Inc., New York, N.Y. Filed Nov. 19, 1969.

THE MUSICAL QUARTERLY

For Journal (Int. Cl. 16).
First use January 1915.

SN 344,104. Florida Snappapers, Inc., Kissimmee, Fla. Filed Nov. 20, 1969.

Osceola  **Sun**

For Publication—Namely, a Newspaper (Int. Cl. 16).
First use on or prior to Aug. 27, 1969.

SN 344,263. Kennedy Sinclair, Inc., Wayne, N.J. Filed Nov. 21, 1969.

PLANNING TODAY

Owner of Reg. Nos. 646,931 and 803,651.
For Booklets Prepared Periodically for Distribution by Others (Int. Cl. 16).
First use Oct. 21, 1969.

SN 344,481. Watt Publishing Company, Mount Morris, Ill. Filed Nov. 24, 1969.

POULTRY INTERNATIONAL

For Monthly Trade Magazine (Int. Cl. 16).
First use January 1962.

SN 345,032. United Medical Laboratories, Inc., Portland, Oreg. Filed Dec. 1, 1969.

INSTA-DEX

For Subject Index to Key Medical and Surgical Journals (Int. Cl. 16).
First use Aug. 5, 1969.

SN 345,085. G. & C. Merriam Company, Springfield, Mass. Filed Dec. 2, 1969.

WORD WATCHING

For Leaflets Published Periodically (Int. Cl. 16).
First use Nov. 18, 1969.

SN 347,262. William L. Glover, Ridgely, Tenn. Filed Dec. 29, 1969.

Glover

For Livestock Photographs (Int. Cl. 16).
First use Jan. 1, 1953.

SN 352,550. The Willows Publishing Company, Willows, Calif. Filed Feb. 26, 1970.

THE NORTH VALLEY FARMER

For Newspaper (Int. Cl. 16).
First use July 1, 1969.

SN 353,044. The Dow Chemical Company, Midland, Mich. Filed Mar. 4, 1970.

BRINEWELL

For House Organ and Trade News Magazine (Int. Cl. 16).
First use Oct. 19, 1943.

Class 39—Clothing

SN 319,085. David Strohli, Brooklyn, N.Y. Filed Feb. 13, 1969.

RENALDO STRASSINI

The name "Rinaldo Strassini" is fanciful.
For Men's and Boys' Suits, Shirts and Knit Shirts; and All Types of Sweaters, Slacks, Ties, Stockings, Shoes, and Underwear (Int. Cl. 25).
First use October 1963.

SN 327,689. Rice Shinkle Imports, St. Louis, Mo. Filed May 19, 1969.

SALERO

The basic meaning of the Spanish word "Salero" is "a salt cellar or other salt accumulation."
For Women's Shoes (Int. Cl. 25).
First use Apr. 22, 1969.

SN 330,896. Barco of California, Gardena, Calif. Filed June 25, 1969.

BARCO OF CALIFORNIA

The words "Of California" are disclaimed apart from the mark as a whole. Owner of Reg. No. 573,305.

For Uniforms, Smocks, Shifts, and Dresses for Professional Women Such as Nurses, Research Workers, Pharmacists, Cosmetologists, Medical Assistants; and Shirt Coats, Lab Coats and Jackets for Professional Men Such as Medical Doctors, Interns, Research Workers, Medical Assistants, Pharmacists, and Non-Professionals Such as Barbers (Int. Cl. 25).
First use on or about Apr. 28, 1930.

SN 332,009. Franklin Stores Corporation, d.b.a. Barkers, Bronx, N.Y. Filed July 8, 1969.

BARKERS

For Men's Rain Suits, Ladies' Hosiery, and Ponchos (Int. Cl. 25).
First use 1962.

SN 333,458. Tipco Sportswear, Inc., Smyrna, Ga. Filed July 24, 1969.

KAY LYNN BY TIPCO

The name "Kay Lynn" is fictitious and fanciful and does not refer to any living individual.
For Ladies' and Girls' Slacks, Shorts, and Skirts (Int. Cl. 25).
First use June 1, 1969.

SN 333,587. Manhattan Industries, Inc., New York, N.Y. Filed July 25, 1969.

CHANNEL CROSSING

For Dress Shirts and Sport Shirts (Int. Cl. 25).
First use Apr. 22, 1969.

SN 333,588. Manhattan Industries, Inc., New York, N.Y. Filed July 25, 1969.

OVER BROOK

For Dress Shirts and Sport Shirts (Int. Cl. 25).
First use Apr. 22, 1969.

SN 333,662. Bernblum International, Incorporated, West Haven, Conn. Filed July 23, 1969.

IMP PRINT



For Sweatshirts, T-Shirts, Jackets, and Gym Wear (Int. Cl. 25).
First use Apr. 25, 1969.

SN 335,921. Judy Bond, Inc., New York, N.Y. Filed Aug. 23, 1969.

Judy Bond

"Judy Bond" is fanciful and is not the name of a living individual. Owner of Reg. No. 723,902.
For Women's and Misses' Clothing—Namely, Blouses, Dresses, Shifts, Skirts, Culottes, and Pants (Int. Cl. 25).
First use Feb. 1, 1941.

SN 336,406. Bayard Shirt Corporation, New York, N.Y. Filed Aug. 27, 1969.

BAYARD

Owner of Reg. Nos. 629,752 and 822,913.
For Men's and Boys' Sport and Dress Shirts (Int. Cl. 25).
First use Nov. 19, 1954.

SN 341,381. Genesco Inc., Nashville, Tenn. Filed Oct. 22, 1969.

AQUA TEX

For Swimsuits for Men, Women, Boys, and Girls (Int. Cl. 25).
First use Oct. 2, 1969.

SN 342,348. AFM, Inc., Stamford, Conn. Filed Nov. 3, 1969.

ONLI-ONE

For Stockings and Panty Hose (Int. Cl. 25).
First use Apr. 16, 1969.

SN 342,408. Calne's Mutiny, Inc., New York, N.Y. Filed Nov. 3, 1969.

S/x *Europeties*

For Men's Ties (Int. Cl. 25).
First use Aug. 15, 1969.

SN 345,548. Maidenform, Inc., New York, N.Y. Filed Dec. 8, 1969.

CHECKADELICS

For Foundation Garments, Lingerie, Sleepwear and Lounge-wear (Int. Cl. 25).
First use Nov. 17, 1969.

SN 345,550. Maidenform, Inc., New York, N.Y. Filed Dec. 8, 1969.

SWEET SECRET

For Foundation Garments, Lingerie, Sleepwear and Lounge-wear (Int. Cl. 25).
First use Nov. 17, 1969.

SN 846,074. Fiorentina Shoes Societa a Responsabilita Limitata, Florence, Italy. Filed Dec. 12, 1969.

FIorentINAS
BY *Jacques Baldi*

For Men's Shoes (Int. Cl. 25).
First use Apr. 8, 1965; in commerce Apr. 8, 1965.

SN 846,978. Levi Strauss & Co., San Francisco, Calif. Filed Dec. 22, 1969.

NUVOS

Owner of Reg. No. 844,639.
For Garments, Particularly Trousers (Int. Cl. 25).
First use Sept. 15, 1968; Jan. 15, 1966, in a different form.

SN 351,762. The Lovable Company, Atlanta, Ga. Filed Feb. 19, 1970.

NATURLON

For Panty Hose (Int. Cl. 25).
First use Feb. 4, 1970.

Class 40—Fancy Goods, Furnishings, and Notions

SN 336,320. David and David, Inc., Long Island City, N.Y. Filed Aug. 26, 1969.

BUSTER

For Wigs and Hairpieces (Int. Cl. 26).
First use Aug. 6, 1969.

SN 350,814. Cournoyer Industries, Inc., Hialeah, Fla. Filed Feb. 9, 1970.

INSTA APPLY

For Eyelash Applicators (Int. Cl. 26).
First use Oct. 15, 1969.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 296,754. Standard Oil Company, Flemington, N.J. Filed Apr. 29, 1968.

EXXON

For Carpeting, Rugs and Floor Coverings Manufactured in Whole or Part of Synthetic Fibers (Int. Cl. 27).
First use Oct. 17, 1967.

SN 328,711. Marcstrate Fashions, Inc., New York, N.Y. Filed May 29, 1969.

AFRICAN INCA

For Fabrics for Making Into Shirts, Dresses, Shawls, and the Like (Int. Cl. 24).
First use June 1968.

SN 340,192. Quaker Fabric Corporation, New York, N.Y. Filed Oct. 8, 1969.

STONEHAVEN

For Carpets (Int. Cl. 27).
First use July 1, 1969.

SN 342,287. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 31, 1969.

PERRAH

Owner of Reg. No. 261,386.
For Fabrics in the Piece, Composed of Man-Made Fibers, and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Jan. 11, 1929.

SN 349,108. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

HIDDEN TREASURE

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,116. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

POLYTEX

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,119. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

SHAGMENDOUS

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,121. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

SOFT APPROACH

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

SN 349,122. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Jan. 21, 1970.

SOFTWALL

For Carpets (Int. Cl. 27).
First use Dec. 1, 1969.

Class 43—Thread and Yarn

SN 339,112. American Enka Corporation, Enka, N.C. Filed Sept. 29, 1969.

ENKALITE

Owner of Reg. Nos. 409,392, 819,592, and others.
For Threads and Yarns (Int. Cl. 23).
First use Sept. 16, 1969.

Class 44—Dental, Medical, and Surgical Appliances

SN 326,407. Minnesota Rubber Company, Minneapolis, Minn. Filed May 5, 1969.

QUAD

Owner of Reg. No. 581,372.
For Dust Seals for Switches on Dental Drills and Rubber Dampeners for Dental Drills (Int. Cl. 10).
First use 1957.

SN 329,522. Southwestern Drug Corporation, Dallas, Tex. Filed June 9, 1969.

MACHIX

For Belt Vibrators, Massage Rollers, and Steam Cabinets (Int. Cls. 10 and 11).
First use Mar. 1, 1969.

SN 336,682. Elisabeth Ungar-Skin Care, Inc., New York, N.Y. Filed Aug. 29, 1969.

TONATRONE

For Owner of Reg. No. 758,541.
For Electrotherapeutic Appliances for the Treatment of Skin Conditions (Int. Cl. 10).
First use Feb. 1, 1960.

Class 45—Soft Drinks and Carbonated Waters

SN 295,663. Ocean Spray Cranberries, Inc., Hanson, Mass. Filed Apr. 15, 1968.

GRAPE-BERRY

For Beverage Consisting of Concord Grape Juice, Cranberry Juice, Water, and Lesser Ingredients (Int. Cl. 32).
First use Apr. 8, 1968.

SN 324,911. General Foods Corporation, White Plains, N.Y. Filed Apr. 18, 1969.

noisy
Kool-Aid

Owner of Reg. Nos. 817,955, 384,244, and others.
For Instant Soft Drink Mix (Int. Cl. 32).
First use Apr. 4, 1968.

SN 846,843. Arrowhead Syrup Sales, Inc., Los Angeles, Calif. Filed Dec. 22, 1969.



The word "Famous" is disclaimed apart from the association shown, without waiver of applicant's common law rights in the disclaimed word. Owner of Reg. No. 260,526.
For Syrups for Use in Making Soft Drinks; Concentrates for Use in Making Soft Drinks and Cocktail Mixes; Concentrates and Syrups for Making Frozen Slush Bases (Int. Cl. 32).
First use at least as early as 1915.

Class 46—Foods and Ingredients of Foods

SN 286,827. General Mills, Inc., Minneapolis, Minn. Filed Mar. 16, 1967.

GRAHAM CHARGERS

The word "Graham" is disclaimed apart from the mark as shown.
For Ready To Eat Breakfast Cereal (Int. Cl. 30).
First use Feb. 27, 1967.

SN 306,799. Oquendo Roasting Company, Miami, Fla. Filed Sept. 6, 1968.



The words "Cafe," "Aroma," and "Calidad" are disclaimed apart from the mark as shown. The English equivalent of these words is as follows: "Cafe"—coffee, "Aroma"—fragrance, good smell, "Calidad"—good quality.
For Coffee (Int. Cl. 30).
First use Nov. 19, 1963.

SN 316,068. Aquatrol, Inc., Long Beach, Calif. Filed Jan. 8, 1969.



For Fish Food for Maintaining Fish Life (Int. Cl. 31).
First use Aug. 24, 1966.

SN 320,591. Alfonso Giola & Sons, Incorporated, d.b.a. Bravo Macaroni Company, Rochester, N.Y. Filed Mar. 3, 1969.

K'NOODLES

For Egg Noodles (Int. Cl. 30).
First use Jan. 9, 1969.

SN 323,051. Frigorifico Bordon S/A, Sao Paulo, Brasil. Filed Mar. 28, 1969.



For Canned Foods—Namely, Corned Cured Beef, Meat Balls, Ham Paste, Liver Paste, Vienna Sausage, and Black Beans (Feijoadas) Brazilian Food (Int. Cl. 29).
First use November 1968; in commerce December 1968.

SN 335,969. Food Technology, Inc., Chicago, Ill. Filed Aug. 22, 1969.

FOOD TECHNOLOGY

No claim is made to the exclusive right to the use of the word "Food" apart from the mark.

For Dehydrated Honey and Dehydrated Molasses Used in Food Products, Especially in Bread, Cake, and Bakery Products (Int. Cl. 30).

First use on or about Aug. 5, 1969.

SN 344,947. Bonewitz Chemicals, Inc., Burlington, Iowa. Filed Dec. 1, 1969.

RULON

For Grain or Animal Feed Conditioner (Int. Cl. 31).
First use July 22, 1969.

SN 345,814. Federal Sweets & Biscuits Co., Inc., Clifton, N.J. Filed Dec. 10, 1969.

THE "MOST"

For Caramel Flavored Wafer Bars (Int. Cl. 30).
First use Nov. 10, 1969.

SN 346,117. Riviana Foods Inc., Houston, Tex. Filed Dec. 12, 1969.

COMPANY

For Rice Mixes and Rice (Int. Cl. 30).
First use Nov. 19, 1969.

SN 346,120. Riviana Foods Inc., Houston, Tex. Filed Dec. 12, 1969.

MAIN DISH

For Rice Mixes and Rice (Int. Cl. 30).
First use Nov. 19, 1969.

SN 346,930. McKee Baking Company, Collegedale, Tenn. Filed Dec. 22, 1969.

SPINWHEELS

For Cookies (Int. Cl. 30).
First use Nov. 17, 1969.

SN 350,328. Lever Brothers Company, New York, N.Y. Filed Feb. 9, 1970.

SPREE

Owner of Reg. No. 724,866.
For Mayonnaise (Int. Cl. 29).
First use Jan. 26, 1970.

SN 352,904. Lever Brothers Company, New York, N.Y. Filed Mar. 3, 1970.

SPREE

Owner of Reg. No. 724,866.
For Margarine (Int. Cl. 29).
First use Feb. 19, 1970.

SN 353,377. Joseph Oscola, Pompano Beach, Fla. Filed Mar. 9, 1970.



For Fresh Vegetables (Int. Cl. 31).
First use in or about 1962.

SN 355,495. Dietzen's Bakeries, Inc., Kokomo, Ind. Filed Mar. 31, 1970.

CORN TOP

For Bread (Int. Cl. 30).
First use Oct. 1, 1923.

SN 355,498. Royal Estates Tea Co., Englewood Cliffs, N.J. Filed Mar. 31, 1970.

ROYAL LION

For Tea (Int. Cl. 30).
First use on or before Sept. 27, 1969.

Class 48—Malt Beverages and Liquors

SN 311,283. Meister Brau, Inc., Chicago, Ill. Filed Nov. 4, 1968.



The drawing is lined for the color blue. Owner of Reg. Nos. 209,158, 408,861, and others.
For Beer With No Available Carbohydrates (Int. Cl. 32).
First use May 15, 1967.

SN 341,813. Theodore Hamm Brewing Co., St. Paul, Minn. Filed Oct. 27, 1969.

BORN IN THE LAND OF SKY BLUE WATERS

Owner of Reg. No. 611,870.
For Beer (Int. Cl. 32).
First use Apr. 1, 1969.

SN 342,474. Jackson Brewing Company, New Orleans, La. Filed Nov. 3, 1969.



For Beer (Int. Cl. 32).
First use Aug. 14, 1969.

SN 352,830. Lone Star Brewing Co., San Antonio, Tex. Filed Mar. 2, 1970.



For Beer (Int. Cl. 32).
First use Feb. 5, 1970.

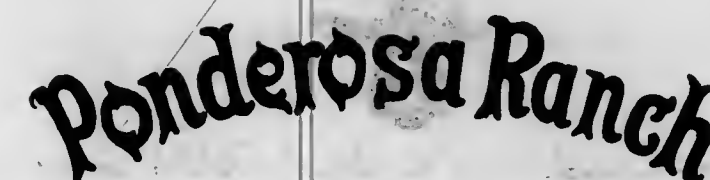
Class 49—Distilled Alcoholic Liquors

SN 316,685. Joseph E. Seagram & Sons (Scotland) Limited, Paisley, Scotland. Filed Jan. 15, 1969.

LOCHAN ORA

The words "Lochan Ora" mean a "small, gold lake."
For Liqueur (Int. Cl. 33).
First use July 8, 1968; in commerce July 8, 1968.

SN 330,568. Ponderosa Ranch, Incline Village, Nev. Filed June 20, 1969.



For Whiskey (Int. Cl. 33).
First use June 10, 1967.

TM 875 O.G.—9

Class 50—Merchandise Not Otherwise Classified

SN 325,503. Pirelli S.p.A., Milan, Italy. Filed Apr. 24, 1969.

CLOROCCELL

Owner of Italian Reg. No. 232,202, dated May 14, 1968.
For Rubber Covers for Electrolytic Cells for Chlorine and Soda Simultaneous Production (Int. Cl. 17).

SN 335,079. Dan O. Turner, Chattanooga, Tenn. Filed Aug. 11, 1969.

BETTERWAY

For Refuse Container Covers (Int. Cl. 21).
First use July 8, 1969.

SN 340,901. Benco Plastics, Inc., Knoxville, Tenn. Filed Oct. 16, 1969.



The drawing is lined for the color blue, but color is not claimed as a feature of the mark.
For Indoor and Outdoor Signs and Advertising Displays (Int. Cl. 20).
First use Aug. 21, 1969.

SN 343,634. Salesco Inc., Greens Farms, Conn. Filed Nov. 17, 1969.

STEPS TO THE STARS

For Booklets and Medals With Reference to Space Exploration To Be Issued From Time to Time and Sold as a Unit (Int. Cl. 20).
First use Oct. 16, 1969.

Class 51—Cosmetics and Toilet Preparations

SN 299,763. Helene Curtis Industries, Inc., Chicago, Ill. Filed June 5, 1968.

NO SET

For Cold Permanent Waving Lotion (Int. Cl. 3).
First use on or about May 21, 1968.

SN 325,985. The Mennen Company, Morristown, N.J. Filed Apr. 30, 1969.

PROTEIN 21

Reserving unto itself all of its common law rights, applicant disclaims the word "Protein" apart from the mark as shown.
Owner of Reg. Nos. 814,679, 843,829, and others.
For Hair Spray (Int. Cl. 8).
First use Apr. 9, 1969.

SN 339,196. The Kroger Co., d.b.a. Super Drugs, Cincinnati, Ohio. Filed Sept. 29, 1969.

SUPERX

Owner of Reg. Nos. 736,165 and 749,689.
For Bay Rum, Dental Cleanser, Dental Gripping Preparation, and Mouth Wash (Int. Cls. 3 and 5).
First use at least as early as August 1963.

SN 339,696. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

LOOKSTICK

For Foundation Make-Up and Lipstick (Int. Cl. 3).
First use July 15, 1969.

SN 339,697. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

SUN SEEKERS

For Leg Make-Up, Sun Tan Lotion, and Moisturized Body Lotion (Int. Cl. 3).
First use July 15, 1969.

SN 339,698. Avon Products, Inc., New York, N.Y. Filed Oct. 3, 1969.

SUN CIRCUIT

For Moisturized Body Lotion, Sun Tan Lotion, and Leg Make-Up (Int. Cl. 3).
First use July 15, 1969.

SERVICE MARKS

Class 100—Miscellaneous

SN 304,119. Pup 'N' Taco Drive Up, Inglewood, Calif. Filed Aug. 1, 1968.

Pup n' Taco

The word "Taco" is disclaimed apart from the mark as shown.
For Restaurant Services (Int. Cl. 42).
First use Apr. 5, 1966.

Class 52—Detergents and Soaps

SN 298,556. Avon Products, Inc., New York, N.Y. Filed May 20, 1968.

LONGING

For Toilet Soap (Int. Cl. 3).
First use May 8, 1968.

SN 311,824. Phillip A. Brooks, d.b.a. Alan Manufacturing Co., Chicago, Ill. Filed Nov. 12, 1968.

PROFESSIONAL TREAT

For Rug and Upholstery Shampoo (Int. Cl. 3).
First use June 26, 1963.

SN 312,285. The Drackett Company, Cincinnati, Ohio. Filed Nov. 15, 1968.

FLUSHO

For Toilet Bowl Cleaner (Int. Cl. 3).
First use Oct. 1, 1968.

SN 328,005. Days-Ease Home Products Corp., Burbank, Calif. Filed May 22, 1969.

Days-Ease

For Toilet Bowl Cleaner (Int. Cl. 3).
First use Apr. 15, 1969.

SN 332,008. Franklin Stores Corporation, d.b.a. Barkers, Bronx, N.Y. Filed July 8, 1969.

BARKERS

For All Purpose Cleaner for Household Use (Int. Cl. 3).
First use 1962.

SN 316,538. Harry S. Johnson Land Surveyors, Inc., Minneapolis, Minn., by change of name from Harry S. Johnson Associates, Inc., Minneapolis, Minn. Filed Jan. 14, 1969.



The representation of the instrument used in land surveying is disclaimed apart from the mark as shown.
For Land Surveying Services; Consultation and Advice Concerning the Best Usage of Land (Int. Cl. 42).
First use May 13, 1968.

SN 322,161. The Gaertner Scientific Corporation, Chicago, Ill. Filed Mar. 19, 1969.

GAERTNER

Owner of Reg. Nos. 192,460 and 780,292.
For Designing Instruments to the Order and/or Specifications of Others—Namely, Electronic and/or Electrical Circuits (Int. Cl. 42).
First use around 1900.

SN 325,695. Eddy Arnold's Tennessee Fried Chicken, Inc., Nashville, Tenn. Filed Apr. 28, 1969.



The boy in the portrait is "Louis Charles Glaser," a minor, and the man appearing in the picture is "Richard Edward Arnold," living individuals whose consents are of record.
For Restaurant Services (Int. Cl. 42).
First use Dec. 3, 1968.

SN 335,411. Marriott Corporation, Washington, D.C. Filed Aug. 15, 1969.



Owner of Reg. Nos. 520,917, 871,923, and others.
For Restaurant Services (Int. Cl. 42).
First use on or about Oct. 1, 1968.

SN 338,414. The Lob Steer Inns, Inc., Rocky Mount, N.C. Filed Sept. 19, 1969.

THE LOB STEER

For Restaurant Services (Int. Cl. 42).
First use Sept. 10, 1969.

SN 354,546. Happy Chef Systems, Inc., Mankato, Minn. Filed Mar. 19, 1970.

HAPPY CHEF

Owner of Reg. No. 863,275.
For Restaurant Services (Int. Cl. 42).
First use in or before October 1957.

SN 354,547. Happy Chef Systems, Inc., Mankato, Minn. Filed Mar. 19, 1970.



Owner of Reg. No. 863,275.
For Restaurant Services (Int. Cl. 42).
First use in or before October 1957.

SN 355,317. Mayflower Restaurant Enterprises, Inc., New York, N.Y. Filed Mar. 30, 1970.



For Restaurant Services (Int. Cl. 42).
First use on or about July 1, 1969.

Class 101—Advertising and Business

SN 283,520. Frolic Outlet Warehouse, Inc., Jonesboro, Ark. Filed Oct. 27, 1967.

FROLIC

For Retail Shoe Store Services (Int. Cl. 35).
First use May 31, 1960.

SN 285,586. Imagineering, Inc., University City, Mo., assignee of James R. Shaughnessy, Clayton, Mo. Filed Nov. 24, 1967.

ALL STAR BINGO

No claim of exclusive right is made to "Bingo" for the services recited.
For Promoting the Sale of Goods and/or Services of Others Through the Conducting of a Promotional Contest Wherein Applicant Devises, Advertises, Promotes and Implements Such Contests, and Furnishes and Distributes Playing Materials for the Same (Int. Cl. 35).
First use June 1, 1967.

SN 323,473. Remote Computing Corporation, Los Angeles, Calif. Filed Apr. 2, 1969.

PAR

For Computer Programming Services Including Providing on Royalty Bases Computer Programs and Apparatus for the Utilization Thereof, Which Programs Are Authorized by Third Parties (Int. Cl. 35).
First use October 1968.

SN 323,625. Castlewood International Corporation, Miami, Fla. Filed Apr. 4, 1969.



For Retail Package Liquor Store Services (Int. Cl. 35).
First use Oct. 2, 1961.

SN 325,314. Venetian International, Inc., Dallas, Tex. Filed Apr. 23, 1969.

VENETIAN

Owner of Reg. No. 876,336.
For Retail Store Services Specializing in the Sale of Marble Products That Are Cast in Molds—Namely, Lavatories, Bathtubs, Fluted Columns, Mirror Columns, Vanities, Vanity Tops, and Bird Baths (Int. Cl. 35).
First use at least as early as January 1961.

SN 330,810. Volume Builders, Inc. and Schaffer Diversified Corporation (joint venture), Cleveland, Ohio. Filed June 24, 1969.

MARKETRONIX

For Mail Order Distribution of Merchandise in Conjunction With Promotional Campaigns of Others (Int. Cl. 35).
First use Jan. 10, 1969.

SN 332,500. Management Recruiters International, Inc., Cleveland, Ohio. Filed July 14, 1969.

SCAN

For Employment Agency Services (Int. Cl. 35).
First use Apr. 1, 1969.

SN 334,066. Federated Department Stores, Inc., d.b.a. Bullock's, Los Angeles, Calif. Filed July 31, 1969.
Owner of Reg. No. 734,216.

BULLOCK'S

For Retail Department Store Services (Int. Cl. 35).
First use at least as early as 1907.

SN 337,404. International Productions, Inc., Jacksonville, Fla. Filed Sept. 9, 1969.

CHRISTMAS FAIRYLAND

For Promoting the Sale of Goods and/or Services of Others by Means of a Trade Show (Int. Cl. 35).
First use December 1967.

SN 338,813. Sherwood Publications Company, Detroit, Mich. Filed Sept. 24, 1969.

AD/MARK

The word "Ad" is disclaimed apart from the mark as shown.
For Advertising Agency Services (Int. Cl. 35).
First use About September 1964.

SN 344,278. Robert E. Burket, d.b.a. Synergism Associates, Columbus, Ohio. Filed Nov. 24, 1969.

SYNERGISM

For Professional Personnel Recruiting Services (Int. Cl. 35).
First use Oct. 2, 1969.

SN 344,464. Ticket Reservation Systems, Inc., New York, N.Y. Filed Nov. 24, 1969.

TICKETRON

For Vending Tickets for Entertainment and Sports Events for Others Using Centralized Computers To Control Remote Box Offices, and Providing Accounting Services in Connection With Such Ticket Sales (Int. Cl. 35).
First use July 1, 1969.

SN 346,583. Tele-Chek, Inc., Dallas, Tex. Filed Dec. 18, 1969.

TELECHEK

For Providing Information to Retailers Concerning the Acceptability of Checks Tendered to Them (Int. Cl. 35).
First use Jan. 2, 1967.

SN 349,048. H. C. Prange Company, Sheboygan, Wis. Filed Jan. 20, 1970.



For Retail Clothing Store Services (Int. Cl. 35).
First use July 1, 1969.

Class 102—Insurance and Financial

SN 289,550. Washington-Lee Savings and Loan Association, Alexandria, Va. Filed Jan. 23, 1968.

REDDY RESERVE

Applicant disclaims the term "Reserve" apart from the mark as shown.

For Savings and Loan Services (Int. Cl. 36).
First use at least as early as August 1964.

SN 314,408. The Boston Company, Inc., Boston, Mass. Filed Dec. 13, 1968.



The mark comprises a silhouette portrait of living individuals, all of whom have given their written consent. Owner of Reg. No. 778,635.

For Banking and Fiduciary Services, Investment Counseling, Investment Technology and Investment Research Services, Economic Counseling Services and Mutual Fund Operations (Int. Cl. 36).
First use Apr. 4, 1967.

Class 105—Transportation and Storage

SN 318,788. Integrated Container Service, Inc., New York, N.Y. Filed Feb. 10, 1969.

ICS

For Transportation, by Air, Sea and Land of the Goods of Others, in Specially Designed Containers Provided by the Applicant and Not Sold (Int. Cl. 39).
First use Oct. 11, 1964.

SN 337,409. Ozark Air Lines, Inc., St. Louis, Mo. Filed Sept. 9, 1969.

GO-GETTERS GO OZARK

Owner of Reg. No. 702,714.
For Air Transportation Services (Int. Cl. 39).
First use at least as early as June 22, 1964.

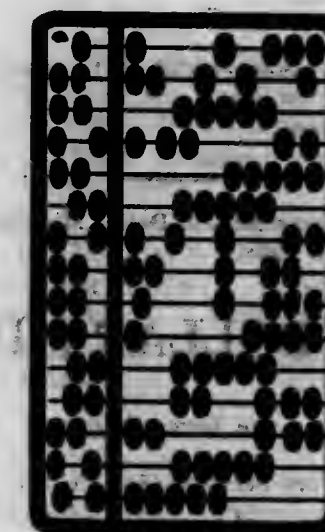
SN 337,411. Ozark Air Lines, Inc., St. Louis, Mo. Filed Sept. 9, 1969.



Owner of Reg. No. 702,714.
For Air Transportation Services (Int. Cl. 39).
First use at least as early as Dec. 1, 1965; at least as early as Feb. 20, 1959, in a different form.

Class 107—Education and Entertainment

SN 294,101. Harold Weiss, d.b.a. Automation Training Center, Reston, Va. Filed Mar. 25, 1968.



The Mark comprises in part a fanciful representation of the letters "ATC."
For Conducting Courses in the Field of Electronic Data Processing (Int. Cl. 41).
First use June 1964.

SN 304,870. Sports Holdings, Inc., Denver, Colo. Filed Aug. 12, 1968.

DENVER SPURS

Applicant disclaims exclusive rights in and to the term "Denver" apart from the mark as shown.
For Entertainment Services in the Nature of Professional Hockey (Int. Cl. 41).
First use Mar. 10, 1968.

SN 308,027. Herbert Paloff, New York, N.Y. Filed Sept. 23, 1968. SN 316,034. 16 Concerto Soloists, Inc., Philadelphia, Pa. Filed Dec. 27, 1968.

THE FALL GUYS

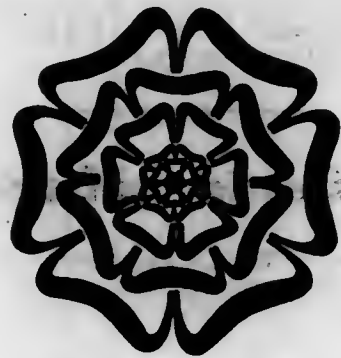
For Entertainment Consisting of Vocal and Instrumental Music Interspersed With Comedy (Int. Cl. 41).
First use Oct. 11, 1958.

SN 308,466. Cine-Vox Productions, Inc., New York, N.Y. Filed Sept. 30, 1968.

CUSTOM RADIO

The word "Radio" is disclaimed apart from the mark.
For Producing and Taping of Radio Programs for Others (Int. Cl. 41).
First use Aug. 10, 1966.

SN 310,350. Nantucket Historical Trust, Nantucket, Mass. Filed Oct. 23, 1968.



For Home Correspondence Course in Needlework (Int. Cl. 41).
First use July 1, 1968.

SN 311,259. Gooding's Million Dollar Midways, Inc., Boston, Mass. Filed Nov. 4, 1968.

MILLION DOLLAR MIDWAYS

Applicant disclaims the term "Midways" apart from the mark as shown.
For Amusement Park Services (Int. Cl. 41).
First use at least as early as August 1966.

For Entertainment Services—Namely, Providing Musical Concerts and Musical Educational Programs (Int. Cl. 41).
First use May 1, 1966.

SN 322,596. Mary Johnson Sewing Studios, Inc., Madison, Conn. Filed Mar. 24, 1969.



The applicant disclaims the word "Sewing" apart from the mark.
For Teaching the Art of Sewing to Persons Desiring To Become Sewing Instructors and/or Teaching the Art of Sewing to Others for an Avocation (Int. Cl. 41).
First use June 26, 1968.

SN 323,674. Basic Education Computers, Inc., Silver Spring, Md. Filed Apr. 4, 1969.



For Educational Services—Namely, Instruction in Reading, and the Application of Teaching Machines to Education (Int. Cl. 41).
First use Feb. 20, 1969.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials Class 5—Adhesives

893,080. GREEN EARTH. Midcontinent Seed Company. SN 297,080. Pub. 4-7-70. Filed 5-1-68.
893,081. FLEX-I-CAST AND DESIGN. Urethane Products Canada Limited. MULTIPLE CLASS (Classes 1, 5, 6, 19, 23, 35, and 42). SN 309,500. Pub. 4-7-70. Filed 10-14-68.
893,082. SNO-FAL. John R. Stone, d.b.a. Stone's Mink Farm. SN 319,084. Pub. 4-7-70. Filed 2-13-69.
893,083. MONZINI. Adhesive Products Corporation. SN 322,535. Pub. 4-7-70. Filed 3-24-69.
893,084. CURLATOR. Curlator Corporation. MULTIPLE CLASS (Classes 1 and 23). SN 323,412. Pub. 4-7-70. Filed 4-2-69.
893,085. X-PEL. X-L Laboratories, Inc. SN 334,952. Pub. 4-7-70. Filed 8-11-69.

893,081. (See Class 1 for this trademark.)
893,088. PACK-KING. Packing Materials Corporation. MULTIPLE CLASS (Classes 5 and 37). SN 330,037. Pub. 4-7-70. Filed 6-16-69.

Class 6—Chemicals and Chemical Compositions

Class 2—Receptacles

893,086. STOWAWAY. Broan Mfg. Co., Inc. SN 320,701. Pub. 4-7-70. Filed 3-4-69.
893,087. MICRO-THIN. Eastman Kodak Company. SN 325,473. Pub. 4-7-70. Filed 4-24-69.
893,088. IRVINPAK. Irvin Industries Inc. SN 327,901. Pub. 4-7-70. Filed 5-21-69.
893,089. MCKINNEY. McKinney Manufacturing Company. MULTIPLE CLASS (Classes 2 and 13). SN 330,174. Pub. 4-7-70. Filed 6-16-69.
893,090. KAL. Kaiser Aluminum & Chemical Corporation. SN 333,139. Pub. 4-7-70. Filed 7-22-69.
893,091. "KEEPERKOOL." Frank Schoonmaker. SN 344,298. Pub. 4-7-70. Filed 11-24-69.

893,081. (See Class 1 for this trademark.)
893,094. (See Class 4 for this trademark.)
893,099. AUTOANALYZER. Technicon Instruments Corporation, assignee of Technicon Corporation. SN 281,406. Pub. 4-7-70. Filed 9-28-67.
893,100. POLYSCIENCES AND DESIGN. Polysciences, Inc. MULTIPLE CLASS (Classes 6 and 26). SN 281,415. Pub. 4-7-70. Filed 9-29-67.
893,101. DILUT-IT. J. T. Baker Chemical Company. SN 292,878. Pub. 4-7-70. Filed 3-11-68.
893,102. HI-FI. Eaton Allen Corp. SN 297,855. Pub. 4-7-70. Filed 5-10-68.
893,103. RELCASYN. Sandoz-Wander, Inc., by merger and change of name from Sandoz, Inc. SN 312,613. Pub. 4-7-70. Filed 11-19-68.
893,104. RELCATHANE. Sandoz-Wander, Inc., by merger and change of name from Sandoz, Inc. SN 312,614. Pub. 4-7-70. Filed 11-19-68.
893,105. TRIANGLE AND CADUCEUS DESIGN. Ortho Pharmaceutical Corporation, d.b.a. Ortho Diagnostics. SN 318,329. Pub. 4-7-70. Filed 11-29-68.
893,106. VENTURE. Kaiser Aluminum & Chemical Corporation. SN 321,232. Pub. 4-7-70. Filed 3-10-69.
893,107. SANTOETHER. Monsanto Company. SN 321,963. Pub. 4-7-70. Filed 3-17-69.
893,108. ACIDYNE. West Chemical Products, Inc. SN 322,371. Pub. 4-7-70. Filed 3-20-69.
893,109. EXOTHERM TERMIL. Diamond Shamrock Corporation. SN 341,741. Pub. 4-7-70. Filed 10-27-69.
893,110. KATANOL. GAF Corporation. SN 342,856. Pub. 4-7-70. Filed 11-3-69.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

893,092. THE SUPRAFLEX. Lark Luggage Corp. SN 325,881. Pub. 4-7-70. Filed 4-29-69.
893,093. THE BATTALION. Lark Luggage Corp. SN 326,384. Pub. 4-7-70. Filed 5-5-69.

Class 9—Explosives, Firearms, Equipments, and Projectiles

Class 4—Abrasives and Polishing Materials

893,094. CPC INTERNATIONAL. CPC International Inc., by change of name from Corn Products Company. MULTIPLE CLASS (Classes 4, 6, and 46). SN 322,119. Pub. 4-7-70. Filed 3-19-69.
893,095. AN-CARE. Anderson Chemical Company. MULTIPLE CLASS (Classes 4 and 52). SN 324,323. Pub. 4-7-70. Filed 4-14-69.
893,096. MISCELLANEOUS DESIGN. Anderson Chemical Company. MULTIPLE CLASS (Classes 4 and 52). SN 324,329. Pub. 4-7-70. Filed 4-14-69.
893,097. WESTERN AND DESIGN. Western Cutlery Co. MULTIPLE CLASS (Classes 4 and 23). SN 330,969. Pub. 4-7-70. Filed 6-25-69.

893,111. GECO AND DESIGN. Dynamit Nobel Aktiengesellschaft. SN 313,089. Pub. 4-7-70. Filed 11-26-68.
893,112. RWS AND DESIGN. Dynamit Nobel Aktiengesellschaft. SN 313,090. Pub. 4-7-70. Filed 11-26-68.
893,113. ROBOT. Bernard J. Semel. SN 325,784. Pub. 4-7-70. Filed 4-28-69.
893,114. MARDI-GRAS. Bernard J. Semel. SN 325,785. Pub. 4-7-70. Filed 4-28-69.
893,115. ROTTWEIL AND DESIGN. Dynamit Nobel Aktiengesellschaft. SN 326,083. Pub. 4-7-70. Filed 5-1-69.
893,116. TUF-GLO. Apache Powder Company. SN 331,582. Pub. 4-7-70. Filed 7-2-69.
893,117. PHILMIX. Phillips Petroleum Company. SN 332,523. Pub. 4-7-70. Filed 7-14-69.
893,118. TRENCHRITE. E. I. du Pont de Nemours and Company. SN 343,628. Pub. 4-7-70. Filed 11-17-69.

Class 11 — Inks and Inking Materials

893,119. MISCELLANEOUS DESIGN. Shachihata Kogyo Kabushiki Kaisha. MULTIPLE CLASS (Classes 11, 23, and 37). SN 319,665. Pub. 4-7-70. Filed 2-20-69.

Class 12 — Construction Materials

893,120. BRIAR-CUT. Alsie, Inc. SN 304,195. Pub. 4-7-70. Filed 8-2-68.
 893,121. SEASON-RITE. Michael Mang-Hoo Cheung, d.b.a. Hing Yu Metal Works. SN 305,633. Pub. 4-7-70. Filed 8-21-68.
 893,122. UNIVERSAL FABRICATED PRODUCTS. Tranaco Inc. SN 311,079. Pub. 4-7-70. Filed 10-31-68.
 893,123. KLIP-LOCK. Powerlock Floors, Inc. SN 313,200. Pub. 4-7-70. Filed 11-27-68.
 893,124. AIRTRUSS. Harvestall Industries, Inc. SN 315,411. Pub. 4-7-70. Filed 12-30-68.
 893,125. SQUEEGE-COTE. Ranco Industrial Products Corporation. SN 316,828. Pub. 4-7-70. Filed 1-16-69.
 893,126. UNIT STEP AND DESIGN. Unit Step Form Company, Inc. SN 326,053. Pub. 4-7-70. Filed 5-1-69.
 893,127. UNIT STEP. Unit Step Form Company, Inc., d.b.a. Lister Concrete Products Iowa. SN 326,150. Pub. 4-7-70. Filed 5-1-69.
 893,128. MINI-BAG. Fox Pools, Inc. SN 327,256. Pub. 4-7-70. Filed 5-14-69.
 893,129. AQUA-FLOW. Rain-Flow Systems, Inc. SN 343,058. Pub. 4-7-70. Filed 11-10-69.
 893,130. EXIDE. ESB Incorporated. MULTIPLE CLASS (Classes 12 and 13). SN 344,177. Pub. 4-7-70. Filed 11-21-69.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

893,089. (See Class 2 for this trademark.)
 893,130. (See Class 12 for this trademark.)
 893,131. FLEX-A-FITTING. Genova Products. SN 307,641. Pub. 4-7-70. Filed 9-18-68.
 893,132. R AND DESIGN. Rodgers Hydraulic Incorporated. MULTIPLE CLASS (Classes 13 and 23). SN 314,128. Pub. 4-7-70. Filed 12-11-68.
 893,133. THE WISE LINE AND DESIGN. Cummings Plastic Company. MULTIPLE CLASS (Classes 13, 21, and 23). SN 315,387. Pub. 4-7-70. Filed 12-30-68.
 893,134. SURE-STAY. Kenlin Enterprises, Inc. SN 328,309. Pub. 4-7-70. Filed 5-26-69.
 893,135. POWELL PETROL. The Wm. Powell Company. SN 332,137. Pub. 4-7-70. Filed 7-9-69.
 893,136. CHERISH. Aluminum Specialty Company. SN 334,799. Pub. 4-7-70. Filed 8-8-69.
 893,137. SPRING TAPPER. Pure Stat Corporation. SN 336,712. Pub. 4-7-70. Filed 8-29-69.
 893,138. DUOMATIC. Monogram Industries, Inc. SN 338,160. Pub. 4-7-70. Filed 9-17-69.
 893,139. GRAYCHEK. Gray Tool Company. SN 338,241. Pub. 4-7-70. Filed 9-18-69.
 893,140. GRAYGATE. Gray Tool Company. SN 338,242. Pub. 4-7-70. Filed 9-18-69.
 893,141. FLEX-ABILITIES. Avica Corporation. SN 338,346. Pub. 4-7-70. Filed 9-19-69.
 893,142. VANLUBE. Henry Soss and Company. SN 342,599. Pub. 4-7-70. Filed 11-4-69.
 893,143. ASTROHINGE. David Allison Co., Inc. SN 342,929. Pub. 4-7-70. Filed 11-7-69.

Class 15 — Oils and Greases

893,144. CANDLES 'N SUCH. Candle-Lite, Inc., d.b.a. Candles 'N Such. SN 318,750. Pub. 4-7-70. Filed 2-10-69.
 893,145. SERVCO-PLATE. The Servco Company. SN 331,837. Pub. 4-7-70. Filed 7-7-69.

Class 16 — Protective and Decorative Coatings

893,146. PERMTINE. Permanent Pigments, Inc. SN 241,998. Pub. 4-7-70. Filed 10-29-69.

Class 18 — Medicines and Pharmaceutical Preparations

893,147. CONTRARIA AND DESIGN. Istituto Sieroterapico e Vaccinogeno Toscano Sclavo Societa per Azioni. SN 296,967. Pub. 4-7-70. Filed 4-30-68.
 893,148. SPOFA. Spofa-Spojene Podniky Pro Zdravotnickou Vyrobu. SN 305,781. Pub. 4-7-70. Filed 8-23-68.
 893,149. Mychel-S. Rachelle Laboratories, Inc. SN 312,496. Pub. 4-7-70. Filed 11-18-68.
 893,150. STOCKBEST. Wilson Industries, Inc. SN 315,508. Pub. 4-7-70. Filed 12-31-68.
 893,151. DIALYTRATE. Broemmel Pharmaceuticals. SN 316,600. Pub. 4-7-70. Filed 1-15-69.
 893,152. PRO-BUMIN. American Cyanamid Company. SN 318,381. Pub. 4-7-70. Filed 2-5-69.
 893,153. DERMACYCLINE. USV Pharmaceutical Corporation. SN 324,540. Pub. 4-7-70. Filed 4-14-69.
 893,154. AMPROL H-E. Merck & Co., Inc. SN 326,780. Pub. 4-7-70. Filed 5-8-69.
 893,155. HIFIRON. Fisons Pharmaceuticals Limited. SN 327,754. Pub. 4-7-70. Filed 5-20-69.
 893,156. KAY POTE. The Vitarine Co., Inc. SN 328,751. Pub. 4-7-70. Filed 5-29-69.
 893,157. KATO. Ingram Pharmaceutical Co. SN 335,167. Pub. 4-7-70. Filed 8-13-69.
 893,158. CONTRABLEM. Texas Pharmacal Company. SN 340,745. Pub. 4-7-70. Filed 10-15-69.
 893,159. STRONGPEN. Beecham Inc. SN 342,011. Pub. 4-7-70. Filed 10-29-69.
 893,160. PENGUT. Beecham Inc. SN 342,012. Pub. 4-7-70. Filed 10-29-69.
 893,161. LUXAPEN. Beecham Inc. SN 342,013. Pub. 4-7-70. Filed 10-29-69.
 893,162. BACTOCILL. Beecham Inc. SN 342,014. Pub. 4-7-70. Filed 10-29-69.
 893,163. HISCATABS. Physicians and Hospitals Supply Company, d.b.a. The Ulmer Pharmacal Company. SN 342,801. Pub. 4-7-70. Filed 11-6-69.
 893,164. ASSET. Johnson & Johnson. SN 344,189. Pub. 4-7-70. Filed 11-21-69.
 893,165. AMNESTY. Johnson & Johnson. SN 344,623. Pub. 4-7-70. Filed 11-26-69.
 893,166. RETINAID. Johnson & Johnson. SN 344,626. Pub. 4-7-70. Filed 11-26-69.
 893,167. QUANE. Smith Kline & French Laboratories. SN 345,053. Pub. 4-7-70. Filed 12-2-69.
 893,168. BILAX. Karl H. Sautter, d.b.a. Leo Products. SN 345,262. Pub. 4-7-70. Filed 12-4-69.

Class 19 — Vehides

893,081. (See Class 1 for this trademark.)

893,169. LARVEN. Lennart Folke Nilsson. SN 304,488. Pub. 4-7-70. Filed 8-6-68.
 893,170. SPRAGUE AND DESIGN. Sprague Devices, Inc. SN 306,957. Pub. 4-7-70. Filed 9-9-68.
 893,171. PINE TREE AND TRACK DESIGN. General Aluminum Products, Inc. MULTIPLE CLASS (Classes 19 and 22). SN 314,418. Pub. 4-7-70. Filed 12-13-68.
 893,172. DIAMOND REQ AND DESIGN. White Motor Corporation. SN 317,418. Pub. 4-7-70. Filed 1-23-69.
 893,173. HYDRA-GUARD. Springdraulic Corporation. SN 320,655. Pub. 4-7-70. Filed 3-3-69.
 893,174. MINILITE. Hank Thorp, Inc. SN 328,465. Pub. 4-7-70. Filed 5-27-69.
 893,175. JERICHO. Societe Anonyme dite: Klaxon. SN 330,207. Pub. 4-7-70. Filed 6-16-69.
 893,176. EXCEL. Peterson Industries, Inc. SN 332,988. Pub. 4-7-70. Filed 7-18-69.
 893,177. MAGNUM MARINE AND DESIGN. American Photocopy Equipment Company. SN 334,190. Pub. 4-7-70. Filed 8-1-69.

Class 20 — Linoleum and Oiled Cloth

893,178. CORKEZE. Congoleum Industries, Inc. SN 336,091. Pub. 4-7-70. Filed 8-25-69.

Class 21 — Electrical Apparatus, Machines, and Supplies

893,133. (See Class 13 for this trademark.)
 893,179. UA. United Aircraft Corporation. MULTIPLE CLASS (Classes 21 and 26). SN 270,452. Pub. 4-7-70. Filed 5-2-67.
 893,180. SHG AND DESIGN. Schmidt'sche Heissdampf-Gesellschaft m.b.H. SN 274,668. Pub. 4-7-70. Filed 6-23-67.
 893,181. MOOG. Moog Inc. SN 281,908. Pub. 3-10-70. Filed 10-5-67.
 893,182. WINDJAMMER. Norwell Manufacturing Co. Inc. SN 287,233. Pub. 4-7-70. Filed 12-19-67.
 893,183. T DESIGN. Telautograph Corporation. SN 295,194. Pub. 4-7-70. Filed 4-9-68.
 893,184. EXPECT THE BEST FROM BLACK & DECKER. The Black and Decker Manufacturing Company. SN 295,609. Pub. 4-7-70. Filed 4-15-68.
 893,185. SILCOMATIC. General Electric Company. SN 300,347. Pub. 4-7-70. Filed 6-18-68.
 893,186. YAMAHA. Nippon Gakki Seizo Kabushiki Kaisha. MULTIPLE CLASS (Classes 21 and 36). SN 301,956. Pub. 4-7-70. Filed 7-3-68.
 893,187. CARPETKEEPER. Breuer Electric Mfg. Co. MULTIPLE CLASS (Classes 21 and 23). SN 307,421. Pub. 4-7-70. Filed 9-16-68.
 893,188. AIRYPOINT. Aeroptix Technology Corporation. SN 313,394. Pub. 4-7-70. Filed 12-2-68.
 893,189. MEDALLION. Midland International Corporation. SN 314,576. Pub. 4-7-70. Filed 12-16-68.
 893,190. PHILIPS. N.V. Philips' Gloeilampenfabrieken. SN 314,806. Pub. 4-7-70. Filed 12-18-68.
 893,191. PERMADUR. American Chain & Cable Company, Inc. SN 318,785. Pub. 4-7-70. Filed 2-10-69.
 893,192. PSR. Cyprus Mines Corporation, d.b.a. Rome Cable Division. SN 320,036. Pub. 4-7-70. Filed 2-25-69.
 893,193. LEI AND DESIGN. Lory Electronics Inc. SN 322,030. Pub. 4-7-70. Filed 3-18-69.
 893,194. MICROBAR. Anocut Engineering Company. SN 322,807. Pub. 4-7-70. Filed 3-26-69.
 893,195. PITRONIM. Pitronim Inc. MULTIPLE CLASS (Classes 21 and 101). SN 323,181. Pub. 4-7-70. Filed 4-1-69.
 893,196. ISOLOC. L'Industrie Electrique de la Seine. SN 325,495. Pub. 4-7-70. Filed 4-24-69.

Class 22 — Games, Toys, and Sporting Goods

893,171. (See Class 19 for this trademark.)
 893,200. BABY DIOR AND DESIGN. Christian Dior, Societe a Responsabilite Limitee. MULTIPLE CLASS (Classes 22, 39, 42, and 50). SN 285,287. Pub. 4-7-70. Filed 11-21-67.
 893,201. TENSOR. Tensor Corporation. SN 308,841. Pub. 4-7-70. Filed 7-29-68.
 893,202. WONDERSIZER. William D. Hunter. SN 304,604. Pub. 4-7-70. Filed 8-7-68.
 893,203. BALLNAMIC. Karsten Solheim. SN 308,153. Pub. 4-7-70. Filed 9-24-68.
 893,204. PROTECTOR ETC. AND DESIGN. Potter Sibley, Inc. SN 317,609. Pub. 4-7-70. Filed 1-27-69.
 893,205. PEA DINGER SWINGER. Skor-Mor Corporation. SN 321,082. Pub. 4-7-70. Filed 3-7-69.
 893,206. SNEAKY PETE. Charles H. Jackson, Jr., d.b.a. Jaxon Enterprises. SN 331,900. Pub. 4-7-70. Filed 7-7-69.
 893,207. W/S AND DESIGN. Wilson Sporting Goods Co. SN 332,177. Pub. 4-7-70. Filed 7-9-69.
 893,208. DENISE. Topper Corporation. SN 342,001. Pub. 4-7-70. Filed 10-29-69.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

893,081. (See Class 1 for this trademark.)
 893,084. (See Class 1 for this trademark.)
 893,097. (See Class 4 for this trademark.)
 893,119. (See Class 11 for this trademark.)
 893,132. (See Class 13 for this trademark.)
 893,133. (See Class 13 for this trademark.)
 893,209. BLO-HOG. Jacksonville Blow Pipe Company. SN 273,075. Pub. 4-7-70. Filed 6-5-67.
 893,210. STRATO-VACUUM AND DESIGN. Strato-Vacuum Handling Company. SN 296,734. Pub. 4-7-70. Filed 4-18-68.
 893,211. PANELKING. Wetoma Corp. SN 297,475. Pub. 4-7-70. Filed 5-6-68.
 893,212. WETOMA. Wetoma Corp. SN 297,476. Pub. 4-7-70. Filed 5-6-68.
 893,213. MISCELLANEOUS DESIGN. Sanders Associates, Inc. SN 297,602. Pub. 4-7-70. Filed 5-7-68.
 893,214. MEPACO. Chemetron Corporation. MULTIPLE CLASS (Classes 23 and 34). SN 299,271. Pub. 4-7-70. Filed 5-29-68.
 893,215. DESIGN OF FIST WITH THREE ARROWS. Carl Schlieper. SN 306,880. Pub. 4-7-70. Filed 9-9-68.
 893,216. S DESIGN. Hunter Manufacturing Company. SN 308,298. Pub. 3-10-70. Filed 9-26-68.
 893,217. WT DESIGN. Western Tool Co. SN 311,540. Pub. 4-7-70. Filed 11-8-68.
 893,218. SMP DESIGN. Standard Metal Products Co. MULTIPLE CLASS (Classes 23 and 34). SN 312,706. Pub. 4-7-70. Filed 11-20-68.
 893,219. GO-TYPE. Adolph Gottsche, Inc. SN 313,094. Pub. 4-7-70. Filed 11-26-68.
 893,220. IMPERIAL. Imperial Stamp & Engraving Co., Inc. SN 314,561. Pub. 4-7-70. Filed 12-16-68.
 893,221. JOYCE AND DESIGN. The Joyce-Cridland Company. SN 314,570. Pub. 4-7-70. Filed 12-16-68.
 893,222. COMMANDAIR. Champion Pneumatic Machinery Company, Inc. SN 315,054. Pub. 4-7-70. Filed 12-23-68.

- 893,223. **VERSA-MATIC**. Automated Building Components, Inc. SN 315,983. Pub. 4-7-70. Filed 1-7-69.
- 893,224. **FLEX-O-GEAR**. Rex Chainbelt Inc., assignee of Perfection American, Inc. SN 316,123. Pub. 4-7-70. Filed 1-8-69.
- 893,225. **INCRE-MIKE**. Giddings & Lewis, Inc. SN 316,581. Pub. 4-7-70. Filed 1-14-69.
- 893,226. **GOLDEN TOUCH**. Imperial Knife Association Companies, Inc. SN 316,648. Pub. 4-7-70. Filed 1-15-69.
- 893,227. **THE GRABBER**. Aldo Controls & Mfg. Inc. SN 316,963. Pub. 4-7-70. Filed 1-21-69.
- 893,228. **DUTCH FINGER AND DESIGN**. Expando Seal Tools, Inc. SN 317,735. Pub. 4-7-70. Filed 1-28-69.
- 893,229. **SERVOYARN LEVELEER**. The Warner & Swasey Company. SN 318,690. Pub. 4-7-70. Filed 2-7-69.
- 893,230. **SPERRY RAND (PLAIN)**. Sperry Rand Corporation. SN 319,363. Pub. 4-7-70. Filed 2-17-69.
- 893,231. **SPERRY RAND (LOGO)**. Sperry Rand Corporation. SN 319,369. Pub. 4-7-70. Filed 2-17-69.
- 893,232. **SPERRY RAND (LOGO) AND SPERISTAR DESIGN**. Sperry Rand Corporation. SN 319,381. Pub. 4-7-70. Filed 2-17-69.
- 893,233. **FERRET**. Arnold Manufacturing Company. SN 322,677. Pub. 4-7-70. Filed 3-25-69.
- 893,234. **MISCELLANEOUS DESIGN**. Cardinal Vending Company. SN 324,405. Pub. 4-7-70. Filed 4-14-69.
- 893,235. **WEB-MASTER**. Clary Corporation. SN 324,408. Pub. 4-7-70. Filed 4-14-69.
- 893,236. **LOEWY-KOMPEX LK AND DESIGN**. Loewy Machinery Supplies Company, Inc. SN 325,498. Pub. 4-7-70. Filed 4-24-69.
- 893,237. **BIG-PRO**. Bryant-Poff, Inc. SN 325,882. Pub. 4-7-70. Filed 4-29-69.
- 893,238. **RULE-MASTER**. Rule Industries, Inc. SN 326,487. Pub. 4-7-70. Filed 5-6-69.
- 893,239. **FAM AND DESIGN**. Speedfam Corporation. SN 327,420. Pub. 4-7-70. Filed 5-15-69.
- 893,240. **MI AND DESIGN**. May-Fran Engineering, Inc. SN 327,772. Pub. 4-7-70. Filed 5-20-69.
- 893,241. **POWERMAST**. Harnischfeger Corporation. SN 327,895. Pub. 4-7-70. Filed 5-21-69.
- 893,242. **GE AND DESIGN**. General Electric Company. SN 328,119. Pub. 4-7-70. Filed 5-27-69.
- 893,243. **THREDSHAVER**. Balax, Inc. SN 330,815. Pub. 4-7-70. Filed 6-24-69.
- 893,244. **HY-FLO**. Horix Manufacturing Company. SN 331,510. Pub. 4-7-70. Filed 7-1-69.
- 893,245. **CRANEVEYOR**. Harsco Corporation. SN 331,618. Pub. 4-7-70. Filed 7-2-69.
- 893,246. **SHINE-MATIC**. Shin Nippon Koki Co., Ltd. SN 332,157. Pub. 4-7-70. Filed 7-9-69.
- 893,247. **PARKS**. Parks Woodworking Machine Company. SN 332,848. Pub. 4-7-70. Filed 7-17-69.
- 893,248. **MISCELLANEOUS DESIGN**. Buhr Machine Tool Corporation. SN 333,871. Pub. 4-7-70. Filed 7-30-69.
- 893,249. **P.D.P.** Norton Company, assignee of Clipper Manufacturing Company, Inc. SN 343,388. Pub. 5-19-70. Filed 11-13-69.

Class 24 — Laundry Appliances and Machines

- 893,250. **MI-T-KLEEN**. Ametek, Inc. SN 342,350. Pub. 4-7-70. Filed 11-3-69.

Class 25 — Locks and Safes

- 893,251. **ABUS AND OVAL DESIGN**. Aug. Bremicker Sohne Kommanditgesellschaft. SN 337,424. Pub. 4-7-70. Filed 9-9-69.
- 893,252. **IDENTI LOCK**. Digital Identification Systems, Inc. SN 344,281. Pub. 4-7-70. Filed 11-24-69.

Class 26 — Measuring and Scientific Appliances

- 893,100. (See Class 6 for this trademark.)
- 893,179. (See Class 21 for this trademark.)
- 893,253. **P. Plas Tronics Corp.** SN 300,106. Pub. 4-7-70. Filed 6-10-68.
- 893,254. **DIDAC 800**. Societe Intertechnique. SN 300,377. Pub. 4-7-70. Filed 6-13-68.
- 893,255. **SPEED ST TRONIC**. General Electric Company. SN 307,570. Pub. 4-7-70. Filed 9-17-68.
- 893,256. **MC QUALITY AND DESIGN**. McHugh Thermodynamics Corporation. SN 309,274. Pub. 4-7-70. Filed 10-9-68.
- 893,257. **AUTOPOLAR**. Teledyne, Inc. SN 310,905. Pub. 4-7-70. Filed 10-30-68.
- 893,258. **KDR**. Potter Instrument Company, Inc. SN 318,576. Pub. 4-7-70. Filed 2-6-69.
- 893,259. **RISTON**. E. I. du Pont de Nemours and Company. SN 326,476. Pub. 4-7-70. Filed 5-6-69.
- 893,260. **TURBITROL**. The Taulman Company. MULTIPLE CLASS (Classes 26 and 100). SN 329,549. Pub. 4-7-70. Filed 6-10-69.

Class 28 — Jewelry and Precious-Metal Ware

- 893,261. **FELICIANA**. Hamilton Watch Company. SN 315,551. Pub. 4-7-70. Filed 1-2-69.
- 893,262. **JOSTEN'S**. Jostens, Inc. MULTIPLE CLASS (Classes 28 and 38). SN 327,444. Pub. 4-7-70. Filed 5-16-69.
- 893,263. **GL Stuckey & Speer, Inc.** SN 334,642. Pub. 4-7-70. Filed 8-6-69.
- 893,264. **GOLD LANCE AND DESIGN**. Stuckey & Speer, Inc. SN 334,643. Pub. 4-7-70. Filed 8-6-69.
- 893,265. **IMP**. Peltan & Leru Corp. SN 336,468. Pub. 4-7-70. Filed 8-27-69.
- 893,266. **LIEBA**. Lieba, Incorporated. SN 336,581. Pub. 4-7-70. Filed 8-28-69.

Class 31 — Filters and Refrigerators

- 893,267. **VOKES VEE-GLASS**. Vokes Limited. SN 303,368. Pub. 4-7-70. Filed 7-22-68.
- 893,268. **INTERSTATE**. Interstate Battery System of America, Inc. SN 313,110. Pub. 4-7-70. Filed 11-26-68.
- 893,269. **FRIGI-CREAMER**. Wyatt Corporation. SN 316,703. Pub. 4-7-70. Filed 1-15-69.
- 893,270. **MILAC**. N.V. Koninklijke Pharmaceutische Fabrieken v/h Brocades-Stheeman & Pharmacia. SN 318,802. Pub. 4-7-70. Filed 2-10-69.
- 893,271. **MICRONAIRE**. Precipitator Corporation of America. SN 321,012. Pub. 4-7-70. Filed 3-7-69.
- 893,272. **KOOL-PAC**. Flambeau Plastics Corporation. SN 322,428. Pub. 4-7-70. Filed 3-21-69.
- 893,273. **FILTRACO**. Seaton-Wilson, Inc. SN 328,353. Pub. 4-7-70. Filed 5-26-69.

Class 32 — Furniture and Upholstery

- 893,274. **CONDOMINIUM**. The Lane Company, Inc. SN 334,239. Pub. 4-7-70. Filed 8-1-69.
- 893,275. **CUSTOM HALL**. Peckham Industries, Inc. SN 335,304. Pub. 4-7-70. Filed 8-14-69.

- 893,276. **HOOLA COUPE AND DESIGN**. Century Products, Inc. SN 336,538. Pub. 4-7-70. Filed 8-28-69.
- 893,277. **SILENT SEAL**. Paramount Bedding Corporation. SN 338,175. Pub. 4-7-70. Filed 9-17-69.

Class 33 — Glassware

- 893,278. **SOVIREL**. Societe des Verreries Industrielles Reunies du Loing (S.O.V.I.R.E.L.). SN 319,644. Pub. 4-7-70. Filed 2-19-69.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 893,214. (See Class 23 for this trademark.)
- 893,218. (See Class 23 for this trademark.)
- 893,279. **C. I. HAYES INC. ETC. AND H DESIGN**. C. I. Hayes Inc. SN 301,426. Pub. 4-7-70. Filed 6-26-68.
- 893,280. **DIP-ARC**. Air Reduction Company, Incorporated. SN 315,295. Pub. 4-7-70. Filed 12-27-68.
- 893,281. **MISCELLANEOUS DESIGN**. Dukor Industries, Inc., by change of name from Dura-Vent Corporation of California. SN 316,419. Pub. 4-7-70. Filed 1-13-69.
- 893,282. **DYNATECH**. Dynatech Corporation. SN 320,459. Pub. 4-7-70. Filed 3-3-69.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 893,081. (See Class 1 for this trademark.)
- 893,283. **"P/G."** The Goodyear Tire & Rubber Company. SN 298,441. Pub. 4-7-70. Filed 5-17-68.
- 893,284. **SSK AND DESIGN**. S. S. Kresge Company. SN 324,920. Pub. 4-7-70. Filed 4-18-69.
- 893,285. **KM 200**. S. S. Kresge Company. SN 325,051. Pub. 4-7-70. Filed 4-21-69.

Class 36 — Musical Instruments and Supplies

- 893,186. (See Class 21 for this trademark.)
- 893,286. **RAY-PHI**. Randolph William Ray, Douglas McNair Phillips, Jr., Gary Sherman Owens and William Sommers, d.b.a. Ray-Phi Records. SN 322,910. Pub. 4-7-70. Filed 3-26-69.
- 893,287. **TRANSITUNES**. Transitailes, Inc. SN 323,481. Pub. 4-7-70. Filed 4-2-69.
- 893,288. **TRANSITALES**. Transitailes, Inc. SN 323,482. Pub. 4-7-70. Filed 4-2-69.
- 893,289. **TRAVELTUNES**. Transitailes, Inc. SN 323,483. Pub. 4-7-70. Filed 4-2-69.
- 893,290. **OFF-SPRING**. Springboard International Records, Inc. SN 324,247. Pub. 4-7-70. Filed 4-10-69.
- 893,291. **SOUNDS FANTASTIC**. Walter E. Smith. SN 332,747. Pub. 4-7-70. Filed 7-16-69.
- 893,292. **DIAL AND DESIGN**. Dial Records, Inc. SN 334,907. Pub. 4-7-70. Filed 8-8-69.

Class 37 — Paper and Stationery

- 893,098. (See Class 5 for this trademark.)
- 893,119. (See Class 11 for this trademark.)

- 893,293. **K-MAT**. Hammermill Paper Company, Strathmore Paper Company Division. SN 270,130. Pub. 4-7-70. Filed 4-27-67.
- 893,294. **FLASH VARY-USE**. J. J. Lester & Co., Inc., d.b.a. Accountants' Supply House. SN 300,206. Pub. 4-7-70. Filed 6-11-68.
- 893,295. **IVY**. Fort Howard Paper Company. SN 319,043. Pub. 4-7-70. Filed 2-18-69.
- 893,296. **CO-RECT-OUT**. Eaton Allen Corp. SN 322,248. Pub. 4-7-70. Filed 3-20-69.
- 893,297. **MISCELLANEOUS DESIGN**. Johnson & Johnson, d.b.a. Cel-Fibe. MULTIPLE CLASS (Classes 37, 39, 42, and 44). SN 324,202. Pub. 4-7-70. Filed 4-10-69.
- 893,298. **THE VILLAGER**. Villager Industries, Inc. SN 327,567. Pub. 3-17-70. Filed 5-19-69.
- 893,299. **GRAND PRIX**. Tuckersharpe Pen Company, Inc. SN 330,311. Pub. 4-7-70. Filed 6-17-69.
- 893,300. **MISCELLANEOUS DESIGN**. Container Corporation of America. SN 331,842. Pub. 4-7-70. Filed 6-30-69.
- 893,301. **CAL-MARK**. Sidney M. Bliss, d.b.a. Bliss Publishing Company. SN 335,846. Pub. 4-7-70. Filed 8-21-69.
- 893,302. **SOTUF**. Avery Products Corporation. SN 344,047. Pub. 4-7-70. Filed 11-20-69.

Class 38 — Prints and Publications

- 893,262. (See Class 28 for this trademark.)
- 893,303. **FANTASTIC FOUR**. Magazine Management Co., Inc., assignee, by mesne assignment, of Magazine Management Company, d.b.a. Marvel Comics Group. SN 276,841. Pub. 4-7-70. Filed 7-26-67.
- 893,304. **IRON MAN**. Magazine Management Co., Inc., assignee, by mesne assignment, of Magazine Management Company, d.b.a. Marvel Comics Group. SN 278,017. Pub. 4-7-70. Filed 8-10-67.
- 893,305. **MAINLY MARKETING AND DESIGN**. Schoonmaker Associates. SN 290,759. Pub. 4-7-70. Filed 2-9-68.
- 893,306. **P PAYDATA AND DESIGN**. Paydata, Inc., assignee of Mints & Girgan, Inc. SN 309,279. Pub. 4-7-70. Filed 10-9-68.
- 893,307. **SUPER-LINE**. Edukald of Ridgewood. SN 316,888. Pub. 2-24-70. Filed 1-17-69.
- 893,308. **PUBLISHING MANAGEMENT**. Hagen Communications Inc. SN 321,931. Pub. 4-7-70. Filed 3-17-69.
- 893,309. **REPRODUCTION METHODS-RM, ETC.** Gellert Publishing Corp. SN 326,592. Pub. 4-7-70. Filed 5-7-69.
- 893,310. **BOX CARD**. Aranar Marketing Services, Inc. SN 326,821. Pub. 4-7-70. Filed 5-9-69.
- 893,311. **MISCELLANEOUS DESIGN**. Follett Educational Corporation. SN 329,972. Pub. 4-7-70. Filed 6-18-69.
- 893,312. **THE JONQUIL**. E.S.A. Service Corporation. SN 330,116. Pub. 4-7-70. Filed 6-16-69.
- 893,313. **ADVERTISING ACTION AND DESIGN**. Elisabeth P. Davis. SN 330,481. Pub. 4-7-70. Filed 6-19-69.
- 893,314. **ROUND-UP**. Bro-Dart Industries. SN 331,993. Pub. 4-7-70. Filed 7-8-69.
- 893,315. **THE BUSINESS OF FITNESS**. Rodale Press, Inc. SN 333,183. Pub. 4-7-70. Filed 7-23-69.
- 893,316. **GEM DMS**. Inc. SN 333,250. Pub. 4-7-70. Filed 7-23-69.
- 893,317. **KET AND TURTLE DESIGN**. Karen E. Thorpe Trego, d.b.a. Ket. SN 333,312. Pub. 4-7-70. Filed 7-23-69.
- 893,318. **WHITE LACE**. Looart Press, Inc. SN 334,778. Pub. 4-7-70. Filed 8-8-69.
- 893,319. **PSYCH-O-GENERATIVE**. Psych-O-Generative, Inc. SN 337,973. Pub. 4-7-70. Filed 9-15-69.
- 893,320. **THE FRAMABLES AND DESIGN**. Sherwood Publishing Company, Inc. SN 338,619. Pub. 4-7-70. Filed 9-22-69.
- 893,321. **GY-CODE**. Geigy Chemical Corporation. SN 339,427. Pub. 4-7-70. Filed 10-1-69.

- 893,322. EMERALD. Norcross, Inc. SN 341,838. Pub. 4-7-70. Filed 10-27-69.
 893,323. ASCIAN. Jonathan G. Meader, d.b.a. Asclan. SN 343,862. Pub. 4-7-70. Filed 11-18-69.

Class 39—Clothing

- 893,200. (See Class 22 for this trademark.)
 893,297. (See Class 37 for this trademark.)
 893,324. SLINGERS. Unishops, Inc. SN 213,069. Pub. 10-5-65. Filed 3-1-65.
 893,325. SUNDEW LINENS AND DESIGN. Johnston, Allen & Company Limited. MULTIPLE CLASS (Classes 39 and 42). SN 291,612. Pub. 4-7-70. Filed 2-21-68.
 893,326. MISCELLANEOUS DESIGN. Advance Glove Manufacturing Company. SN 297,640. Pub. 4-7-70. Filed 5-8-68.
 893,327. TOSCO AND DESIGN. Toyo Sen-I Co., Ltd. MULTIPLE CLASS (Classes 39, 42, and 43). SN 299,902. Pub. 4-7-70. Filed 6-7-68.
 893,328. SNIA. Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A. MULTIPLE CLASS (Classes 39, 42, and 43). SN 302,978. Pub. 4-7-70. Filed 7-17-68.
 893,329. COLOR BEN COLOUR COULEUR AND DESIGN. Schubert-Werk. SN 309,302. Pub. 4-7-70. Filed 10-9-68.
 893,330. CINDY KAY. Figure Flattery Brassiere Company, Inc. SN 313,501. Pub. 4-7-70. Filed 12-3-68.
 893,331. APPLE ANNIE'S OF GRETNA AND DESIGN. Apple Annie's of Gretna, Inc. SN 317,432. Pub. 4-7-70. Filed 1-24-69.
 893,332. CATCH CAN. Carl Gutmann & Company, Inc. SN 317,437. Pub. 4-7-70. Filed 1-24-69.
 893,333. GLOFANE. Eastco Safety Equipment, Inc. SN 322,419. Pub. 4-7-70. Filed 3-21-69.
 893,334. MISTER MARK AND DESIGN. The Commercial Electric Company. SN 323,264. Pub. 4-7-70. Filed 4-1-69.
 893,335. BRA-TIQUE. Kops Bros., Inc. SN 324,021. Pub. 4-7-70. Filed 4-9-69.
 893,336. FITTING SANDAL ETC. AND DESIGN. Otafuku Sangyo Co., Ltd. SN 325,258. Pub. 4-7-70. Filed 4-8-69.
 893,337. FABRIMATES. Stevconk Textile Co. SN 325,521. Pub. 4-7-70. Filed 4-24-69.
 893,338. SKI SKINS. Atlas Underwear Corporation. SN 325,564. Pub. 4-7-70. Filed 4-25-69.
 893,339. PETROCELLI AND DESIGN. Petrocelli Clothes, Inc. SN 326,545. Pub. 4-7-70. Filed 5-6-69.
 893,340. ALJAC. Aljac Sportswear Limited. SN 326,611. Pub. 4-7-70. Filed 5-7-69.
 893,341. THE KEATS. Consolidated Foods Corporation. SN 327,001. Pub. 4-7-70. Filed 5-12-69.
 893,342. DI VILLA. Imperial Reading Corporation. SN 328,550. Pub. 4-7-70. Filed 5-28-69.
 893,343. PIERRE MARQUEZ. Les Tricots Pierre Marquez Ltee. SN 328,868. Pub. 4-7-70. Filed 6-2-69.
 893,344. CAPLEO. Rice Shinkle Imports. SN 329,129. Pub. 4-7-70. Filed 6-4-69.
 893,345. BLAIR PRESS. New Process Company. SN 330,004. Pub. 4-7-70. Filed 6-13-69.
 893,346. CAPEZIO AND DESIGN. Capazio, Inc. SN 330,475. Pub. 4-7-70. Filed 6-19-69.
 893,347. CUCOS. Formald Co. SN 330,804. Pub. 4-7-70. Filed 6-24-69.
 893,348. DUNN. Dunn Products, Inc. SN 330,878. Pub. 4-7-70. Filed 6-25-69.
 893,349. ALL WOOL AND A YARD WIDE. Woolrich Woolen Mills. SN 332,878. Pub. 4-7-70. Filed 7-17-69.
 893,350. DON CARLOS. Wohl Shoe Company. SN 333,316. Pub. 4-7-70. Filed 7-23-69.
 893,351. JOHN WEITZ SIGNATURE COLLECTION. Palm Beach Company. SN 335,896. Pub. 4-7-70. Filed 8-21-69.

- 893,352. SKI-BURBIA WHITE STAG AND DESIGN. White Stag Manufacturing Co. SN 338,508. Pub. 4-7-70. Filed 9-22-69.
 893,353. RETRACT. Commonwealth Hosiery Mills, Inc. SN 339,785. Pub. 4-7-70. Filed 10-6-69.
 893,354. THE TAMER, ETC. AND LION DESIGN BY FORTUNA. Fortuna Foundations, Inc. SN 339,792. Pub. 4-7-70. Filed 10-6-69.
 893,355. MR SI. Simon Cohen, SN 343,627. Pub. 4-7-70. Filed 11-17-69.
 893,356. BELLEHAVEN FROCKS. Kanner Dress Co., Inc. SN 344,191. Pub. 4-7-70. Filed 11-21-69.

Class 40—Fancy Goods, Furnishings, and Notions

- 893,357. THE HAT CHECK. Gladys S. Stott, d.b.a. Coventry Creations. SN 304,207. Pub. 4-7-70. Filed 8-2-68.
 893,358. GAYLORD. Gaylord Products, Incorporated. SN 318,774. Pub. 4-7-70. Filed 2-10-69.
 893,359. PAULANN. Lawrence Corporation. SN 323,828. Pub. 4-7-70. Filed 4-7-69.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 893,081. (See Class 1 for this trademark.)
 893,200. (See Class 22 for this trademark.)
 893,297. (See Class 37 for this trademark.)
 893,325. (See Class 39 for this trademark.)
 893,327. (See Class 39 for this trademark.)
 893,328. (See Class 39 for this trademark.)
 893,360. TIGER THINGS AND DESIGN. Tiger Fabrics, Inc. SN 275,322. Pub. 4-7-70. Filed 7-3-67.
 893,361. TAWASHI. The Tawashi Club, Inc. SN 339,824. Pub. 4-7-70. Filed 10-6-69.
 893,362. SPACELACE. Vanguard Knits, Inc. SN 344,201. Pub. 4-7-70. Filed 11-21-69.

Class 43—Thread and Yarn

- 893,327. (See Class 39 for this trademark.)
 893,328. (See Class 39 for this trademark.)

Class 44—Dental, Medical, and Surgical Appliances

- 893,297. (See Class 37 for this trademark.)
 893,363. CUSTOM-CARE. Clairrol Incorporated. MULTIPLE CLASS (Classes 44 and 51). SN 294,431. Pub. 4-7-70. Filed 3-29-68.
 893,364. DEXON. American Cyanamid Company. SN 334,289. Pub. 4-7-70. Filed 8-4-69.

Class 45—Soft Drinks and Carbonated Waters

- 893,365. DAILY'S COCKTAIL TIME AND DESIGN. Daily Juice Products, Inc. SN 260,655. Pub. 4-7-70. Filed 12-13-66.

- 893,366. PRUNESHINE. Duffy-Mott Company, Inc. SN 321,642. Pub. 4-7-70. Filed 3-13-69.
 893,367. DESIGN OF A MAN. The Thin Man, Incorporated. SN 328,464. Pub. 4-7-70. Filed 5-27-69.

Class 46—Foods and Ingredients of Foods

- 893,094. (See Class 4 for this trademark.)
 893,368. SANADIA. Gustav & Wilhelm Heller. SN 278,489. Pub. 4-7-70. Filed 8-17-67.
 893,369. HIGH ALTITUDE HUNGARIAN. The Colorado Milling & Elevator Company. SN 289,172. Pub. 3-3-70. Filed 1-19-68.
 893,370. NANDY AND DESIGN. Nazareth Candy Co. Ltd. SN 298,468. Pub. 4-7-70. Filed 5-17-68.
 893,371. HENNINGSEN. Henningsen Foods, Inc. SN 306,372. Pub. 3-17-70. Filed 8-30-68.
 893,372. CG-ASTRO AND DESIGN. Consumer Guild Foods, Inc. SN 307,430. Pub. 4-7-70. Filed 9-16-68.
 893,373. G-F-I OUR FUTURE IS WRAPPED IN EVERY PACKAGE! AND DESIGN. Guaranteed Foods, Inc. SN 309,765. Pub. 4-7-70. Filed 10-16-68.
 893,374. COUNTRY STORE MERCHANDISE AND DESIGN. Country Store Sweet Shoppe, Inc. MULTIPLE CLASS (Classes 46 and 100). SN 310,957. Pub. 4-7-70. Filed 10-31-68.
 893,375. DELTA WESTERN. Delta Western Chemical, Inc. SN 315,310. Pub. 4-7-70. Filed 12-27-68.
 893,376. CITADEL. Canada Packers Limited. SN 315,384. Pub. 2-10-70. Filed 12-30-68.
 893,377. WOMAN HOLDING A CUP AND TRIANGLE DESIGN. Beech-Nut, Inc. SN 318,150. Pub. 4-7-70. Filed 2-3-69.
 893,378. PENNY CANDY STORE. W. R. Grace & Co. SN 318,905. Pub. 4-7-70. Filed 2-11-69.
 893,379. SLOPPY FRANKS. Libby, McNeill & Libby. SN 321,669. Pub. 4-7-70. Filed 3-13-69.
 893,380. POLYNESIAN. Allied Old English, Inc. SN 324,669. Pub. 4-7-70. Filed 4-16-69.
 893,381. WOODCHUCKS. Beatrice Foods Co., d.b.a. Chocolate Company of America. SN 326,988. Pub. 3-31-70. Filed 5-12-69.
 893,382. SCUDDER BUDS. Pet Incorporated. SN 328,249. Pub. 4-7-70. Filed 5-26-69.
 893,383. BLISS. General Foods Corporation. SN 328,976. Pub. 4-7-70. Filed 6-3-69.
 893,384. SALFA AND DESIGN. Societe Agricole Laitiere Flandre Artois, S.A.L.F.A. SN 331,133. Pub. 4-7-70. Filed 6-9-69.
 893,385. BODY MACHINE. Kellogg Company. SN 331,912. Pub. 4-7-70. Filed 7-7-69.
 893,386. BLUE CHIP. John Hansen & Sons, Inc. SN 332,104. Pub. 4-7-70. Filed 7-9-69.
 893,387. HYDE PARK AND DESIGN. Malone & Hyde, Inc. SN 332,732. Pub. 4-7-70. Filed 7-16-69.
 893,388. KOLEOPHILIC. H. Kohnstamm & Co., Inc. SN 333,709. Pub. 4-7-70. Filed 7-28-69.
 893,389. GOURMET TOUCH. Castle & Cooke, Inc., d.b.a. Dole Company. SN 343,626. Pub. 4-7-70. Filed 11-17-69.
 893,390. POPPLE. Lotte Co., Ltd. SN 344,060. Pub. 4-7-70. Filed 11-20-69.
 893,391. CLANCY'S. Hamilton Hamburgers, Inc. MULTIPLE CLASS (Classes 46 and 100). SN 344,767. Pub. 4-7-70. Filed 11-28-69.

Class 47—Wines

- 893,392. ZOILLO RUIZ-MATEOS, S.A. AND DESIGN. Zollo Ruiz-Mateos, S.A. MULTIPLE CLASS (Classes 47 and 49). SN 303,013. Pub. 4-7-70. Filed 7-18-68.

- 893,393. MISCELLANEOUS DESIGN. Takara Shuso Co., Ltd. SN 307,874. Pub. 4-7-70. Filed 9-20-68.

Class 48—Malt Beverages and Liquors

- 893,394. KIKU-MASA. Kiku-Masamune Sake Brewing Co., Ltd. SN 316,012. Pub. 4-7-70. Filed 1-7-69.

Class 49—Distilled Alcoholic Liquors

- 893,392. (See Class 47 for this trademark.)
 893,395. DRYTINI. Vernon B. Hunt, d.b.a. Van Der Hunt Co. SN 317,842. Pub. 4-7-70. Filed 1-29-69.
 893,396. ABC AND DESIGN. Paramount Distillers, Inc., d.b.a. ABC Distilled Products Co. SN 327,727. Pub. 4-7-70. Filed 5-20-69.

Class 50—Merchandise Not Otherwise Classified

- 893,200. (See Class 22 for this trademark.)
 893,397. GRIFF-GLOW. Griffolyn Co., Inc. SN 313,699. Pub. 4-7-70. Filed 12-5-68.
 893,398. SPACE AGE. The Franklin Mint, Inc. SN 320,509. Pub. 3-24-70. Filed 3-3-69.
 893,399. MARK-N-ERASE. Milton Bradley Company. SN 321,177. Pub. 4-7-70. Filed 3-10-69.
 893,400. ZIP-A-LETTER. Howard L. Taylor, Oscoda Aluminum Center. SN 322,634. Pub. 4-7-70. Filed 3-24-69.
 893,401. CLINCH ON. American Flange & Manufacturing Co. Inc. SN 323,931. Pub. 4-7-70. Filed 4-8-69.
 893,402. GOLD MEDAL FLORIST ETC. AND DESIGN. Caffco Imports, Inc. MULTIPLE CLASS (Classes 50 and 101). SN 327,724. Pub. 4-7-70. Filed 5-20-69.

Class 51—Cosmetics and Toilet Preparations

- 893,363. (See Class 44 for this trademark.)
 893,403. SUMMER LIGHTNING. Avon Products, Inc. SN 313,887. Pub. 4-7-70. Filed 12-9-68.
 893,404. HOUSE OF WALDRON. William Waldron, d.b.a. House of Waldron, J. E. Goold & Co. SN 316,154. Pub. 4-7-70. Filed 1-8-69.
 893,405. PAGAN MOON. Glvaudan Corporation. SN 318,186. Pub. 4-7-70. Filed 2-3-69.
 893,406. GIDGET. Chemical Associates, Inc. SN 321,382. Pub. 4-7-70. Filed 3-11-69.
 893,407. ZOTOS. Zotos International, Inc., by change of name from Sales Affiliates, Inc. SN 321,686. Pub. 4-7-70. Filed 3-13-69.
 893,408. PLIFOLAN. L'Oreal. SN 329,785. Pub. 4-7-70. Filed 6-11-69.
 893,409. CARNADINE. Chas. Pfizer & Co., Inc. SN 330,187. Pub. 4-7-70. Filed 6-16-69.
 893,410. TWIGGY. Yardley of London, Inc. SN 330,869. Pub. 4-7-70. Filed 6-24-69.
 893,411. EYE WANT. Avon Products, Inc. SN 333,519. Pub. 4-7-70. Filed 7-25-69.

- 893,412. FIRMESSENCE. Lanvin-Charles of the Ritz, Inc. SN 334,174. Pub. 4-7-70. Filed 8-1-69.
- 893,413. FOAMINE. Yardley of London, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 336,507. Pub. 4-7-70. Filed 8-28-69.
- 893,414. ENCHANTED ISLES. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,641. Pub. 4-7-70. Filed 10-3-69.
- 893,415. WISHING WELL. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,642. Pub. 4-7-70. Filed 10-3-69.
- 893,416. THE HEIGHTS. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,644. Pub. 4-7-70. Filed 10-3-69.
- 893,417. DEPARTURE. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,645. Pub. 4-7-70. Filed 10-3-69.
- 893,418. LEEWARD ISLES. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,646. Pub. 4-7-70. Filed 10-3-69.
- 893,419. SKI-VON. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,648. Pub. 4-7-70. Filed 10-3-69.
- 893,420. DEAR FRIENDS. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,649. Pub. 4-7-70. Filed 10-3-69.
- 893,421. ONE WORLD. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,650. Pub. 4-7-70. Filed 10-3-69.
- 893,422. THE PRACTICAL. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,651. Filed 4-7-70. Filed 10-3-69.
- 893,423. GARDEN PATCH. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,653. Pub. 4-7-70. Filed 10-3-69.

Class 52—Detergents and Soaps

- 893,095. (See Class 4 for this trademark.)
- 893,096. (See Class 4 for this trademark.)
- 893,413. (See Class 51 for this trademark.)
- 893,414. (See Class 51 for this trademark.)
- 893,415. (See Class 51 for this trademark.)
- 893,416. (See Class 51 for this trademark.)
- 893,417. (See Class 51 for this trademark.)
- 893,418. (See Class 51 for this trademark.)
- 893,419. (See Class 51 for this trademark.)
- 893,420. (See Class 51 for this trademark.)
- 893,421. (See Class 51 for this trademark.)
- 893,422. (See Class 51 for this trademark.)
- 893,423. (See Class 51 for this trademark.)
- 893,424. VARN AND DESIGN. Varn Products Company, Inc. SN 287,973. Pub. 4-7-70. Filed 1-2-68.
- 893,425. THUNDERSUDS. H. Kohnstamm & Co., Inc. SN 321,508. Pub. 4-7-70. Filed 3-12-69.
- 893,426. ZIP. National Service Industries, Inc., d.b.a. Zep Manufacturing Company. SN 322,898. Pub. 4-7-70. Filed 3-26-69.
- 893,427. ROD & ROAD. The Drackett Company. SN 326,754. Pub. 4-7-70. Filed 5-8-69.
- 893,428. TRACK. The Drackett Company. SN 326,755. Pub. 4-7-70. Filed 5-8-69.
- 893,429. NURSERY GUARD. Lanewood Laboratories, Inc. SN 327,154. Pub. 4-7-70. Filed 5-13-69.
- 893,430. JOHAR AND DESIGN. Johar Enterprises, Inc. SN 331,887. Pub. 4-7-70. Filed 6-30-69.

- 893,481. B-15. Bestline Products Inc. SN 334,296. Pub. 4-7-70. Filed 8-4-69.
- 893,482. SWIM. Calgon Corporation. SN 337,775. Pub. 4-7-70. Filed 9-12-69.
- 893,483. POLYBRAD. Texas Pharmacal Company. SN 340,746. Pub. 4-7-70. Filed 10-15-69.
- 893,484. SAFETY PLUS. Knomark Inc. SN 343,470. Pub. 4-7-70. Filed 11-14-69.

Service Marks

Class 100—Miscellaneous

- 893,260. (See Class 26 for this trademark.)
- 893,374. (See Class 46 for this trademark.)
- 893,391. (See Class 46 for this trademark.)
- 893,435. HUDSON PRESCRIPTION SERVICES AND DESIGN. Hudson National, Inc. MULTIPLE CLASS (Classes 100 and 103). SN 268,117. Pub. 4-7-70. Filed 4-3-67.
- 893,436. CER. Cer Geonuclear Corporation. SN 293,353. Pub. 4-7-70. Filed 3-15-68.
- 893,437. ALL-PRO CHICKEN. All-Pro Chicken, Inc. SN 299,190. Pub. 4-7-70. Filed 5-28-68.
- 893,438. BAMBINO'S. Bambino's Incorporated. SN 310,817. Pub. 4-7-70. Filed 10-30-68.
- 893,439. THE PIZZA PEOPLE. Bambino's Incorporated. SN 310,818. Pub. 4-7-70. Filed 10-30-68.
- 893,440. M. McDonald's Corporation. SN 312,480. Pub. 4-7-70. Filed 11-18-68.
- 893,441. CAPTAIN JIM'S SEAFOOD GALLEY AND DESIGN. Buffalo Bill's Wild West, Inc. and Kulan Enterprises, Inc. (joint owners). SN 314,932. Pub. 4-7-70. Filed 12-20-68.
- 893,442. DIP'N SIP. Dip'n Sip Donuts of America, Inc. SN 315,476. Pub. 4-7-70. Filed 12-31-68.
- 893,443. A WALK FOR DEVELOPMENT. American Freedom From Hunger Foundation, Inc. SN 316,172. Pub. 4-7-70. Filed 1-9-69.
- 893,444. PARADISE GARDENS. The Paradise Gardens Apartments. SN 317,868. Pub. 4-7-70. Filed 1-20-69.
- 893,445. THE LIFE CYCLE CENTER AND DESIGN. Kimberly-Clark Corporation. SN 319,059. Pub. 4-7-70. Filed 2-13-69.
- 893,446. LES 3 LIMOUSINS AND 3 BULLS DESIGN. Les Trois Limousins. SN 320,064. Pub. 4-7-70. Filed 2-25-69.
- 893,447. HEREFORD BARN STEAK HOUSE AND DESIGN. Hereford Barn, Inc. SN 324,195. Pub. 4-7-70. Filed 4-10-69.
- 893,448. CARDINAL. Cardinal Vending Company. SN 324,402. Pub. 4-7-70. Filed 4-14-69.
- 893,449. MISCELLANEOUS DESIGN. Cardinal Vending Company. SN 324,403. Pub. 4-7-70. Filed 4-14-69.
- 893,450. TRINI'S AND DESIGN. Trini's Restaurants, Inc. SN 324,946. Pub. 4-7-70. Filed 4-18-69.
- 893,451. MAX'S KANSAS CITY ETC. Max's Kansas City, Inc. SN 325,121. Pub. 4-7-70. Filed 4-21-69.
- 893,452. MISCELLANEOUS DESIGN. Continental Oil Company. SN 325,467. Pub. 4-7-70. Filed 4-24-69.
- 893,453. MSC AND DESIGN. The Marine Square Club, Inc. SN 328,712. Pub. 4-7-70. Filed 5-29-69.
- 893,454. LONGCHAMPS. Longchamps, Inc. MULTIPLE CLASS (Classes 100 and 101). SN 330,881. Pub. 4-7-70. Filed 6-25-69.
- 893,455. PONTE VEDRA CLUB AND DESIGN. Ponte Vedra Corporation, d.b.a. Ponte Vedra Club. MULTIPLE CLASS (Classes 100 and 107). SN 330,991. Pub. 4-7-70. Filed 6-26-69.

- 893,456. RED DOOR. Elizabeth Arden Sales Corporation, d.b.a. Elizabeth Arden. SN 334,823. Pub. 4-7-70. Filed 8-8-69.
- 893,457. T TIMME PLAZA AND DESIGN. Timme Motor Inn Corporation. SN 336,528. Pub. 4-7-70. Filed 8-28-69.
- 893,458. THE GUV'NOR. Orasp Restaurant Corporation. SN 341,591. Pub. 4-7-70. Filed 10-24-69.

Class 101—Advertising and Business

- 893,195. (See Class 21 for this trademark.)
- 893,402. (See Class 50 for this trademark.)
- 893,454. (See Class 100 for this trademark.)
- 893,459. STARCH. Daniel Starch & Staff, Inc. SN 308,238. Pub. 4-7-70. Filed 9-25-68.
- 893,460. SIRS ETC. AND DESIGN. Industrial Relations Counselors Service, Inc. SN 318,107. Pub. 4-7-70. Filed 11-26-68.
- 893,461. ACTION ACCOUNTING. S. Bosworth & Associates. SN 316,598. Pub. 4-7-70. Filed 1-15-69.
- 893,462. PEOPLE UNLIMITED. Ann G. Collier. SN 316,771. Pub. 4-7-70. Filed 1-16-69.
- 893,463. HARTS AND HEART DESIGN. Harts Stores, Inc. SN 319,598. Pub. 4-7-70. Filed 2-19-69.
- 893,464. THE TREASURY. J. C. Penney Company, Inc. SN 323,839. Pub. 4-7-70. Filed 4-7-69.
- 893,465. D AND DESIGN. Del Amo Enterprises, Inc. MULTIPLE CLASS (Classes 101 and 108). SN 325,178. Pub. 4-7-70. Filed 4-22-69.
- 893,466. PGP. Prince Georges Properties, Inc. SN 325,391. Pub. 4-7-70. Filed 4-23-69.
- 893,467. GPI. General Personnel, Inc. SN 333,629. Pub. 4-7-70. Filed 7-28-69.

Class 102—Insurance and Financial

- 893,468. NAB NATIONAL ADJUSTMENT BUREAU AND DESIGN. National Adjustment Bureau, Inc. SN 288,224. Pub. 4-7-70. Filed 1-5-68.
- 893,469. INSURAFUND. Commercial State Corporation, assignee of Commercial State Life Insurance Company. SN 310,068. Pub. 4-7-70. Filed 10-21-68.
- 893,470. H AND DESIGN. Heritage Savings and Loan Association. SN 323,706. Pub. 4-7-70. Filed 4-4-69.
- 893,471. GA GOLDEN AGE CHECKING CLUB AND DESIGN. First Palmetto Bank. SN 324,712. Pub. 4-7-70. Filed 4-16-69.
- 893,472. GU AND DESIGN. General United Group, Incorporated. SN 325,742. Pub. 4-7-70. Filed 4-28-69.
- 893,473. CONTINENTAL ACCOUNT SERVICING HOUSE, INC.—CASH ETC. AND DESIGN. Continental Account Servicing House, Inc. SN 326,517. Pub. 4-7-70. Filed 5-6-69.
- 893,474. YACP. Cohen-Hatfield Industries, Inc. SN 340,879. Pub. 4-7-70. Filed 10-16-69.
- 893,475. A. J. GROESBECK ASSOCIATES, INC. A. J. Groesbeck Associates, Inc. SN 340,987. Pub. 4-7-70. Filed 10-17-69.
- 893,476. FLEX-ELECT. The College Life Insurance Company of America. SN 341,487. Pub. 4-7-70. Filed 10-28-69.
- 893,477. APL AMERICAN PIONEER LIFE AND DESIGN. American Pioneer Life Insurance Company. SN 343,622. Pub. 4-7-70. Filed 11-17-69.
- 893,478. APL (DESIGN). American Pioneer Life Insurance Company. SN 343,623. Pub. 4-7-70. Filed 11-17-69.

- 893,479. PROTECTION IN DEPTH. Liberty Mutual Insurance Company. SN 344,059. Pub. 4-7-70. Filed 11-20-69.
- 893,480. S A V - K I N G. Hagerstown Trust Company. SN 344,287. Pub. 4-7-70. Filed 11-24-69.

Class 103—Construction and Repair

- 893,435. (See Class 100 for this trademark.)
- 893,465. (See Class 101 for this trademark.)
- 893,481. CONTINUOUS SPOUTING ETC. AND DESIGN. Continuous Spouting Co., Inc. SN 291,591. Pub. 4-7-70. Filed 2-21-68.
- 893,482. TECO. Toledo Engineering Co., Inc. SN 310,506. Pub. 4-7-70. Filed 10-24-68.
- 893,483. TEIS MYRA, INC. TENNIS IS MY RACKET. Teis Myra, Inc. MULTIPLE CLASS (Classes 103 and 107). SN 319,663. Pub. 4-7-70. Filed 2-20-69.
- 893,484. TECH-TURF INC. AND TREES AND OVAL DESIGN. Tech-Turf, Incorporated. SN 335,152. Pub. 4-7-70. Filed 8-12-69.
- 893,485. PORT-A-LUBE. Portable Lubrication, Inc. SN 341,595. Pub. 4-7-70. Filed 10-24-69.
- 893,486. INTERNATIONAL. International Harvester Company. SN 344,188. Pub. 4-7-70. Filed 11-21-69.
- 893,487. TVI AND GLOBE DESIGN. Traveler's Valet, Inc. SN 344,910. Pub. 4-7-70. Filed 11-28-69.

Class 105—Transportation and Storage

- 893,488. HOOKERS OF THE GOLDEN WEST. Hookers of the Golden West, Inc. SN 332,415. Pub. 3-24-70. Filed 7-14-69.

Class 106—Material Treatment

- 893,489. BENTONIZE. Bentonize Inc. SN 297,822. Pub. 4-7-70. Filed 5-10-68.

Class 107—Education and Entertainment

- 893,455. (See Class 100 for this trademark.)
- 893,483. (See Class 103 for this trademark.)
- 893,490. ELECTRIC CIRCUS. The Electric Circus Company, Ltd., assignee of Electric Circus of New York, Inc. SN 291,849. Pub. 4-7-70. Filed 2-26-68.
- 893,491. MARY MOPPET'S. Mary Moppet's Day Care Schools, Inc. SN 323,463. Pub. 4-7-70. Filed 4-2-69.
- 893,492. NCI NATIONAL COMPUTER INSTITUTE. Information Industries, Inc. SN 325,756. Pub. 4-7-70. Filed 4-28-69.
- 893,493. POTOMAC HORSE CENTER. Potomac Horse Center, Inc. SN 334,282. Pub. 4-7-70. Filed 8-4-69.

Collective Membership Mark

Class 200

- 893,494. THE ARABIC CLUB AC AND DESIGN. The Arabic Club. SN 329,824. Pub. 4-7-70. Filed 6-12-69.

TRADEMARK REGISTRATIONS RENEWED

34,067. CREAM OF WHEAT AND DESIGN. Cl. 46 (Int. Cl. 30). 1-23-1900.	524,805. DARTFORD BOND. Cl. 37 (Int. Cl. 16). 5-2-50.
34,738. SAXIN. Cl. 18 (Int. Cl. 5). 6-5-1900.	524,930. WESTON'S MACHINE POSTING-LEDGER. Cl. 37 (Int. Cl. 16). 5-9-50.
77,436. B.V.D. ETC. AND DESIGN. Cl. 39 (Int. Cl. 25). 4-12-10.	525,022. SPALDING. Cl. 22 (Int. Cl. 28). 5-9-50.
77,495. REPRESENTATION OF HOUSE. Cl. 46 (Int. Cl. 30). 4-12-10.	525,065. BRAKE-MASTER. Cl. 35 (Int. Cl. 12). 5-9-50.
77,640. BRAG. Cl. 52 (Int. Cl. 3). 4-26-10.	525,092. CRAFTSMAN. Cl. 35 (Int. Cls. 7 and 17). 5-9-50.
78,954. AUK. Cl. 46 (Int. Cl. 29). 7-26-10.	525,163. AUTOSHIELD. Cl. 16 (Int. Cl. 2). 5-9-50.
79,007. TEXOMA. Cl. 23 (Int. Cl. 8). 7-26-10.	525,231. JOHNSON WORK HORSE AND DESIGN. Cl. 23 (Int. Cl. 7). 5-16-50.
79,547. EPICURE. Cl. 46 (Int. Cl. 30). 9-20-10.	525,392. DUVERNOY. Cl. 46 (Int. Cl. 30). 5-23-50.
79,631. DIAMOND EDGE. Cl. 23 (Int. Cls. 7 and 8). 9-20-10.	525,644. EGG-EM-ON AND DESIGN. Cl. 46 (Int. Cl. 31). 5-30-50.
265,883. COLORIT. Cl. 37 (Int. Cl. 16). 1-7-30.	525,865. LESLIE. Cl. 46 (Int. Cl. 30). 6-6-50.
265,892. LAKE SHORE. Cl. 37 (Int. Cl. 16). 1-7-30.	525,872. CHOC-NICKEL. Cl. 46 (Int. Cl. 30). 6-6-50.
266,095. MARXIT. Cl. 37 (Int. Cl. 16). 1-14-30.	525,953. LAST-BILT. Cl. 22 (Int. Cl. 28). 6-6-50.
269,028. MILTEX. Cl. 52 (Int. Cl. 3). 3-25-30.	526,149. GILSPAR. Cl. 16 (Int. Cl. 2). 6-6-50.
269,401. DISH O'GOLD. Cl. 46 (Int. Cl. 29). 4-8-30.	526,250. WORLD CONSTRUCTION AND DESIGN. Cl. 38 (Int. Cl. 16). 6-13-50.
271,811. THOR AND DESIGN. Cl. 21 (Int. Cl. 9). 6-17-30.	526,388. MR. JOHN. Cl. 3 (Int. Cl. 18). 6-13-50.
271,275. ALPHA ETC. AND DESIGN. Cl. 2 (Int. Cl. 6). 5-27-30.	526,389. MR. JOHN. Cl. 41 (Int. Cl. 18). 6-13-50.
272,537. PERFIT AND DESIGN. Cl. 33 (Int. Cl. 14). 7-8-30.	526,403. NYLATINT. Cl. 106 (Int. Cl. 40). 6-13-50.
272,627. BROOKFORD JUNIORS. Cl. 39 (Int. Cl. 25). 7-8-30.	526,513. FULLER AND DESIGN. Cl. 13 (Int. Cl. 21). 6-20-50.
273,263. MAYFLOWER. Cl. 46 (Int. Cl. 29). 7-29-30.	526,920. RED PRIDE. Cl. 46 (Int. Cl. 29). 6-27-50.
273,401. CARBOLOY. Cl. 38 (Int. Cl. 16). 8-5-30.	526,921. SILVER PRIDE. Cl. 46 (Int. Cl. 29). 6-27-50.
274,052. MERODICEIN. Cl. 18 (Int. Cl. 5). 8-19-30.	527,096. MAGNETIC CLEANER. Cl. 29 (Int. Cl. 21). 7-4-50.
274,264. COLONIAL FRUIT CAKE. Cl. 46 (Int. Cl. 30). 8-26-30.	527,098. FULLER. Cl. 29 (Int. Cl. 21). 7-4-50.
274,445. COLDSPOT. Cl. 31 (Int. Cl. 11). 8-26-30.	527,467. HANSEN ETC. AND DESIGN. Cl. 23 (Int. Cl. 8). 7-11-50.
274,730. APPRETOLE. Cl. 6 (Int. Cl. 1). 9-2-30.	527,743. BIRO. Cl. 23 (Int. Cl. 7). 7-18-50.
274,839. LAMOLE. Cl. 52 (Int. Cl. 3). 9-9-30.	527,839. PROLASE. Cl. 18 (Int. Cl. 1). 7-18-50.
274,840. KIEROLE. Cl. 6 (Int. Cl. 1). 9-9-30.	527,860. RECTALYT. Cl. 18 (Int. Cl. 5). 7-18-50.
443,747. AQUA MATIC. Cl. 31 (Int. Cl. 11). 2-7-50.	528,005. ORCHEM. Cl. 23 (Int. Cl. 7). 7-25-50.
443,819. MAGNAVOX. Cl. 21 (Int. Cl. 9). 3-7-50.	528,012. GLEN-SPRAY. Cl. 39 (Int. Cl. 25). 7-25-50.
443,848. SAV-ALL. Cl. 13 (Int. Cl. 21). 3-21-50.	528,013. KASHMAY. Cl. 39 (Int. Cl. 25). 7-25-50.
443,861. 2 F. Cl. 21 (Int. Cl. 9). 3-28-50.	528,016. MARBLEHEAD. Cl. 46 (Int. Cl. 31). 7-25-50.
443,970. OPW. Cl. 13 (Int. Cl. 7). 5-9-50.	528,189. IRON FACE. Cl. 39 (Int. Cl. 25). 8-1-50.
444,012. JACKSON FURNITURE CO. Cl. 32 (Int. Cl. 20). 5-30-50.	528,221. STARK TREES. Cl. 1 (Int. Cl. 31). 8-1-50.
444,041. WEATHER WINKY AND DESIGN. Cl. 39 (Int. Cl. 21). 6-20-50.	528,672. REGAL. Cl. 13 (Int. Cl. 21). 8-8-50.
516,867. FORMOST. Cl. 37 (Int. Cl. 16). 10-25-49.	528,782. LABEL DESIGN. Cl. 17 (Int. Cl. 34). 8-8-50.
519,620. SHAKE-AWAY. Cl. 29 (Int. Cl. 21). 1-10-50.	528,990. FULLER AND DESIGN. Cl. 51 (Int. Cls. 3 and 5). 8-15-50.
519,987. LAMB. Cl. 46 (Int. Cl. 31). 1-17-50.	529,218. STA RITE. Cl. 40 (Int. Cl. 26). 8-15-50.
519,989. CLEVELAND. Cl. 23 (Int. Cl. 7). 1-17-50.	529,306. ASTOR. Cl. 46 (Int. Cl. 30). 8-22-50.
520,139. JENNEY. Cl. 15 (Int. Cl. 4). 1-24-50.	529,500. AMPLI-VERSAL. Cl. 23 (Int. Cl. 6). 8-22-50.
521,461. RAYTHEON AND DESIGN. Cl. 21 (Int. Cl. 9). 2-28-50.	529,570. DEXAMYL. Cl. 18 (Int. Cl. 5). 8-22-50.
521,807. SLENDERIZER. Cl. 39 (Int. Cl. 25). 3-7-50.	529,571. NUCLON. Cl. 18 (Int. Cl. 5). 8-22-50.
523,120. LUCOFLEX. Cl. 1 (Int. Cls. 1 and 17). 8-28-50.	529,664. TRU-LINE. Cl. 23 (Int. Cl. 7). 8-29-50.
523,208. UNION SPECIAL. Cl. 21 (Int. Cls. 7 and 9). 3-28-50.	529,974. VASOXYL. Cl. 18 (Int. Cl. 5). 8-29-50.
523,289. PET-PRO. Cl. 46 (Int. Cl. 5). 4-4-50.	530,089. GILMAN. Cl. 16 (Int. Cl. 2). 9-5-50.
523,314. MINLYS. Cl. 51 (Int. Cl. 3). 4-4-50.	530,175. PUFF BALL. Cl. 46 (Int. Cl. 30). 9-5-50.
523,416. EKCOLINE. Cl. 23 (Int. Cls. 8 and 21). 4-4-50.	530,303. INFERNO. Cl. 35 (Int. Cl. 17). 9-5-50.
523,463. WOLMAN. Cl. 6 (Int. Cl. 1). 4-4-50.	530,325. SPARKL-TEX. Cl. 50 (Int. Cl. 28). 9-5-50.
523,504. SILA-FLEX. Cl. 22 (Int. Cl. 28). 4-4-50.	530,368. WHITE SWAN. Cl. 39 (Int. Cl. 25). 9-5-50.
523,547. THE TRI-CHANGER. Cl. 39 (Int. Cl. 25). 4-4-50.	530,426. ORANGE GOLD. Cl. 46 (Int. Cl. 31). 9-5-50.
523,695. STREAM LINE TOOLS DROP FORGED. Cl. 23 (Int. Cl. 8). 4-11-50.	530,440. THERE'LL ALWAYS BE AN ENGLAND. Cl. 38 (Int. Cl. 16). 9-5-50.
523,795. TT. Cl. 13 (Int. Cl. 6). 4-11-50.	530,471. YOUNGSTOWN. Cl. 21 (Int. Cl. 9). 9-12-50.
523,845. BARBISIO. Cl. 39 (Int. Cl. 25). 4-11-50.	530,476. L. L. BROWN'S LINEN. Cl. 37 (Int. Cl. 16). 9-12-50.
523,852. COMFY CORD. Cl. 42 (Int. Cl. 24). 4-11-50.	530,506. KOPI-SPOT. Cl. 37 (Int. Cl. 16). 9-12-50.
523,952. TACO. Cl. 26 (Int. Cl. 9). 4-11-50.	530,516. RACE BILT. Cl. 23 (Int. Cl. 7). 9-12-50.
523,995. NANTUA. Cl. 42 (Int. Cl. 24). 4-11-50.	530,577. FAULTLESS. Cl. 37 (Int. Cl. 16). 9-12-50.
523,998. GARONNE. Cl. 42 (Int. Cl. 24). 4-11-50.	530,705. PLANET. Cl. 11 (Int. Cl. 16). 9-12-50.
524,145. ASHLAND OLD. GOLD. Cl. 15 (Int. Cl. 4). 4-18-50.	530,706. SPECIAL OCCASION. Cl. 11 (Int. Cl. 16). 9-12-50.
524,211. TANNETTE. Cl. 44 (Int. Cl. 10). 4-18-50.	530,707. BUCCANEER. Cl. 11 (Int. Cl. 16). 9-12-50.
524,254. MIDWESTERN HAYRIDE. Cl. 104 (Int. Cl. 38). 4-18-50.	530,708. STYLEWRITER. Cl. 11 (Int. Cl. 16). 9-12-50.
524,712. FLEXSTEEL AND DESIGN. Cl. 32 (Int. Cl. 20). 5-2-50.	530,801. WINE GROWERS GUILD. Cl. 47 (Int. Cl. 33). 9-19-50.
	531,016. SHERIFF. Cl. 39 (Int. Cl. 25). 9-19-50.
	531,038. GUILDSMAN AND DESIGN. Cl. 49 (Int. Cl. 33). 9-19-50.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

738,753. LUNCHEON RINGS. Cl. 46. 10-2-62.

Section 8

118,159. DREADNAUGHT AND DESIGN. Cl. 9. 8-21-17.
181,971. PARACORD. Cl. 39. 4-1-24.
404,866. MANLEIGH. Cl. 40. 12-28-43.
407,884. WESTON PAPER AND DESIGN. Cl. 37. 7-4-44.

The following registrations issued May 5, 1964

768,920. R/BACK. Cl. 1.
768,921. R/PLATE. Cl. 1.
768,924. ZANTREL 700. Cl. 1.
768,932. ANGEL. Cl. 1.
768,937. SNAPWRAP. Cl. 2.
768,938. DESIGN OF STYLIZED A. Cl. 2.
768,939. HUSKI PAK AND DESIGN. Cl. 2.
768,941. PLANT LIFE PRESERVER AND DESIGN. Cl. 2.
768,942. WHIRLAWAY. Cl. 2.
768,946. TOTA CASE. Cl. 3.
768,949. KIP. Cl. 4.
768,952. 20 MULE TEAM. Cl. 4.
768,953. U.S. BORAX. Cl. 4.
768,954. AB AND DESIGN. Cl. 5.
768,957. CHEXALL. Cl. 6.
768,975. FANCIFUL DESIGN. Cl. 6.
768,976. PARKER RUST PROOF ETC. AND DESIGN. Cls. 6 and 52.
768,979. DEYTRON. Cl. 6.
768,994. ZINC-GRO. Cl. 6.
768,996. DOODLE DICE. Cl. 8.
769,008. TRUSSPAN. Cl. 12.
769,113. LIONEL. Cl. 22.
769,014. E-Z LIVING HOMES. Cl. 12.
769,015. STRUCSUREMATIC. Cl. 12.
769,021. CHEM-CO ETC. AND DESIGN. Cl. 12.
769,024. PLAN-O-LITE. Cl. 12.
769,025. CHUBBAR. Cl. 12.
769,035. JKI AND DESIGN. Cl. 13.
769,048. 20 MULE TEAM. Cl. 16.
769,049. U.S. BORAX. Cl. 16.
769,050. ANTON JUSTMAN'S AND DESIGN. Cl. 17.
769,052. OSFULVIN. Cl. 18.
769,057. DEPO-MEDROCAINE. Cl. 18.
769,062. DECLINAX. Cl. 18.
769,070. CAFEDRINE 'B'. Cl. 18.
769,074. TEMPALAC. Cl. 18.
769,075. FERROTEMP. Cl. 18.
769,079. NOVI. Cl. 19.
769,081. VANAWAVE. Cls. 20 and 37.
769,085. GLAMOR-LITE. Cl. 12.
769,086. DESIGN OF A MAN'S HEAD WITHIN A CIRCLE. Cls. 21, 26, 29, and 44.
769,087. ECCLEVOX. Cl. 21.
769,093. ROYAL DIMENSION. Cl. 21.
769,094. EARLY-ELECTRIC. Cl. 21.
769,097. AKANE ETC. AND DESIGN. Cl. 22.
769,098. SKIX. Cl. 22.
769,100. FUN FRAME. Cl. 22.
769,101. ISOMYTE. Cl. 22.
769,107. K AND DESIGN. Cl. 22.
769,109. DRALLOS. Cl. 22.
769,110. JEWELIE. Cl. 22.
769,111. DURANODIC. Cl. 22.
769,114. DUPONT AND DESIGN. Cl. 22.
769,115. MARTIANS-GO HOME! Cl. 22.
769,117. BEAUTY QUEEN. Cl. 22.
769,118. LAUNDRA-MAGIC. Cl. 22.

769,119. SQUAWKER. Cl. 22.
769,123. PRECISION-GRIP. Cl. 23.
769,125. BIG BLANKET. Cl. 23.
769,129. MARTINETT AND DESIGN. Cl. 23.
769,134. GALAXIE. Cl. 23.
769,144. HORSESHOE AND NAIL (DESIGN). Cl. 28.
769,145. V. BAHNER. Cl. 28.
769,150. HV1. Cl. 28.
769,151. PAVANNE. Cl. 29.
769,172. DESIGN OF STYLIZED A. Cl. 33.
769,174. THERMOCO AND DESIGN. Cl. 34.
769,179. DUO-FIDELITY. Cl. 36.
769,180. GOLDCRAFT. Cl. 37.
769,181. IRS INDIVIDUAL RECORD SYSTEMS AND DESIGN. Cl. 37.
769,184. VG AND DESIGN. Cl. 37.
769,188. PALAESTRUM NEWS. Cl. 38.
769,189. AMERICAN CHERLEADERS ASSOCIATION AND EMBLEM DESIGN. Cl. 38.
769,191. PICTURE-LAND STUDIOS ETC. AND DESIGN. Cl. 38.
769,192. SWIMMERS READY. Cl. 38.
769,193. ANGEL GRAM. Cl. 38.
769,197. THE AMERICAN ECONOMIST A JOURNAL OF PERSONAL ECONOMICS AND DESIGN. Cl. 38.
769,199. METRICARD. Cl. 38.
769,200. SELFSOUND. Cl. 38.
769,202. FUSION POINT. Cl. 38.
769,203. BEST'S ETC. AND DESIGN. Cl. 38.
769,204. M.F.D. Cl. 38.
769,206. CANTERBURY ART. Cl. 38.
769,215. G5 AND DESIGN. Cl. 39.
769,218. LIL BUR WRAPPIT. Cl. 42.
769,227. BOUFFANT. Cl. 43.
769,229. INTERDENT. Cl. 44.
769,230. WHIRL-A-DENT. Cl. 44.
769,234. ROLL-AID. Cl. 44.
769,242. LPS AND DESIGN. Cl. 46.
769,246. NATORS. Cl. 46.
769,249. SHELTEX. Cl. 46.
769,258. GOLD LABEL. Cl. 46.
769,261. DELICIA. Cl. 46.
769,266. LA MAREE. Cl. 47.
769,268. GRANDTULLY. Cl. 49.
769,271. CALFETERIA. Cl. 50.
769,273. ROYAL VIENNA AUGARTEN. Cl. 50.
769,277. BEAUTY PAGEANT. Cl. 51.
769,283. PAVANNE. Cl. 51.
769,286. VITAL. Cl. 51.
769,291. WHIRL-A-DENT. Cl. 51.
769,293. DELETE. Cl. 52.
769,299. FAST PICK UP SPEEDY DELIVERY AND DESIGN. Cl. 101.
769,301. L LOBLAWS AND DESIGN. Cl. 101.
769,302. BUDGET INSURANCE CENTER. Cl. 102.
769,303. BIC. Cl. 102.
769,306. FANCIFUL HEAD OF A HUMAN. Cl. 103.
769,308. BALLOON BRACING. Cl. 105.
769,309. 100 AMERICANS AND DESIGN. Cl. 105.
769,312. ALERT AND DESIGN. Cl. 107.
769,313. CINNAMON CINDER. Cl. 107.
769,318. CAR CARRY CANTEN. Cl. 2.
769,320. SUPER TILT AND DESIGN. Cl. 13.
769,323. GLASBEADS. Cl. 33.

Section 18

309,916. OCTIN. Cl. 18. 2-6-34.
773,994. LEVEL-AIRE. Cl. 19. 7-28-64.
783,206. GAS PAC. Cl. 34. 1-12-65.
832,170. SLUDGE-MASTER. Cl. 23. 7-18-67.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

93,644. ROWNTREE. Cl. 46. 10-7-13. Rowntree and Company, Limited. Rowntree Mackintosh Limited, York, England. Amended: In the certificate, line 5, after "ed", line 19, in the heading, signature and in the statement, column 1, line 2, after "Limited" now owned by Rowntree Mackintosh Limited, of York Y01 IXY, England is inserted.

268,132. REPRESENTATION OF PORTRAIT OF AN OLD MAN AND DESIGN. Cl. 49. 3-11-30. A. Overholt & Company. National Distillers and Chemical Corporation, New York, N.Y. Amended to appear:



285,606. DOW AND DESIGN. Cl. 52. 7-28-31. The Dow Chemical Company, Midland, Mich. Amended to appear:



293,057. DOW AND DESIGN. Cl. 12. 4-5-32. The Dow Chemical Company, Midland, Mich. Amended to appear:



384,459. BLACK MAGIC. Cl. 46. 1-21-41. Rowntree & Company, Limited. Rowntree Mackintosh Limited, York, England. Amended: In the certificate, lines 3 and 17, in the heading, signature and in the statement, column 1, line 1, after "Limited", now owned by Rowntree Mackintosh Limited, of York Y01 IXY, England is inserted.

384,465. BLACK MAGIC AND DESIGN. Cl. 46. 1-21-41. Rowntree & Company, Limited. Rowntree Mackintosh Limited, York, England. Amended: In the certificate, lines 3 and 17, in the heading, signature and in the statement, column 1, line 1, after "Limited", now owned by Rowntree Mackintosh Limited, of York, Y01 IXY is inserted.

406,610. MIDNIGHT 'TIL DAWN CREATED BY ESTELLE POET. Cl. 51. 4-11-44. Estelle Poet Bryant, doing business as Estelle Bryant. Tussy Cosmetics, Inc., New York, N.Y. Amended: In the statement, column 1, lines 8 and 9, "no claim being made to the words 'created by Estelle Poet' apart from the mark shown" is deleted, and the drawing is amended to appear:

Midnight
'TIL DAWN

TM 214

508,071. FELIX. Cl. 46. 3-29-49. Doyle Packing Company. Doric Corporation, Oklahoma City, Okla. Amended to appear:

FELIX

511,515. SPRINGTITE. Cl. 13. 6-21-49. Eaton Manufacturing Company. Eaton Yale & Towne Inc., Cleveland, Ohio. Amended to appear:

SPRINGTITE

524,266. MERIT. Cl. 15. 4-18-50. Cato Oil and Grease Company, Inc. Cato Oil and Grease Co., Oklahoma City, Okla. Corrected: In the statement, column 1, line 1, "Company, Inc." should be deleted and Co. should be inserted.

526,366. SCHIFFS. Cl. 39. 6-13-50. Shoe Corporation of America. SGOA Industries, Inc., Columbus, Ohio. Amended to appear:

SCHIFF

615,094. MARY CARTER'S. Cl. 16. 11-1-55. Robert Van Worp, doing business as The Linseed White Co. Mary Carter Industries, Inc., Tampa, Fla. Amended to appear:

Mary
Carter's

691,531. TENZ-NUTS. Cl. 13. 1-19-60. Eaton Manufacturing Company. Eaton Yale & Towne Inc., Cleveland, Ohio. Amended to appear:

TENZ-NUT

699,609. FLEXTRAN. Cl. 13. 5-20-69. Johns-Manville Corporation, New York, N.Y. Corrected: In the statement, column 2, line 1, "water" should be deleted and mortar should be inserted.

886,161. FRANCISCAN TERRA GRANDE. Cl. 12. 2-17-70. Interpace Corporation, Los Angeles, Calif. Corrected: In the statement, column 1, line 1, "Interpace" should be deleted and Interpace should be inserted.

886,502. STYLIZED RHOMBUS DESIGN. Cl. 102. 2-17-70. The Sumitomo Bank, Ltd., Osaka, Japan. Corrected to appear:



886,571. SST. Cl. 3. 2-24-70. Samsonite Corporation, doing business as Shwayder Brothers, Inc., Denver, Colo. Corrected: In the statement, column 1, line 2, "Schwayder" should be deleted and Shwayder should be inserted.

INDEX OF REGISTRANTS

JUNE 23, 1970

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AMP Inc., Harrisburg, Pa. 529,500, ren. 6-23-70. Cl. 23.
Acme Boot Co., Inc., Clarksville, Tenn. 531,016, ren. 6-23-70. Cl. 39.
Adhesive Products Corp., Bronx, N.Y. 893,083. Cl. 1.
Advance Glove Mfg. Co., Detroit, Mich. 893,326, pub. 4-7-70. Cl. 39.
Air Reduction Co., Inc., New York, N.Y. 898,280, pub. 4-7-70. Cl. 34.
Alberts, Paul C., d.b.a. Alberts & Son, Newark, N.J. 769,144, can. Cl. 28.
Aldo Controls & Mfg. Inc., Crystal Lake, Ill. 893,227, pub. 4-7-70. Cl. 23.
Aljac Sportswear Ltd., Montreal, Quebec, Canada. 893,340, pub. 4-7-70. Cl. 39.
Allied Materials Corp., Oklahoma City, Okla. 525,163, ren. 6-23-70. Cl. 16.
Allied Old English, Inc., Newark, N.J. 893,880, pub. 4-7-70. Cl. 46.
Allison, David Co., Inc., Woodbury, N.Y. 893,143, pub. 4-7-70. Cl. 13.
All-Pro Chicken, Inc., Pittsburgh, Pa. 893,437, pub. 4-7-70. Cl. 100.
Alpha Tank & Sheet Metal Mfg. Co., St. Louis, Mo. 271,275, ren. 6-23-70. Cl. 2.
Alside, Inc., Akron, Ohio. 893,120, pub. 4-7-70. Cl. 12.
Aluminum Specialty Co., Manitowac, Wis. 893,136, pub. 4-7-70. Cl. 18.
American Brands Inc., New York, N.Y. 528,762, ren. 6-23-70. Cl. 17.
American Can Co., New York, N.Y. 768,938, can. Cl. 2.
American Can Co., New York, N.Y. 769,172, can. Cl. 33.
American Chain & Cable Co., Inc., New York, N.Y. 893,191, pub. 4-7-70. Cl. 21.
American Cyanamid Co., Wayne, N.J. 893,152, pub. 4-7-70. Cl. 18.
American Cyanamid Co., Wayne, N.J. 893,364, pub. 4-7-70. Cl. 44.
American Enka Corp., Enka, N.C. 768,924, can. Cl. 1.
American Flange & Mfg. Co., Inc., New York, N.Y. 893,401, pub. 4-7-70. Cl. 50.
American Freedom From Hunger Foundation, Inc., Washington, D.C. 893,443, pub. 4-7-70. Cl. 100.
American Home Products Corp., New York, N.Y. 443,848, ren. 6-23-70. Cl. 13.
American Home Products Corp., New York, N.Y. 523,416, ren. 6-23-70. Cl. 23.
American Home Products Corp., New York, N.Y. 527,860, ren. 6-23-70. Cl. 18.
American Perfekt Crystal Corp., New York, N.Y. 272,537, ren. 6-23-70. Cl. 33.
American Photocopy Equipment Co., Evanston, Ill. 893,177, pub. 4-7-70. Cl. 19.
American Pioneer Life Insurance Co., Orlando, Fla. 893,477-8, pub. 4-7-70. Cl. 102.
Ametek, Inc., East Moline, Ill. 893,250, pub. 4-7-70. Cl. 24.
Anderson Chemical Co., Litchfield, Minn. 893,095-6, pub. 4-7-70. Multiple Class (Classes 4 and 52).
Anocut Engineering Co., Elk Grove Village, Ill. 893,194, pub. 4-7-70. Cl. 21.
Apache Powder Co., Benson, Ariz. 893,116, pub. 4-7-70. Cl. 9.
Apple Annie's of Greta, Inc., Greta, La. 893,331, pub. 4-7-70. Cl. 39.
Aqua Matic, Inc., Rockford, Ill. 443,747, ren. 6-23-70. Cl. 31.
Arabic Club, The, Dayton, Ohio. 893,494, pub. 4-7-70. Cl. 200.
Aranar Marketing Services, Inc., Chicago, Ill. 893,310, pub. 4-7-70. Cl. 38.
Arden, Elisabeth Sales Corp., New York, N.Y. 893,456, pub. 4-7-70. Cl. 100.
Aresoptix Technology Corp., Plainview, N.Y. 893,188, pub. 4-7-70. Cl. 21.
Arnold Mfg. Co., Pengilly, Minn. 893,233, pub. 4-7-70. Cl. 23.
Ashland Oil & Refining Co., Ashland, Ky. 524,145, ren. 6-23-70. Cl. 15.
Astor Products, Inc., Jacksonville, Fla. 529,306, ren. 6-23-70. Cl. 46.
Atlas Underwear Corp., Piqua, Ohio. 893,838, pub. 4-7-70. Cl. 39.
Automated Building Components, Inc., Miami, Fla. 893,223, pub. 4-7-70. Cl. 23.
Automation Industries, Inc., Torrance, Calif. 768,957, can. Cl. 6.
Avco Broadcasting Corp., Cincinnati, Ohio. 524,254, ren. 6-23-70. Cl. 104.
Avery Products Corp., San Marino, Calif. 893,302, pub. 4-7-70. Cl. 37.
Avica Corp., Newport, R.I. 893,141, pub. 4-7-70. Cl. 13.
Avon Products, Inc., New York, N.Y. 893,403, pub. 4-7-70. Cl. 51.
Avon Products, Inc., New York, N.Y. 893,411, pub. 4-7-70. Cl. 51.
Avon Products, Inc., New York, N.Y. 893,414-23, pub. 4-7-70. Multiple Class (Classes 51 and 52).
B.V.D. Co., The, New York, N.Y. 77,486, ren. 6-23-70. Cl. 39.
Bahner, Volmer & Co. A/S, Copenhagen, Denmark. 769,145, can. Cl. 28.
Baker, J. T. Chemical Co., Phillipsburg, N.J. 893,101, pub. 4-7-70. Cl. 8.
Balax, Inc., North Lake, Wis. 893,243, pub. 4-7-70. Cl. 23.
Baldwin-Koch Corp., New York, N.Y. 769,197, ren. 6-23-70. Cl. 38.
Bambino's Inc., Beltsville, Md. 893,438-9, pub. 4-7-70. Cl. 100.
Barbilio & C. S.A., Sagliano Micca, Verdelli, Italy. 523,845, ren. 6-23-70. Cl. 39.
Baxter Laboratories, Inc., Morton Grove, Ill. 527,839, ren. 6-23-70. Cl. 18.
Beatrice Foods Co., d.b.a. Chocolate Co. of America, Chicago, Ill. 893,381, pub. 3-31-70. Cl. 46.
Beecham Inc., Clifton, N.J. 893,159-62, pub. 4-7-70. Cl. 18.
Beech-Nut, Inc., New York, N.Y. 893,377, pub. 4-7-70. Cl. 46.
Beich, Paul F., Co., Bloomington, Ill. 79,547, ren. 6-23-70. Cl. 46.
Be-Mac Enterprise, Inc., Kansas City, Mo. 769,277, can. Cl. 51.
Bentonize Inc., Minneapolis, Minn. 893,489, pub. 4-7-70. Cl. 105.
Best, Alfred M., Co., Inc., New York, N.Y. 769,203, can. Cl. 38.
Bestline Products Inc., San Jose, Calif. 893,431, pub. 4-7-70. Cl. 52.
Bilhuber, E., Inc., Jersey City, N.J. 309,910, can. Cl. 18.
Biro Mfg. Co., The, Marblehead, Ohio. 527,743, ren. 6-23-70. Cl. 23.
Black & Decker Mfg. Co., The, Towson, Md. 893,184, pub. 4-7-70. Cl. 21.
Bliss, Sidney M., d.b.a. Bliss Publishing Co., Eldon, Mo. 893,301, pub. 4-7-70. Cl. 37.
Borden, Inc., The, New York, N.Y. 523,289, ren. 6-23-70. Cl. 46.
Bosworth, S., & Associates, Plainview, N.Y. 893,401, pub. 4-7-70. Cl. 101.
Bradley, Milton, Co., Springfield, Mass. 893,399, pub. 4-7-70. Cl. 50.
Bremicker, Aug., Sohne Kommanditgesellschaft, Volmarstein (Ruhr), Germany. 893,251, pub. 4-7-70. Cl. 25.
Breuer Electric Mfg. Co., Chicago, Ill. 893,187, pub. 4-7-70. Multiple Class (Classes 21 and 23).
Brewer, E. F., Co., Butler, Wis. 769,234, can. Cl. 44.
Broan Mfg. Co., Inc., Hartford, Wis. 893,086, pub. 4-7-70. Cl. 2.
Br-Dart Industries, Newark, N.J. 893,314, pub. 4-7-70. Cl. 38.
Brosmann Pharmaceuticals, San Francisco, Calif. 893,151, pub. 4-7-70. Cl. 18.
Brown, L. L., Paper Co., Adams, Mass. 530,476, ren. 6-23-70. Cl. 37.
Browning Arms Co., Morgan, Utah. 523,504, ren. 6-23-70. Cl. 22.
Bryant-Poff, Inc., Coatesville, Ind. 893,237, pub. 4-7-70. Cl. 23.
Buffalo Bill's Wild West, Inc., and Knlan Enterprises, Inc., Los Angeles, Calif. 893,441, pub. 4-7-70. Cl. 100.
Buhr Machine Tool Corp., Ann Arbor, Mich. 893,248, pub. 4-7-70. Cl. 23.
Burner, Lily M., Minot, N. Dak. 769,218, can. Cl. 42.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 34,738, ren. 6-23-70. Cl. 18.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 529,974, ren. 6-23-70. Cl. 18.
CER Geonuclear Corp., Las Vegas, Nev. 893,430, pub. 4-7-70. Cl. 100.
CPC International Inc., from Corn Products Co., Englewood Cliffs, N.J. 893,094, pub. 4-7-70. Multiple Class (Classes 4, 6, and 46).
Caffco Imports, Inc., Montgomery, Ala. 893,402, pub. 4-7-70. Multiple Class (Classes 50 and 101).
Calgon Corp., Pittsburgh, Pa. 893,432, pub. 4-7-70. Cl. 52.
Canada Packers Ltd., Toronto, Ontario, Canada. 893,376, pub. 2-10-70. Cl. 46.
Candle-Lite, Inc., d.b.a. Candles 'N Such, Cincinnati, Ohio. 893,144, pub. 4-7-70. Cl. 15.
Capesio, Inc., New York, N.Y. 893,340, pub. 4-7-70. Cl. 39.
Cardinal Vending Co., Cleveland, Ohio. 893,234, pub. 4-7-70. Cl. 23.
Cardinal Vending Co., Cleveland, Ohio. 893,448-9, pub. 4-7-70. Cl. 100.
Cargill, Inc., Minneapolis, Minn. 768,975, can. Cl. 6.
Carter's Ink Co., The, Cambridge, Mass. 530,705-8, ren. 6-23-70. Cl. 11.
Castle & Cooke, Inc., Honolulu, Hawaii. 893,889, pub. 4-7-70. Cl. 46.
Century Products, Inc., Cleveland, Ohio. 893,276, pub. 4-7-70. Cl. 32.
Champion Pneumatic Machinery Co., Inc., Princeton, Ill. 893,222, pub. 4-7-70. Cl. 23.
Chemtron Corp., Chicago, Ill. 523,795, ren. 6-23-70. Cl. 13.
Chemtron Corp., Chicago, Ill. 893,214, pub. 4-7-70. Multiple Class (Classes 23 and 34).
Chemical Associates, Inc., Houston, Tex. 893,406, pub. 4-7-70. Cl. 51.
Chemical & Color Co. of America, Inc., Newark, N.J. 769,021, can. Cl. 12.

TM 1

Cheung, Michael Mang-Hoo, d.b.a. Hing Yu Metal Works, Kowloon, Hong Kong, 893,121, pub. 4-7-70. Cl. 12.
 Chubb-Mosler & Taylor, Safes Ltd., Brampton, Ontario, Canada 769,025, can. Cl. 12.
 Cinnamon Cider, Studio City, Calif. 769,313, can. Cl. 107.
 Clays Candy, Inc., South Bend, Ind. 530,175, ren. 6-23-70. Cl. 46.
 Claifol Inc., New York, N.Y. 893,363, pub. 4-7-70. Multiple Class (Classes 44 and 51).
 Clary Corp., San Gabriel, Calif. 893,235, pub. 4-7-70. Cl. 23.
 Cline, Lorraine, d.b.a. Denver Cattle Oiler Co., Denver, Colo. 769,125, can. Cl. 23.
 Coast Mfg. & Supply Co., Livermore, Calif. 118,159, can. Cl. 9.
 Cohen, Simon, Van Nuys, Calif. 893,355, pub. 4-7-70. Cl. 39.
 Cohen-Hatfield Industries, Inc., New York, N.Y. 893,474, pub. 4-7-70. Cl. 102.
 Colgate-Palmolive Co., New York, N.Y. 269,028, ren. 6-23-70. Cl. 52.
 College Life Insurance Co. of America, The, Indianapolis, Ind. 893,476, pub. 4-7-70. Cl. 102.
 Collier, Ann G., Reseda, Calif. 893,462, pub. 4-7-70. Cl. 101.
 Colorado Milling & Elevator Co., The, Denver, Colo. 893,369, pub. 3-8-70. Cl. 46.
 Columbia Belford Corp., Los Angeles, Calif. 769,024, can. Cl. 12.
 Columbia Belford Corp., Los Angeles, Calif. 769,085, can. Cl. 12.
 Commercial Electric Co., The, Toledo, Ohio. 893,334, pub. 4-7-70. Cl. 39.
 Commercial State Corp., from Commercial State Life Insurance Co., St. Louis, Mo. 893,469, pub. 4-7-70. Cl. 102.
 Commonwealth Hosiery Mills, Inc., Randleman, N.C. 893,353, pub. 4-7-70. Cl. 39.
 Congoleum Industries, Inc., Kearny, N.J. 893,178, pub. 4-7-70. Cl. 20.
 Consolidated Foods Corp., d.b.a. Popsicle Industries, Englewood, N.J. 525,872, ren. 6-23-70. Cl. 46.
 Consolidated Foods Corp., Chicago, Ill. 893,341, pub. 4-7-70. Cl. 39.
 Consumer Guild Foods, Inc., Toledo, Ohio. 893,372, pub. 4-7-70. Cl. 46.
 Container Corp. of America, Chicago, Ill. 893,300, pub. 4-7-70. Cl. 37.
 Continental Account Servicing House, Inc., Salt Lake City, Utah. 893,473, pub. 4-7-70. Cl. 102.
 Continental Casualty Co., Chicago, Ill. 769,302-3, can. Cl. 102.
 Continental Oil Co., Ponca City, Okla. 893,452, pub. 4-7-70. Cl. 100.
 Continuous Spouting Co., Inc., Cincinnati, Ohio. 893,481, pub. 4-7-70. Cl. 103.
 Corn Products Inc.: See—
 CPC International Inc.
 Country Store Sweet Shoppe, Inc., Minneapolis, Minn. 893,374, pub. 4-7-70. Multiple Class (Classes 46 and 100).
 Crompton Co., New York, N.Y. 523,852, ren. 6-23-70. Cl. 42.
 Crompton Co., New York, N.Y. 523,995, ren. 6-23-70. Cl. 42.
 Crompton Co., New York, N.Y. 523,998, ren. 6-23-70. Cl. 42.
 Cummings Plastic Co., Aurora, Ill. 893,183, pub. 4-7-70. Multiple Class (Classes 13, 21, and 23).
 Curlator Corp., East Rochester, N.Y. 893,084, pub. 4-7-70. Multiple Class (Classes 1 and 23).
 Cyprus Mines Corp., d.b.a. Rome Cable Division, Rome, N.Y. 893,192, pub. 4-7-70. Cl. 21.
 DMS, Inc., Greenwich, Conn. 893,316, pub. 4-7-70. Cl. 38.
 Daily Juice Products, Inc., Oakmont, Pa. 893,365, pub. 4-7-70. Cl. 45.
 Dana, C. H., Co., Inc., Hyde Park, Vt. 769,271, can. Cl. 50.
 Davis, Al, Radio Inc., Los Angeles, Calif. 769,179, can. Cl. 36.
 Davis, Elizabeth P., Washington, D.C. 893,313, pub. 4-7-70. Cl. 38.
 Del Amo Enterprises, Inc., Marina Del Rey, Calif. 893,465, pub. 4-7-70. Multiple Class (Classes 101 and 103).
 Delta Western Chemical, Inc., Indianapolis, Miss. 893,375, pub. 4-7-70. Cl. 46.
 Deutsche Angelerete Manufaktur (Dam) Hellmuth Kuntze, Berlin, Germany. 769,109, can. Cl. 22.
 Deyton Co., The, Odessa, Tex. 768,978, can. Cl. 6.
 Dial Records, Inc., Nashville, Tenn. 893,292, pub. 4-7-70. Cl. 36.
 Diamond Shamrock Corp., Cleveland, Ohio. 893,109, pub. 4-7-70. Cl. 6.
 Digital Identification Systems, Inc., Anaheim, Calif. 893,252, pub. 4-7-70. Cl. 25.
 Dior, Christian, Paris, France. 893,200, pub. 4-7-70. Multiple Class (Classes 22, 39, 42, and 50).
 Dip'n Slip Donuts of America, Inc., Roslindale, Mass. 893,442, pub. 4-7-70. Cl. 100.
 Dixon, Joseph Crucible Co., The, Jersey City, N.J. 265,883, ren. 6-23-70. Cl. 37.
 Dixon, Joseph Crucible Co., The, Jersey City, N.J. 265,892, ren. 6-23-70. Cl. 37.
 Dixon, Joseph Crucible Co., The, Jersey City, N.J. 266,095, ren. 6-23-70. Cl. 37.
 Dominion Electric Corp., Mansfield, Ohio. 769,086, can. Multiple Class (Classes 21, 26, 29, and 44).
 Donnelly, Margaret V., Wilmington, Del. 769,204, can. Cl. 38.
 Donnelley, Reuben H., Corp., The, New York, N.Y. 526,250, ren. 6-23-70. Cl. 38.
 Doughboy Industries, Inc., New Richmond, Wis. 525,644, ren. 6-23-70. Cl. 46.
 Dover Corp., New York, N.Y. 443,970, ren. 6-23-70. Cl. 18.
 Drackett Co., The, 519,620, ren. 6-23-70. Cl. 29.
 Drackett Co., The, Cincinnati, Ohio. 769,293, can. Cl. 52.
 Drackett Co., The, Cincinnati, Ohio. 893,427-8, pub. 4-7-70. Cl. 52.

Drummond, Anthony, d.b.a. Drummond Cine Productions, Kensington, Md. 769,200, can. Cl. 38.
 Duffy-Mott Co., Inc., New York, N.Y. 893,366, pub. 4-7-70. Cl. 45.
 Dukor Industries, Inc., from Dura-Vent Corp. of California, Redwood City, Calif. 893,281, pub. 4-7-70. Cl. 84.
 Duncan, Donald F., Inc., Evanston, Ill. 769,119, can. Cl. 22.
 Dunn Products, Inc., Chicago, Ill. 893,348, pub. 4-7-70. Cl. 39.
 Du Pont de Nemours, E. I., & Co., Wilmington, Del. 769,114, can. Cl. 22.
 Du Pont de Nemours, E. I., & Co., Wilmington, Del. 893,118, pub. 4-7-70. Cl. 9.
 Du Pont de Nemours, E. I., & Co., Wilmington, Del. 893,259, pub. 4-7-70. Cl. 26.
 Duvernoy & Sons, Inc., New York, N.Y. 525,392, ren. 6-23-70. Cl. 46.
 Dynamics Ltd., Aurora, Colo. 769,100, can. Cl. 22.
 Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. 893,111-12, pub. 4-7-70. Cl. 9.
 Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. 893,115, pub. 4-7-70. Cl. 9.
 Dynatech Corp., Cambridge, Mass. 893,282, pub. 4-7-70. Cl. 34.
 E.B.A. Service Corp., Loveland, Colo. 893,312, pub. 4-7-70. Cl. 38.
 ESB Inc., Philadelphia, Pa. 893,130, pub. 4-7-70. Multiple Class (Classes 12 and 13).
 Eagle-Picher Co., The, Cincinnati, Ohio. 768,994, can. Cl. 6.
 Eastman Kodak Co., Rochester, N.Y. 893,087, pub. 4-7-70. Cl. 2.
 Easton Safety Equipment, Inc., Whitestone, N.Y. 893,333, pub. 4-7-70. Cl. 39.
 Eastern States Farmers' Exchange, Inc., West Springfield, Mass. 769,249, can. Cl. 46.
 Eaton Allen Corp., Brooklyn, N.Y. 893,102, pub. 4-7-70. Cl. 6.
 Eaton Allen Corp., Brooklyn, N.Y. 893,296, pub. 4-7-70. Cl. 37.
 Ecclesiastical Electronics, Taylor, Tex. 769,087, can. Cl. 21.
 Edgewater Woolen Co., Philadelphia, Pa. 769,227, can. Cl. 43.
 Educational Aids Co., Inc., Washington, D.C. 769,180, can. Cl. 37.
 Edukaid of Ridgewood, Ridgewood, N.J. 893,307, pub. 2-24-70. Cl. 38.
 Electric Circus Co., Ltd., The, from Electric Circus of New York, Inc., New York, N.Y. 893,490, pub. 4-7-70. Cl. 107.
 Electric Circus of New York, Inc.: See—
 Electric Circus Co., Ltd., The
 Emence Industries, Inc., New York, N.Y. 769,098, can. Cl. 22.
 Endicott Johnson Corp., Endicott, N.Y. 181,971, can. Cl. 39.
 Engelhard Hanovia, Inc., Newark, N.J. 524,211, ren. 6-23-70. Cl. 44.
 Epando Seal Tools, Inc., Spring House, Pa. 893,228, pub. 4-7-70. Cl. 23.
 Fairmont Foods Co., Omaha, Nebr. 769,261, can. Cl. 40.
 Fieldcrest Mills, Inc., Spray, N.C. 769,093, can. Cl. 21.
 Figure Flattery Brassiere Co., Inc., New York, N.Y. 893,330, pub. 4-7-70. Cl. 39.
 First Palmetto Bank, Palmetto, Ga. 893,471, pub. 4-7-70. Cl. 102.
 Fischer, Josef, Sportartikelherzeugung, Ried im Innkreis, Austria. 769,111, can. Cl. 22.
 Fisons Pharmaceuticals Ltd., Leicestershire, England. 893,155, pub. 4-7-70. Cl. 18.
 Flambeau Plastics Corp., Baraboo, Wis. 893,272, pub. 4-7-70. Cl. 31.
 Flexsteel Industries, Inc., Dubuque, Iowa. 524,712, ren. 6-23-70. Cl. 32.
 Follett Educational Corp., Chicago, Ill. 893,311, pub. 4-7-70. Cl. 38.
 Formaid Co., Boston, Mass. 893,347, pub. 4-7-70. Cl. 39.
 Fort Howard Paper Co., Green Bay, Wis. 893,295, pub. 4-7-70. Cl. 37.
 Fortuna Foundations, Inc., New York, N.Y. 893,354, pub. 4-7-70. Cl. 39.
 Fox Pools, Inc., York, Pa. 893,128, pub. 4-7-70. Cl. 12.
 Franklin Mint Inc., The, Yeaton, Pa. 893,398, pub. 3-24-70. Cl. 50.
 Fraser & Johnston Co., San Francisco, Calif. 783,206, can. Cl. 34.
 French, R. T., Co., The, Rochester, N.Y. 738,753, can. Cl. 46.
 Fuller Brush Co., The, East Hartford, Conn. 520,513, ren. 6-23-70. Cl. 13.
 Fuller Brush Co., The, East Hartford, Conn. 527,098, ren. 6-23-70. Cl. 29.
 Fuller Brush Co., The, East Hartford, Conn. 528,990, ren. 6-23-70. Cl. 31.
 GAF Corp., New York, N.Y. 893,110, pub. 4-7-70. Cl. 6.
 Gaylord Products, Inc., Chicago, Ill. 893,358, pub. 4-7-70. Cl. 40.
 Geigy Chemical Corp., Ardsley, N.Y. 893,321, pub. 4-7-70. Cl. 38.
 Gellert Publishing Corp., New York, N.Y. 893,309, pub. 4-7-70. Cl. 38.
 General Aluminum Products, Inc., Charlotte, Mich. 893,171, pub. 4-7-70. Multiple Class (Classes 19 and 22).
 General Battery Corp., Reading, Pa. 271,811, ren. 6-23-70. Cl. 21.
 General Composition Co., Boston, Mass. 769,299, can. Cl. 101.
 General Electric Co., Schenectady, N.Y. 273,401, ren. 6-23-70. Cl. 38.
 General Electric Co., Philadelphia, Pa. 893,185, pub. 4-7-70. Cl. 21.
 General Electric Co., Schenectady, N.Y. 893,242, pub. 4-7-70. Cl. 23.
 General Electric Co., Schenectady, N.Y. 893,255, pub. 4-7-70. Cl. 26.

General Foods Corp., White Plains, N.Y. 768,942, can. Cl. 2.
 General Foods Corp., White Plains, N.Y. 893,383, pub. 4-7-70. Cl. 46.
 General Mills, Inc., Minneapolis, Minn. 77,495, ren. 6-23-70. Cl. 46.
 General Personnel, Inc., Kendallville, Ind. 893,467, pub. 4-7-70. Cl. 101.
 General United Group, Inc., Des Moines, Iowa. 893,472, pub. 4-7-70. Cl. 102.
 Genova Products, Davison, Mich. 893,131, pub. 4-7-70. Cl. 13.
 Georges Auto Glass Co., Inc., d.b.a. Novi Mfg. Co., Los Angeles, Calif. 769,079, can. Cl. 19.
 Gibaudan Corp., Clifton, N.J. 893,405, pub. 4-7-70. Cl. 51.
 Giddings & Lewis, Inc., Fond du Lac, Wis. 893,225, pub. 4-7-70. Cl. 23.
 Gilman Paint & Varnish Co., Chattanooga, Tenn. 526,149, ren. 6-23-70. Cl. 16.
 Gilman Paint & Varnish Co., Chattanooga, Tenn. 530,089, ren. 6-23-70. Cl. 16.
 Good Luck Glove Co., Carbondale, Ill. 528,189, ren. 6-23-70. Cl. 39.
 Goodall Rubber Co., Trenton, N.J. 530,303, ren. 6-23-70. Cl. 35.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 893,283, pub. 4-7-70. Cl. 35.
 Gotham Industries, Inc., Chicago, Ill. 769,318, can. Cl. 2.
 Gottsche, Adolph, Inc., Hillside, N.J. 893,219, pub. 4-7-70. Cl. 23.
 Grace, W. R., & Co., New York, N.Y. 893,378, pub. 4-7-70. Cl. 46.
 Gray Tool Co., Houston, Tex. 893,139-40, pub. 4-7-70. Cl. 13.
 Grifolyn Co., Inc., Houston, Tex. 893,397, pub. 4-7-70. Cl. 50.
 Groesbeck, A. J., Associates, Inc., Beverly Hills, Calif. 893,475, pub. 4-7-70. Cl. 102.
 Guaranteed Foods, Inc., Lenexa, Kans. 893,373, pub. 4-7-70. Cl. 46.
 Guild Wine Co., d.b.a. Wine Growers Guild, Lodi, Calif. 530,801, ren. 6-23-70. Cl. 47.
 Guild Wine Co., d.b.a. Wine Growers Guild, Lodi, Calif. 531,038, ren. 6-23-70. Cl. 49.
 Gutmann, Carl, & Co., Inc., New York, N.Y. 893,332, pub. 4-7-70. Cl. 39.
 Hagen Communications Inc., Upper Montclair, N.J. 893,308, pub. 4-7-70. Cl. 38.
 Hagerstown Trust Co., Hagerstown, Md. 892,480, pub. 4-7-70. Cl. 102.
 Hamilton Hamburgers, Inc., Noblesville, Ind. 893,391, pub. 4-7-70. Multiple Class (Classes 46 and 100).
 Hamilton Watch Co., Lancaster, Pa. 893,261, pub. 4-7-70. Cl. 28.
 Hammermill Paper Co., West Springfield, Mass. 893,293, pub. 4-7-70. Cl. 37.
 Hansen, A. L., Mfg. Co., Gurnee, Ill. 527,467, ren. 6-23-70. Cl. 23.
 Hansen, John, & Sons, Inc., Oakland, Calif. 893,336, pub. 4-7-70. Cl. 46.
 Harlee Creations, Inc., New York, N.Y. 769,150, can. Cl. 28.
 Harnischfeger Corp., West Milwaukee, Wis. 893,241, pub. 4-7-70. Cl. 23.
 Harco Corp., Camp Hill, Pa. 893,245, pub. 4-7-70. Cl. 23.
 Hart Schaffner & Marx, Chicago, Ill. 521,807, ren. 6-23-70. Cl. 39.
 Harts Stores, Inc., Columbus, Ohio. 893,463, pub. 4-7-70. Cl. 101.
 Harvestall Industries, Inc., New Hampton, Iowa. 893,124, pub. 4-7-70. Cl. 12.
 Hassenfeld Bros., Inc., Central Falls, R.I. 769,118, can. Cl. 22.
 Hayes, C. I., Inc., Cranston, B. I. 893,279, pub. 4-7-70. Cl. 34.
 Heller, Gustav & Wilhelm, Vienna, Austria. 893,368, pub. 4-7-70. Cl. 46.
 Henningsen Foods, Inc., New York, N.Y. 893,371, pub. 3-17-70. Cl. 46.
 Hereford Barn, Inc., Charlotte, N.C. 893,447, pub. 4-7-70. Cl. 100.
 Heritage Savings and Loan Association, Richmond, Va. 893,470, pub. 4-7-70. Cl. 102.
 Hewitt Soap Co., Inc., The, Dayton, Ohio. 77,640, ren. 6-23-70. Cl. 152.
 Hickey-Freeman Co., Inc., Rochester, N.Y. 528,012-13, ren. 6-23-70. Cl. 39.
 Hoffmann-La Roche Inc., Nutley, N.J. 769,062, can. Cl. 18.
 Hooker Chemical Corp., New York, N.Y. 768,976, can. Multiple Class (Classes 6 and 52).
 Hookers of the Golden West, Inc., Honolulu, Hawaii. 893,488, pub. 3-24-70. Cl. 105.
 Hopfenberg, Irving J., Providence, R.I. 404,866, can. Cl. 40.
 Hoppers Co., Inc., Pittsburgh, Pa. 523,463, ren. 6-23-70. Cl. 6.
 Horan, William L., d.b.a. American Cheerleaders Association, Miami, Fla. 769,189, can. Cl. 38.
 Horix Mfg. Co., Pittsburgh, Pa. 893,244, pub. 4-7-70. Cl. 23.
 Hudson National, Inc., New York, N.Y. 893,435, pub. 4-7-70. Multiple Class (Classes 100 and 103).
 Hunt, Vernon B., d.b.a. Van Der Hunt Co., Seattle, Wash. 893,395, pub. 4-7-70. Cl. 49.
 Hunter Mfg. Co., Cleveland, Ohio. 893,218, pub. 3-10-70. Cl. 23.
 Hunter, William D., Salt Lake City, Utah. 893,202, pub. 4-7-70. Cl. 22.
 Hyson, Westcott & Dunning, Inc., Baltimore, Md. 274,052, ren. 6-23-70. Cl. 18.
 IRS Co., Inc., Fort Wayne, Ind. 769,181, can. Cl. 37.
 Illinois Liquid Feed Co., The, Princeton, Ill. 769,242, can. Cl. 46.
 Imperial Homes, Inc., Griffin, Ga. 769,014, can. Cl. 12.
 Imperial Knife Association Companies, Inc., Providence, R.I. 893,226, pub. 4-7-70. Cl. 23.

Imperial Reading Corp., New York, N.Y. 893,342, pub. 4-7-70. Cl. 39.
 Imperial Stamp & Engraving Co., Inc., Mount Prospect, Ill. 893,220, pub. 4-7-70. Cl. 23.
 Industrial Relations Counselors Service, New York, N.Y. 893,460, pub. 4-7-70. Cl. 101.
 Information Industries, Inc., Wayne, Pa. 893,492, pub. 4-7-70. Cl. 107.
 Ingram Pharmaceutical Co., San Francisco, Calif. 893,157, pub. 4-7-70. Cl. 18.
 Interchemical Corp., New York, N.Y. 769,015, can. Cl. 12.
 International Harvester Co., Chicago, Ill. 893,486, pub. 4-7-70. Cl. 103.
 Interstate Battery System of America, Inc., Dallas, Tex. 893,268, pub. 4-7-70. Cl. 31.
 Irvin Industries Inc., Lexington, Ky. 893,088, pub. 4-7-70. Cl. 2.
 Istituto Sieroterapico e Vaccinogeno Toscano Sclavo Società per Azioni, Siena, Italy. 893,147, pub. 4-7-70. Cl. 18.
 J.K. Industries, Inc., Clark Summit, Pa. 769,035, can. Cl. 13.
 Jackson, Charles H., Jr., d.b.a. Jaxon Enterprises, San Marcos, Calif. 893,206, pub. 4-7-70. Cl. 22.
 Jacksonville Blow Pipe Co., Jacksonville, Fla. 893,209, pub. 4-7-70. Cl. 23.
 Jalovec, John J., d.b.a. Fiddy States Global Tours, Los Angeles, Calif. 769,309, can. Cl. 105.
 Jenney Mfg. Co., Newton, Mass. 520,139, ren. 6-23-70. Cl. 15.
 Johar Enterprises, Inc., Allentown, Pa. 893,430, pub. 4-7-70. Cl. 52.
 Johnson Hydraulic Equipment Co., Minneapolis, Minn. 525,231, ren. 6-23-70. Cl. 23.
 Johnson & Johnson, New Brunswick, N.J. 893,104-6, pub. 4-7-70. Cl. 18.
 Johnson & Johnson, d.b.a. Cel-Fibe, New Brunswick, N.J. 893,297, pub. 4-7-70. Multiple Class (Classes 37, 39, 42, and 44).
 Johnston, Allen & Co. Ltd., Lurgan, Armagh, Northern Ireland. 893,325, pub. 4-7-70. Multiple Class (Classes 39 and 42).
 Jostens, Inc., Owatonna, Minn. 893,262, pub. 4-7-70. Multiple Class (Classes 28 and 38).
 Joyce-Cridland Co., The, Dayton, Ohio. 893,221, pub. 4-7-70. Cl. 23.
 Justman, Anton, (Amsterdam & London) Ltd., London, England. 769,050, can. Cl. 17.
 Kaiser Aluminum & Chemical Corp., Oakland, Calif. 893,090, pub. 4-7-70. Cl. 2.
 Kaiser Aluminum & Chemical Corp., Oakland, Calif. 893,106, pub. 4-7-70. Cl. 6.
 Kalamazoo Sled & Toys, Inc., Kalamazoo, Mich. 769,107, can. Cl. 22.
 Kanner Dress Co., Inc., Elizabeth, N.J. 893,356, pub. 4-7-70. Cl. 39.
 Kellogg Co., Battle Creek, Mich. 893,385, pub. 4-7-70. Cl. 40.
 Kemlon Products & Development Co., Houston, Tex. 893,198, pub. 4-7-70. Cl. 21.
 Kenai Salmon Packing Co., Seattle, Wash. 526,920, ren. 6-23-70. Cl. 46.
 Kenai Salmon Packing Co., Seattle, Wash. 526,921, ren. 6-23-70. Cl. 46.
 Kenlin Enterprises, Inc., Highland Park, Ill. 893,134, pub. 4-7-70. Cl. 13.
 Kiku-Masamune Sake Brewing Co., Ltd., Kobe, Hyogo Prefecture, Japan. 893,394, pub. 4-7-70. Cl. 48.
 Kimball, A., Ltd., Toronto, Ontario, Canada. 768,949, can. Cl. 4.
 Kimberly-Clark Corp., Neenah, Wis. 893,445, pub. 4-7-70. Cl. 100.
 Klein, Max, Inc., Ferndale, Mich. 768,941, can. Cl. 2.
 Knomark Inc., Jamaica, N.Y. 893,434, pub. 4-7-70. Cl. 52.
 Kohnstamm, H., & Co., Inc., New York, N.Y. 893,388, pub. 4-7-70. Cl. 46.
 Kohnstamm, H., & Co., Inc., New York, N.Y. 893,425, pub. 4-7-70. Cl. 52.
 Kops Bros., Inc., New York, N.Y. 893,335, pub. 4-7-70. Cl. 39.
 Kraftco Corp., Chicago, Ill. 273,263, ren. 6-23-70. Cl. 46.
 Kramer Bros., Inc., Baltimore, Md. 769,097, can. Cl. 22.
 Kramer, Samuel, d.b.a. Semka Lures, Brooklyn, N.Y. 769,110, can. Cl. 22.
 Kresge, S. S., Co., Detroit, Mich. 893,197, pub. 4-7-70. Cl. 21.
 Kresge, S. S., Co., Detroit, Mich. 893,254-5, pub. 4-7-70. Cl. 35.
 Laker Spring & Electric Car Corp., Oakland, Calif. 525,065, ren. 6-23-70. Cl. 35.
 Lamb-Weston, Inc., Portland, Oreg. 519,987, ren. 6-23-70. Cl. 46.
 Lancome, S.A., Paris, France. 523,314, ren. 6-23-70. Cl. 51.
 Lane Co., Inc., The, Altavista, Va. 893,274, pub. 4-7-70. Cl. 32.
 Lanewood Laboratories, Inc., Framingham, Mass. 893,429, pub. 4-7-70. Cl. 52.
 Lanvin-Charles of the Ritz, Inc., New York, N.Y. 893,412, pub. 4-7-70. Cl. 51.
 Lark Luggage Corp., New York, N.Y. 893,092-3, pub. 4-7-70. Cl. 3.
 Lawrence Corp., Omaha, Nebr. 893,359, pub. 4-7-70. Cl. 40.
 Les Tricots Pierre Marques Ltee., Montreal, Quebec, Canada. 893,343, pub. 4-7-70. Cl. 39.
 Les Trois Limousins, Paris, France. 893,446, pub. 4-7-70. Cl. 100.
 Leslie Salt Co., San Francisco, Calif. 525,865, ren. 6-23-70. Cl. 46.
 Lester, J. J., & Co., d.b.a. Accountants' Supply House, Valley Stream, N.Y. 893,294, pub. 4-7-70. Cl. 37.
 Lester, Robert, Chicago, Ill. 769,306, can. Cl. 103.
 Libby, McNeill & Libby, Chicago, Ill. 893,379, pub. 4-7-70. Cl. 46.

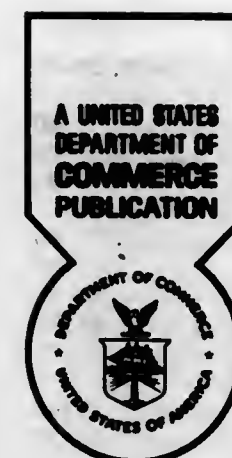
Liberty Mutual Insurance Co., Boston, Mass. 893,479, pub. 4-7-70. Cl. 102.
 Lieba, Inc., Baltimore, Md. 893,266, pub. 4-7-70. Cl. 28.
 L'Industrie Electrique de la Seine, Romainville, France. 893,198, pub. 4-7-70. Cl. 21.
 Lionel Corp., The, New York, N.Y. 769,113, Cl. 22.
 Littlefuse, Inc., Des Plaines, Ill. 443,861, ren. 6-23-70. Cl. 21.
 Loading Service Co., The, Medford, Oreg. 769,308, can. Cl. 105.
 Loblaw Inc., Buffalo, N.Y. 769,301, can. Cl. 101.
 Loewy Machinery Supplies Co., Inc., New York, N.Y. 893,286, pub. 4-7-70. Cl. 23.
 Longchamps, Inc., New York, N.Y. 893,454, pub. 4-7-70. Multiple Class (Classes 100 and 101).
 Loort Press, Inc., Colorado Springs, Colo. 893,318, pub. 4-7-70. Cl. 38.
 L'Oreal, Paris, France. 893,408, pub. 4-7-70. Cl. 51.
 Lory Electronics Inc., Deer Park, N.Y. 893,193, pub. 4-7-70. Cl. 21.
 Lotte Co., Ltd., Tokyo, Japan. 893,390, pub. 4-7-70. Cl. 46.
 Magazine Management Co., Inc., d.b.a. Marvel Comics Group, from Magazine Management Co., d.b.a. Marvel Comics, Group, New York, N.Y. 893,303-4, pub. 4-7-70. Cl. 38.
 Magnavox Co., The, Fort Wayne, Ind. 443,819, ren. 6-23-70. Cl. 21.
 Malone & Hyde, Inc., Memphis, Tenn. 893,387, pub. 4-7-70. Cl. 46.
 Marblehead Lime Co., Chicago, Ill. 528,016, ren. 6-23-70. Cl. 46.
 Marda Pharmaceuticals, Inc., New York, N.Y. 769,070, can. Cl. 18.
 Marine Square Club, Inc., The, Jersey City, N.J. 893,453, pub. 4-7-70. Cl. 100.
 Mar-Salle, Chicago Co., Chicago, Ill. 769,268, can. Cl. 49.
 Martin, Elmer A., Oakland, Calif. 769,129, can. Cl. 23.
 Martin, Norman F., d.b.a. Edison Post Light Co., San Antonio, Tex. 769,094, can. Cl. 21.
 Marx, Louis, & Co. Inc., New York, N.Y. 769,117, can. Cl. 22.
 Master-Craft Corp., Kalamazoo, Mich. 530,506, ren. 6-23-70. Cl. 37.
 Max's Kansas City, Inc., New York, N.Y. 893,451, pub. 4-7-70. Cl. 100.
 May-Farm Engineering, Inc., Cleveland, Ohio. 893,240, pub. 4-7-70. Cl. 23.
 McDonald's Corp., Chicago, Ill. 893,440, pub. 4-7-70. Cl. 100.
 McHugh Thermodynamics Corp., Breese, Pa. 893,256, pub. 4-7-70. Cl. 26.
 McKinney Mfg. Co., Scranton, Pa. 893,089, pub. 4-7-70. Multiple Class (Classes 2 and 13).
 McNeil Corp., Akron, Ohio. 619,989, ren. 6-23-70. Cl. 23.
 Meader, Jonathan G., d.b.a. Asclan, Washington, D.C. 893,323, pub. 4-7-70. Cl. 38.
 Mercantile Stores Co., Inc., Wilmington, Del. 272,627, ren. 6-23-70. Cl. 39.
 Merck & Co., Inc., Rahway, N.J. 769,052, can. Cl. 18.
 Merck & Co., Inc., Rahway, N.J. 893,154, pub. 4-7-70. Cl. 18.
 Meyton Gerard Brissou, Glronde, France. 769,266, can. Cl. 47.
 Midcontinent Seed Co., Columbia, Mo. 893,080, pub. 4-7-70. Cl. 1.
 Midland International Corp., North Kansas City, Mo. 893,189, pub. 4-7-70. Cl. 21.
 Mints & Girgan, Inc.: See—
 Paydata, Inc.
 Missouri Jack B. Nimble Portraits, Inc., St. Louis, Mo. 769,191, can. Cl. 38.
 Mr. John, Inc., New York, N.Y. 526,388-9, ren. 6-23-70. Cl. 3.
 Monogram Industries, Inc., Los Angeles, Calif. 893,138, pub. 4-7-70. Cl. 13.
 Monsanto Co., St. Louis, Mo. 893,107, pub. 4-7-70. Cl. 6.
 Moog Inc., East Aurora, N.Y. 893,181, pub. 3-10-70. Cl. 21.
 Moppet's, Mary, Day Care Schools, Inc., Scottsdale, Ariz. 893,491, pub. 4-7-70. Cl. 107.
 Murray Co. of Texas, Inc., Pittsburgh, Pa. 529,664, ren. 6-23-70. Cl. 23.
 National Adjustment Bureau, Inc., Dallas, Tex. 893,468, pub. 4-7-70. Cl. 102.
 N.V. Koninklijke Pharmaceutische Fabrieken v/h Brocades-Sibbeaan & Pharmacia, Amsterdam, Netherlands. 893,270, pub. 4-7-70. Cl. 31.
 N.V. Nederlandse Schoen-een Lederfabrieken Bata-Best, Best, North Brabant, Netherlands. 769,215, can. Cl. 39.
 N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. 893,190, pub. 4-7-70. Cl. 21.
 National Blacuit Co., New York, N.Y. 34,067, ren. 6-23-70. Cl. 46.
 National Service Industries, Inc., d.b.a. Zep Mfg. Co., Atlanta, Ga. 893,426, pub. 4-7-70. Cl. 52.
 National Summer Palaestrum, Inc., Champaign, Ill. 769,188, can. Cl. 38.
 Nazareth Candy Co. Ltd., Nazareth, Israel. 893,370, pub. 4-7-70. Cl. 46.
 New Process Co., Warren, Pa. 893,345, pub. 4-7-70. Cl. 39.
 New Yorker Magazine, Inc., The, New York, N.Y. 530,440, ren. 6-23-70. Cl. 38.
 Nilsson Lennart Folke, Ostersund, Sweden. 893,169, pub. 4-7-70. Cl. 19.
 Nippon Gakki Seiso Kabushiki Kaisha, Shizuoka-ken, Japan. 893,186, pub. 4-7-70. Multiple Class (Classes 21 and 36).
 Nissen Corp., Cedar Rapids, Iowa. 769,101, can. Cl. 22.
 Norcross, Inc., New York, N.Y. 893,322, pub. 4-7-70. Cl. 38.
 Northland Canning Co., Cokato, Minn. 269,401, ren. 6-23-70. Cl. 46.
 Norton Co., Worcester, Mass., from Clipper Mfg. Co., Inc., Grandview, Mo. 893,249, pub. 5-19-70. Cl. 23.
 Norwell Mfg. Co. Inc., Taunton, Mass. 893,182, pub. 4-7-70. Cl. 21.
 Ohio Leather Co., The, Girard, Ohio. 768,932, can. Cl. 1.
 Olin Mathieson Chemical Corp., East Alton, Ill. 768,939, can. Cl. 2.
 Orange Cove Citrus Association, Orange Cove, Calif. 530,426, ren. 6-23-70. Cl. 46.
 Orchem Pumps, Inc., Philadelphia, Pa. 528,005, ren. 6-23-70. Cl. 23.
 Orsip Restaurant Corp., New York, N.Y. 893,458, pub. 4-7-70. Cl. 100.
 Ortho Pharmaceutical Corp., d.b.a. Ortho Diagnostics, Raritan, N.J. 893,105, pub. 4-7-70. Cl. 6.
 Otafuku Sangyo Co., Ltd., Tokushima, Japan. 893,336, pub. 4-7-70. Cl. 39.
 Pacific Alaska Fisheries, Inc., Seattle, Wash. 78,954, ren. 6-23-70. Cl. 46.
 Pacifica Designs, San Francisco, Calif. 444,012, ren. 6-23-70. Cl. 32.
 Packing Materials Corp., Chicago, Ill. 893,098, pub. 4-7-70. Multiple Class (Classes 5 and 37).
 Palm Beach Co., Portland, Maine. 893,351, pub. 4-7-70. Cl. 39.
 Paradise Gardens Apartments, The, Scottsdale, Ariz. 893,444, pub. 4-7-70. Cl. 100.
 Paramount Bedding Corp., Norfolk, Va. 893,277, pub. 4-7-70. Cl. 32.
 Paramount Distillers, Inc., d.b.a. ABC Distilled Products Co., Cleveland, Ohio. 893,394, pub. 4-7-70. Cl. 49.
 Parks Woodworking Machine Co., Cincinnati, Ohio. 893,247, pub. 4-7-70. Cl. 23.
 Paydata, Inc., East Orange, from Mints & Girgan, Inc., Kearny, N.J. 893,306, pub. 4-7-70. Cl. 38.
 Peabody Coal Co., St. Louis, Mo. 769,202, can. Cl. 38.
 Peckham Industries, Inc., White Plains, N.Y. 893,275, pub. 4-7-70. Cl. 32.
 Peltan & Leru Corp., New York, N.Y. 893,265, pub. 4-7-70. Cl. 28.
 Penn Photomounts, Darby, Pa. 769,115, can. Cl. 22.
 Penney, J. C. Co., Inc., New York, N.Y. 893,464, pub. 4-7-70. Cl. 101.
 Peoples Drug Stores, Inc., Washington, D.C. 516,867, ren. 6-23-70. Cl. 37.
 Permanent Pigments, Inc., Norwood, Ohio. 893,146, pub. 4-7-70. Cl. 16.
 Pet Inc., St. Louis, Mo. 893,382, pub. 4-7-70. Cl. 46.
 Peterson Industries, Inc., Smith Center, Kans. 893,176, pub. 4-7-70. Cl. 19.
 Petrocelli Clothes, Inc., New York, N.Y. 893,339, pub. 4-7-70. Cl. 39.
 Pfizer, Chas., & Co., Inc., New York, N.Y. 893,409, pub. 4-7-70. Cl. 51.
 Phillips Petroleum Co., Bartlesville, Okla. 893,117, pub. 4-7-70. Cl. 9.
 Physicians & Hospitals Supply Co., d.b.a. The Ulmer Pharmaceutical Co., Minneapolis, Minn. 892,163, pub. 4-7-70. Cl. 18.
 Pitronim, Inc., Brookline, Mass. 893,195, pub. 4-7-70. Multiple Class (Classes 21 and 101).
 Plas Tronics Corp., San Jose, Calif. 893,253, pub. 4-7-70. Cl. 26.
 Polymer Corp., The, Reading, Pa. 526,403, ren. 6-23-70. Cl. 106.
 Polytechnics, Inc., Bethayres, Pa. 893,100, pub. 4-7-70. Multiple Class (Classes 6 and 26).
 Ponte Vedra Corp., d.b.a. Ponte Vedra Club, Ponte Vedra Beach, Fla. 893,455, pub. 4-7-70. Multiple Class (Classes 100 and 107).
 Portable Lubrication, Inc., Minneapolis, Minn. 893,465, pub. 4-7-70. Cl. 103.
 Potomac Horse Center, Inc., Gaithersburg, Md. 893,493, pub. 4-7-70. Cl. 107.
 Potter Instrument Co., Inc., Plainview, N.Y. 893,258, pub. 4-7-70. Cl. 26.
 Potter Sibley, Inc., Minnetonka, Minn. 893,204, pub. 4-7-70. Cl. 22.
 Powell, Wm., Co., The, Cincinnati, Ohio. 893,135, pub. 4-7-70. Cl. 13.
 Powerlock Floors, Inc., Philadelphia, Pa. 893,123, pub. 4-7-70. Cl. 12.
 Precipitator Corp. of America, Newton, Mass. 893,271, pub. 4-7-70. Cl. 31.
 Prince Georges Properties, Inc., Bladensburg, Md. 893,460, pub. 4-7-70. Cl. 101.
 Prismo Safety Corp., Huntingdon, Pa. 769,323, can. Cl. 33.
 Produits Chimiques Pechiney Saint-Gobain, Neuilly-sur-Seine (Houts-de-Seine), France. 523,120, ren. 6-23-70. Cl. 1.
 Project Alert, Inc., Pensacola, Fla. 769,312, can. Cl. 107.
 Psych-O-Generative, Inc., Waterloo, Iowa. 893,319, pub. 4-7-70. Cl. 38.
 Pure Stat Corp., Ann Arbor, Mich. 893,137, pub. 4-7-70. Cl. 13.
 Race & Race, Inc., Winter Haven, Fla. 530,516, ren. 6-23-70. Cl. 23.
 Rachelle Laboratories, Inc., Long Beach, Calif. 893,149, pub. 4-7-70. Cl. 18.
 Rain-Flow Systems, Inc., Indianapolis, Ind. 893,129, pub. 4-7-70. Cl. 12.
 Ranco Industrial Products Corp., Cleveland, Ohio. 893,125, pub. 4-7-70. Cl. 12.
 Rapid-American Corp., New York, N.Y. 523,547, ren. 6-23-70. Cl. 39.
 Ray, Randolph William, Douglas McNair Phillips, Jr., Gary Sherman Owens, and William Sommers, d.b.a. Ray-Phi Records, Ventura, Calif. 893,288, pub. 4-7-70. Cl. 36.
 Raytheon Co., Lexington, Mass. 521,461, ren. 6-23-70. Cl. 21.
 Republic Steel Corp., Cleveland, Ohio. 769,008, can. Cl. 12.
 Recorder Charts Ltd., London, England. 769,184, can. Cl. 37.
 Regal Ware, Inc., Kewaskum, Wis. 528,072, ren. 6-23-70. Cl. 13.

Reliable Luggage, Inc., West Pittsburg, Pa. 768,946, can. Cl. 3.
 Rex Chainbelt, Inc., Milwaukee, Wis., from Perfection American, Inc., Harvey, Ill. 893,224, pub. 4-7-70. Cl. 23.
 Rica Shinkle Imports, St. Louis, Mo. 893,344, pub. 4-7-70. Cl. 39.
 Roberts, Sanford & Taylor Co., Sherman, Tex. 79,007, ren. 6-23-70. Cl. 23.
 Rodale Press, Inc., Emmaus, Pa. 893,315, pub. 4-7-70. Cl. 38.
 Rodgers Hydraulic Inc., Minneapolis, Minn. 893,132, pub. 4-7-70. Multiple Class (Classes 13 and 23).
 Rogers Corp., Rogers, Conn. 768,920-1, can. Cl. 1.
 Ronan & Kunal, Inc., Marshall, Mich. 893,199, pub. 4-7-70. Cl. 21.
 Rule Industries, Inc., Beverly Farms, Mass. 893,238, pub. 4-7-70. Cl. 23.
 Salsal, Katherine, d.b.a. Katy Kards, Pittsburgh, Pa. 769,193, can. Cl. 38.
 Sanders Associates, Inc., Nashua, N.H. 893,213, pub. 4-7-70. Cl. 23.
 Sandoz, Inc.: See—
 Sandoz-Wander, Inc.
 Sandoz-Wander, Inc., from Sandoz, Inc., Hanover, N.J. 893,103-4, pub. 4-7-70. Cl. 6.
 Sautter, Karl H., d.b.a. Leo Products, Chicago, Ill. 893,168, pub. 4-7-70. Cl. 18.
 Schleper Carl, Remscheid, Germany. 893,215, pub. 4-7-70. Cl. 23.
 Schmidt'sche Heilsdampt-Gesellschaft M.B.H., Wilhelmshoehe, Germany. 893,180, pub. 4-7-70. Cl. 21.
 Schoonmaker Associates, Larchmont, N.Y. 893,305, pub. 4-7-70. Cl. 38.
 Schoonmaker, Frank, New York, N.Y. 893,091, pub. 4-7-70. Cl. 2.
 Schuberth-Werk, Braunschweig, Germany. 893,329, pub. 4-7-70. Cl. 39.
 Sears, Roebuck & Co., Chicago, Ill. 274,445, ren. 6-23-70. Cl. 31.
 Sears, Roebuck & Co., Chicago, Ill. 525,092, ren. 6-23-70. Cl. 35.
 Seaton-Wilson, Inc., Burbank, Calif. 893,273, pub. 4-7-70. Cl. 31.
 Sea-Trim Corp., Plymouth, Ind. 778,994, can. Cl. 19.
 Semel, Bernard J., Washington, D.C. 893,113-14, pub. 4-7-70. Cl. 9.
 Servco Co., The, Long Beach, Calif. 893,145, pub. 4-7-70. Cl. 15.
 Shachihata Kogyo Kabushiki Kaisha, Nishi-ku, Nagoya, Japan. 893,119, pub. 4-7-70. Multiple Class (Classes 11, 23, and 37).
 Sherwood Publishing Co., Inc., Amarillo, Tex. 893,320, pub. 4-7-70. Cl. 38.
 Shin Nippon Koki Co., Ltd., Osaka, Japan. 893,246, pub. 4-7-70. Cl. 23.
 Sirla, A. J., Products Corp., New York, N.Y. 769,151, Cl. 29.
 Sirla, A. J., Products Corp., New York, N.Y. 769,283, can. Cl. 51.
 Skor-Mor Corp., Anaheim, Calif. 893,205, pub. 4-7-70. Cl. 22.
 Slendair, Inc., Los Angeles, Calif. 769,236, can. Cl. 51.
 Smith, Frederick H., Dayton, Ohio. 769,123, can. Cl. 23.
 Smith Kline & French Laboratories, Philadelphia, Pa. 529,570-1, ren. 6-23-70. Cl. 18.
 Smith Kline & French Laboratories, Philadelphia, Pa. 893,167, pub. 4-7-70. Cl. 18.
 Smith, Walter E., Caldwell, Idaho. 893,291, pub. 4-7-70. Cl. 36.
 Smooth-On Mfg. Co., Jersey City, N.J. 768,954, can. Cl. 5.
 Sula Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. 893,328, pub. 4-7-70. Multiple Class (Classes 39, 42, and 43).
 Societe Agricole lattiere Flandre Artois, Renescure, Nord, France. 893,384, pub. 4-7-70. Cl. 46.
 Societe Anonyme Dite: Klaxon, Courbevoie, Hauts-de-Seine, France. 893,175, pub. 4-7-70. Cl. 19.
 Societe des Verrieres Industrielles Reunies Du Loing (S.O.V.I.R.E.L.), Paris (Seine), France. 893,278, pub. 4-7-70. Cl. 33.
 Societe Inter technique, Plaisir, France. 893,254, pub. 4-7-70. Cl. 26.
 Sohn, Ernest Creations, Inc., New York, N.Y. 768,996, can. Cl. 8.
 Solheim, Karsten, Phoenix, Ariz. 893,203, pub. 4-7-70. Cl. 22.
 Sosa, Henry, & Co., Los Angeles, Calif. 893,142, pub. 4-7-70. Cl. 13.
 Spalding, A. G. & Bros. Inc., Chicopee, Mass. 525,022, ren. 6-23-70. Cl. 22.
 Spalding, A. G. & Bros. Inc., Chicopee, Mass. 525,953, ren. 6-23-70. Cl. 22.
 Speedfam Corp., Des Plaines, Ill. 893,239, pub. 4-7-70. Cl. 23.
 Sperry Rand Corp., New York, N.Y. 893,230-2, pub. 4-7-70. Cl. 23.
 Spofa-Spojene Podniky Pro Zdravotnickou Vyrobu, Husinecka, Praha, Czechoslovakia. 893,148, pub. 4-7-70. Cl. 18.
 Sprague Devices, Inc., Michigan City, Ind. 893,170, pub. 4-7-70. Cl. 19.
 Springboard International Records, Inc., New York, N.Y. 893,290, pub. 4-7-70. Cl. 36.
 Springdrain Corp., San Francisco, Calif. 893,173, pub. 4-7-70. Cl. 19.
 Spur Prints, Inc., Dallas, Tex. 768,937, can. Cl. 2.
 Square D Co., Park Ridge, Ill. 530,471, ren. 6-23-70. Cl. 21.
 Stahl-Meyer, Inc., New York, N.Y. 769,258, can. Cl. 46.
 Standard Metal Products Co., Franklin Park, Ill. 893,218, pub. 4-7-70. Multiple Class (Classes 23 and 34).
 Stanley Home Products, Inc., Westfield, Mass. 537,094, ren. 6-23-70. Cl. 39.
 Starch, Daniel, & Staff, Inc., Mamaroneck, N.Y. 893,459, pub. 4-7-70. Cl. 101.
 Sta-Rite Glanle Lou, Inc., Shelbyville, Ill. 529,218, ren. 6-23-70. Cl. 40.
 Stark Bro's Nurseries & Orchards Co., Louisiana, Mo. 528,231, ren. 6-23-70. Cl. 1.
 Stationers Loose Leaf Co., Milwaukee, Wis. 530,577, ren. 6-23-70. Cl. 37.
 Stevconit Textile Co., New York, N.Y. 893,237, pub. 4-7-70. Cl. 39.
 Stockwell, C. W., Co., Los Angeles, Calif. 769,061, can. Multiple Class (Classes 20 and 37).
 Stone, John R., d.b.a. Stone's Mink Farm, Dell Rapids, S. Dak. 893,082, pub. 4-7-70. Cl. 4.
 Stott, Gladys S., d.b.a. Coventry Creations, North Haven, Conn. 893,357, pub. 4-7-70. Cl. 40.
 Strato-Vacuum Handling Co., Chicago, Ill. 893,210, pub. 4-7-70. Cl. 23.
 Stream Line Tools, Inc., Conover, N.C. 523,695, ren. 6-23-70. Cl. 23.
 Stucker & Speer, Inc., Houston, Tex. 893,263-4, pub. 4-7-70. Cl. 23.
 Sun Chemical Corp., New York, N.Y. 274,730, ren. 6-23-70. Cl. 6.
 Sun Chemical Corp., New York, N.Y. 274,839-40, ren. 6-23-70. Cl. 52.
 Sunshine Art Studios, Inc., Springfield, Mass. 769,206, can. Cl. 38.
 Supak & Sons Mfg. Co., Elizabeth City, N.C. 444,041, ren. 6-23-70. Cl. 39.
 Super Tilt, Inc., Cincinnati, Ohio. 769,320, can. Cl. 13.
 Swimmers Ready, Inc., New York, N.Y. 769,192, can. Cl. 38.
 Taco, Inc., Cranston, R.I. 523,952, ren. 6-23-70. Cl. 26.
 Takara Shuzo Co., Ltd., Kyoto, Japan. 893,393, pub. 4-7-70. Cl. 47.
 Taulman Co., The, Atlanta, Ga. 893,260, pub. 4-7-70. Multiple Class (Classes 26 and 100).
 Tawashi Club, Inc., The, New York, N.Y. 893,361, pub. 4-7-70. Cl. 42.
 Taylor, Howard L., Oscoda Aluminum Center, Oscoda, Mich. 893,400, pub. 4-7-70. Cl. 50.
 Technicon Instruments Corp., Tarrytown, from Technicon Corp., Ardaley, N.Y. 893,099, pub. 4-7-70. Cl. 6.
 Tech-Turf, Inc., Maplewood, N.J. 893,484, pub. 4-7-70. Cl. 108.
 Teis Myra, Inc., Fayetteville, N.C. 893,483, pub. 4-7-70. Multiple Class (Classes 108 and 107).
 Teletograph Corp., Los Angeles, Calif. 893,183, pub. 4-7-70. Cl. 21.
 Teledyne, Inc., Los Angeles, Calif. 893,257, pub. 4-7-70. Cl. 26.
 Temple Corp., Munster, Ind. 769,074-5, can. Cl. 13.
 Tensor Corp., Brooklyn, N.Y. 893,201, pub. 4-7-70. Cl. 22.
 Texas Pharmacal Co., San Antonio, Tex. 893,158, pub. 4-7-70. Cl. 18.
 Texas Pharmacal Co., San Antonio, Tex. 893,433, pub. 4-7-70. Cl. 52.
 Thermotron Corp., Chicago, Ill. 769,174, can. Cl. 34.
 Thin Man, Inc., The, New Haven, Conn. 893,367, pub. 4-7-70. Cl. 45.
 Thomas Industries Inc., Louisville, Ky. 769,134, can. Cl. 23.
 Thorp, Hank, Inc., Edison, N.J. 893,174, pub. 4-7-70. Cl. 19.
 Thott, Bo W., d.b.a. Metricard Co., Washington, D.C. 769,199, can. Cl. 38.
 Tiger Fabrics, Inc., New York, N.Y. 893,360, pub. 4-7-70. Cl. 42.
 Timme Motor Inn Corp., Wilmington, N.C. 893,457, pub. 4-7-70. Cl. 100.
 Toledo Engineering Co., Inc., Toledo, Ohio. 893,482, pub. 4-7-70. Cl. 103.
 Topper Corp., Elizabeth, N.J. 893,208, pub. 4-7-70. Cl. 22.
 Toyo Sen-I Co., Ltd., Tokyo, Japan. 893,327, pub. 4-7-70. Multiple Class (Classes 39, 42, and 43).
 Transco Inc., Chicago, Ill. 893,122, pub. 4-7-70. Cl. 12.
 Translates, Inc., Falls Church, Va. 893,287-9, pub. 4-7-70. Cl. 36.
 Traveler's Valet, Inc., Kansas City, Mo. 893,487, pub. 4-7-70. Cl. 103.
 Trego, Karen E. T., d.b.a. Ket, West Chester, Pa. 893,317, pub. 4-7-70. Cl. 38.
 Trini's Restaurants, Inc., Dallas, Tex. 893,450, pub. 4-7-70. Cl. 100.
 Trupp-Interdental, Baltimore, Md. 769,229, can. Cl. 44.
 Tuckersharpe Pen Co., Inc., Richmond, Va. 893,299, pub. 4-7-70. Cl. 37.
 USV Pharmaceutical Corp., New York, N.Y. 893,153, pub. 4-7-70. Cl. 18.
 Union Special Machine Co., Chicago, Ill. 523,208, ren. 6-23-70. Cl. 21.
 Union Wadding Co., Pawtucket, R.I. 530,325, ren. 6-23-70. Cl. 50.
 Unishops, Inc., Jersey City, N.J. 893,324, pub. 10-5-65. Cl. 39.
 Unit Step Form Co., Inc., Waterloo, Iowa. 893,126-7, pub. 4-7-70. Cl. 12.
 United Aircraft Corp., East Hartford, Conn. 893,179, pub. 4-7-70. Multiple Class (Classes 21 and 26).
 United States Borax & Chemical Corp., Los Angeles, Calif. 769,952-3, can. Cl. 4.
 United States Borax & Chemical Corp., Los Angeles, Calif. 769,048-9, can. Cl. 16.
 Upjohn Co., The, Kalamazoo, Mich. 769,057, can. Cl. 18.
 Urethane Products Canada Ltd., Mississauga, Ontario, Canada. 893,061, pub. 4-7-70. Multiple Class (Classes 1, 6, 9, 19, 23, 35, and 42).
 Val-Test Distributors, Inc., Chicago, Ill. 79,631, ren. 6-23-70. Cl. 23.

INDEX OF REGISTRANTS

Vanguard Knits, Inc., Brooklyn, N.Y. 893,862, pub. 4-7-70. Cl. 42.
 Varn Products Co., Inc., Flushing, N.Y. 893,424, pub. 4-7-70. Cl. 52.
 Villager Industries, Inc., Philadelphia, Pa. 893,298, pub. 3-17-70. Cl. 37.
 Vitarine Co., Inc., The, Springfield Gardens, N.Y. 893,156, pub. 4-7-70. Cl. 18.
 Vokes Ltd., Guildford, Surrey, England. 893,267, pub. 4-7-70. Cl. 31.
 Waldron, William, d.b.a. House of Waldron, Portland, Maine. 893,404, pub. 4-7-70. Cl. 51.
 Ward Foods, Inc., New York, N.Y. 274,264, ren. 6-23-70. Cl. 46.
 Warner & Swasey Co., The, Cleveland, Ohio. 893,229, pub. 4-7-70. Cl. 23.
 Rupp, Warren, Co., Mansfield, Ohio. 832,170, canc. Cl. 23.
 West Chemical Products, Inc., Long Island City, N.Y. 893,108, pub. 4-7-70. Cl. 6.
 Western Cutlery Co., Boulder, Colo. 893,097, pub. 4-7-70. Multiple Class (Classes 4 and 23).
 Western Tool Co., Arvada, Colo. 893,217, pub. 4-7-70. Cl. 23.
 Weston, Byron, Co., Dalton, Mass. 407,884, canc. Cl. 37.
 Weston, Byron, Co., Dalton, Mass. 524,805, ren. 6-23-70. Cl. 37.
 Weston, Byron, Co., Dalton, Mass. 524,930, ren. 6-23-70. Cl. 37.
 Wetoma Corp., Fort Worth, Tex. 893,211-12, pub. 4-7-70. Cl. 23.
 Whirl-A-Dent, Inc., San Gabriel, Calif. 769,230, canc. Cl. 44.
 Whirl-A-Dent, Inc., San Gabriel, Calif. 769,291, canc. Cl. 51.
 White Motor Corp., Cleveland, Ohio. 893,172, pub. 4-7-70. Cl. 19.
 White Stag Mfg. Co., Portland, Oreg. 893,352, pub. 4-7-70. Cl. 39.
 White Swan Uniforms, Inc., New York, N.Y. 530,368, ren. 6-23-70. Cl. 39.
 Wiener Porzellanmanufaktur Augarten Aktiengesellschaft Zur Erneuerung und Fortsetzung Der Vormaligen Staatlichen (Aerarial) Porzellanmanufaktur Wein, Vienna, Austria. 769,273, canc. Cl. 50.
 Wilson Industries, Inc., Prairie Village, Kans. 893,150, pub. 4-7-70. Cl. 18.
 Wilson Sporting Goods Co., River Grove, Ill. 893,207, pub. 4-7-70. Cl. 22.
 Wohl Shoe Co., St. Louis, Mo. 893,350, pub. 4-7-70. Cl. 39.
 Woolrich Woolen Mills, Woolrich, Pa. 893,349, pub. 4-7-70. Cl. 39.
 Wyatt Corp., Cheyenne, Wyo. 893,269, pub. 4-7-70. Cl. 31.
 X-L Laboratories, Inc., Bakersfield, Calif. 893,085, pub. 4-7-70. Cl. 1.
 Yankee, Inc., d.b.a. Natorg Food Products Co., Dublin, N.H. 769,246, canc. Cl. 46.
 Yardley of London, Inc., New York, N.Y. 893,410, pub. 4-7-70. Cl. 51.
 Yardley of London, Inc., New York, N.Y. 893,413, pub. 4-7-70. Multiple Class (Classes 51 and 52).
 Zollo Ruiz-Mateos, S.A., Cadiz, Spain. 893,392, pub. 4-7-70. Multiple Class (Classes 47 and 49).
 Zotos International, Inc., from Sales Affiliates, Inc., New York, N.Y. 893,407, pub. 4-7-70. Cl. 51.

U.S. GOVERNMENT PRINTING OFFICE: O-1970



U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 30, 1970

Volume 875

Number 5

PATENTS
NOTICESBoard of Appeals Decisions Rendered in the Month of
May 1970

Examiner affirmed	115
Examiner affirmed in part	17
Examiner reversed	37
Total	169

Certificates of Correction for the Week of June 30, 1970

Re. 26,719	3,478,593	3,487,482	3,492,333
3,009,927	3,479,183	3,487,930	3,492,351
3,424,777	3,479,318	3,487,958	3,492,377
3,426,024	3,479,815	3,488,521	3,492,407
3,436,210	3,481,937	3,488,686	3,492,456
3,438,777	3,481,991	3,488,732	3,492,772
3,440,201	3,483,186	3,488,772	3,492,829
3,444,975	3,484,281	3,489,468	3,493,108
3,447,362	3,485,055	3,489,780	3,493,180
3,452,175	3,485,117	3,489,732	3,493,205
3,453,279	3,485,518	3,490,637	3,493,257
3,456,237	3,485,652	3,490,659	3,493,304
3,459,005	3,485,653	3,491,032	3,493,505
3,460,713	3,485,795	3,491,092	3,493,593
3,461,104	3,485,796	3,491,098	3,493,609
3,461,120	3,485,828	3,491,117	3,493,628
3,464,725	3,485,842	3,491,129	3,493,678
3,466,302	3,485,917	3,491,376	3,493,981
3,468,919	3,485,945	3,491,487	3,494,007
3,470,217	3,486,193	3,491,838	3,494,113
3,472,799	3,486,209	3,491,884	3,494,446
3,472,897	3,486,546	3,492,219	3,495,163
3,475,359	3,486,622	3,492,225	3,496,143
3,476,490	3,487,073	3,492,247	3,496,582
3,478,570	3,487,178	3,492,298	3,504,879

Disclaimer and Dedication

3,490,914.—George K. Okumura, and Jack E. Wilkinson, Fresno, Calif. PREPARATION OF VEGETABLE PROTEIN-CONTAINING FOOD PRODUCTS. Patent dated Jan. 20, 1970. Disclaimer and dedication filed June 27, 1969, by the inventors.

Hereby disclaim and dedicate to the Public the term of the patent subsequent to Sept. 3, 1985.

Foreign Patents Received in the Search Center as of
May 31, 1970

Source	Date received	Highest number
Australia: (Abstracts)	Apr. 27, 1970	64,298/69
(Patents)	May 6, 1970	292,325
Austria	May 6, 1970	288,438
Belgium	May 11, 1970	687,600
Canada	May 25, 1970	839,844
Czechoslovakia	May 18, 1970	131,000
Denmark: (Applications)	Apr. 24, 1970	116,575
(Patents)	Apr. 24, 1970	115,170
East Germany	May 25, 1970	72,495
Finland: (Applications)	May 25, 1970	42,267
(Patents)	Mar. 9, 1970	37,420
France: (Patents)	May 26, 1970	2,010,200
(Additions)	May 22, 1970	94,850
(Medicaments)	May 22, 1970	6,649 M
Germany: (Auslegeschriften)	Feb. 5, 1970	1,815,403
(Offenlegungsschriften)	Apr. 27, 1970	1,942,635
(Patentschriften)	Apr. 27, 1970	1,300,427
Great Britain	May 25, 1970	1,188,919
India	June 18, 1969	102,055
Ireland	May 25, 1970	28,810
Italy	Apr. 1, 1970	710,000
Japan: (Patents)	May 20, 1970	10,920/70
(Utility Models)	May 18, 1970	8,000/70
Korea: (Patents)	May 15, 1970	309/69
(Utility Models)	May 15, 1970	1,047/69
Netherlands: (Applications)	Apr. 13, 1970	11,604/69
(Patents)	May 11, 1970	128,422
Norway: (Applications)	May 18, 1970	119,266
(Patents)	May 18, 1970	119,173
Poland	Apr. 21, 1970	59,324
Romania	Mar. 11, 1970	52,087
Sweden: (Applications)	May 18, 1970	322,258
(Patents)	May 13, 1970	319,137
Switzerland	May 25, 1970	486,823
U.S.S.R.	Mar. 19, 1970	247,877
Yugoslavia	May 20, 1970	28,788

Belgium: First printed 493,079/1950
 Canada: First printed 445,931/1948
 Czechoslovakia: Not received between 81,300/1952 and 81,901/1959
 Hungary: First received 5,792/1896
 Latest 140,582/1951
 U.S.S.R.: Not received between 2,496/1928 and 116,000/1958

New Applications Received During April 1970

Patents	9009
Designs	599
Plant Patents	6
Reissues	49
Total	9663

Issue—June 30, 1970

Patents	1309—No. 3,517,392 to No. 3,518,700, incl.
Designs	55—No. 2,217,893 to No. 2,17,947, incl.
Plant Patents	3—No. 2,974 to No. 2,976, incl.
Reissues	9—No. 26,921 to No. 26,929, incl.
Def. Pub.	7—No. T875,024 to No. T875,030, incl.
Total	1383

Index of Consolidated Listing of Recent Official Gazette Notices

Following is a descriptive word index for the Consolidated Listing of Recent Official Gazette Notices which appeared in the January 13, 1970 OFFICIAL GAZETTE. The index refers to all item numbers of pertinent notices related to the key word referenced.

A	
Abandonment:	
Application at Board of Appeals	108
Abstracts, Patent	118, 119, 121
Actions, Office:	
Attachments to	10
First Page Form	14, 70
Amendments:	
After Allowance	84
After Final Rejection	66
Basis in Original Disclosure	81
Claims—Brackets	83
Examiners' Amendment Practice	82
Fees	24
Hand Delivery of	9, 68
Appeals	83, 66, 99-106
Abandonment of Application Before Board of Appeals	108
Attorney Appearances Before Board of Appeals	83
Briefs, Reply	109
Dismissal	101
Examiner Appearances Before Board of Appeals	106, 107
Reopening Prosecution After Decision by Board of Appeals	67
Assignee, Issue of Patent to	144
Assignments:	
Accessibility of Records	20
Notification re Conflict	21
Recording of Certified Copies	19
C	
Certificates of Correction	114-117
Citation of References	122, 124, 125, 127
Claim Interpretation	80
Claims:	
Dependent	25
Method	76
Non-Elected	88, 92
Classification, Patent	128
Computer Programs:	
Examination of Applications	75
Protection Study	189, 140
Continuing Applications:	
Chains of	49
Reference Citations in	127
Res Judicata	71
Streamline Continuations	43-46
Convention Cases:	
German Requirements	51
Correspondence:	
Necessary Information on Papers	4-7, 11
Patent Office Mailing Address	8, 15
D	
Declarations	84, 85
Defensive Publication Program	133-137
Dependent Claims	25, 73, 74
Trial Multiple Dependent Claim Practice	73, 74
Deposit Accounts	23, 26-28
Design Patent Practice	77
Diligence	3
Directory of Registered Patent Attorneys/Agents	16
Disclaimers, Terminal	63-65, 132
Disclosure, Application	38
Disclosure Document Program	142
Divisional Applications	87
Double Patenting	63-65, 132
Drawings	52-54
Drug Guidelines	72
E	
Effective Date of U.S. Patent	47
Election of Species	66, 88-92
Examiners' Amendment Practice	82
Extensions of Time	95, 96, 105

F	
Fees	24-27, 29-31
Filing Date:	
Incorporation by Reference	40
Photoprints as Drawings	52
Plant Patent Applications	37
Final Rejection:	
First Action	69
Non-Final Second Action	62
Prosecution After Final Rejection	66, 68
Time for Response	97, 98
First Action Procedure	70
Foreign Exchange Programs:	
Philippines-U.S.	145
Swedish-U.S.	146
Foreign, Miscellaneous Matters:	
Citations of Foreign Patents	122
Informal Applications	55
Licenses To File Applications in Foreign Countries	143
Orders for Copies of Foreign Patents	17
Priority Reissue Applications	41
Priority of Continuing Applications	50
Format:	
Front Page of Patent, Proposed	141
Patent Headings	48
Requesting Streamline Continuation Application	45
Function of Machine—Rejection	76
G	
German Requirements in Convention Cases	51
Guidelines:	
Disclosures of Utility in Drug Cases	72
Examination of Computer Programs—Rescission of Guidelines	75
Incorporation by Reference in Patent Applications	39
Model Patent Application	36
Preparation of Patent Abstracts	119
Preparation of Patent Application Disclosures	38
H	
Headings, Patent	48
Hearings:	
Appeal	83, 106, 107
Trademark	130
I	
Incorporation by Reference	39, 40
Informal Applications of Foreign Applications	55
Inquiries, Status	2, 8
Interference Practice	110-113
Interviews	9, 68, 85, 86
Inventors, Change of	93
L	
Licenses To File Applications in Foreign Countries	143
M	
Mailing Address, Patent Office	8, 15
Multiple Dependent Claim Practice—Trial	73, 74
N	
Non-Elected Claims	88, 92
Non-Final Second Action Rejection Practice	62
O	
Orders:	
Defensive Publications	137
Foreign Patents and/or Published Applications	17
References Cited in SSP Actions	126
P	
Patentability Brief	78, 79
Patentees, List of	18
Petition To Revive Practice	3, 148
Photoprints as Drawings	52
Plant Patent Applications	37

P—Continued

R	
Recording of Instruments	19
References	122-128, 137
Reissue Applications—Foreign Priority	41
Rejections:	
Final Rejection—Time for Response	97, 98
First Action Final	69
Mere Function of Machine	76
Non-Final Second Action	62
Not Based on Prior Art	57
Prosecution After Final Rejection	66, 68
Res Judicata	71
Technical	56
Reopening Prosecution After Board of Appeals Decision	67
Res Judicata	71
Restriction and Election	66, 88-91, 94
Revival	3, 148
Rule Changes:	
Amendments After Allowance (Rule 312)	84
Certificates of Correction (Rules 322, 323)	116
Declaration in Lieu of Oath (Rule 68)	84, 85
Defensive Publication Program (Misc. Rules)	133
Defensive Publication Program, Extension (Proposal)	136
Export of Technical Data (Rule 5.19)	143
Fees and Charges (Misc.) (Rule 21)	31
Housekeeping Changes (Misc. Rules)	147
Interference Practice (Misc. Rules)	113
Issuance of Patent to Assignee (Rule 384)	144
Patentability Brief (Proposal) (Rule 98)	78, 79
S	
Search Exchange Programs:	
Philippines-U.S.	145
Swedish-U.S.	146
Search Room	22
Secrecy of Inventions	143
Special Treatment of Applications:	
Special Examining Procedure for Certain New Applications	58-60
Applications To Be Taken Up Special	61
Species, Election of	88-92
Status:	
Information re Pending Applications	1
Inquiries	2, 3
Streamline Continuation Practice	43-46
T	
Technical Rejections	56, 57
Telephone Practice	86, 88-91
Time for Response	95-98
Trademarks	129-131
U	
U.S. Patent, Effective Date of	47
W	
Withdrawal of Attorney	32
Withdrawal of Final Rejection After Notice of Appeal to Board of Appeals	102

June 3, 1970.

RICHARD A. WAHL,
Assistant Commissioner.

Dedications

3,197,241.—*Erik W. Anthon*, Kensington, Calif. COUPLING DEVICES. Patent dated July 27, 1965. Dedication filed Mar. 2, 1970, by the assignee, American Optical Corporation.

Hereby dedicates the remaining term of the patent to the Public.

3,282,431.—*Hans Baruch, Berkeley, and Delmy Travaglio*, Kensington, Calif. SAMPLE CONVEYING AND CONDITIONING UNIT. Patent dated Nov. 1, 1966. Dedication filed Mar. 2, 1970, by the assignee, American Optical Corporation.

Hereby dedicates the remaining term of the patent to the Public.

3,293,885.—*Delmy Travaglio*, Kensington, Calif. CYCLE TIMERS. Patent dated Dec. 20, 1966. Dedication filed Mar. 2, 1970, by the assignee, American Optical Corporation.

Hereby dedicates the remaining term of the patent to the Public.

3,323,058.—*Erik W. Anthon*, Kensington, Calif. AUTOMATIC REBALANCE MEASURING SYSTEM WITH ITS INDICATOR COUPLED BY ECCENTRIC DRIVE MEANS FOR SCALE DISTRIBUTION CONTROL. Patent dated May 30, 1967. Dedication filed Mar. 2, 1970, by the assignee, American Optical Corporation.

Hereby dedicates the remaining term of the patent to the Public.

Service by Publication

Richard M. Segedi

In accordance with Rule 47 of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on March 12, 1969, of an application for patent entitled "Artificial Sea Water Solution and Composition for Producing the Same," on behalf of Richard M. Segedi, whose last known address is 1695 Ridgewick Drive, Wickliffe, Ohio 44092. The application was made in compliance with Rule 47(a) and 35 U.S.C. 116 by William B. Kelly without execution by the said Richard M. Segedi. Notice of the filing directed to the above noted address has been returned undelivered.

Any action to be taken by the said Richard M. Segedi in connection with the said application must be taken within thirty days of the publication of this notice.

RICHARD A. WAHL,
Assistant Commissioner of Patents.

David G. Walker

In accordance with Rule 47(b) of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on September 3, 1968, of an application for patent entitled "Bimetallic Salts and Derivatives Thereof, Their Preparation and Use in the Complexing of Ligands," on behalf of David G. Walker, whose last known address is 904 Fleetwood Drive, Baytown, Texas. The application was made in compliance with Rule 47(b) and 35 U.S.C. 118 by Esso Research and Engineering Co. without execution by the said David G. Walker. Notice of the filing directed to the above noted address has been returned undelivered.

Any action to be taken by the said David G. Walker in connection with the said application must be taken within thirty days of the publication of this notice.

RICHARD A. WAHL,
Assistant Commissioner of Patents.

Divisional Application Papers

In the interest of expediting the processing of newly filed divisional applications, filed as a result of a restriction requirement, applicants are requested to include the appropriate Patent Office classification on the papers submitted.

The appropriate classification for the divisional application may be found in the office communication of the parent case wherein the requirement was made. It is suggested that this classification designation be placed in the upper right hand corner of the letter of transmittal accompanying these divisional applications.

RICHARD A. WAHL,
Assistant Commissioner of Patents.

June 5, 1970.

Disclaimers

3,279,111.—*John L. Morton*, Endicott, N.Y. FILM RECORD CARD AND METHOD OF MAKING SAME. Patent dated Oct. 18, 1966. Disclaimer filed Mar. 6, 1970, by the assignee, *International Business Machines Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, 4 and 6 of said patent.

3,391,405.—*George C. Wiswell, Jr.*, Southport, Conn. DIVING SUIT. Patent dated July 9, 1968. Disclaimer filed Mar. 18, 1970, by the inventor.

Hereby enters this disclaimer to claims 1, 4, 5 and 6 of said patent.

3,451,006.—*Orrin H. Grangaard, Jr.*, St. Paul, Minn. VARIABLE GAIN AMPLIFIERS. Patent dated June 17, 1969. Disclaimer filed Mar. 17, 1970, by the assignee, *Honeywell Inc.*

Hereby enters this disclaimer to claims 1, 2, 3, and 4 of said patent.

3,465,983.—*Lawrence T. Taggart*, Bakersfield, Calif. SEAT BELT RETRACTOR. Patent dated Sept. 9, 1969. Disclaimer filed Mar. 9, 1970, by the assignee, *Borg-Warner Corporation*.

Hereby enters this disclaimer to claim 5 of said patent.

3,504,682.—*David Howard Aylott*, Welwyn Garden City, England. APPARATUS FOR CLEANING ARTIFICIAL EYELASHES. Patent dated Apr. 7, 1970. Disclaimer filed Feb. 2, 1970, by the assignee, *Eylure Limited*.

Hereby disclaims the terminal portion of the term of the patent subsequent to Jan. 27, 1987.

3,511,034.—*Raymond K. Strasel*, Winthrop Harbor, Ill. ARTICULATE CONNECTION FOR A LAWN MOWER ON A TRACTOR. Patent dated May 12, 1970. Disclaimer filed Mar. 13, 1970, by the inventor and the assignee, *Jacobsen Manufacturing Company*.

Hereby disclaim the terminal portion of the term of the patent subsequent to Feb. 25, 1986.

3,511,035.—*Raymond K. Strasel*, Winthrop Harbor, Ill. LIFT MEANS FOR TRACTOR-MOUNTED LAWN MOWERS. Patent dated May 12, 1970. Disclaimer filed Mar. 13, 1970, by the inventor and the assignee, *Jacobsen Manufacturing Company*.

Hereby disclaim the terminal portion of the term of the patent subsequent to Feb. 25, 1986.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner
F. H. BRONAUGH, Deputy Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF JUNE 16, 1970

PATENT EXAMINING GROUPS	Actual Filing Date of Oldest New Case Awaiting Action
CHEMICAL EXAMINING GROUPS	
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—M. SHERMAN, Director.....	7-05-68
Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	
GENERAL ORGANIC CHEMISTRY, GROUP 120—L. MARCUS, Director.....	2-19-68
Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING, GROUP 140—L. J. BERCOVITZ, Director.....	8-08-68
Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—A. P. KENT, Director.....	6-20-68
Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Director.....	3-04-68
Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	
ELECTRICAL EXAMINING GROUPS	
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—N. ANSHER, Director.....	4-01-69
Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	
SECURITY, GROUP 220—S. BOYD, Director.....	8-07-68
Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—J. F. COUCH, Director.....	8-29-68
Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Director.....	11-21-68
Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	
PHYSICS, GROUP 280—R. L. EVANS, Director.....	6-07-68
Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	
DESIGNS, GROUP 290—S. BOYD, Director.....	9-05-69
Industrial Arts; Household, Personal and Fine Arts.	
MECHANICAL EXAMINING GROUPS	
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Director.....	1-15-69
Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Apparatuses; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—D. J. STOCKING, Director.....	8-06-68
Manufacturing Processes; Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bending, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Director.....	12-06-68
Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletary; Printing; Typewriters; Stationary; Information Dissemination.	
HEAT, POWER AND FLUID ENGINEERING, GROUP 340—C. F. GAREAU, Director.....	6-02-69
Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission; Fluid Handling; Lubrication; Joint Packing.	
CONSTRUCTIONS, SUPPORTS, TEXTILES, CLEANING, GROUP 350—T. J. HICKEY, Director.....	2-11-69
Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures; Centrifugal Separations; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes; Sewing Machines; Winding and Reeling.	
Total number of pending applications (excluding Designs).....	184,056
Total number of Design applications pending.....	2,781

Expiration of patents: The patents within the range of numbers indicated below expire during June 1970, except those which may have expired earlier due to shortened terms under the provisions of Public Law 860, 79th Congress, approved August 8, 1946 (60 Stat. 940) and Public Law 619, 86th Congress, approved August 22, 1964 (68 Stat. 764), or which may have had their terms curtailed by disclaimer under the provisions of 35 U.S.C. 263. Other patents, issued after the dates of the range of numbers indicated below, may have expired before the full term of 17 years for the same reasons, or have lapsed under the provisions of 35 U.S.C. 151.

Patents..... Numbers 2,640,195 to 2,644,155, inclusive
Plant Patents..... Numbers 1,191 to 1,200, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

WALTER MUNCH, JR. v. RICHARD H. PETERSON

No. 8228. Decided January 29, 1970

[57 CCPA —; 420 F.2d 758; 164 USPQ 343]

1. INTERFERENCE—CONSTRUCTION OF COUNT—DOUBLE INCLUSION OF ELEMENTS—AMBIGUOUS COUNT—*In re Kelley* Distinguished.

"However, the problem of 'double inclusion' remains. On that point, the recitations of the 'source' and of the 'restoring circuit' including the 'decay circuit' are less broad than the mere 'means' expressions in *Kelley*, which expressions were there held not to amount to an improper double inclusion of elements with the claims being interpreted broadly without regard to the patent in which they originated. Thus, *Kelley* is not necessarily controlling authority for holding the count to be supported by Munch. On the other hand, the fact that Munch's circuit provides all of the functions required by the count dictates that a contrary holding not be made without considering all aids to interpretation of the count that are appropriate. We think the circumstances of the dispute here require the conclusion that the count is ambiguous with respect to the double inclusion question and warrants recourse to the Peterson patent for interpretation."

2. SAME—PATENT AND APPLICATION—RIGHT TO MAKE—DOUBLE INCLUSION OF ELEMENTS.

"Thus, as Munch contends, double inclusion of elements is necessary in applying the count to the Peterson [patented] disclosure as well as to Munch's circuit. Moreover, the part of Peterson that must be included twice is, as in Munch, a portion of the signal 'source.' Under the particular circumstances, we think that the breadth of the count is such that a reasonable construction of it requires the conclusion that it is supported by the Munch disclosure."

APPEAL from Patent Office. Interference No. 94,547.

REVERSED.

Hurvitz & Rose (Hyman Hurvitz, of counsel) for appellant.

Donald H. Sweet for appellee.

Before RICH, Acting Chief Judge, ALMOND, BALDWIN, LANE, Associate Judges, and RAO, Chief Judge, sitting by designation

LANE, J., delivered the opinion of the court.

This appeal is from the decision of the Board of Patent Interferences awarding priority to Peterson as to the single count in Interference No. 94,547.

The sole issue is Munch's right to make the count, the Board's award of priority resting wholly on its decision that the Munch application directly involved in the interference does not support the count.

The count originated as claim 22 in Peterson Reissue Patent No. 25,515, granted January 21, 1964, of an original patent issued on an application filed May 16, 1958. Munch copied the count in directly involved application Serial No. 4,444, filed January 25, 1960, and was made senior party upon being accorded the benefit of the filing date of his copending application Serial No. 657,085, filed May 6, 1957. Both parties filed testimony in the form of affidavits pursuant to a stipulation, and Peterson stated before the Board that he relies only on the question of Munch's right to make, which he had previously raised unsuccessfully by his motion to dissolve the interference. The invention in issue relates to circuits for use in an electronic organ to provide signals corresponding to the different notes of the musical

JUNE 30, 1970

U. S. PATENT OFFICE

705

scale for audible reproduction through conventional means. In normal electronic organ playing, the tones cease almost simultaneously with release of the keys by the player, unless some type of sustaining equipment is employed. The invention here provides a special sustaining effect whereby the tone volume decays rapidly at first, and then decays less rapidly down to an inaudible level. The single count, separated into clauses, reads as follows:

In an electronic musical instrument, in combination:

a series of signal sources tuned to the note of the musical scale;

each source having a control terminal and being adapted to deliver output signal having an amplitude which is a function of the potential of said terminals;

a source of D.C. activating potential;

a playing key operatively connected with each control terminal and with said D.C. source, for changing the potential of said terminal from an original inactive potential to full activating potential;

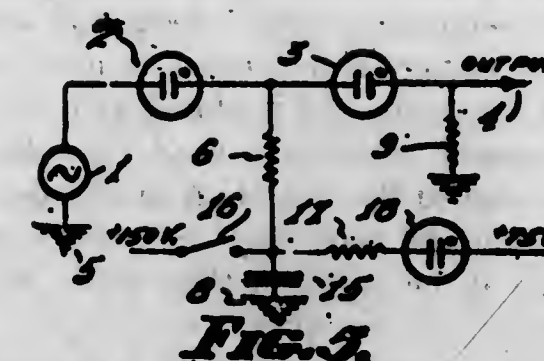
electrical energy storage means connected to each control terminal;

and a restoring circuit connected to each control terminal for returning said terminal to inactive potential when potential from said D.C. source is withdrawn;

said restoring circuit including a decay circuit connected to each control terminal, which normally returns said terminal to inactive potential in a predetermined period of time;

and additional means connected to said decay circuit for speeding up the decay down to a predetermined intermediate potential.

A circuit representative of those providing the various signal sources in the Munch instrument is shown in FIG. 5 of his application drawings, reproduced below:



The Munch circuit includes an oscillator or generator 1 operating continuously to produce a peak-to-peak voltage of between 20 and 100 volts with about equal positive and negative peaks. One terminal of the generator is connected to a common return, hereinafter designated ground, at 5 while the other terminal is connected through two neon bulbs 2 and 3 in series to an output terminal 4 which is connected through a load resistor 9 to ground. The neon bulbs 2 and 3 are described as of the NE-3 type having a firing potential of 70 volts and an extinguishing potential of 50 volts. A second resistor 6 is connected at one terminal between the two neon bulbs 2 and 3 and at the other terminal to the ungrounded terminal of a capacitor 15, the latter having its other terminal grounded at 8. A source of direct current at 150 volts potential is connected to the ungrounded terminal of the capacitor through a switch 16. Also, a resistor 17 and a neon bulb 18 are connected in series between the ungrounded terminal of the capacitor 15 and a direct current source at 75 volts.

With switch 16, which is operated by a playing key of an electronic organ, open, the alternating voltage output of the oscillator or generator 1 is insufficient to cause the neon bulb 2 to fire. The neon bulb 3 likewise will not fire and no output signal is provided at terminal 4.

Closing switch 16 impresses a potential across the capacitor 15 and charges the capacitor. The resulting potential at its ungrounded terminal causes one of the neon bulbs 2 or 3 to fire depending on the polarity of the voltage of the generator 1 at the moment. When the neon bulb 3 is firing, current passes through load resistor 9 providing an output signal at 4. When the generator output reaches a sufficient negative potential, neon bulb 2 fires through resistor 6 and through the generator; the potential across neon bulb 3 drops so that the bulb is extinguished and the signal voltage at terminal 4 drops to zero. So long as the switch 16 remains closed, the bulbs 2 and 3 fire alternately with swings of the generator voltage from negative to positive and back again. The signal at the output terminal 4 will be of square pulse form having a frequency corresponding to that of the generator and having a uniform maximum amplitude.

When the key switch 16 is opened, the capacitor 15 will be charged to substantially 150 volts and the alternate firing of the bulbs 2 and 3 will continue for a while with the charge on the capacitor gradually leaking off through the bulb discharge circuits until the charge is reduced to a potential too low to continue to cause firing of the bulbs. During this period, the amplitudes of the pulses at output 4 will gradually reduce or decay, providing a decrease in the volume of the tone, as contrasted to an abrupt cessation of tone.

The function of the circuit made up of resistor 17, neon bulb 18 and the 75 volt source is to change the rate of decay of the pulses at output 4, and hence the output volume, by causing a rapid initial rate of decay followed by a period of slower decay. This change in the decay rate provides percussive sound effects that are sometimes desired. Thus, sufficient voltage is impressed on neon bulb 18 to render it conductive while the switch 16 is closed and, after the switch is opened, the bulb remains conductive until its voltage drops below extinguishing value due to the reduction in charge on capacitor 15. During the period that the neon bulb 18 is conducting, it causes a more rapid discharge of the capacitor than would be provided by the previously mentioned discharge circuit through the elements of the signal source itself. After the neon bulb 18 is extinguished, however, the discharge of the capacitor 15 continues at the slower rate until its potential is insufficient to render the bulbs 2 and 3 conductive and the output signal at point 4 drops to zero.

Although the main issue here revolves about the last three clauses of the count as set out above, it is first necessary to consider which elements of the Munch device are necessary to constitute each signal source of the count. As one alternative, Munch takes the position, previously adopted by the Examiner in denying Peterson's motion to dissolve, that his generator 1 satisfies the requirements of the source. We cannot accept that view. The signal source must have "a control terminal" connected to other recited elements in specified relationships and must "deliver [an] output signal having an amplitude which is a function of the potential of said [control] terminal." It is apparent that the generator 1, which operates with a continuous periodic output, is not disclosed as having a control terminal meeting the count requirements.

The Board noted the requirements for the signal source just mentioned and concluded:

* * * It is our opinion that the "source" must be read as including the oscillator or generator 1, the neon bulbs 2 and 3 and the resistor 6.

We agree. Although not controlling with respect to our decision, it seems to us that the load resistor 9 is also a necessary part of the signal source. As to the other elements in the first part of the count, the point between the lower terminal of resistor 6 and the ungrounded terminal of capacitor 15 constitutes the "control terminal" of the source, the 150 volt supply line is the "source of D.C. activating potential," the switch 17 is at least part of the "playing key," and capacitor 15 is the "electrical energy storage means" connected to the control terminal.

Turning to the terms of the count pertaining to the determinative issue, the Board observed that some components of the signal source must additionally be relied on to satisfy the requirement for "a restoring circuit connected to each control terminal * * *." Designating this a question of double inclusion, i.e., "whether it is proper to satisfy two different requirements of an interference count by a single element or subcombination," the Board referred to *In re Kelley*, 49 CCPA 1359, 305 F.2d 909, 134 USPQ 397 (1962), for guidance. It cited the conclusion in that case that:

Automatic reliance upon a "rule against double inclusion" will lead to as many unreasonable interpretations as will automatic reliance upon a "rule allowing double inclusion." The governing consideration is not *double inclusion*, but rather is what is a reasonable construction of the language of the claims. [Court's emphasis.]

Endeavoring to apply that reasoning to the present case, the Board referred to the circuit disclosed in the Peterson patent and found Munch's circuit equivalent thereto. However, it commented that "the doctrine of equivalents does not apply in interferences." It then concluded:

Here we do not have merely a broad requirement for means provided to restore the control terminal to inactive potential. Rather, it is a specific requirement for "a restoring circuit connected to each control terminal." Further, it is required that such restoring circuit include a decay circuit. In our opinion this clearly expresses an intent to limit the count to a circuit of the type specified in addition to and independent of the previously recited signal source. * * *

Peterson emphasizes a different point before us. He contends that the recitations of the "restoring circuit," the "decay circuit" which the restoring circuit is defined as including, and the "additional means" require *three* instrumentalities rather than just *two*, to which he regards the Munch circuit to be limited.

Viewing the count as broadly as is reasonable, as we must do where it is not ambiguous, we are satisfied that the recitation of the "restoring circuit * * * for returning said [control] terminal to inactive potential" should be interpreted as including both the "decay circuit" and the "additional means connected to said decay circuit for speeding up the decay down to a predetermined intermediate potential." Peterson admits that Munch includes the "additional means" separately from the "source" in his resistor 17, neon bulb 18 and the 75 volt supply.

[1] However, the problem of "double inclusion" remains. On that point, the recitations of the "source" and of the "restoring circuit" including the "decay circuit" are less broad than the mere "means" expressions in *Kelley*, which expressions were there held not to amount to an improper double inclusion of elements with the claims being interpreted broadly without regard to the patent in which they originated. Thus, *Kelley* is not necessarily controlling authority for holding the count to be supported by Munch. On the other hand, the

fact that Munch's circuit provides all of the functions required by the count dictates that a contrary holding not be made without considering all aids to interpretation of the count that are appropriate. We think the circumstances of the dispute here require the conclusion that the count is ambiguous with respect to the double inclusion question and warrants recourse to the Peterson patent for interpretation. See *Smith v. Wehn*, 50 CCPA 1544, 318 F.2d 325, 138 USPQ 52 (1963).

The circuit disclosed in the Peterson patent includes signal sources for the different musical notes, each comprising an electronic oscillator which is normally inactive, but, upon application of a direct current actuating potential to a control terminal therein, delivers an output signal having an amplitude which is a function of the potential of the control terminal. A capacitor connected to the control terminal charges to activating potential after closure of a key-operated switch connecting a direct current source to the control terminal. Also connected to the control terminal side of the switch are circuit elements including a second capacitor connected at its other terminal through a resistor to the direct current activating source, and a separate resistor connected at its other terminal to ground. Additionally a circuit extends from the same side of the switch through a diode and resistor to a lead wire having a potential such that, upon opening of the switch, the circuit offers a path for rapid decay of control terminal potential until it reaches a predetermined value between the initial operative potential of the terminal and a potential insufficient to maintain the oscillation. The last circuit provides the "additional means" of the count like the circuit through the neon bulb 18 of Munch and need not be considered further.

Aside from activating the "additional means," opening of the switch in Peterson results in other elements of the described circuit also contributing to the restoration of the control terminal potential to inoperative level. First, a path through the oscillator or source circuit to ground normally tends to discharge the charged capacitor. Also, a circuit acts to charge the second capacitor in a direction to return the control terminal to inoperative potential. The latter circuit extends from the direct current supply through the associated resistor and capacitor to the control terminal side of the switch and from that point through parallel paths including one through a portion of the signal source oscillator to ground and another through the aforementioned separate resistor to ground. There is no suggestion that the latter path through the separate resistor can be used alone. On the contrary, the Peterson specification states that "nearly all" of the charging current for the second capacitor "comes through the oscillator circuit" instead of through that resistor.

We therefore think it plain that the Board erred in finding the recitation of the "restoring circuit" and the "decay circuit" included therein to express an intent "to limit the count to a circuit of the type specified in addition to and independent of the recited signal source." Rather, the part of the Peterson circuit that functions as "a restoring circuit * * * for returning said [control] terminal to inactive potential when potential from said D.C. source is withdrawn" and the "decay circuit * * * which normally returns said terminal to inactive potential in a predetermined period of time" clearly includes a circuit through the signal source or oscillator to ground. Even though a resistor which is not part of the signal source is also

connected to the control terminal side of the switch, and other elements in addition to the source are provided, the period of time which would normally be taken for restoring the potential is primarily controlled by a path through the oscillator or signal source.

[2] Thus, as Munch contends, double inclusion of elements is necessary in applying the count to the Peterson disclosure as well as to Munch's circuit. Moreover, the part of Peterson that must be included twice is, as in Munch, a portion of the signal "source." Under the particular circumstances, we think that the breadth of the count is such that a reasonable construction of it requires the conclusion that it is supported by the Munch disclosure.

Peterson asserts that, in his reissue application, he sought to obtain two claims which he regards as defining a "two-part" instrumentality for returning the control terminal to inactive potential and which he considers to be supported by Munch. We do not see that those claims, which are merely set out in the record unaccompanied by the prosecution history, demonstrate either that the present claim requires a three-part instrumentality, or that it is not reasonable to interpret the count as finding support in Munch despite any double inclusion of elements.

The decision is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

TECHNIC, INC. v. SEL-REX CORPORATION

No. 8190. Decided January 29, 1970

[57 CCPA —; 419 F.2d 1331; 164 USPQ 342]

1. TRADEMARK—CONFUSING SIMILARITY—"RHODEX" AND "RHODIUM X-LESS" FOR RHODIUM SOLUTIONS.

"Technic, Inc., applicant below, appeals from the decision of the Trademark Trial and Appeal Board * * * holding that appellant's mark, RHODIUM X-LESS, so resembles opposer-appellee's previously used and registered mark, RHODEX, that, as applied to applicant's goods [both marks being for rhodium solutions], there would be a likelihood of confusion or mistake. Applicant's petition for reconsideration was denied by the Board. We find no reversible error in the Board's opinion and affirm its decision."

2. SAME—SAME—SAME.

"Appellant's reasons of appeal urge that the Board erred in holding that there is likelihood of confusion, that applicant's mark RHODIUM X-LESS includes opposer's mark RHODEX, and in failing to recognize that RHODIUM X-LESS is based on the name of an element while RHODEX is arbitrary. Appellant urges that its products are technological products of a highly sophisticated character, extremely costly, and sold to very discriminating purchasers in an extraordinarily specialized market. Appellant admits that its solutions of rhodium compete in the market with opposer's solutions of rhodium, but urges that chemists producing rhodium plate are the most discriminating class of buyers imaginable and hence would not be confused. We are not persuaded that this necessarily follows. The likelihood of confusion as to source may be as great or greater than the likelihood of confusion as to the specific character of the goods."

3. SAME—SAME—DOUBT RESOLVED IN FAVOR OF PRIOR USER.

"Our review of the record, the briefs and the arguments of counsel does not convince us of error in the decision of the Board. The parties have stipulated an expanding use of the mark RHODEX for electroplating compositions since 1956 by the opposer prior to the first use of the mark RHODIUM X-LESS by the appellant. The respective products are in direct competition. Any doubt here as to actual confusion or as to likelihood of confusion must be resolved in favor of the prior user."

APPEAL from Patent Office. Opposition No. 45,308.

AFFIRMED.

Thomas B. Graham, for appellant.

Stanley H. Lieberstein (*Frank L. Durr, Greene, Callmann & Durr*, of counsel) for appellee.

Before *RICH, Acting Chief Judge*, *MATTHEWS, Judge*, sitting by designation, *ALMOND, BALDWIN* and *LANE, Associate Judges* *LANE, J.*, delivered the opinion of the court.

[1] *Technic, Inc.*, applicant below, appeals from the decision of the Trademark Trial and Appeal Board, 153 USPQ 135, holding that appellant's mark, RHODIUM X-LESS, so resembles opposer-appellee's previously used and registered mark, RHODEX, that, as applied to applicant's goods, there would be a likelihood of confusion or mistake. Applicant's petition for reconsideration was denied by the Board. We find no reversible error in the Board's opinion and affirm its decision.

The opposition involves appellant's application Serial No. 185,746, filed January 27, 1964, to register on the Principal Register, RHODIUM X-LESS as a trademark for "a rhodium solution for the deposition of rhodium." First use June 3, 1963, is claimed. The word RHODIUM apart from the mark was disclaimed, and appellant's mark was published in the OFFICIAL GAZETTE July 6, 1965.

The opposer bases its opposition to registration of appellant's mark on its own Registration No. 663,957, dated July 8, 1958, of its mark RHODEX for "electroplating composition and solution," claiming first use in 1956.

The relevant facts have been stipulated by the parties. The opposer-appellee and its predecessor have been engaged continuously in the development of precious metal electroplating solutions and in the sale thereof since 1947 in interstate and foreign commerce. Opposer began selling its patented low stressed rhodium plating compositions under the mark RHODEX in 1956, and has used this mark since that date on electroplating solutions or compositions for the plating of stress-free or compressively stressed rhodium. Opposer's total sales of RHODEX compositions exceeded one and one-half million dollars in the period 1957-1965. Opposer has advertised its RHODEX plating compositions in charts, booklets, newsletters and various monthly magazines.

The stipulated testimony of record shows that applicant-appellant and its predecessor have been engaged in the sale of precious metals, including rhodium, for use in electroplating since 1940, but that applicant has used its mark RHODIUM X-LESS for its strain-free or compressively stressed rhodium solution only since about 1965. Applicant's sales of RHODIUM X-LESS are said to exceed fifty thousand dollars per year.

Although applicant has contended that the goods are different, it is concluded from the record that both are compressively stressed rhodium solutions advertised in the same or similar publications and that they are sold generally to the same industrial users.

The Board held that neither party can claim any rights in the word RHODIUM, that there is nothing in the record to show that "X" or "EX" possesses any special meaning in the trade, and that RHODIUM X-LESS so resembles RHODEX that there would be likelihood of confusion or mistake. The Board also held that while the respective

products may be purchased by technically trained persons, this does not eliminate the likelihood that such persons might be confused or make a mistake. Appellant's request for reconsideration urging that the goods are functionally identical but chemically disparate, that the goods are not compatible and that they are patentably different, was denied.

[2] Appellant's reasons of appeal urge that the Board erred in holding that there is likelihood of confusion, that applicant's mark RHODIUM X-LESS includes opposer's mark RHODEX, and in failing to recognize that RHODIUM X-LESS is based on the name of an element while RHODEX is arbitrary. Appellant urges that its products are technological products of a highly sophisticated character, extremely costly, and sold to very discriminating purchasers in an extraordinarily specialized market. Appellant admits that its solutions of rhodium compete in the market with opposer's solutions of rhodium, but urges that chemists producing rhodium plate are the most discriminating class of buyers imaginable and hence would not be confused. We are not persuaded that this necessarily follows. The likelihood of confusion as to source may be as great or greater than the likelihood of confusion as to the specific character of the goods.

[3] Our review of the record, the briefs and the arguments of counsel does not convince us of error in the decision of the Board. The parties have stipulated an expanding use of the mark RHODEX for electroplating compositions since 1956 by the opposer prior to the first use of the mark RHODIUM X-LESS by the appellant. The respective products are in direct competition. Any doubt here as to actual confusion or as to likelihood of confusion must be resolved in favor of the prior user.

We, accordingly, affirm the decision of the Board.

AFFIRMED.

PATENT SUITS

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DEFENSIVE PUBLICATIONS

PUBLISHED JUNE 30, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O.G. 687. The abstracts of Defensive Publication applications are identified by distinctly numbered series and are arranged chronologically. The heading of each abstract indicates the number of pages of specification, including claims and sheets of drawings contained in the application as originally filed. The files of these applications are available to the public for inspection and reproduction may be purchased for 30 cents a sheet.

Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

T875,024 POLYMERIC ANTHRACENE KETONIC DERIVATIVES

Nathan H. Canter, 43 Eileen Way, Edison, N.J. 08817

Filed May 9, 1968, Ser. No. 728,042

Int. Cl. C08g 33/00

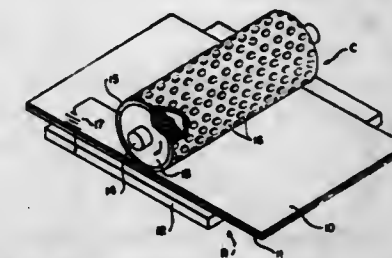
U.S. Cl. 260-78.4

No Drawing. 14 Pages Specification

An endoanthracene maleic anhydride (9,10-endoanthracene-11,12-dicarboxylic anhydride-9,10-dihydro) polymer and process for preparing said polymer which comprises reacting endoanthracene maleic anhydride in the presence of a Friedel-Crafts catalyst. Polymers of this invention are readily cured by compounds such as amines for ketonic groups and sulfonic acids, sulfonyl halides, acyl halides and primary or secondary hydrocarbon halides for aromatic groups which are reactive with ketonic and aromatic groups. The polymer has exceptional thermal stability and is suitable for use as a coating material for rocket nose-cones and the like.

material of such flange to apply uniform pressure across the side face of the film roll (24). The above described package protects film from dirt contamination and the like.

T875,026
CHARGING APPARATUS
Philip Thompson Scharf, 901 Elm Grove Road, Pittsford, N.Y. 14650
Filed Oct. 30, 1969, Ser. No. 872,573
Int. Cl. G03g 13/00
U.S. Cl. 250-49.5
1 Sheet Drawing. 7 Pages Specification



An apparatus is provided for induction charging of a receiver having a photoconductive surface. Proper spacing between the photoconductive surface of the receiver and the conductive surface of a charging roller is obtained in one embodiment by providing a photoresist insulative dot pattern on the conductive surface of the roller. Air ionization takes place in the spacing during application of a potential between the conductive surface of the charging roller and a conductive backing on the receiver. In another embodiment the proper spacing is provided by an insulative powder which is sprinkled or dusted onto the conductive surface prior to use.

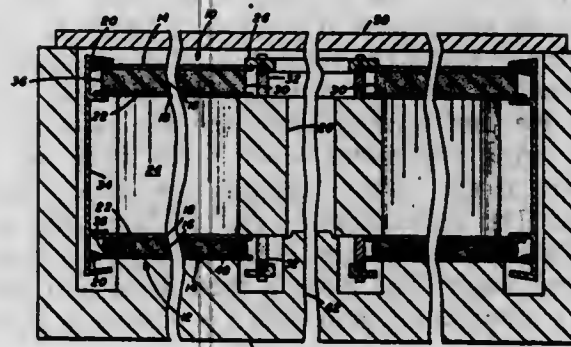
T875,025
PACKAGING FOR PHOTOGRAPHIC FILM
Clifford B. Bushnell, 746 Oakridge Drive; Heinz C. Altmann, 58 Bristol Ave.; and Henry L. West, 169 Rosemont Drive, all of Rochester, N.Y. 14617

Filed Oct. 13, 1969, Ser. No. 865,577

Int. Cl. B65d 85/67

U.S. Cl. 206-52

1 Sheet Drawing. 4 Pages Specification



A roll of film (24), especially a large flangeless one, is readied for "vertical axis" handling as follows: Top and bottom flanges (10, 12) are secured to the roll hub (28) while the axis of the roll is horizontal. Each flange has a protective semi-rigid member (14), a resilient member (18), and compressible foam (16) sandwiched therebetween. A band (34) provides a light-tight seal for the film (24). The roll is tilted so that its axis is vertical; and then placed in a container (38). The container (38) has a raised surface (40) on which the rigid member (14) of the flange (12) rests, thereby compressing the foam

T875,027
BISPHENOL POLYESTER COATINGS
Winston J. Jackson, Jr., and John R. Caldwell, both of P.O. Box 511, Kingsport, Tenn. 37662
Continuation of application Ser. No. 583,457, Sept. 30, 1966. This application Dec. 22, 1969, Ser. No. 883,664
Int. Cl. B32b 15/08
U.S. Cl. 161-186

No Drawing. 20 Pages Specification

An article comprising (A) a substrate and (B) a coating of a resinous composition being essentially composed of a mixture of (1) a polyepoxide resin and (2) a bisphenol polyester resin having a second-order transition temperature of at least 150° C. Alternately, the substrate may have a first coating of polyepoxide resin and a second coating or surface film of bisphenol polyester resin having a second-order transition temperature of at least 150° C. Examples of the bisphenol are: 4,4'-isopropylidenediphenol; 4,4'-(2-norbornyldene) diphenol, 4,4'-(hexahydro 4,7 methanoindan 5-ylidene) diphenol; 4,4'-(cyclohexylmethylene) diphenol; and 4,4'-(2-norbornylmethylene) diphenol. The substrate may be an electrical conductor, such as wire.

T875,028
SUPERSENSITIZED SILVER HALIDE
PHOTOGRAPHIC MATERIALS

Cynthia G. Ulbing and Mary Jane W. Brizee, both
 % Research Laboratories, Kodak Park, Rochester,
 N.Y. 14650

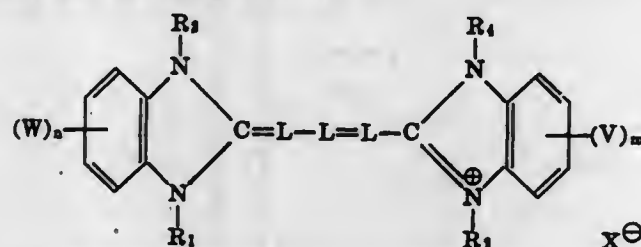
Filed Dec. 12, 1969, Ser. No. 884,745

Int. Cl. G03c 1/28

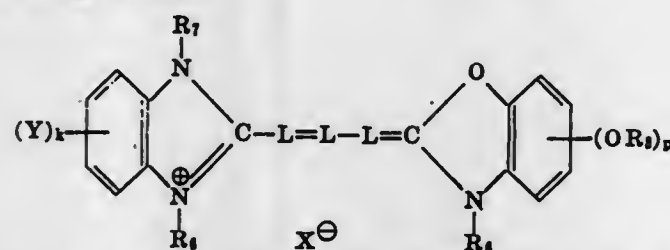
U.S. Cl. 96—104

No Drawing. 17 Pages Specification

Photographic silver halide emulsions are spectrally sensitized with a dye combination comprising (1) a benzimidazolocarbo-cyanine dye and (2) a benzimidazolooxocarbo-cyanine dye having an alkoxy group in the 5- or 6-position of the benzoxazole nucleus. A preferred dye combination comprises (1) a benzimidazolocarbo-cyanine dye having the following formula:



and (2) a benzimidazolooxocarbo-cyanine dye having the following formula:



wherein each L represents a methine linkage; n , m , k and p each represents a positive integer of from 1 to 2; R_1 , R_2 , R_3 and R_4 each represents an alkyl group; R_5 and R_6 each represents an unsubstituted lower alkyl group; R_7 represents an unsubstituted lower alkyl group or an aryl group; X represents an acid anion; and, V , W and Y each represents a halogen atom. A typical highly useful emulsion comprises a silver bromoiodide emulsion containing the combination of anhydro-5,5',6,6'-tetrachloro-1,1'-diethyl-3,3'-di(3-sulfobutyl)benzimidazolocarbo-cyanine hydroxide with anhydro-5,6-dichloro-1,3'-diethyl-5'-methoxy-(3-sulfopropyl)benzimidazolooxocarbo-cyanine hydroxide.

T875,029
MASKING OF ODORS OF PROCESSED PHOTOGRAPHIC ELEMENTS AND PROCESSING COMPOSITIONS

Raymond Snellman and Henry J. Fassbender, both
 % Kodak Park Division, Rochester, N.Y. 14650

Filed Jan. 2, 1970, Ser. No. 388

Int. Cl. G03c 5/30

U.S. Cl. 96—66

No Drawing. 13 Pages Specification

Certain odor masking compositions, such as carvone, ionone and pinene are incorporated into a photographic

element to mask any processing odor. The use of such compounds in the top layer of a photographic element adapted for rapid processing followed by stabilization is suitable. The element can contain a silver halide developing agent. Other compounds useful for masking odor can also be employed in a processing composition, such as an activator solution or stabilizer solution.

T875,030
LITHOGRAPHIC PRINTING PLATE

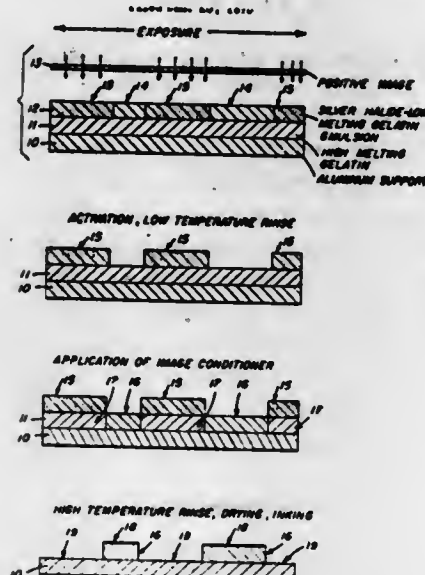
Thomas I. Abbott and Hugo F. Huedepohl, both
 % Kodak Park Works, Rochester, N.Y. 14650

Filed Jan. 26, 1970, Ser. No. 5,564

Int. Cl. G03f 7/06; G03c 11/12

U.S. Cl. 96—33

1 Sheet Drawing. 11 Pages Specification



An autopsitive lithographic printing plate is provided comprising a silver halide-low melting gelatin emulsion e.g. having a melting point of from about 60° F. to about 110° F. containing a tanning developer e.g. a polyhydroxy benzene developer such as 4-phenyl catechol, etc., coated on a layer of higher melting gelatin e.g. having a melting point of about 75° F. to about 125° F., on an aluminum support. The melting point upper layer is advantageously maintained at a value of about 10 to about 15° F. degrees below the melting point of the lower layer. After exposure and activation, the untanned areas of the top layer are washed away and the plate is treated with an image conditioner which reacts with the uncovered areas of the bottom gelatin layer rendering them oleophilic. The remainders of the top layer and the untreated areas of the bottom layer are then washed away with hotter water. The plate is then dried and inked to produce a lithographic plate which is positive with respect to the original.

REISSUES

JUNE 30, 1970

26,921

PHOTOGRAPHIC APPARATUS

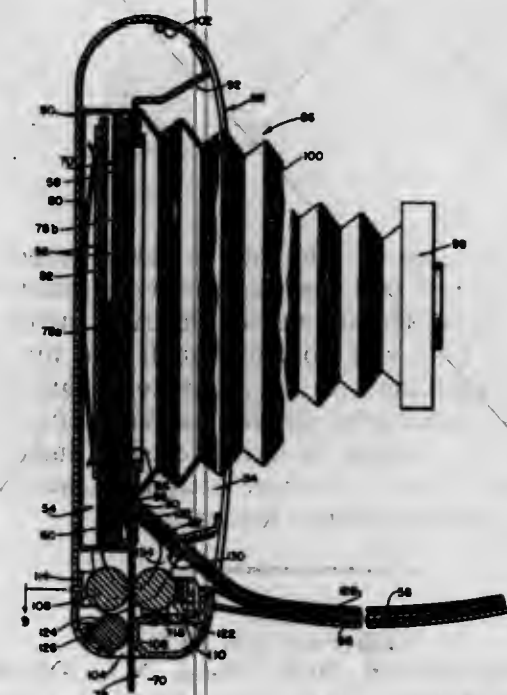
Irving Erlichman, Natick, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Original No. 3,152,529, dated Oct. 13, 1964, Ser. No. 48,666, Aug. 10, 1960. Application for reissue Oct. 12, 1965, Ser. No. 497,600

Int. Cl. G03b 17/52

U.S. Cl. 95—13

38 Claims



1. Photographic apparatus for exposing and processing photosensitive sheet materials, said apparatus comprising, in combination, a housing for holding a photographic film assemblage including photosensitive and second sheets movable with respect to one another into superposition with one another and a third sheet for connecting said photosensitive and second sheets and moving said sheets through said apparatus; said housing including means providing a first chamber for holding said third sheet and at least one of said photosensitive and second sheets, a second chamber for holding said one sheet apart from the other of said photosensitive and second sheets during exposure of said photosensitive sheet and a third chamber enclosing means for distributing a processing fluid between said photosensitive and second sheets during movement of said sheets in superposition through said third chamber; means for guiding said one sheet from an initial position in said first chamber, wherein said one sheet is disposed, prior to exposure of said photosensitive sheet, with one surface of said one sheet in facing relation with a surface of said third sheet, into said second chamber; means for guiding said one sheet from said second chamber into superposition with said other of said photosensitive and second sheets in said third chamber; and guide means for engaging said one sheet during movement thereof between said first, second and third chambers and pivoting said one sheet through an angle of 180° with respect to said third sheet about an axis extending transversely of the direction of movement of said sheets to bring the other surface of said one sheet into facing relation with said surface of said third sheet.

26,922

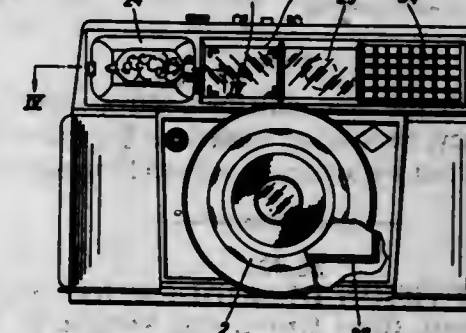
CAMERA HAVING A BUILT-IN FLASH-BULB ARRANGEMENT

Franz Jakob, Unterhaching, near Munich, and Joachim Spatz, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
 Original No. 3,172,345, dated Mar. 9, 1965, Ser. No. 159,237, Dec. 14, 1961. Application for reissue Jan. 3, 1966, Ser. No. 523,831

Int. Cl. G03b 15/035

U.S. Cl. 95—11

9 Claims



1. A camera comprising a substantially rectangular casing having front and back faces, a view finder having a window in the front face of said casing along a longer edge thereof, a flash-bulb reflector positioned within said casing and having a depth sufficient to completely enclose a flash-bulb normally used therein, said reflector being positioned laterally of said view finder window along said longer edge and having a size approximately equal to said view finder window, and an outer reflector mounted on said camera casing in front of said first-mentioned reflector.

26,923

LINER RING ASSEMBLY FOR ROCK CRUSHERS

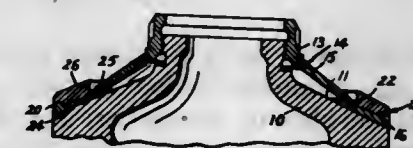
Marland G. Curtis, % Curtis Construction Company, Box 106, Spokane, Wash. 99210

Original No. 3,406,917, dated Oct. 22, 1968, Ser. No. 588,538, Oct. 21, 1966. Application for reissue Mar. 13, 1969, Ser. No. 817,223

Int. Cl. B02c 2/04, 23/00

U.S. Cl. 241—294

14 Claims



Liner ring for a conical crushing part of a gyratory type crusher. The liner comprises segmented wear members joined at tapered ends and supported against the crushing part by interlocking shoulders provided on the back surface of the wear members and the outer surface of the crusher part. By employing a segmented liner, the metal used in the casting thereof can be of greater hardness than for full circle liners.

26,924

COLOR TELEVISION DEMODULATION SYSTEM

Norman W. Parker, Wheaton, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Original No. 3,405,230, dated Oct. 8, 1968, Ser. No. 704,620, Feb. 12, 1968, which is a continuation-in-part of application Ser. No. 504,749, Oct. 24, 1965. Application for reissue Jan. 3, 1969, Ser. No. 822,064

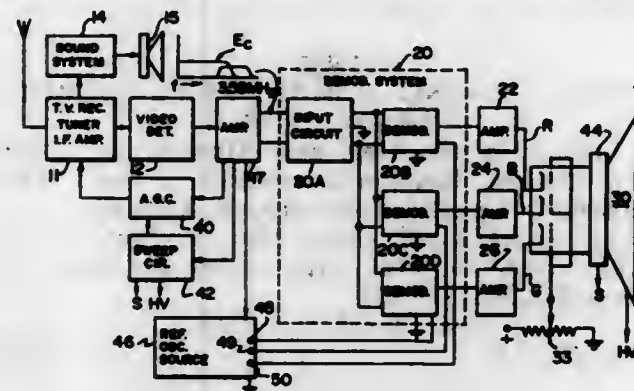
Int. Cl. H04n 9/50

U.S. Cl. 178—5.4

12 Claims

A direct demodulator for a composite color television signal operates upon both the video frequency brightness

components and the chroma subcarrier. The demodulator output is a signal representing brightness, hue and saturation of a television image. Modulation of the brightness



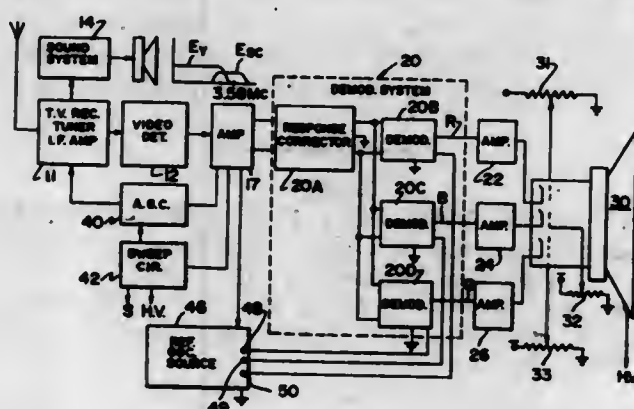
components with the demodulator control signal of sub-carrier frequency, producing undesired [spurious] spurious signals is offset by action of a cancelling network.

26,925

COLOR TELEVISION DEMODULATION SYSTEM
Francis H. Hilbert, River Grove, and Norman W. Parker, Wheaton, Ill., assignors to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Original No. 3,405,231, dated Oct. 8, 1968, Ser. No. 704,659, Feb. 12, 1968, which is a continuation-in-part of application Ser. No. 504,523, Oct. 24, 1965. Application for release Mar. 10, 1969, Ser. No. 822,079
Int. Cl. H04n 9/50

U.S. Cl. 178-5.4

12 Claims



A direct demodulator for a composite color television signal decodes the combined video frequency brightness components and the chroma subcarrier. The demodulator output comprises a signal representing brightness, hue and saturation of the television image. Since the brightness components also beat with the demodulator control or reference signal of the subcarrier frequency, thereby producing a spurious signal accompanying the desired signal, a secondary demodulator section is used to provide a cancellation signal at the output of the demodulator in order to eliminate the spurious signal.

26,926

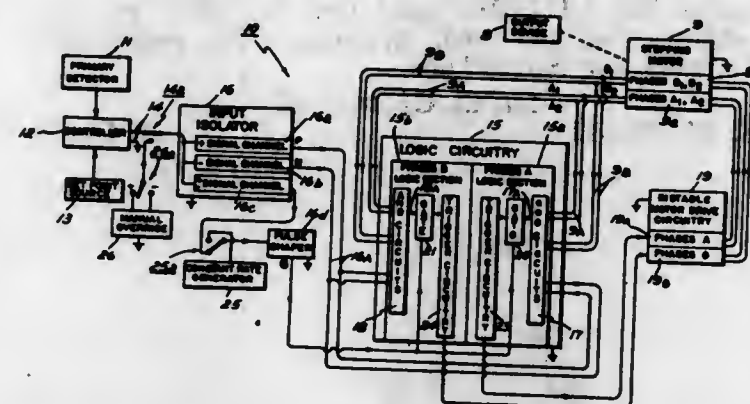
DIGITAL ACTUATOR INCLUDING FEEDBACK REPRESENTATION OF THE STEPPER MOTOR WINDING ENERGIZATION STATE
Wen H. Ko, Cleveland Heights, Ohio, assignor to Conoflow Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Original No. 3,304,480, dated Feb. 14, 1967, Ser. No. 280,966, May 16, 1963. Application for release Jan. 28, 1969, Ser. No. 802,281
Int. Cl. H02k 37/00

U.S. Cl. 318-138

27 Claims

1. Digital actuator apparatus comprising an electrically-excited motive device for producing a mechanical out-

put movement of predetermined magnitude in one of two possible directions responsive to each change in electrical excitation thereof, said motive device producing movements in the two directions responsive to electrical excitations thereof in accordance with a predetermined repetitive sequence, controller means producing two different control signals to command output movements of said predetermined magnitude from said motive device in different directions, logic circuit means for changing the



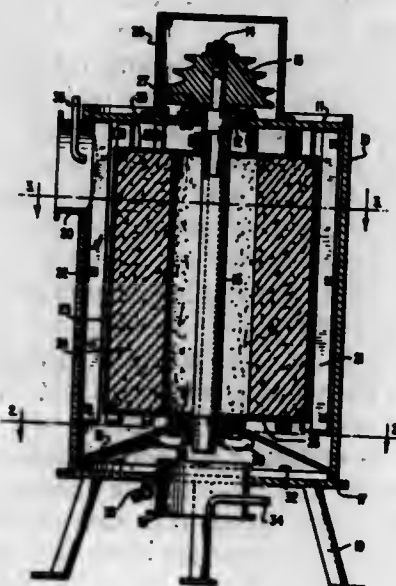
26,927

AEROSOL FILTER

Roger L. Schomwald, Belle Mead, N.J., Oliver L. I. Brown, Waterford, Conn., and Mason P. Wilson, Jr., Kingston, R.I., assignors to General Dynamics Corporation, a corporation of Delaware
Original No. 3,289,397, dated Dec. 6, 1966, Ser. No. 356,278, Mar. 31, 1964. Application for release Oct. 11, 1968, Ser. No. 767,008
Int. Cl. B01d 46/16

U.S. Cl. 55-392

6 Claims



A mechanical aerosol filtering apparatus is described having an outer drum like housing and a perforated inner drum coaxial with each other. A tubular body of filter material is disposed around the inside diameter of the inner drum. A shaft is connected to the inner drum so as to rotate the inner drum at selectable speeds. An air flow inlet port is disposed near one end of the drum and per-

mits air to be sucked into the drum by the fan action of the rotating inner drum. An exhaust air port is disposed on the side wall of the outer drum near the end thereof opposite the inlet port. Inflowing gas then spirals continuously through the axial length of the filter body as the shaft rotates so that collisions between aerosol particles and the filter body and among the particles themselves occur causing the particles to be thrown out of the filter material and out of the inner drum so as to impact the inner wall of the outer drum and flow in liquid form to a collection spigot in the outer drum.

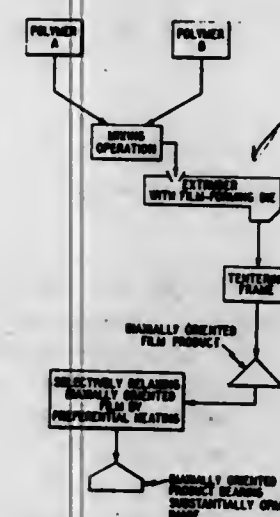
26,928

THERMOPLASTIC FILMS AND PROCESS FOR PREPARING SAME

Walter A. Miller, Somerville, and Stephen O. Cook, Lebanon, N.J., assignors to Union Carbide Corporation, a corporation of New York
Original No. 3,234,313, dated Feb. 8, 1966, Ser. No. 121,363, July 3, 1961. Application for release Dec. 23, 1966, Ser. No. 615,875
Int. Cl. B29c 17/02

U.S. Cl. 264-230

17 Claims



A transparent, biaxially oriented composite thermoplastic film composed of mutually incompatible synthetic

organic resins, each of the organic resins being in an amorphous rubbing state at a temperature above their second order transition temperature and being orientable at a common temperature, the composite film having a shrinkage value determined according to ASTM D-1204-54 of at least 5 percent along each of its major axes.

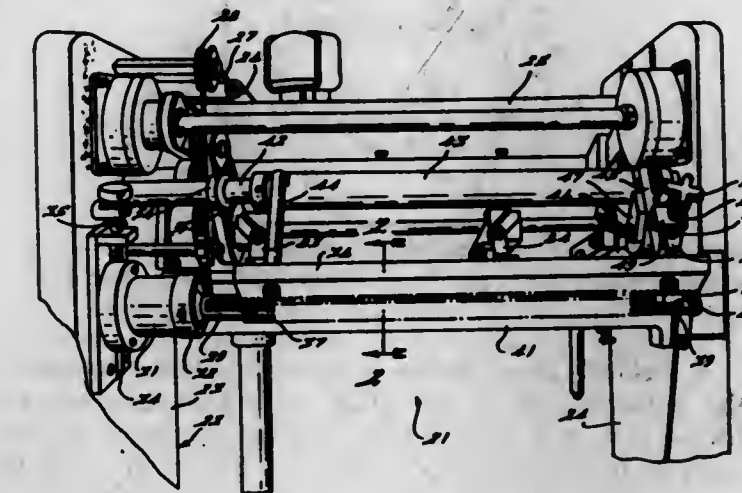
26,929

SPIRAL BINDER APPLYING MACHINE

Class Ostermeter, Waterford, Mich., assignor to Hans Sickinge Co., West Bloomfield Township, Mich., a corporation of Michigan
Original No. 3,378,046, dated Apr. 16, 1968, Ser. No. 535,154, Mar. 17, 1966. Application for release Apr. 28, 1969, Ser. No. 822,077
Int. Cl. B21f 45/00

U.S. Cl. 140-92.94

9 Claims



A machine for inserting spiral wire binders in packs of sheets. The pack is supported between two slotted elongated members at least one of which has a guide roller rotated to advance the spiral wire through the slots. A contact engageable by the wire after passing through the pack stops the wire feed.

PLANT PATENTS

GRANTED JUNE 30, 1970

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,974

ROSE PLANT

Marie Louise Meilland, Cap d'Antibes, France, assignor to The Conard-Fyle Company, West Grove, Pa., a corporation of Pennsylvania
Filed July 1, 1968, Ser. No. 741,689
Int. Cl. A01h 5/00

U.S. Cl. Plt.-11

1 Claim

A new and distinct variety of rose plant of the grandiflora class, originated by crossing Zambra with Suspense.

2,975

PEAR TREE

Frederic W. Anderson, Merced, Calif., assignor to Fowler Nurseries, Inc., Newcastle, Calif., a corporation of California
Filed July 29, 1968, Ser. No. 748,572
Int. Cl. A01h 5/03

U.S. Cl. Plt.-36

1 Claim

A medium size, vigorous, rapid growing variety of pear tree which is tall and spreading and a regular and pro-

ductive bearer of large to medium size fruit which turns from a light yellow-green when hard ripe to predominantly yellow when full ripe.

2,976

NECTARINE TREE

Frederic W. Anderson, Merced, Calif., assignor to Reedley Nursery, Inc., Reedley, Calif., a corporation of California
Filed Sept. 30, 1968, Ser. No. 763,991
Int. Cl. A01h 5/03

U.S. Cl. Plt.-41

1 Claim

A variety of nectarine tree which is large, spreading, and a regular and productive bearer of large, late-season freestone fruit having firm yellow flesh, and yellow skin substantially overspread with red.

PATENTS

GRANTED JUNE 30, 1970

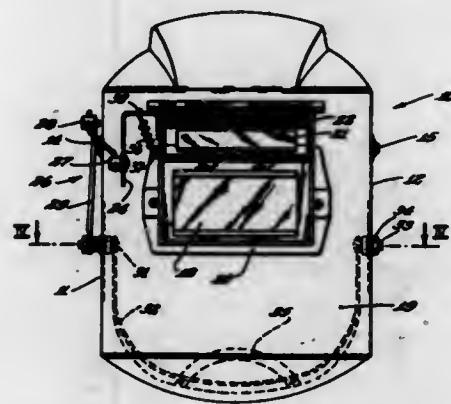
GENERAL AND MECHANICAL

3,517,392
CHIN OPERATED SHIELD FOR WELDER'S MASK
William R. Hodge, 6620 Calumet Ave., and Robert R. Hodge, 1447 175th St., both of Hammond, Ind. 61929

Filed Oct. 17, 1968, Ser. No. 768,365
Int. Cl. A61f 9/06

U.S. Cl. 2-8

10 Claims



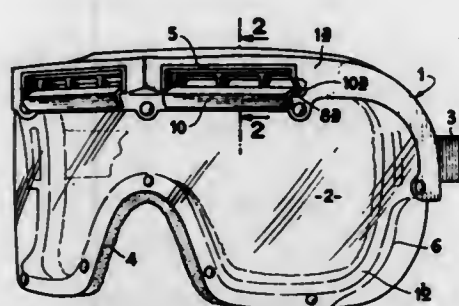
A welder's mask having a window shield operated by the welder's chin. A chin strap lies within the mask and forms part of a lever having a pivot extending through the side of the mask. The lever also has an arm that lies outside the mask and is connected by a link to the window shield. The welder moves the shield away from the window by opening his mouth and returns the shield to the window by closing his mouth.

3,517,393
SKI GOGGLES
Gaston Henri Beauchef, Annecy, France, assignor to Societe d'Application des Matieres Plastiques, Annecy, France, a body corporate of France
Filed Nov. 7, 1968, Ser. No. 774,006
Claims priority, application France, Apr. 10, 1968, 147,582

Int. Cl. A61f 9/02

U.S. Cl. 2-14

5 Claims



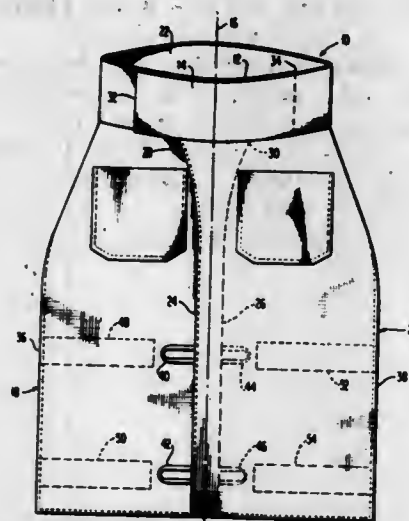
Goggles having a horizontal demisting venting passageway provided with a pivotable closing flap. The flap is automatically shifted to the position for substantially closing the passageways by the pivoting effect of the force of the surrounding air when the user reaches a given speed relative to the air. At speeds below this given speed, the flap automatically moves, under the effect of its own weight, to the position for opening the passageway.

718

3,517,394
PROTECTIVE APRON
Sylvester Robinson, 655 Ozburn Road NW., Atlanta, Ga. 30318
Filed Jan. 30, 1969, Ser. No. 795,249
Int. Cl. A41d 13/04

U.S. Cl. 2-51

8 Claims



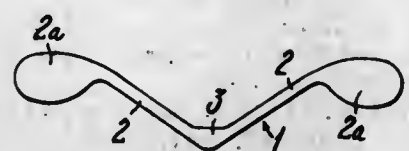
A waist-encircling strip girdle is overlapped and removably anchored together at its opposite ends to lead support for the user's back and abdomen. Separated leg panels adapted to be strapped around the legs are secured at their upper ends to their girdle, leaving a back area of the girdle free and unencumbered by the leg panels to allow freedom of movement. At the same time, the leg panels overlap at the upper parts of their inner edges and extend around to the sides of the user's hips to give full front protection. A bib, shirt or tunic top may be provided.

3,517,395
NECKTIE ATTACHMENT
Masanobu Shimol, 43 6-chome, Nishimagawamachi, Higashisumiyoshiku, Osaka, Japan
Continuation-in-part of application Ser. No. 669,197, Sept. 20, 1967. This application Jan. 28, 1969, Ser. No. 794,747

Int. Cl. A41b 25/08, 25/14

U.S. Cl. 2-153

10 Claims



A necktie attachment comprises a winged attachment body made of a soft pliable material and provided with elastic arms each having an engagement portion formed with elastic hook-shaped filaments for engagement with piled fabric portion of the neckband of a shirt. A necktie, tied or attached to the body, can be attached to and detached from the shirt by the operation of the engagement portions. The body may be elastic and flexibly made so that both arms may be extended and both engagement portions may be turned toward the front of the neck or the back of the collar of the shirt for engagement with the piles on the back of the collar.

JUNE 30, 1970

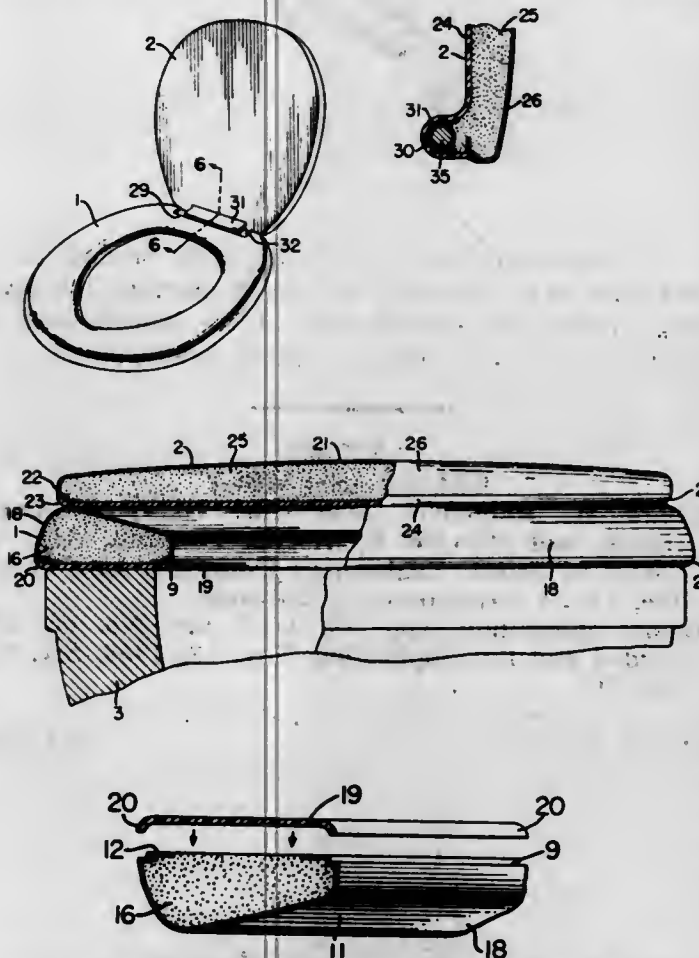
GENERAL AND MECHANICAL

719

3,517,396
CUSHION TOILET SEAT STRUCTURE
Clifford M. Wert, Akron, Ohio, assignor to The Good-year Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Original application Aug. 20, 1964, Ser. No. 390,933, now Patent No. 3,379,800, dated Apr. 23, 1968. Divided and this application Nov. 6, 1967, Ser. No. 705,591
Int. Cl. A47k 13/00

U.S. Cl. 4-234

4 Claims

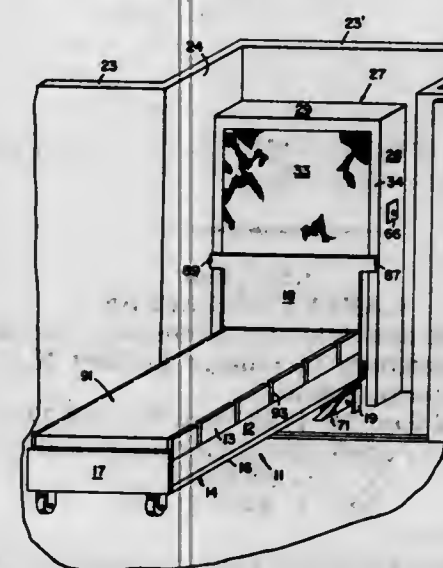


This invention relates to covered cushioned toilet seats and the like. More specifically the invention is directed to a toilet seat or a cushioned element wherein at least a portion of the surface is covered by a relatively impervious skin and the cushioning material is a foam.

3,517,397
POWERED RETRACTING BED CONSTRUCTION
Stephen G. Moore, 461 Nevada, Palo Alto, Calif. 94301
Filed Feb. 23, 1968, Ser. No. 707,685
Int. Cl. A47c 17/40

U.S. Cl. 5-147

18 Claims



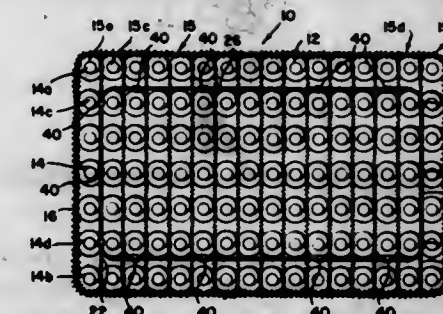
The head end of a bed engages with steeply inclined guides and with a motor driven lead screw which raises

the head end along the guide means while drawing the foot end towards the base of the guides. Mechanism is provided to support the weight of the raised bed to avoid a reactive force on the motor, the mechanism acting automatically to facilitate an initial outward movement of the foot of the bed when the motor is energized to lower the bed.

3,517,398
INNERSPRING UNIT CONSTRUCTION
Thomas N. Patton, Memphis, Tenn., assignor to National Bedding & Furniture Industries, Memphis, Tenn., a corporation of Tennessee
Filed May 20, 1968, Ser. No. 730,318
Int. Cl. A47c 27/22

U.S. Cl. 5-351

5 Claims



In an innerspring unit of the Bonnell type, the improvement which essentially consists of top and bottom inner border members disposed inwardly of the outer border members, with each inner border member having side edge portions extending along and connected to the outer edges of coil springs in each of two penultimate columns which are laterally separated by a plurality of columns and each inner border member having end edge portions extending along and connected both to the inner edges of coil springs in each of two terminal rows and to the outer edges of coil springs in each of two penultimate rows, which penultimate rows are longitudinally separated by a plurality of rows.

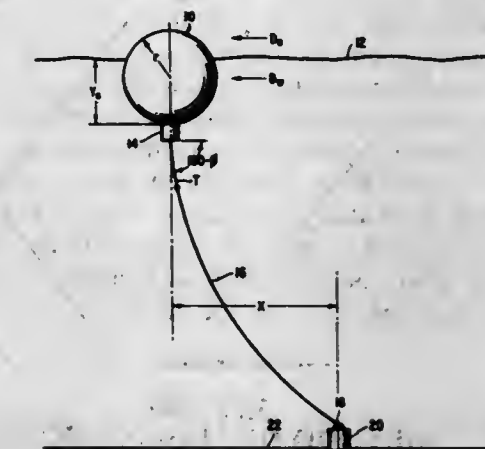
3,517,399
MOORING APPARATUS HAVING A FREE FLOATING BUOYANT ELEMENT
Maurice Horowitz and Clinton S. Myers, Fort Wayne, Ind., assignors to The Magnavox Company, Fort Wayne, Ind.

Filed Mar. 4, 1966, Ser. No. 531,960

Int. Cl. B63b 21/52

U.S. Cl. 9-8

1 Claim



Mooring apparatus is provided with a buoy having optimum submergence and lift, and with a cable having optimum strength and length. When anchored in water, the buoy remains above the water and near the anchor for an optimum length of time under various conditions of the surrounding water and atmosphere.

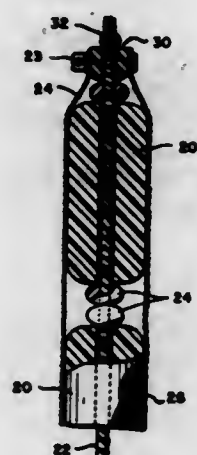
3,517,400

APPARATUS FOR MARKING UNDERWATER PIPELINES

Dean P. Hemphill, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 10, 1968, Ser. No. 720,246
Int. Cl. B63b 21/52

U.S. Cl. 9-8

5 Claims



An apparatus for marking underwater locations for detection by sonar consisting of a strong buoyant rope, such as polypropylene sheathed in a multi-surface acoustic reflector.

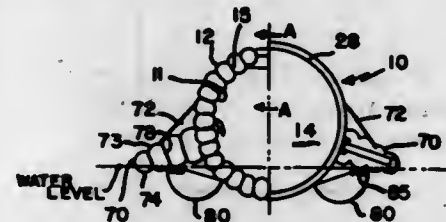
3,517,401

ENVIRONMENT SURVIVAL CAPSULE

John F. Lee, Inglewood, Calif. (AF Unit P.O. Hq. SAMSO (SMVZP), Los Angeles, Calif. 90045)
Filed May 21, 1968, Ser. No. 730,830
Int. Cl. B63c 9/06

U.S. Cl. 9-14

5 Claims



A double walled structure with inflatable cylindrical section and non-inflatable end walls. It is sufficiently compact to be carried on the person and be integrated with a parachute. It provides the survivor with an insulated buoyant envelope in which he can await rescue in safety. It is inflated optionally directly following parachute deployment to provide a floating dry environment capable of sustaining life for sea landings, or it can be inflated by him after ground or sea ice is reached. The structure is fabricated from nylon or similar material coated with urethane, neoprene, polyethylene or similar water-resisting and insulating materials. Compartments are provided which are filled with goose down. It is zipper-closed with ventilation provided by ventile cloth, or equivalent. A pair of fins and a pair of water ballast tanks provide buoyancy and stability. Fabric ribbing provides separation between the walls of the structure.

3,517,402

METHOD OF MAKING BOLTS

George R. Cohen, Cambridge, Mass., assignor to Standard Pressed Steel Co., Jenkintown, Pa., a corporation of Pennsylvania
Original application Dec. 20, 1967, Ser. No. 692,128, now Patent No. 3,440,922. Divided and this application
Feb. 3, 1969, Ser. No. 828,025
Int. Cl. B21k 1/44

U.S. Cl. 10-27

2 Claims

A bolt formed by turning a threaded section of a stud into a head unit having a partially threaded bore. The

threaded section of the stud is spaced from one end of the stud by an unthreaded section which is arranged to be in tightly fitted engagement with the unthreaded portion of the bore of the head unit, whereby the head unit and



the stud are joined together rigidly. The stud is fabricated from an alloy which develops high-strength properties either by the combination of mechanical-working and heat treatment or by mechanical-working alone.

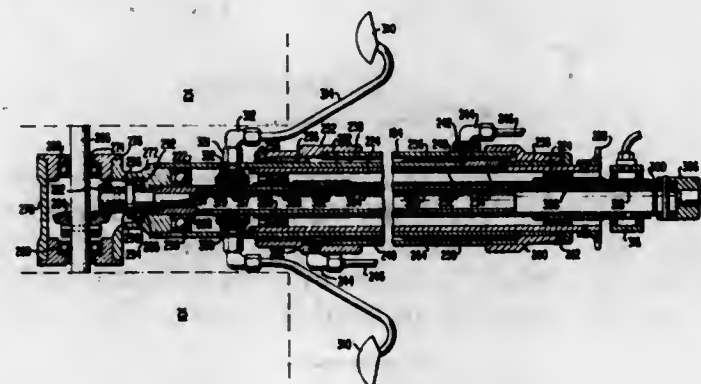
3,517,403

BRUSH ASSEMBLY

Richard W. Rhinehart, Huntsville, Henry L. Conn, Athens, and Howard E. Morris, Florence, Ala., assignors to Brown Engineering Company, Inc., Huntsville, Ala., a corporation of California
Original application Aug. 28, 1967, Ser. No. 663,694. Divided and this application Nov. 18, 1968, Ser. No. 776,571

Int. Cl. A46b 13/04; B60s 3/00
U.S. Cl. 15-21

18 Claims



An extendible and retractable telescoping boom pivotally supported on a mobile unit and having at its forward end a plurality of brushes mounted for rotation relative to the boom about an axis transverse to the boom axis. The boom itself is also rotatable about its longitudinal axis and thereby imparts a second degree of rotation to the brushes. To aid in the cleaning operation, a detergent or other washing fluid is conveyed through the boom to dispensing nozzles mounted on the boom to direct the washing fluid on the brushes.

3,517,404

CARPET SWEEPERS

Gunter Leifheit and Johannes Liebecher, Nassau (Lahn), Germany, assignors to Gunter Leifheit K.G., Nassau (Lahn), Germany, a firm
Filed Jan. 16, 1968, Ser. No. 698,275
Claims priority, application, Germany, Jan. 17, 1967, L 55,511

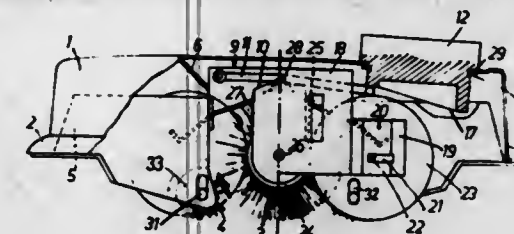
Int. Cl. A47l 11/08

U.S. Cl. 15-42

11 Claims

A carpet sweeper having a driven brush roller, at least one additional brush roller engaging the driven brush roller and floor engaging wheels all mounted in a casing, in which one or more of the brush rollers, or the wheels,

are mounted in a yoke which is vertically movable in the casing, under the action of a face cam, to vary the extent



of engagement of the bristles of the brush rollers with the floor engaged by the wheels.

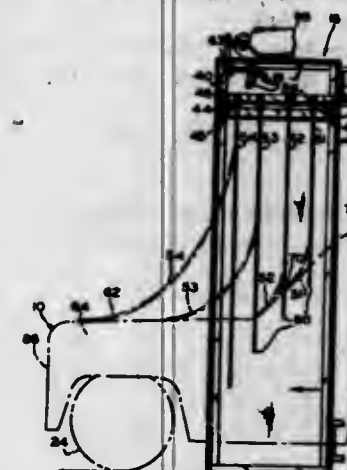
3,517,405

CAR WASHING FRICTION SCRUBBER

Daniel C. Hanna, 1122 N. Williams Ave., Portland, Oreg. 97227, and Jack F. Ebeling, Portland, Oreg.; said Ebeling assignor to said Hanna
Continuation of application Ser. No. 655,379, July 24, 1967, which is a division of application Ser. No. 526,162, Feb. 9, 1966, now Patent No. 3,345,666. This application July 16, 1968, Ser. No. 752,440
Int. Cl. A47l 1/02

U.S. Cl. 15-97

15 Claims



A friction scrubber 30 including ribbons of thick, wetted, felt-like material having substantially no nap and of different lengths reciprocated to scrub top surfaces of a car. Two brushes 32 and 34 carried by overhead arms above the path of the car brush the entire perimeter of the car, each brush including a lower side brush and an upper window brush driven independently. Elongated wheel brushes are mounted on roller carriages for movement to the sides of the car wheels.

3,517,406

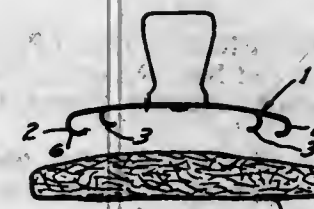
SCOURING PAD HOLDER

Paul B. Stephens, Hotel Carlos, Room 308, 3834 N. Sheffield Ave., Chicago, Ill. 60613
Filed Jan. 20, 1967, Ser. No. 610,640

Int. Cl. A47l 17/04

U.S. Cl. 15-209

9 Claims



A shallow concavo-convex one piece body of sheet material with two concentric rows of integral hooks at the concave face pointing radially inwardly. The hooks of one row alternate circumferentially with those of the other.

There are no non-radial hooks and no hooks with points directed other than inwardly. The inner hook bases are closer to the outer hook points than to the body center. The body periphery is at the bases of the inner hooks. The outer hook points line in a plane normal to the body axis and the inner hook points in a parallel plane closer to the body.

3,517,407

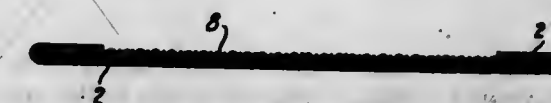
DISPOSABLE CARPET MADE FROM POLY-ETHYLENE COATED SHEET MATERIAL WITH MOISTURE ABSORBING PAPER LAYERS

Gerald W. Wyant, 2125 Madison Ave., Montreal, Quebec, Canada
Filed July 28, 1967, Ser. No. 656,935
Claims priority, application Canada, Apr. 14, 1967, 987,937

Int. Cl. A47l 13/16

U.S. Cl. 15-215

4 Claims



A disposable carpet for winter use formed of a bottom layer of sheet paper coated on its upper surface with a waterproof material, a second layer of plastic material and a top layer of twisted or woven graft paper; the lower layer being larger in size than the other two layers and having its peripheral edges folded upwards and inwards over the peripheral edges of the top layer and bonded thereto.

3,517,408

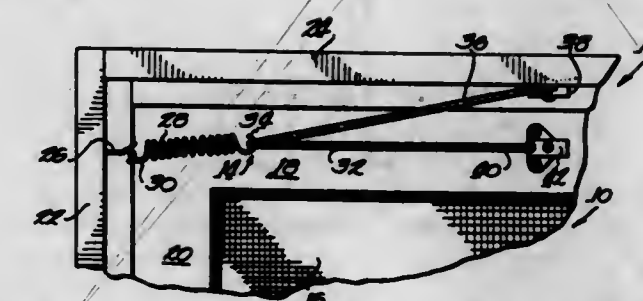
DOOR STOP

George Banse, Sterling, Ill., assignor to National Manufacturing Co., Sterling, Ill., a corporation of Illinois
Filed Apr. 12, 1968, Ser. No. 720,829

Int. Cl. E05f 1/08

U.S. Cl. 16-72

11 Claims



One end of a helical extension spring is fastened near the top of the side jamb on the hinged side of the door and the other end of the spring engages the center portion of a nylon cord, one end of the nylon cord being attached to the door rail at the top of the door and the other end of the nylon cord being fastened to the head jamb of the doorway. As the door is opened, the nylon cord is straightened and pulls the helical spring, which spring stretches to permit the cord to become straight. The door is stopped when it has been opened so far that the cord is straight.

3,517,409

DOOR HANGER FOR A SLIDING DOOR

James A. Edens, Rock Falls, Ill., assignor to National Manufacturing Co., Sterling, Ill., a corporation of Illinois

Filed June 21, 1967, Ser. No. 647,843

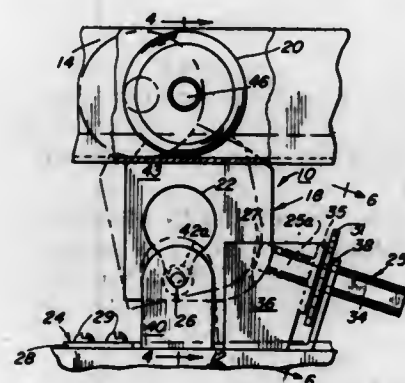
Int. Cl. E05d 13/02

U.S. Cl. 16-105

7 Claims

A hanger for rollably supporting a sliding door on an overhead track includes a track-engagable roller member having an opening therein, and a door-engagable member adapted to be attached to the top edge of the door

and having a hook portion receivable in the opening in the roller member. To plumb the door, the door-engagable member includes an adjusting screw which is threaded into a lug and which has its end abutting the edge of a curved corner forming a cam surface for the roller mem-

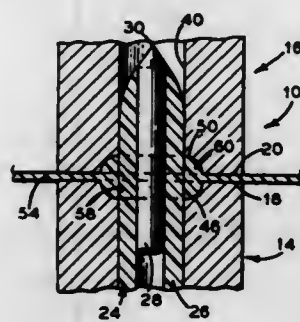


ber so that the screw maintains the door-engagable member in an adjusted position relative to the roller member, whereby the door may be maintained either in a raised or in a lowered position by advancing the screw toward or away from the cam surface.

3,517,410
APPARATUS FOR PRODUCING REINFORCED APERTURES IN PLASTIC MATERIALS
Paul Rapisarda, 4412 Fort Hamilton Parkway, Brooklyn, N.Y. 11219
Filed Feb. 17, 1967, Ser. No. 616,905
Int. Cl. B29c 17/08

U.S. Cl. 18-1

11 Claims



A die and a jig therefor wherein the die includes a male member having a piercing means and a female member having a bore which slidably receives the piercing means. The piercing means is adapted to first pierce a plastic sheet to displace material therefrom thereby to provide an aperture in the sheet. The male and female members are then moved toward each other to compress the displaced material into a recess which surrounds the piercing means. When heat energy is applied to the die the displaced material forms a bead about the periphery of the aperture thereby to provide a reinforced aperture in the plastic strip.

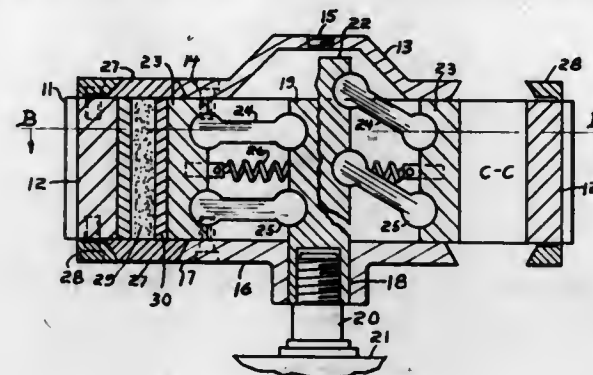
3,517,411
MOLDING MACHINE FOR MAKING COMPACTED ABRASIVE ARTICLES
Charles F. Staples, 4456 Samoset, Royal Oak, Mich. 48072
Filed Jan. 2, 1968, Ser. No. 695,227
Int. Cl. B29c 3/00

U.S. Cl. 18-5

5 Claims

A machine for making compacted abrasive articles (such as abrasive hones, and abrasive blocks that may be made into hones), from a loose mix of grits and binder material compacted under heavy pressure into molds or

dies having various shapes and sizes oriented vertically, the molds or dies being readily removed from the machine after the mix has been uniformly compacted into



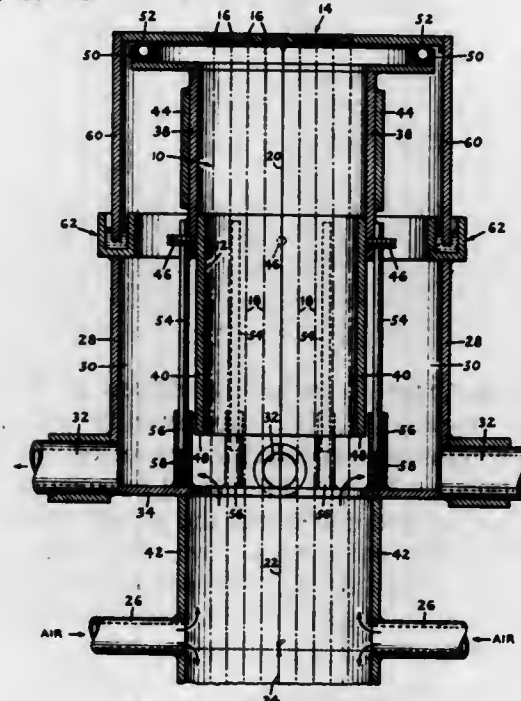
the molds, and after the hones or blocks are removed from the molds they may be vitrified for use, the compacting operation being performed in a vacuum.

3,517,412
MELT SPINNING PROCESS AND APPARATUS
Eugene A. Swanson, Disputanta, and William H. Harlacher and Grady N. Dulin, Jr., Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Original application Jan. 19, 1965, Ser. No. 426,631.
Divided and this application June 18, 1968, Ser. No. 752,414

Int. Cl. D01d 13/02

U.S. Cl. 18-8

1 Claim



Melt spinning apparatus having a heated sleeve sealed around the spinneret, open at its lower end to a spinning tower wherein there is a gas outlet and a gas inlet therebelow, and wherein preferably the major portion of the entering air flows down the tower and a minor portion flows up the tower.

3,517,413
ULTRAHIGH PRESSURE APPARATUS
Shuichiro Takahashi and Naoto Asami, Omiya, Japan, assignors to Mitsubishi Atomic Power Industries, Inc., Tokyo, Japan
Filed Aug. 15, 1967, Ser. No. 660,712
Claims priority, application Japan, Feb. 28, 1967, 42/12,302

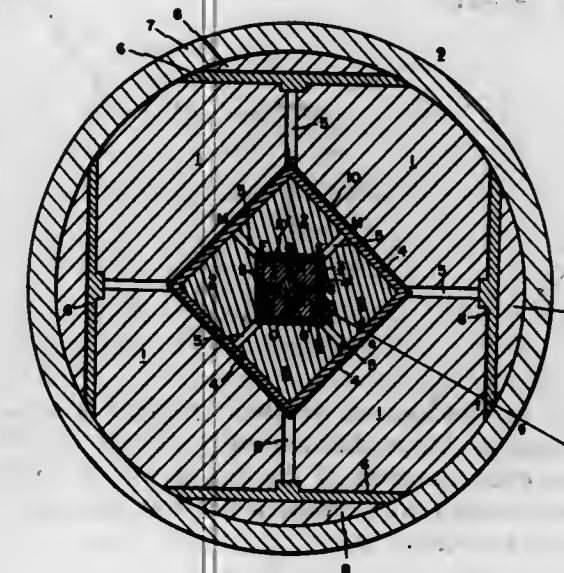
Int. Cl. B29c 3/00; B29g 1/00

U.S. Cl. 18-16

10 Claims

The apparatus is a plural polyhedron anvil type ultrahigh pressure apparatus. An outer anvil group consists of plural anvils and each anvil is formed so that its inner

space forms an octahedron, a hexahedron or a tetrahedron. The inner anvil group also consists of a plurality of anvils and each anvil is shaped so that the external form of the inner anvil group fits into the internal space, formed by its outer anvil group and the internal space formed by the inner anvil group forms an octahedron,

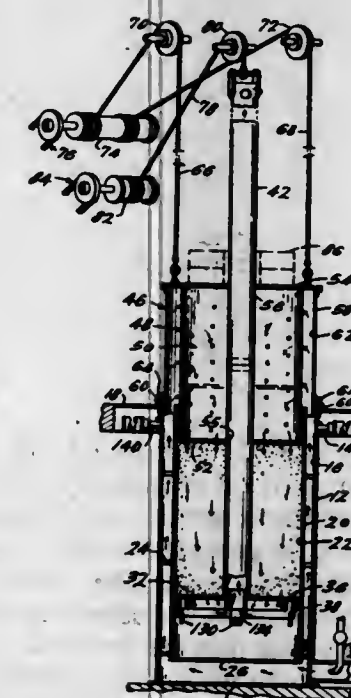


a hexahedron or a tetrahedron. The inner anvil group surrounds the high compression zone in three dimensions and the outer anvil group surrounds the inner anvil group in three dimensions. The outer anvil group is sealed with thin soft elastic shell material and compressed by the pressurized hydraulic liquid.

3,517,414
APPARATUS FOR PROCESSING PLASTIC MATERIAL
William S. Carson, Jr., Swanton, Ohio, assignor to Scott-del, Inc., Swanton, Ohio, a corporation of Ohio
Filed Aug. 31, 1967, Ser. No. 664,772
Int. Cl. B29c 3/00

U.S. Cl. 18-16.5

8 Claims



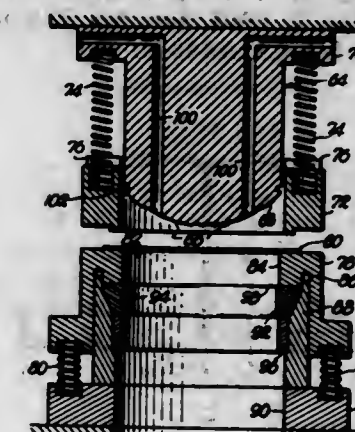
An apparatus for processing new or scrap foam material is provided. The foam material is cut into pieces and mixed with a resin in a cylindrical mold, and cured. After

curing, the resulting cylindrical body of foam pieces and resin binder or matrix is rotated on its axis and sheets cut therefrom. The resulting sheet material is particularly useful for carpet padding, but has other uses where a resilient sheet of material, particularly with insulating properties, is desired.

3,517,415
DECORATIVE SPECTACLE FRAME COVER AND METHOD AND APPARATUS FOR PRODUCING SAME
Paul F. McGrath and Stanley W. Otto, Kansas City, Mo., assignors to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Filed May 22, 1967, Ser. No. 640,204
Int. Cl. B29c 17/00; B29d 12/02

U.S. Cl. 18-19

6 Claims



A removable spectacle frame cover is provided so that the wearer may change the color and appearance of the spectacle frame at will. The cover is formed from a blank of thermoplastic synthetic resin sheet material having desired decorative characteristics. The cover is flexible and has a peripheral lip which snaps over the rim of the spectacle frame. The inner face of the cover is configured to intimately contact the front surface of the frame between the lens and the rim; thus the cover closely conforms to the frame surface to augment the holding action of the lip and provide a neat appearance.

In the manufacture of the cover, the blank in heated, moldable form is clamped on a die body, then forced into the latter by a punch, pinch trimmed, subjected to a lip forming operation and ultimately ejected in finished form except for the stamping of the lens opening therein. Cooperable structure is provided to enable a single stroke of a die press ram to effect the forming of the cover, the lip being shaped through the use of a urethane forming member which cooperates with the punch after the blank is trimmed to press the peripheral edge of the trimmed blank into a groove in the periphery of the punch. Fabrication of the cover from a relatively thin sheet is facilitated by the use of a vacuum forming technique wherein the head of the punch has a pair of spaced recesses therein which are in communication with a vacuum system to cause the synthetic resin material to closely conform to the surface of the die punch.

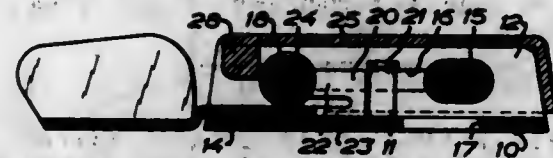
3,517,416
BUCKLES FOR SAFETY SEAT BELTS
Josef Hermann Frei, Muhlestrasse 22, Ruschlikon, Switzerland, and Göte Ekil Yngve Holmberg, Anderstorp, Sweden
Filed Mar. 1, 1968, Ser. No. 709,730
Claims priority, application Sweden, June 30, 1967, 10,271/67; Dec. 22, 1967, 17,771/67

Int. Cl. A44b 11/06, 11/25

U.S. Cl. 24-75

In a buckle for safety seat belts having two interengageable buckle parts, a latching bar is shiftable in one buckle

part. A leaf spring interposed between the latching bar and a stationary abutment biases the latching bar into latching



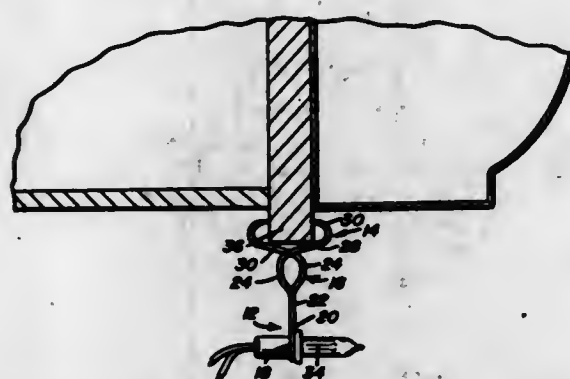
position in which the bar prevents the buckle parts from being disengaged from one another.

3,517,417 MOUNTING CLIP

Stanley Kachel, 27215 Sylvan, Warren, Mich. 48093
Filed Apr. 2, 1968, Ser. No. 718,067
Int. Cl. A44b 21/00

U.S. Cl. 24—81

2 Claims



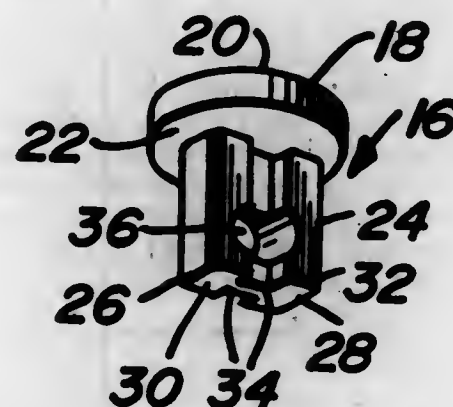
A spring metal clip deformed so as to define an article receiving and grasping loop having a pair of legs extending radially therefrom and forming, at the outer ends thereof, a pair of inwardly directed gripping jaws. The legs include oppositely directed bowed portions which can be selectively manipulated so as to effect an opening of the jaws for a mounting of the clip.

3,517,418 LEATHER BUTTON WITH SHANK

Max Wolfeld, Dobbs Ferry, N.Y., assignor to Hemisphere Novelties, Inc., a corporation of New York
Filed Mar. 19, 1968, Ser. No. 714,192
Int. Cl. A44b 1/24; D05b 3/16

U.S. Cl. 24—90

9 Claims



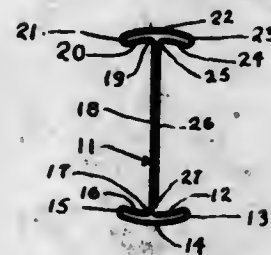
A leather button including a rigid shank, one end of which is fastened within a recess of a button cap. The opposite end includes an aperture therein for facilitating the sewing thereof to a garment. The shank is contoured for acceptance in an automatic hopper fed sewing machine which feeds one button at a time to a holding device while the button is sewn to a garment.

3,517,419 NON-INTERLACING, FEEDABLE PIN FOR BADGES

Dante J. Frigalia, West Caldwell, N.J., assignor to Danira Corporation, Newark, N.J., a corporation of New Jersey
Filed Nov. 6, 1969, Ser. No. 874,565
Int. Cl. A44b 9/02

U.S. Cl. 24—103

10 Claims



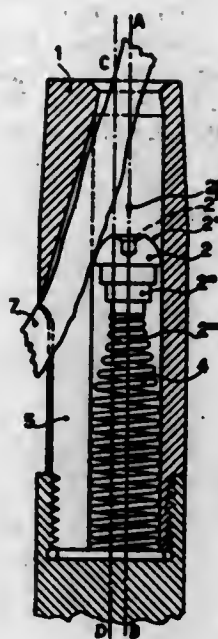
A pin for badges in which a resilient wire is shaped with wings or loops diametrically disposed with respect to a pin, every portion of the pin or loop is dimensioned sufficiently small to prevent a portion of any other pin to interlace with it.

3,517,420 CONNECTOR FOR ELECTRICAL CONDUCTORS

Renato Anzini, Locarno, Switzerland, assignor to Max Pasbrig, Orselina, Switzerland
Continuation-in-part of application Ser. No. 489,663, Sept. 23, 1965. This application Oct. 18, 1967, Ser. No. 676,246
Claims priority, application Switzerland, Oct. 27, 1966, 15,606/66

U.S. Cl. 24—126

2 Claims



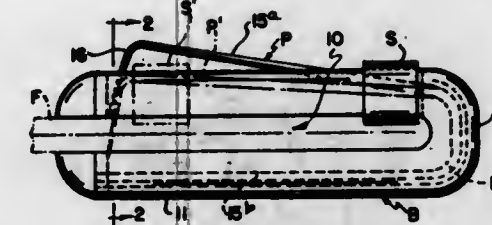
A tubular connector body is provided with an elongated cavity which has its axis offset laterally from the axis of the body, thus forming a greater wall thickness at one side where the body is provided with a lateral opening communicating with the cavity. The cavity has an outwardly tapered portion with an open outer end through which a wire or the like may be inserted into the cavity and lateral opening, to be wedged by a mushroom-shaped locking member against the tapered portion of the cavity. The locking member is biased by a spring and may be provided with a finger-piece projecting outwardly through the open end of the cavity to facilitate inward pressing of the locking member.

3,517,421 SAFETY PIN

Arthur M. Lewis, 2730 Fernwald Road, Pittsburgh, Pa. 15217
Filed Nov. 14, 1968, Ser. No. 775,601
Int. Cl. A44b 9/12

U.S. Cl. 24—162

13 Claims



An end-rounded cylindrical plastic body has parallel legs defining a main fabric receiving longitudinal slot; and perpendicular to, and extending inwardly through one leg to intersect, the main slot has a narrower longitudinal slot receiving an elongated, shiftable, fastening element arm having an inwardly bent fabric penetrating pointed free end portion shiftable captive in and the other end fixed in the narrow slot; the point being always within the body. In one type, a slide, longitudinally slideable along the said one leg, cams the arm to or releases it from a closed fabric penetrating position in its slot. Another type exposes the arm at all times to digital opening and closing, relative to an arm catch lip in the narrow slot.

3,517,422 SLIDE FASTENER

Karl Wilhelm Uhrig, Mannesmannstrasse 11, Wuppertal-Elberfeld, Germany
Continuation-in-part of application Ser. No. 536,073, Mar. 21, 1966. This application Oct. 31, 1967, Ser. No. 679,369
Claims priority, application Germany, Nov. 8, 1966, S 106,894

U.S. Cl. 24—205.1

5 Claims



A slide fastener stringer consisting of a band of textile material having a longitudinal row of openings and a spiral or meander of nylon wire whose turns constitute the interlockable elements of the stringer is assembled by partly pushing each wire turn through an associated opening in the band, folding the narrower portion of the band on one side of the row of openings against the interlockable elements, and fastening respective face portions of the elements and of the narrower tape portion to each other by means of an adhesive, by welding, if both are thermoplastic, or by embedding the textile material in the thermally softened elements.

3,517,423 FLUID OPERATED ZIPPER

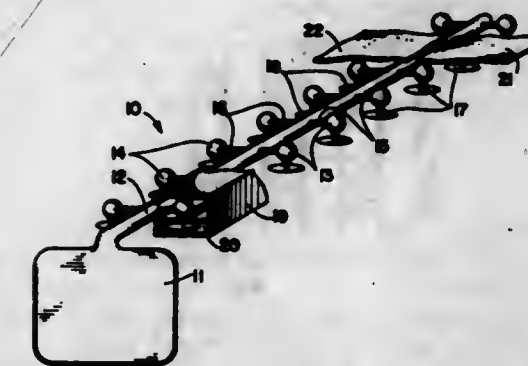
Katherine Marie LeBeau, 2217 Neilson Way, Santa Monica, Calif. 90405
Filed Sept. 19, 1968, Ser. No. 760,782
Int. Cl. A44b 19/20

U.S. Cl. 24—207

9 Claims

A fluid operated zipper incorporates a pair of adjacent guide channels and a flexible fluid container in communication with an inflatable, elongated conduit. Rows of bulbs arranged on opposing sides of the conduit ex-

tend into corresponding guide tracks. Evacuation of the fluid such as air from the container fills the conduit with fluid forcing it to an extended position. The bulbs are



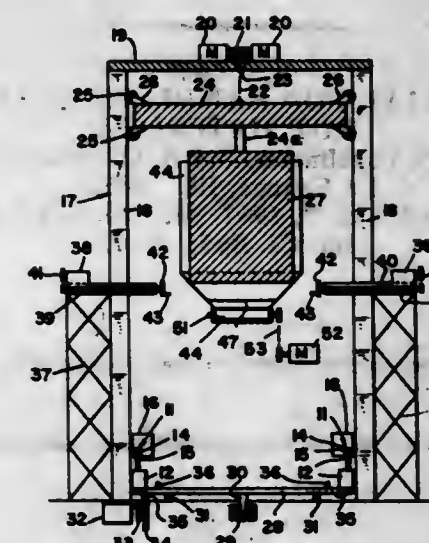
simultaneously inflated and slid along the guide tracks to thereby pull them and fabric margins attached to the guide tracks together.

3,517,424 PIPE MACHINE

Ralph J. Anthony, Reynoldsburg, and Clarence E. Larson and Robert H. Gates, Columbus, Ohio, assignors to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland
Filed June 9, 1967, Ser. No. 644,875
Int. Cl. B28b 21/12

U.S. Cl. 25—31

5 Claims



A machine for making articles, e.g. pipe, from plastic inorganic masses comprising, in combination, rails having carriages to transport molds, means at a forming station to compact the plastic inorganic masses in the molds and means to raise and lower the rails to permit placing and pickup of the molds at the forming station.

3,517,425 APPARATUS FOR CONVEYING AND STRETCHING TIRE CORD FABRIC

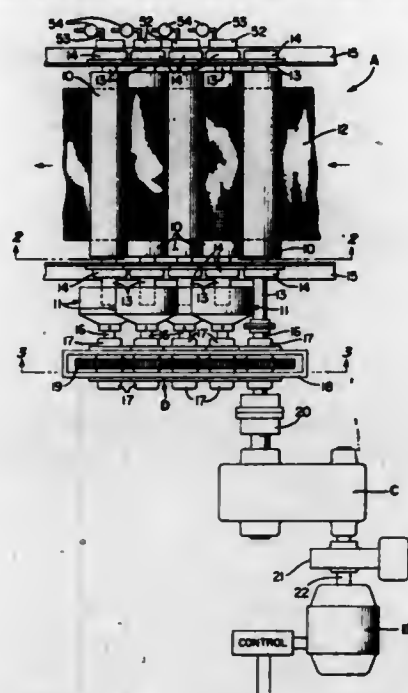
Edward E. Hunter, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 15, 1967, Ser. No. 616,337
Int. Cl. D06c 3/00

U.S. Cl. 26—54

11 Claims

Apparatus for tensioning fabric such as tire cord fabric in which the fabric is pulled through one or more treatment chambers under substantial tension. The tension is created in an assembly of hold back rolls and the fabric is elongated during its passage through the assembly. Torque is applied to the shafts of the rolls through friction clutches which slip when a predetermined torque is exceeded, the clutches being adjusted so that the rolls accommodate their speeds to variations in the speed of the web due to the elongation of the material without

slippage taking place between the web and rolls. The foregoing abstract is not to be taken as limiting the invention of this application, and in order to understand



the full nature and extent of the technical disclosure, reference must be made to the accompanying drawings and the following detailed description.

3,517,426

ROLLER FOR HANDLING HEAVY HOT MATERIALS

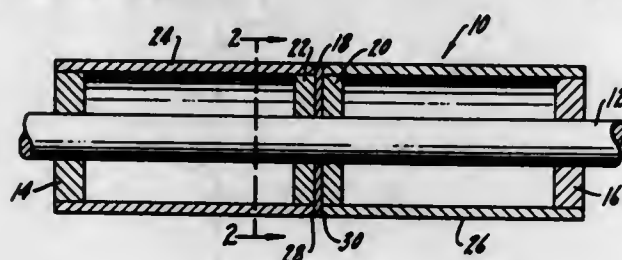
Friedrich Vogelmann, 716 S. La Grange Road, La Grange, Ill. 60525

Filed Aug. 7, 1967, Ser. No. 658,723

Int. Cl. B65g 39/02

U.S. Cl. 29—125

4 Claims



A roller for handling heavy hot materials which comprises a shaft having fixedly mounted thereon two end support plates and a central support and mounting plate. On each side of the central support and mounting plate in the preferred embodiment there is fixedly attached to the shaft auxiliary support plates. Two exterior tubular members each have one end welded to the center support and mounting plate and the other end extending freely over but in a press-fit, sliding relationship with an end support plate. In this manner the roller is supported at its central portion and the tubular members are permitted to expand at their free ends so that the roller will withstand the contact with the hot heavy materials it is handling.

3,517,427

METHOD OF MAKING A MULTISIDED STRUCTURE

Huston K. Bainter and Marvin E. Nerem, Forest City, Iowa, assignors to Winnebago Industries, Inc., Forest City, Iowa, a corporation of Iowa

Continuation of application Ser. No. 536,058, Mar. 21, 1966. This application Sept. 9, 1968, Ser. No. 758,244

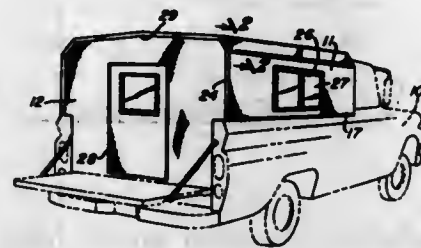
Int. Cl. B23p 17/00; E04c 2/00

U.S. Cl. 29—155

11 Claims

A sandwich panel multisided structure mountable on a vehicle body, as a pickup truck or trailer. The structure is

a pickup cover formed from a single flat sandwich panel comprising a bendable sheet metal facing and a rigid plywood facing bonded to opposite sides of a flat core of plastic foam, as polystyrene foam. The panel is provided with spaced pairs of transverse grooves extended through the rigid plywood facing toward the bendable metal facing. The bases of the grooves are spaced from the metal



facing. The grooves divide the panel into a roof section and opposite side sections. The side sections having openings for receiving window structures. The pickup cover is formed by bending the panel along the base of the V-grooves forming a roof converging outwardly to a longitudinal ridge and upright side walls. The back of the pickup cover is closed with an end wall having a door.

3,517,428

BRAZED ARTICLE WITH ALUMINIDE COATING STOP-OFF

John D. Gadd, Willowick, Ohio, assignor to TRW Inc., Cleveland, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 548,423, May 9, 1966. This application Apr. 25, 1969, Ser. No. 819,314

Int. Cl. B32b 15/04

U.S. Cl. 29—195

8 Claims



A brazed article comprising a pair of metallic members bonded together with a brazing alloy, at least one of the members being composed of an alloy having a base metal of the iron group and having a stop-off composition adjacent the area of brazing comprising an aluminide layer of the iron group metal having a superficial oxide layer thereover.

3,517,429

KNITTING MACHINERY

Frederick Henry Carrotte, Leicester, and George Herbert Wilson, Coventry, England, assignors to A. Kirkland & Company Limited, Syston, Leicester, England, a British company

Filed May 10, 1968, Ser. No. 728,280

Claims priority, application Great Britain, May 12, 1967, 22,254/67

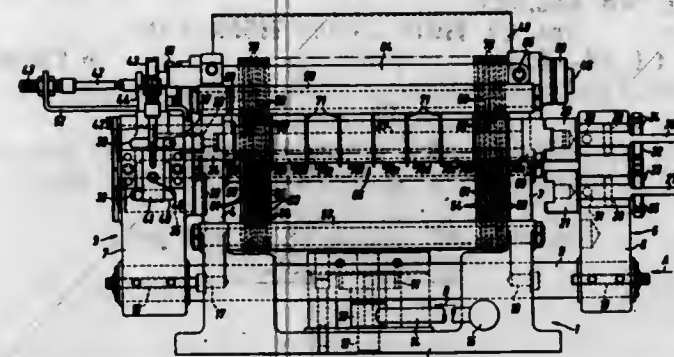
Int. Cl. B23p 19/00

U.S. Cl. 29—200

8 Claims

Apparatus for the removal of selected bits from the circumference of pattern wheel elements for circular knitting machines, the apparatus comprising holding means for releasably holding one or more pattern wheel elements, mounting means on which a representation of at

least part of the repeat pattern area of a fabric to be produced can be mounted, a plurality of selection members each of which can be located, in accordance with information on a representation on the mounting means, to set a separate bit-removing member in or out of a position in which relative movement between it and a pattern



wheel element held by the holding means will cause removal of a bit from the circumference of the pattern wheel element, and means for effecting such relative movement. The bit-removing members may be carried on the selection members, and the holding means may be adapted to hold a plurality of pattern wheel elements.

3,517,430

WORK-SETTING STATIONS

David Theodore Nelson Williamson, Richard Graham Croeland, and Philip Richard Christal, Deptford, London, England, assignors to Molins Machine Company Limited, Deptford, London, England, a corporation of Great Britain

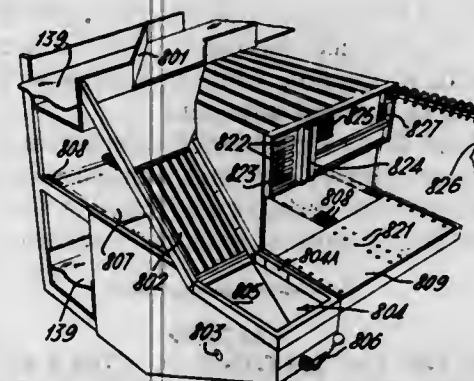
Filed May 1, 1968, Ser. No. 725,847

Claims priority, application Great Britain, May 5, 1967, 21,108/67

Int. Cl. B23p 19/04

U.S. Cl. 29—208

24 Claims



A work-setting station has driven chain conveyors to feed pallets in linked pairs over a support table from a receiving position, to which a transporter delivers pallets, towards a work-setting position and therefrom to a collection position from which the transporter collects pallets. Upper and lower conveyors feed bins respectively to and from the station which has inclined bin ramps from the upper conveyor to a bin compartment and therefrom to the lower conveyor. Switches and read-heads indicate to a controlling computer the positions and identifying binary numbers of pallets and bins at the station.

3,517,431

METHOD OF MAKING COMBINATION FUEL RODS

James E. Ayer, Joliet, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Apr. 28, 1967, Ser. No. 635,961

Int. Cl. B22f 3/24

U.S. Cl. 29—420.5

2 Claims

A method of making uniform close-packed dispersions in which different materials are arranged in layers within

a container. Predetermined amounts of different materials which are of a relatively large diameter are added to the container in succession and compacted by vibration. Then, in the same order, successive amounts of material which are relatively smaller in diameter are added to the container in quantities just sufficient to occupy the spaces or interstices between the larger diameter materials of the same type, while vibrating the container.

3,517,432

DIFFUSION BONDING OF CERAMICS

Donald J. Sandstrom, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed May 2, 1968, Ser. No. 726,244

Int. Cl. B23k 31/02

U.S. Cl. 29—472.7

5 Claims

A method of bonding a ceramic to another ceramic body in which a metal such as aluminum, titanium, or vanadium in the form of foil, oxide, or hydride is placed between two ceramic bodies, heated in an oxidizing or inert atmosphere until the metal reacts with the ceramic causing solution of the bonding agent with the ceramic. Upon subsequent cooling to room temperature the bonding material remains as a mixed oxide phase which is a nonconducting ceramic phase which has produced a diffusion bond.

3,517,433

METHOD FOR ASSEMBLING UNIVERSAL JOINTS

Alfred Pitner, Paris, France, assignor of one-half to Nadella S.A., Rueil-Malmaison, France, a French body corporate

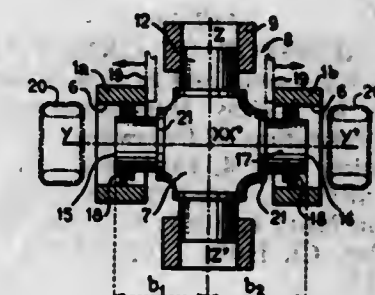
Filed Feb. 20, 1967, Ser. No. 617,129

Claims priority, application France, Feb. 23, 1966, 50,711

Int. Cl. B23p 19/00; B23q 3/00

U.S. Cl. 29—434

3 Claims



The method concerns ensuring that the axis of the shaft to which a fork of a universal joint is connected intersects the common axis of one of the pairs of journals of the cross member of the universal joint, by means of a fixture supporting the shaft and comprising two U- or V-shaped centering elements which directly engage the pair of journals and hold their common axis in a plane containing the axis of the shaft while the other pair of journals are fixed in position in the corresponding bores of the fork, of which the following is a specification.

3,517,434

METHOD FOR FASTENING BODIES

James D. Shaver, Scarsdale, N.Y., assignor to Clark & Vicario Corporation, North Tarrytown, N.Y., a corporation of New York

Original application Aug. 3, 1965, Ser. No. 476,953, now Patent No. 3,372,067. Divided and this application Dec. 21, 1967, Ser. No. 725,242

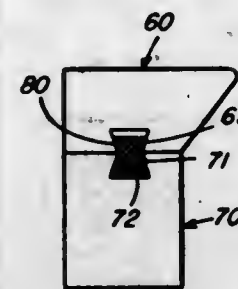
Int. Cl. B23k 35/12

U.S. Cl. 29—502

14 Claims

A method for fastening two bodies wherein each body has an enlarged cavity formed therein extending inwardly

from a mouth opening in the surface thereof. The two bodies are joined together by introducing into at least one of the cavities a mass of non-shrinking type metal alloy, holding the bodies in contact with each other with the



respective cavities in communication, and heating the bodies to melt the metal alloy and cause the metal alloy to bond the two bodies together. A portion of the volume of the cavities may be filled with compressible material.

3,517,435

METHOD OF PRODUCING SEMICONDUCTOR MATERIALS

Ernst W. S. Winkler, John R. Emmett, and John A. Perry, Ottawa, Ontario, Canada, assignors to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada
No Drawing. Filed Sept. 1, 1967, Ser. No. 664,946
Int. Cl. H01v 49/00

U.S. Cl. 29—573

3 Claims

A method for compacting thermoelectric semiconductor material to provide anisotropic properties by enclosing the material in powdered form in a ductile sheath. The sheath is then compressed by repeated swaging or drawing to compact the semiconductor material and the sheath or a portion of it is subsequently removed.

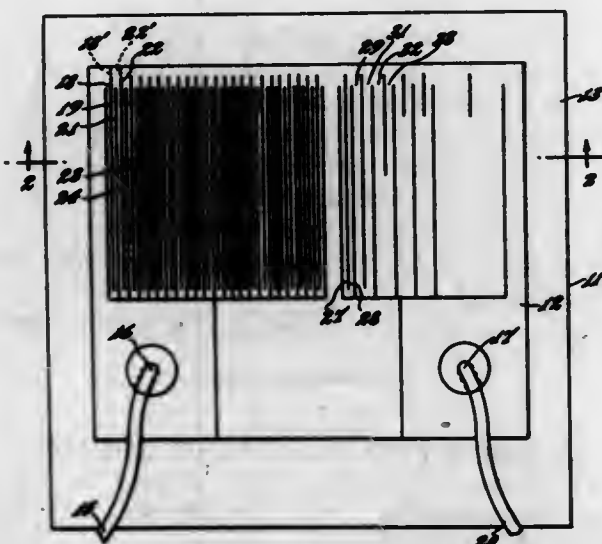
3,517,436

PRECISION RESISTOR OF GREAT STABILITY

Felix Zandman, Villanova, and Branin A. Boyd, Malvern, Pa., assignors to Vishay Interotechnology, Inc., Malvern, Pa., a corporation of Delaware
Original application May 4, 1965, Ser. No. 453,098, now Patent No. 3,405,381, dated Oct. 8, 1968. Divided and this application Nov. 1, 1967, Ser. No. 701,794
Int. Cl. H01c 1/02, 17/00

U.S. Cl. 29—613

3 Claims



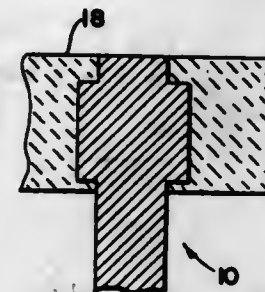
A process of manufacturing a precision resistor having a predetermined pattern of thin metallic film supported on a substrate wherein the resistance value of the resistor is adjusted after a plastic coating has been applied to the thin metallic film.

METHOD OF FORMING A TERMINAL STRUCTURE IN A REFRACTORY BASE

Karl F. Szobonya, Orange, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Original application Dec. 4, 1964, Ser. No. 416,974, now abandoned. Divided and this application June 19, 1967, Ser. No. 662,223
Int. Cl. H01b 13/00; H05k 3/00

U.S. Cl. 29—624

6 Claims



1. A method of mounting a terminal structure in a refractory base member which base member has top and bottom surfaces, said refractory base member being formed of a refractory material which shrinks upon the application of heat thereto, comprising the steps of: forming, in said refractory base member, while said base member is in the unfired state, a hole of diameter B communicating with said top and bottom surfaces; providing a conductive terminal pin of a length substantially greater than the distance between said top and bottom surfaces of said base member; forming on said terminal pin a shank having a diameter A which is smaller than said hole diameter B, and forming protuberances projecting from said shank of said terminal pin, said protuberances having an outer diameter C which is larger than said hole diameter B; inserting said shank of said terminal pin in said hole, said protuberances having an interference fit with the sidewalls of the hole while said refractory base member is in the unfired state; and heating and firing the assembly comprising said refractory base member and said terminal pin to cure said refractory base member and causing said base material to shrink around said protuberances.

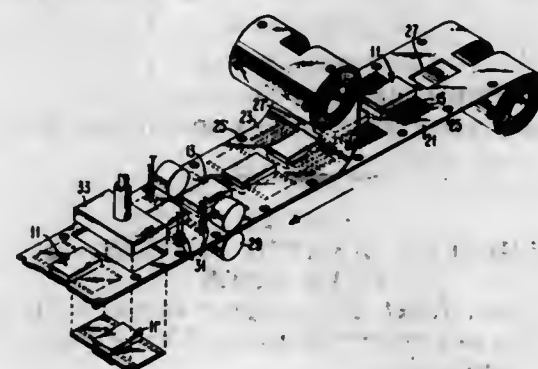
3,517,438

METHOD OF PACKAGING A CIRCUIT MODULE AND JOINING SAME TO A CIRCUIT SUBSTRATE

Alfred H. Johnson and William R. McConnell, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed May 12, 1966, Ser. No. 549,544
Int. Cl. H05k 3/30

U.S. Cl. 29—627

5 Claims



Plural integrated circuit modules or "flat packs" are sandwiched and sealed between plastic sheets. One of the sheets has receiving slots to locate the modules and each

slot is of such a width to allow each module to be supported by the leads which extend in opposite directions beyond the edge of the slot. In the sealed condition the modules can be tested and/or stored. Then the sealed flat packs are separated; the leads exposed, formed, and looped; and the looped leads soldered to circuit substrates.

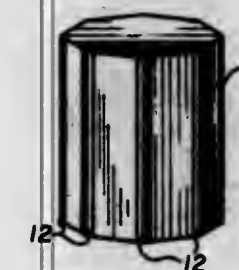
3,517,439

METHOD OF MAKING A MICROMINIATURE CONNECTOR

Howard H. Manko, Teaneck, N.J., assignor to Alpha Metals, Inc., Jersey City, N.J., a corporation of New Jersey
Filed Dec. 5, 1968, Ser. No. 789,634
Int. Cl. H01r 9/00

U.S. Cl. 29—630

1 Claim



A microminiature connector for connecting components of an electric circuit in which a generally elongated, dielectric body is provided with longitudinal, electrically conductive leads permanently bonded to the body, and exposed on its surface for connection thereto.

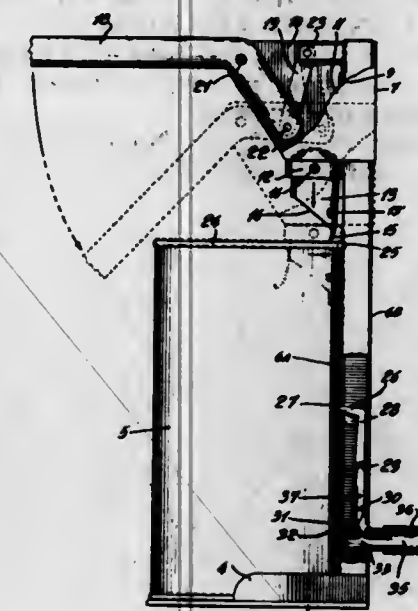
3,517,440

CAN OPENER HAVING DRIP COLLECTING MEANS

Omer Charette, 117 Rue Thibault, Valleyfield, Quebec, Canada
Filed Apr. 11, 1968, Ser. No. 720,551
Int. Cl. B67b 7/24

U.S. Cl. 30—5.5

6 Claims



An apparatus for opening fluid containers having an up- and downward operable, lever-actuated punch blade and means for automatically collecting drops dripping from the blade upon perforation and removal of the container from the apparatus.

3,517,441

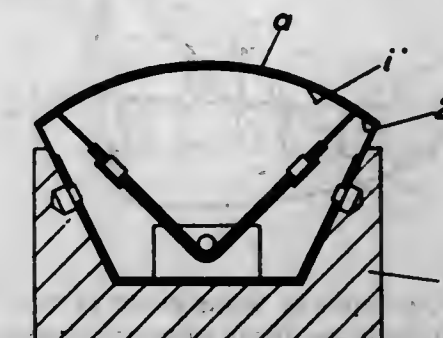
SHAVER WITH TWO-FOIL SHEARING HEAD

Bodo Futterer, Sarnen, and Hugo Fritschy and Klaus Gorlinger, Sachseln, Switzerland, assignors, by means of assignments, to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed July 6, 1967, Ser. No. 651,492
Claims priority, application Switzerland, July 6, 1966, 9,842/66

U.S. Cl. 30—34.1

Int. Cl. B26b 19/06

5 Claims



A shaver with a two-foil shearing head, both foils being provided with slots along at least one edge. The inner foil has projecting teeth for intimate contact with the slotted edge portion of the outer foil. A comb-like projection is arranged in front of the slotted edge of the outer foil.

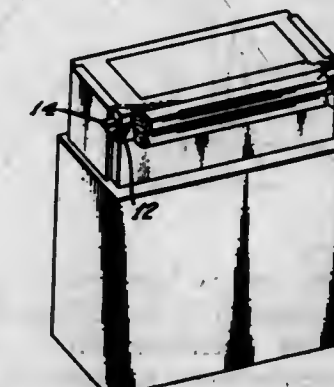
3,517,442

ATTACHMENT FOR INCREASING THE EFFECTIVENESS OF AN ELECTRIC SHAVER

Malachy J. Regan, 1516 York Ave., New York, N.Y. 10028
Filed Apr. 8, 1968, Ser. No. 719,376
Int. Cl. B26b 19/38

U.S. Cl. 30—41

4 Claims



A clip means for holding absorbent material detachably upon the housing of an electric shaver, whereby said means contain arms for retention thereof by door-like closures at opposite ends of the head of the shaver; said clip means being usable singly or in pairs. Said absorbent material may be moistened with a skin conditioning lotion or other suitable emollient, which is applied by the pressure of said material upon the face and neck prior to and simultaneously with the use of an electric shaver.

3,517,443

DENTURE STRUCTURE AND METHOD OF MAKING

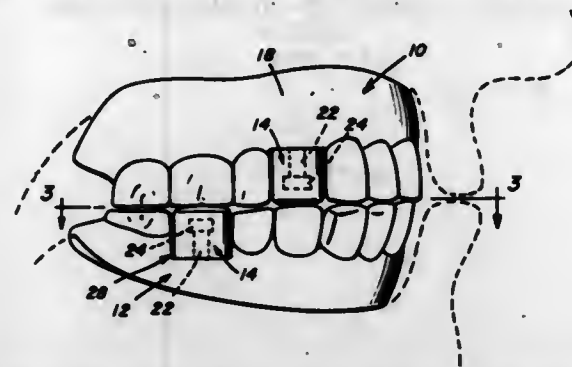
Al F. Holley, Rte. 1, Brewton, Ala. 36426
Filed Sept. 23, 1968, Ser. No. 761,775
Int. Cl. A61c 13/00

U.S. Cl. 32—2

11 Claims

A construction for dentures employing rebound or elastically displaceable teeth at the rear of the upper and lower plates so that contact is made thereby first, before the front bite, forcing the person to chew more naturally with the rear bite. This rear bite is further enhanced by the formation of the lingual flange to extend below the alveolar ridge and fill a portion of the lingual cavity adjacent the denture.

Heretofore, the problems associated with dentures were associated with the improper front bite, wherein the front teeth of the upper and lower dentures make contact first, which results in improper mastication of food and also tends to loosen the dentures from the alveolar ridge thereby causing irritation of the ridge and embarrassment



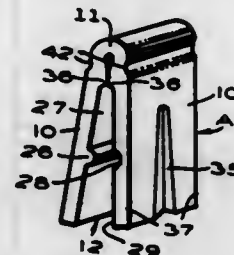
due to the loose dentures. Some dentures have teeth which are provided with resilient mounting between the cap and the denture which gives some relief, but the problem is not completely solved since the plates cannot be made to anchor firmly enough to the alveolar ridge to sustain the pivoting of the upper teeth about the rear of the lower denture.

3,517,444 REVERSIBLE DENTAL MATRIX BAND RETAINING CLAMP

Benjamin F. Tofflemire, 41301 Crest Drive,
Hemet, Calif. 92343
Filed Nov. 28, 1969, Ser. No. 880,785
Int. Cl. A61c 5/12

U.S. Cl. 32-63

5 Claims



A reversible dental matrix band retaining clamp defining a unitary substantially U-shaped member having a pair of legs which are interconnected by an arch, the legs having a slot therebetween for receiving overlapped end sections of a matrix band, one of the legs having a horizontal tongue on its interior surface that registers with a horizontal groove formed in the interior surface of the other leg. Horizontal beads are provided on the interior surfaces of the legs to form stops against which occlusal edges of the band will abut to prevent the band from entering the arch and becoming pinched when the member is clamped upon the band. Opposite lateral edges of the legs parallel one another. Occlusal-lingual recesses are formed on the mesial and distal aspects of the clamp.

3,517,445 OPTO-MECHANICAL ALIGNMENT APPARATUS

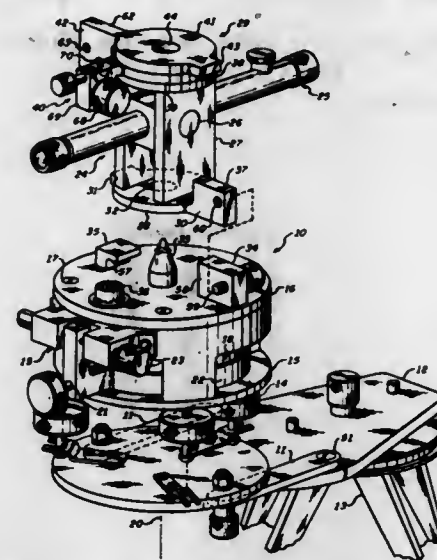
Henry B. Harris, Scottsdale, Ariz., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed June 3, 1968, Ser. No. 733,927
Int. Cl. G01c 15/00

U.S. Cl. 33-46

10 Claims

Apparatus for installing a flux valve in an aircraft including an invertible telescope assembly having first and second alignment tabs respectively fixedly oriented and rotatable in azimuth with respect to a sighting device, a telescope assembly support having a reference tab and adapted to be affixed to a level turntable, and a telescope assembly mount forming an integral part of a mount

adaptor having an adaptor plate with an indexing surface corresponding to an alignment surface on the flux valve. To use the apparatus the telescope assembly is placed on the telescope assembly support affixed to the turntable positioned to the front or rear of the craft and the first alignment tab is held in contact with the reference tab while the turntable is rotated to sight the longitudinal axis of the craft thus orienting the reference tab with respect to the axis. Then the telescope assembly is inverted and the second alignment tab is placed in contact with the reference tab after which the sight-



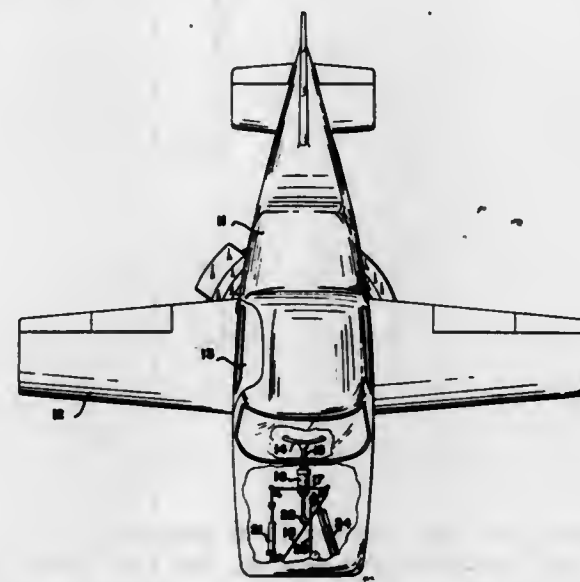
ing device is rotated in azimuth to sight the location of the flux valve mounting fixture thereby defining the angle between the longitudinal axis and the mounting fixture from the point of observation. Installation of the valve in the craft is completed by placing the telescope assembly in its inverted position on the mount adaptor with a reference tab thereon in contact with the second alignment tab and then the telescope assembly, mount adaptor and flux valve are rotated together to sight back on a center post of the telescope assembly support preparatory to securing the valve to its mounting fixture.

3,517,446 VEHICLE TRAINER CONTROLS AND CONTROL LOADING

Phillip R. Corlyon, Conklin, and John C. Fletcher, Binghamton, N.Y., assignors to Singer-General Precision, Inc., a corporation of Delaware
Filed Apr. 19, 1967, Ser. No. 631,996
Int. Cl. G09b 9/08

U.S. Cl. 35-12

7 Claims



One of the primary requirements of a vehicle trainer is the proper simulation of the operation and feel of the

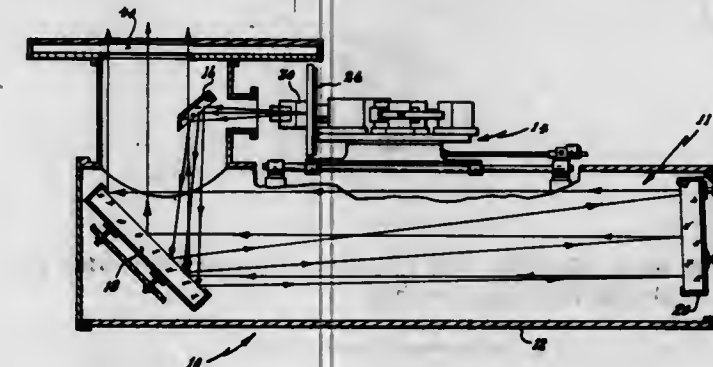
primary controls of the vehicle being simulated. This disclosure describes and illustrates one system for primary controls of a fixed-base aviation trainer including the means for changing the feel of those controls as they are operated. The disclosure includes details of construction as well as modifications of various components.

3,517,447 OPTICAL-REIMAGING SYSTEM

Paul L. Fox, Whittier, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 3, 1968, Ser. No. 695,392
Int. Cl. G02b 27/00

U.S. Cl. 35-25

4 Claims



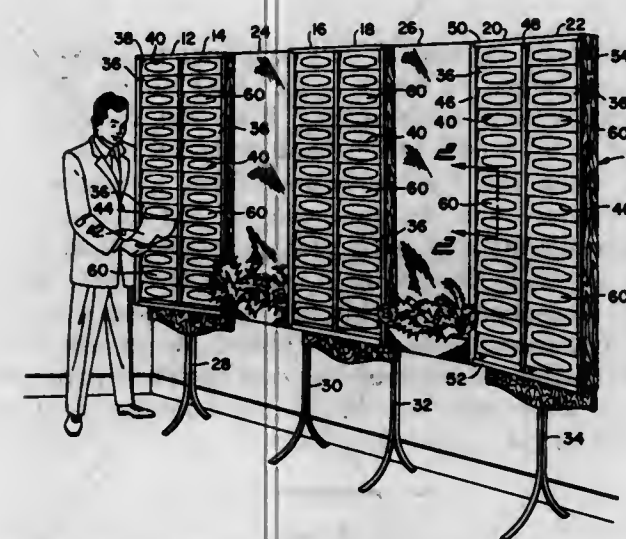
An optical-reimaging system for converting the image from a rotating disk target of a target and ground speed simulator into a rectilinearly moving target having a pair of angled reflectors positioned between the target and a collimator. One of the angled reflectors having a concave cylindrical configuration while the other reflector is a compound aspheric.

3,517,448 COLOR DISPLAY AND DISPENSING DEVICE

John J. Wallace, Highland Heights, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
Filed May 22, 1968, Ser. No. 731,226
Int. Cl. B65h 19/04

U.S. Cl. 35-28.3

1 Claim



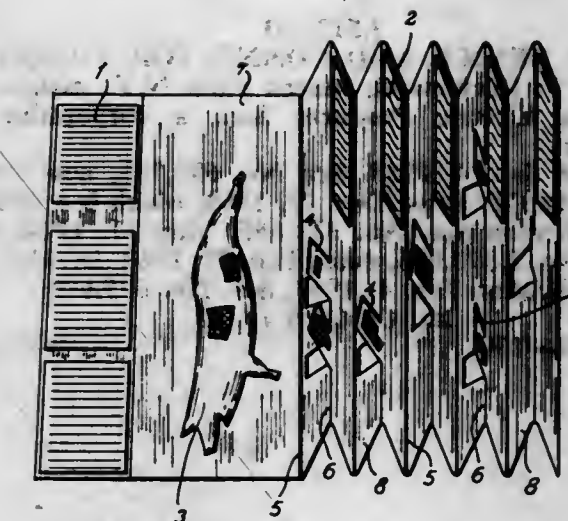
There is provided a display and color sample dispensing rack including in combination a plurality of individual receptacles, a plurality of color sample displaying and dispensing devices in said rack, each device comprising a roll of colored paper and a box dimensioned to contain such roll and to fit into a box-receiving receptacle in said rack.

876 O.G.-30

3,517,449 EDUCATIONAL AND INSTRUCTIONAL DEVICE

Jørgen Melchior Frandsen, Mølholm, Vejle, and Erik Buddig Johansen, Aarhus, Denmark, assignors to Tulp Meat Packers, Vejle, Denmark
Filed Dec. 6, 1967, Ser. No. 688,459
Claims priority, application Sweden, May 16, 1967, 6,795/67
Int. Cl. G09b 29/04; B42d 15/04; G09t 1/00
U.S. Cl. 35-53

4 Claims



An educational and instructional device for illustrating the components of a three-dimensional body and consisting of a plate, preferably of cardboard, provided with a number of parallel folds so that the plate may be folded to form a corrugated element of superimposed layers, each layer having one or more tongues which in the folded position cooperate with the other tongues representing the components and arrangements of the three-dimensional body.

3,517,450 ADHESIVED RECORDING LABEL

Michael R. Greco, Chicago, Ill., assignor to Professional Tape Co., Inc., Riverside, Ill., a corporation of Illinois
Filed Feb. 23, 1968, Ser. No. 707,580
Int. Cl. A44c 3/00

U.S. Cl. 40-2

7 Claims



The recording label of this invention has means, such as adhesive, in a narrow band along one edge by which it is removably attachable to a necked bottle or similar

vari-contoured container of flowable material with the one edge, which may have volumetric markings, closely conforming to the container contours while also extending in a plane, the remainder of the label being free of the container. This free portion is engageable smoothly on the container surface for clear and legible recording of data on any part of the label front face, and also serves as an attention-arresting "flag."

3,517,451

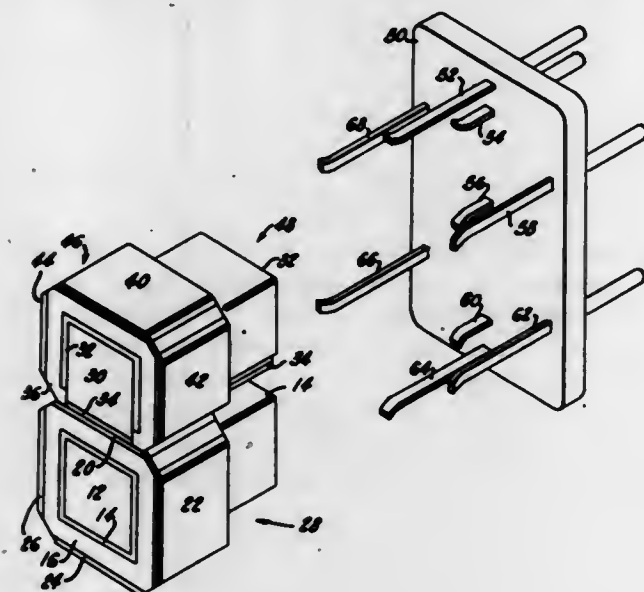
DISPLAY DEVICE AND CONNECTOR THEREFOR
Thaddeus V. Rychlewski, Seneca Falls, N.Y., assignor to
Sylvania Electric Products Inc., a corporation of
Delaware

Application Jan. 4, 1968, Ser. No. 695,758, now Patent
No. 3,484,975, dated Dec. 23, 1969, which is a division
of application Ser. No. 370,655, May 27, 1964, now
Patent No. 3,370,976, dated Feb. 27, 1968, Divided and
this application Jan. 4, 1968, Ser. No. 695,690

Int. Cl. G09f 13/22

U.S. Cl. 40-130

3 Claims



serves as a shoulder for aligning the faceplate and picture with the backing member.

3,517,453

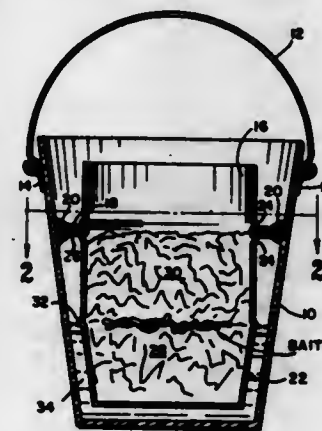
BAIT BUCKET

Leon C. De Croes, 319 E. Walnut, Kokomo, Ind. 46901
Filed Jan. 19, 1968, Ser. No. 699,234

Int. Cl. A01k 97/04

U.S. Cl. 43-55

6 Claims



A generally cylindrical bait container is supported partially submerged in water in an outer bucket having its side and bottom walls spaced from the container. The support is by a coil spring band attached at four spaced points about the bucket wall to form a square having sides shorter than the diameter of the container. The spring resiliently engages a groove in the wall of the container, which is thereby held in spaced relation with the bucket. The container holds two equal layers of crushed damp newspaper which fills two-thirds of its volume. The bait is placed between the two layers of paper where it is kept alive and clean in the damp environment which is cooled by the surrounding water.

3,517,454

FEEDER AND PACKAGE ARRANGEMENT FOR FLUENT DRY SOLIDS

Grady W. Query, Rte. 4, Matthews, N.C. 28105
Filed Aug. 17, 1967, Ser. No. 661,420

Int. Cl. A01m 25/00

U.S. Cl. 43-131

5 Claims

A generally rectangular prismatoid container is erected from sheet material such as paperboard scored and folded into a plurality of interconnected panels, with the panels being configured and disposed in such shapes

3,517,452

PICTURE MOUNTING APPARATUS

Sidney Finley, 3226 Wickham Ave., Bronx, N.Y. 10469
Filed Sept. 16, 1968, Ser. No. 762,246

Int. Cl. G09f 1/10

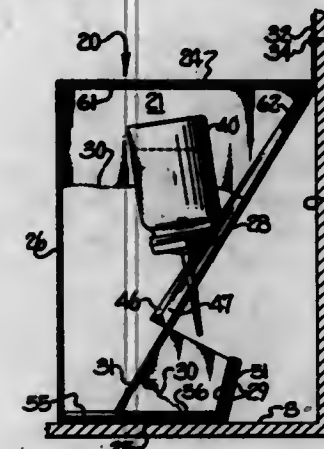
U.S. Cl. 40-159

3 Claims

A mounting apparatus for the decorative display of pictures or the like is provided, which includes a base member, one or more picture backing members mounted on the base member in overlying relation thereto and a transparent faceplate mounted on each backing member so that a picture to be displayed may be positioned between the faceplate and the backing member. A plurality of spring clamps is provided with each backing member and faceplate to retain the faceplate and picture in posi-

and orientations as to define a receptacle adapted to receive dry solids and to feed the same to a dispensing tray

plurality of resonant cavities to effect air passage there-through to produce as an output a blend of audible tones constituting a sound pattern simulating the whine of a jet engine or turbine engine.



adapted to retain the dry solids in position for unobstructed access by animals.

3,517,455

TOY BOAT WITH PHONOGRAPH

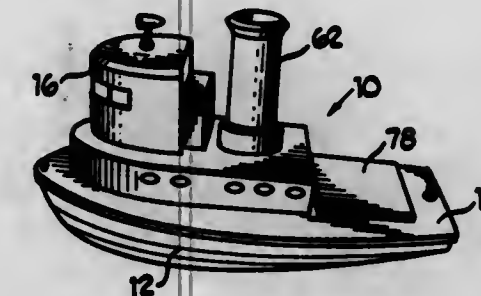
Marvin I. Glass, Chicago, and Palmer J. Schoenfeld, Evanston, Ill., assignors to Marvin Glass & Associates, Chicago, Ill., a partnership

Filed Jan. 17, 1968, Ser. No. 698,468

Int. Cl. A63h 23/04

U.S. Cl. 46-93

1 Claim



A self-propelled toy boat which includes a phonograph device for producing appropriate sounds as the boat is propelled through the water. The hull or housing of the boat includes a rotatable turntable with a record thereon, a tone arm having a needle positionable to engage the sound track of the record, an acoustical amplifying cone having its apex in position for engagement by the tone arm, and a pair of battery powered motors for driving the turntable and for propelling the boat, respectively.

3,517,456

JET ENGINE SOUND SIMULATING DEVICE

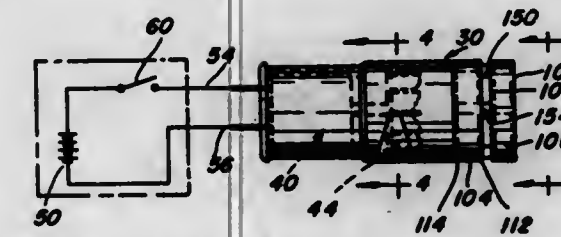
Robert Reder, Northfield, and Jack Richard Behrends, Prospect Heights, Ill., assignors to Monogram Models, Inc., Morton Grove, Ill., a corporation of Illinois

Filed July 26, 1968, Ser. No. 748,078

Int. Cl. A63h 33/26

U.S. Cl. 46-232

12 Claims



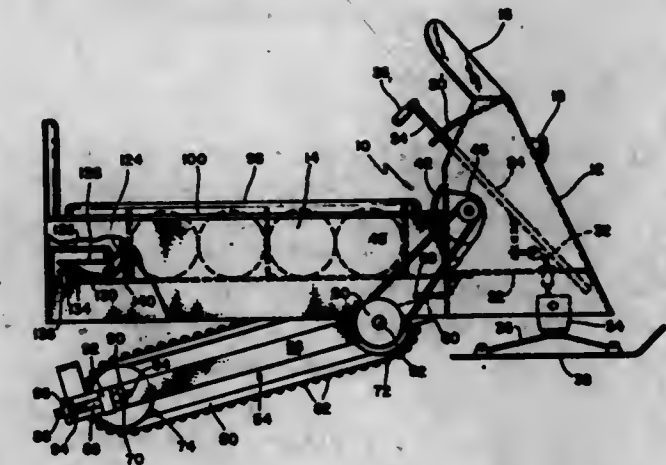
A battery-powered, motor-driven fan assembly for toy planes and the like and functioning in cooperation with a

3,517,457
SELF-PROPELLED SNOW TOY VEHICLE
William H. Pene, Rte. 1, Rush City, Minn. 55069
Filed July 10, 1967, Ser. No. 692,306

Int. Cl. A63h 29/22

U.S. Cl. 46-243

4 Claims



The toy includes a casing containing an electric motor, batteries and a switch. The switch is automatically closed when the toy is placed on a surface, such as snow, which is to be traversed, thereby energizing the motor. The motor operates an endless belt or track that provides the propulsion for the vehicle. Steering is achieved via a pair of forwardly mounted ski runners.

3,517,458

MOVABLE TOY HAVING DETACHABLE AUXILIARY DRIVING WHEEL MEANS

Yasuta Sato, 48-333-2 Matsugasaki, Nagareyama-shi, Chiba-ken, Japan

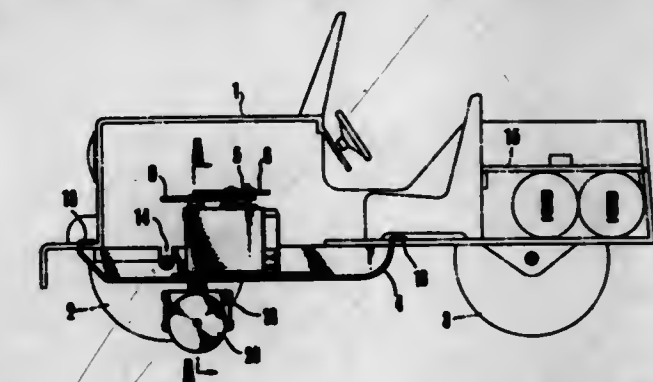
Filed Dec. 11, 1967, Ser. No. 689,622

Claims priority, application Japan, Oct. 11, 1967, 42/88,345

Int. Cl. A63h 29/22

U.S. Cl. 46-243

6 Claims



A movable toy has a body provided with pairs of front and rear wheels which are idlers and a source of driving power including an electric motor. An auxiliary driving wheel attachment including a driving shaft connected to an axle carrying a pair of driving wheels is detachably connected to the body and the source of driving power by its driving shaft.

3,517,459 **ROLLER SUPPORT FOR A SLIDING DOOR, A** **SLIDING WINDOW, OR THE LIKE**

Heinrich Schupper, 13 Bannweg,
 7853 Steinen, Germany

Filed Nov. 4, 1968, Ser. No. 773,199

Claims priority, application Germany, Nov. 4, 1967,
 1,788,138

Int. Cl. E05d 13/02

U.S. Cl. 49—425

8 Claims



A roller support for a sliding door, a sliding window, or the like with vertically movable and insofar motionally interdependent rollers wherein a gear chain, including said rollers, is positioned between said door or said window to be shifted and a stationary supporting surface, respectively, so as to equalize the load among said rollers.

3,517,460

ABRADING TOOL CONTROL SYSTEMS

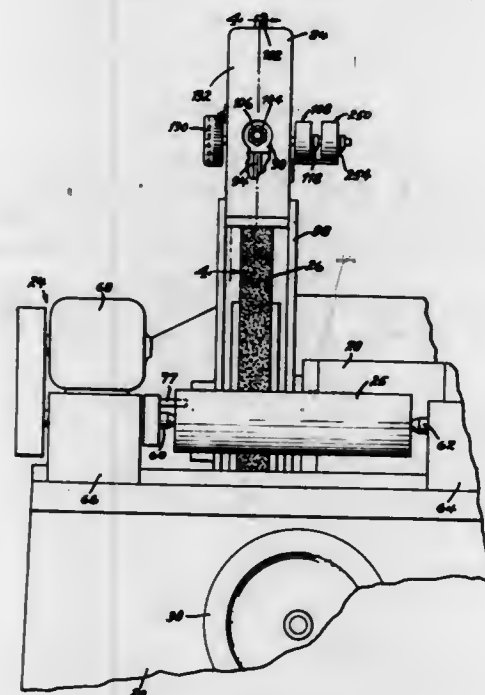
Donald R. Stewart and Ellis D. Kane, Detroit, Mich.;
 said Ellis assignor to Donald R. Stewart, Detroit, Mich.,
 doing business as Stewart Instrument Company, Detroit,
 Mich.

Filed Apr. 26, 1966, Ser. No. 545,363

Int. Cl. B24b 5/04, 53/14, 55/04

U.S. Cl. 51—5

14 Claims



The disclosure embraces a rotatable abrasive wheel for grinding metal parts to size and a magnet proximate the wheel grinding surface to remove loose metal particles from the wheel and to magnetize particles embedded in the wheel which accumulate and decrease grinding efficiency. The magnet is mounted for movement toward the wheel periphery to maintain the distance therebetween substantially constant and therefore the magnet is effective as the diameter of the wheel decreases by wear, the magnet being movable by a mounting which responds to the wear of the wheel. A transducer responds to a predetermined increase in the density of metal particles embedded in the wheel and generates a correspondingly increasing voltage and a control switch activated by a pre-

determined increased voltage causes a power element to move a dressing wheel to engage and dress the abrasive wheel to remove the objectionable metal particles.

3,517,461

ABRADING APPARATUS

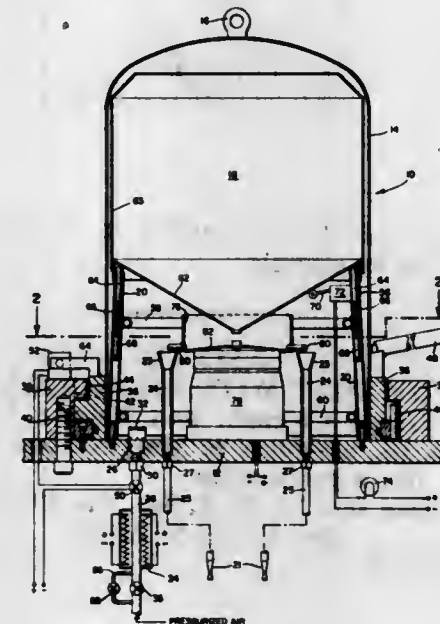
Brian E. Baldwin, Wilmette, and Herbert E. Karlinski,
 Chicago, Ill., assignors to Pennwalt Corporation, a cor-
 poration of Pennsylvania

Filed Mar. 21, 1968, Ser. No. 714,945

Int. Cl. B24c 3/00

U.S. Cl. 51—12

10 Claims



The abrading apparatus includes a pressure vessel which houses a storage reservoir and a distributor for abrasive material. The vessel has an inlet for pressurized gas and a plurality of outlets for gas-borne abrasive material, the distributor being angularly movable about an upright axis to distribute the abrasive material from anularly spaced locations through the outlets and preferably being reciprocated in an inclined arcuate path by a rotary vibrator. Provision is made to signal when the pressure vessel is not locked shut and also when the storage reservoir is almost depleted of abrasive material.

3,517,462

REDUCING AND ROUGHING TOOLS

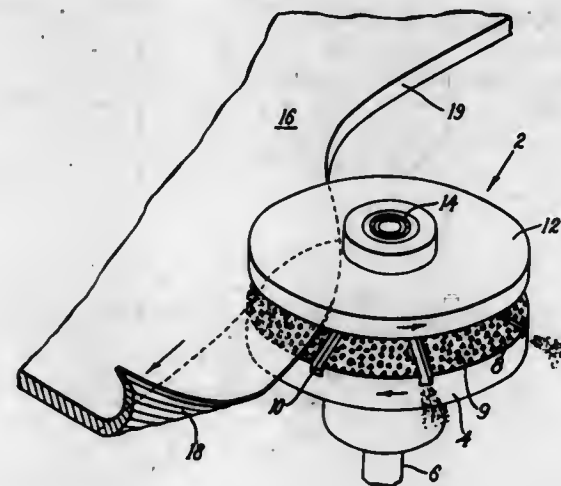
Herman A. Imhof, Hamilton, Mass., assignor to USM
 Corporation, Flemington, N.J., a corporation of New
 Jersey

Filed Feb. 1, 1968, Ser. No. 702,283

Int. Cl. B24b 9/00

U.S. Cl. 51—128

3 Claims



A tool for simultaneously guiding and reducing the edge of a thin piece of material comprising a driven rotary

tapered wheel or disk having a particulate abrasive surface and having spaced therefrom on the same shaft a free wheeling rotary disk which guides the piece of material being reduced.

3,517,463

ROTARY SEGMENTAL SAW WITH DRY- CUTTING CHARACTERISTICS

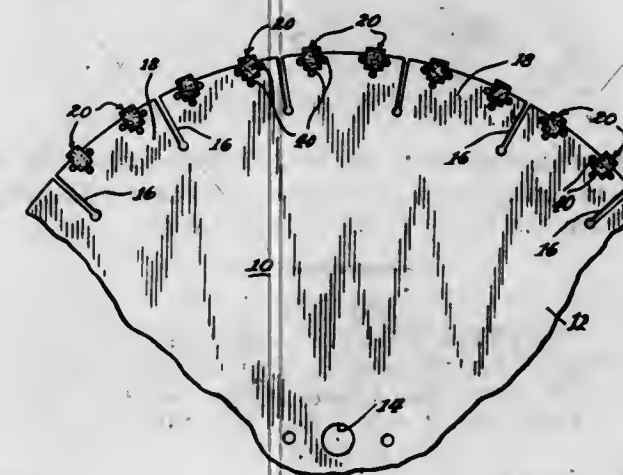
Stephen M. Niemiec, Chicago, Ill., assignor to Super-Cut,
 Inc., Chicago, Ill., a corporation of Illinois

Filed Mar. 6, 1968, Ser. No. 710,924

Int. Cl. B24d 5/10; B28d 1/04

U.S. Cl. 51—206.4

7 Claims



A rotary segmental saw having peripheral segments which are air cooled by means of proximate air passages which extend transversely through the circular blade of the saw.

3,517,464

METHOD OF MAKING ABRASIVE TOOLS BY ELECTRO-DEPOSITION

Michael Mattia, Upper Darby, and William T. Tompkins,
 Philadelphia, Pa., assignors to The Budd Company,
 Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 19, 1968, Ser. No. 714,275

Int. Cl. B24d 3/02

U.S. Cl. 51—309

1 Claim



An abrasive tool and the method of making such a tool is provided. Particles of grit material are embedded and securely bonded in a layer of metal. The method involves first distributing the grit material on soft material, levelling and embedding the particles into the soft material, electro-depositing the metal around exposed portions of the grit material and removing the soft material.

3,517,465

METHOD AND MEANS FOR CONTINUOUS SURFACE TREATMENT

Ardee H. Freeman, Granger, Harold F. Schulte, Mishawaka, and Hubert Davidson, South Bend, Ind., assignors to The Wheelabrator Corporation, Mishawaka, Ind., a corporation of Delaware

Filed May 19, 1966, Ser. No. 551,395

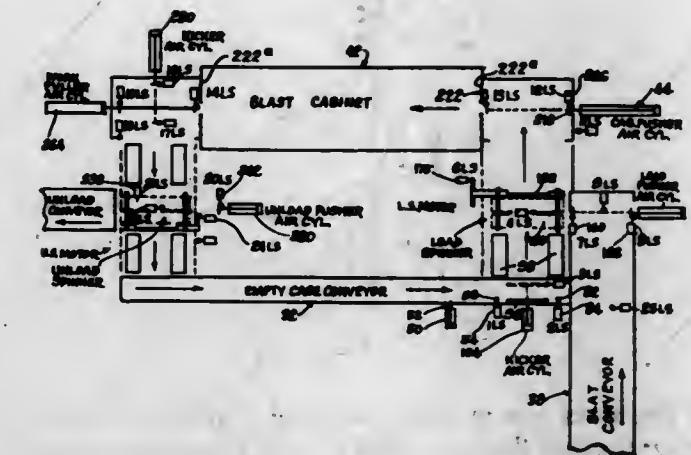
Int. Cl. B24c 1/00, 3/14

U.S. Cl. 51—319

10 Claims

A means and method for surface treatment of shaped articles of large dimension by throwing particulate material onto the surfaces of the articles, an open cage having circular rims into which the articles are inserted, means for loading the cage with article while the cage is in stationary position, means for transporting the

loaded cage onto an elongate roller conveyor, means for endwise displacement of the loaded cages along the conveyor during turning movement of the conveyor to effect rotational movement of the loaded cage, means for



throwing particulate material onto the loaded cage during rotational movement on the conveyor, means for unloading the article from the cage, and means for returning the empty cage to the loading position.

3,517,466

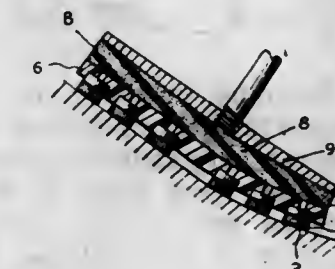
STONE POLISHING WHEEL FOR CONTOURED SURFACES

Jean J. Bouvier, Tonawanda, N.Y., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
 Continuation-in-part of application Ser. No. 725,649,
 May 1, 1968. This application July 18, 1969, Ser.
 No. 846,649

Int. Cl. B24d 17/00

U.S. Cl. 51—358

5 Claims



Cylinders carrying an abrasive bonded to one end thereof and fixed to a flexible disk which is in turn fixed to a compressible elastomer disk, which in turn is fixed to a rigid rotatable driving plate, to form an abrasive polishing wheel for stone adaptable to polish contoured surfaces. In a preferred embodiment, the driving plate is tapered downward to impart a slanted workface and cut more smoothly.

3,517,467

STRUCTURAL SUPPORT SYSTEM FOR SHELVING

Robert L. Propst, Ann Arbor, and James O. Kelley,
 Saline, Mich., assignors to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan

Continuation-in-part of application Ser. No. 623,878,
 Mar. 17, 1967. This application June 17, 1968, Ser.
 No. 737,522

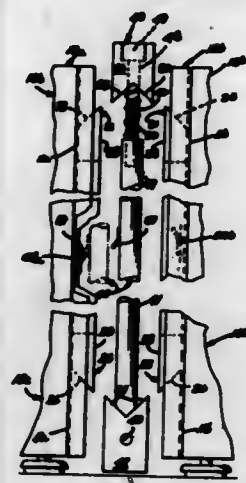
Int. Cl. A47f 5/08, 5/16

U.S. Cl. 52—36

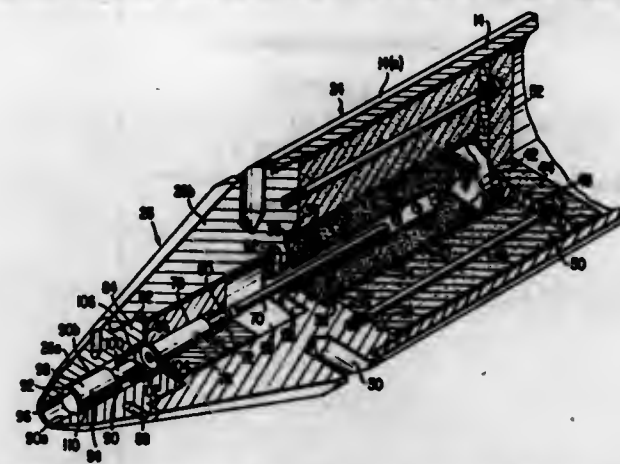
32 Claims

A structural support system for space divider hung furniture components in which support system hanger strips, enclosed within a vertical support member, are provided with pairs of juxtaposed slots which support clips in adjacent relationship to thereby permit independ-

ent furniture units to be supported by each support member at a common level. The hanger strips are shaped such



the inertial member moves to the lower position, to thereby detonate the detonator. In the safety position, the detonating means is spaced out of contact with the de-



that the slots are at least partially concealed behind inwardly directed flanges at the face of the support member.

nator. Passage means in the body admits earth into the body upon contact with the ground to force the detonating means from the safety to the firing position.

3,517,468

AUDIOMETRIC ENCLOSURE

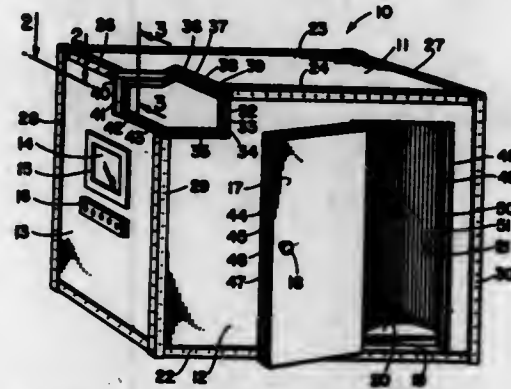
John Thomas Woods, 513 Howie Court,
Santa Paula, Calif. 93060

Filed July 22, 1968, Ser. No. 746,553

Int. Cl. E04b 1/82

U.S. Cl. 52-79

1 Claim



An audiometric enclosure includes side wall, roof and floor panels that are secured together so that sounds from external sources can be greatly attenuated to make the enclosure soundproof. Each panel is of sandwich construction including an intermediate layer of sound absorption material such as polyurethane foam. The panels are joined together at corner joints by angle bars and fasteners that do not penetrate through the sound absorption material. By preventing the fasteners from penetrating through the sound absorption material numerous leakage sources through which external sound could otherwise enter the enclosure are eliminated.

3,517,469

CAMOUFLET DEVICE

Claude H. Brown, Arlington, Tex., assignor to Jet Research Center, Inc., Arlington, Tex., a corporation of Texas

Filed Sept. 27, 1968, Ser. No. 763,059

Int. Cl. E02d 5/80

U.S. Cl. 52-155

4 Claims

A camouflet device which is adapted to have applied thereto an initial accelerating force for propelling the device downwardly into the ground. The camouflet device includes a body, containing an inertial member mounted for free movement between vertically spaced upper and lower positions. A detonator is carried by the inertial member. Detonating means is mounted within the body for movement between safety and firing positions of the detonating means. In the firing position the detonating means is positioned to be struck by the detonator when

3,517,470

EARTH MOUNT ASSEMBLY

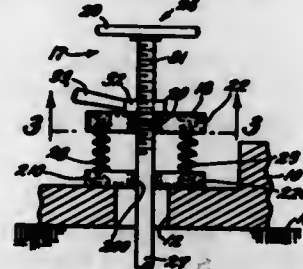
George C. Luebkeman, % Truitt Products, Inc.,
32 Porter St., Cleveland, Ohio 45002

Filed Jan. 3, 1969, Ser. No. 788,831

Int. Cl. E02d 5/80

U.S. Cl. 52-157

3 Claims



An earth mount for a vibratile device comprising a hold-down plate and an earth anchor, the plate being positioned above the base of the device and having a number of base engaging expansile springs connected to its underside, and a mechanical leverage means on the anchor adapted to apply hold-down pressure upon the plate to firmly set the base upon the earth.

3,517,471

METHOD OF JOINING LOGS AND THE RESULTING STRUCTURE WITH A CLAMP USED THEREIN

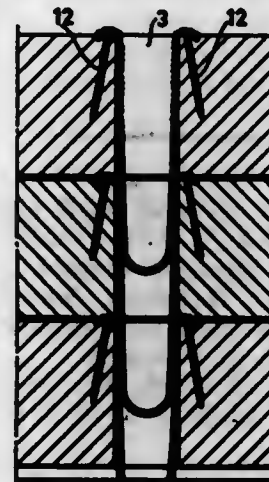
Karl Signar Lindmark, Cityhuset, Jokkmokk, Sweden

Filed Mar. 25, 1968, Ser. No. 715,670

Int. Cl. E04b 1/10, 1/48

U.S. Cl. 52-233

9 Claims



The logs of a log house or the like are provided with aligned vertically extending holes. U-shaped clamps inserted in the holes extend into like clamps in lower logs and thereby hold the logs securely in position.

3,517,472

STRUCTURAL ELEMENT WITH THERMAL BARRIER MEANS

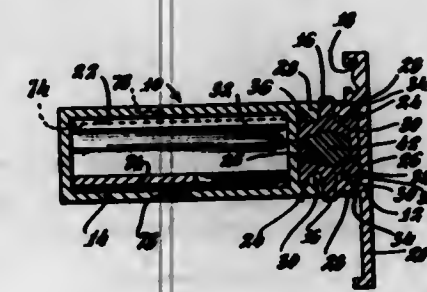
Louis Toth, Easton, Conn., assignor to Anchor Enterprises Corporation, Bridgeport, Conn., a corporation of Connecticut

Filed May 8, 1967, Ser. No. 636,866

Int. Cl. E04b 1/62

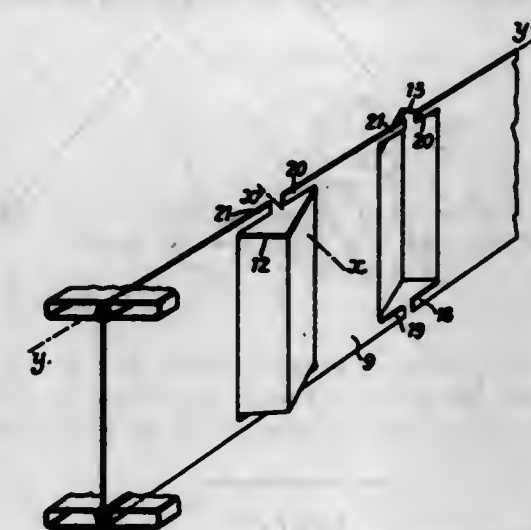
U.S. Cl. 52-403

6 Claims



A structural element with thermal barrier means having an elongated thermal insulating plastic locking member with portions which interlock in elongated tracks formed in two elongated metal members to form a rigid unitary member.

tions converge after a second bending toward the interior of the flange until contact with the back of the upper side



of the flange, the core being welded to the two folded sections preferably at the location of the bend.

3,517,475

METHOD OF PACKAGING

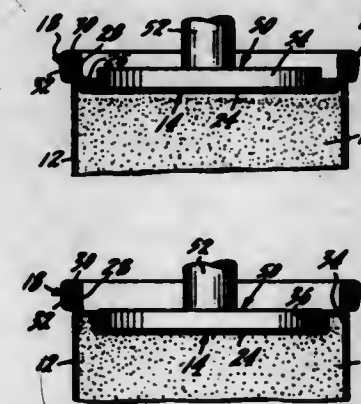
Alfred Edward Balocca, Wheaton, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 18, 1968, Ser. No. 722,352

Int. Cl. B65b 1/24, 31/02

U.S. Cl. 53-22

10 Claims



In order to prevent paneling or body-wall deformation of a can or like container which is subjected to reduced pressure or vacuum conditions, or to prevent undesired movement of the product within the container, a portion of the can end closure is reshaped to greatly reduce the internal volume of the can after the latter has been sealed with the product therein. The reshaping is facilitated by providing an annular peripheral fold in the end closure whereby mechanical pressure may be readily applied to the end closure to depress a major portion of the latter into the can body as the fold is uncollapsed uniformly and evenly to thereby provide a finished package of commercially acceptable appearance.

3,517,474

FLANGED STRUCTURAL ASSEMBLY

Andre Lanterrier, Paris, France, assignor to De Wendel & Cie Societe Anonyme, Paris, France, a company of France

Filed Apr. 24, 1968, Ser. No. 723,654

Claims priority, application France, June 16, 1967,

110,643

Int. Cl. E04c 3/32

U.S. Cl. 52-732

2 Claims

This disclosure concerns a structural assembly having vertical edges or tubular flanges and a planar core or a reinforced core, these flanges being folded on themselves by various deformations and characterized by the fact that this folding is such that the cross section of the flanges be rectangular or trapezoidal and that the two folded sec-

3,517,476

METHOD AND APPARATUS FOR CLOSING CONTAINERS

Eldred W. Bowen, Brentwood, Mo., assignor to Pot Incorporated, St. Louis, Mo., a corporation of Delaware

Filed Apr. 27, 1967, Ser. No. 634,280

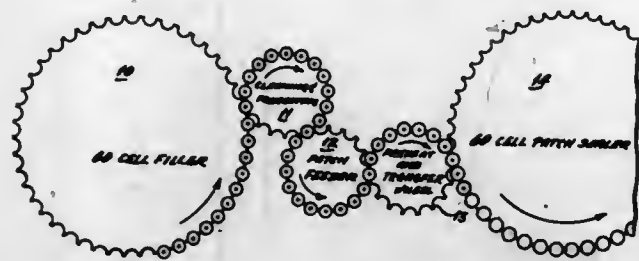
Int. Cl. B65b 3/04

U.S. Cl. 53-37

12 Claims

A foil lined plastic adhesive patch for covering the filling holes of evaporated milk cans and a mechanism

for applying feed patches in high-speed plant production. The apparatus comprises a filler cell where the can is filled with milk, a cleaning wheel, a patch feeder transfer



wheel, and a preheater transfer wheel to a patch sealing wheel where the patch is heated and pressure is applied simultaneously to seal the patch over the filling hole.

3,517,477

ARTICLE HANDLING APPARATUS

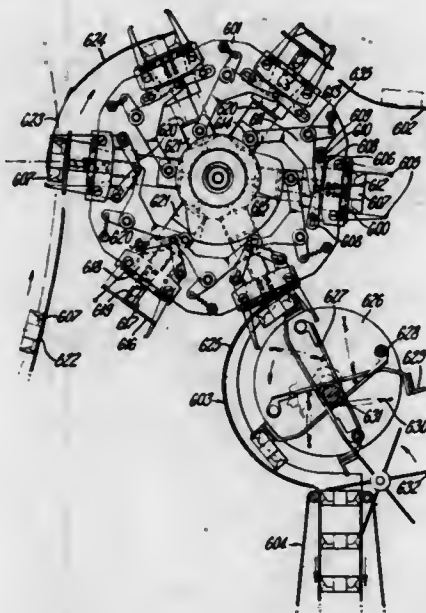
Leonard Thornton, London, England, assignor to Molins Machine Company Limited, London, England, a corporation of Great Britain

Filed Oct. 6, 1967, Ser. No. 673,502

Int. Cl. B65b 57/02

U.S. Cl. 53—53

18 Claims



A rotary table has a number of handling mechanisms which grab packets of cigarettes issuing in a stream from a cigarette-packing machine; springs push faulty packets along the grabs to a position where they are removed by a scoop whilst electromagnets hold good packets back against the springs so that they pass clear of the scoop to be released by the grabs. A decelerator is provided to take the packets from the rotary table, slow them down and move them closer together.

3,517,478

CARTRIDGE PACKAGING MACHINE

George E. Winch, Anoka, Walter H. Grams, Elk River, Gerald G. Braastad, St. Francis, James F. Riddell, Elk River, and William A. Shaw, Champlin, Minn., assignors to Federal Cartridge Corporation, Minneapolis, Minn., a corporation of Minnesota

Filed Nov. 17, 1967, Ser. No. 684,018

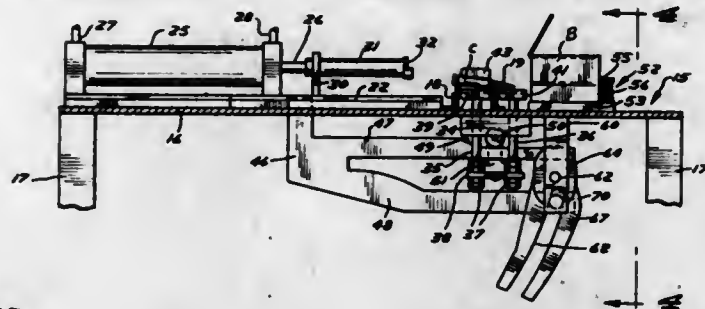
Int. Cl. B65b 35/30, 19/00, 5/10

U.S. Cl. 53—142

8 Claims

A machine for loading firearm cartridges into containers directly from the discharge rail of a gage and weigh machine wherein an elevator bar lifts a preselected number of cartridges from the rail in a horizontal row with cartridges laying side by side and separates the cartridges to the desired packaged spacing and a pusher bar then moves

horizontally into engagement with the ends of the cartridges and pushes them axially off of the elevator bar and into a container. An indexing mechanism operated



by the pusher bar adjusts the container between two alternate elevations for loading two rows of cartridges into the container during successive cycles of the machine.

3,517,479

WRAPPING MACHINE

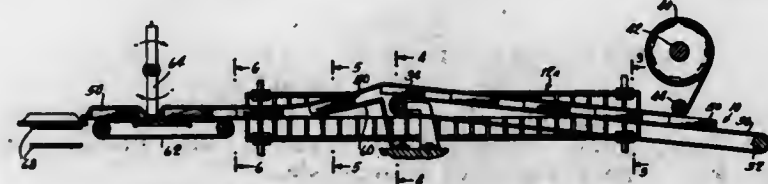
Jesse R. Pinkham, Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

Filed June 25, 1968, Ser. No. 739,753

Int. Cl. B65b 9/12, 51/30

U.S. Cl. 53—182

17 Claims



An automatic continuous motion overwrap machine capable of wrapping irregular shaped objects or articles. The machine embodies a technique according to which a film of plastic material or the like is held taut by a conveying means and is moved in a path which is at an angular relationship with the path of conveyance of the articles, whereby the film is stretched laterally to a considerable extent.

In one form of the machine, as the plastic film is payed off from its bobbin, the side edges are engaged by tenter clips attached to chains running horizontally at opposite sides of the film. The articles to be wrapped are moved underneath the film along a conveyor belt which runs at the same speed as the wrapping film. The belt is inclined such that the articles are moved upwardly and in so moving stretch the film. After it has been stretched, the edges of the film are brought around the articles by the tenter clips which also serve at the final stages to support the articles.

The technique can be practiced by completely overwrapping articles; or it can be applied to the bundling of articles, in which case they are snugly held together but without requiring complete enclosure. The articles are either overwrapped such that they are entubed in a series or string, or they are individually wrapped in accordance with other aspects and features of the disclosure.

3,517,480

APPARATUS FOR MAKING LOOSE GRANULAR FILTERS

Jesse R. Pinkham, Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

Filed Feb. 14, Ser. No. 705,472

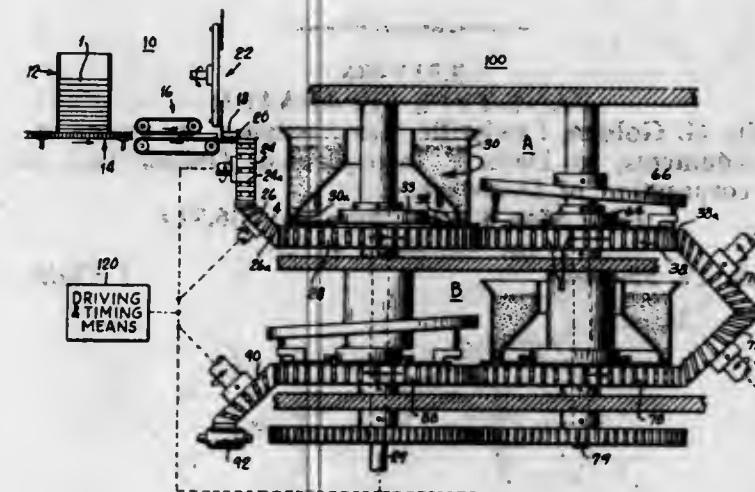
Int. Cl. B65b 1/02

U.S. Cl. 53—183

15 Claims

An improvement in the production of filter tips for cigarettes and the like, the filter tips being composite types

which include a plurality of sections of differing filter components, one of these components being granular material. In order to obtain good packaging of the granular component into the filter tip, means are provided for continuously feeding standard length tubes to a device



which provides end-wise filling. That is to say, the discrete tubes are placed in upright position and the granular material is injected from above into their ends, thereby insuring a complete filling of the void or chamber provided in the tube.

3,517,481

CARTON CLOSER AND SEALER

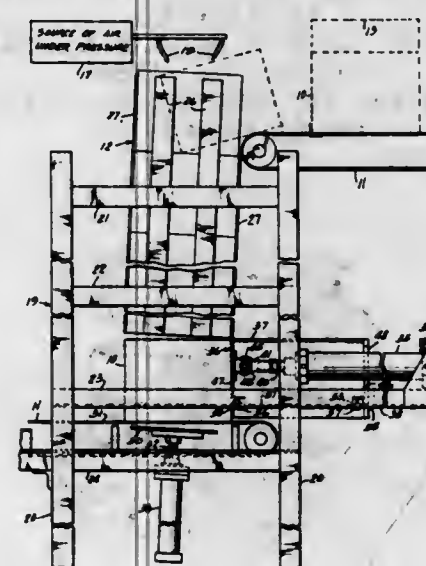
Herbert H. Weber, Sheboygan, Wis., assignor to H. G. Weber and Company, Inc., a corporation of Wisconsin

Filed Sept. 3, 1968, Ser. No. 757,059

Int. Cl. B65b 7/20, 51/10

U.S. Cl. 53—374

13 Claims



Carton closer and sealer in which cartons having adhesive applied to their closure flaps are successively supplied to a compression column. The flaps are moved to closed positions as they are supplied to the column and are sealed by the weight of the cartons in the column. The compression column is tilted at an acute angle with respect to the vertical. A hydraulic cylinder and piston having a lift plate on its upper end are provided to support and lower the cartons. The lift plate conforms to the plane of the bottom of the bottom carton of the column of cartons and passes downwardly beneath ejector means ejecting and supporting the stack of cartons in the column during the ejecting operation and between

and beneath the material carrying surface of a pair of horizontal conveyors, successively carrying the cartons away from the closer and sealer.

3,517,482

CONTINUOUS MOTION MECHANICAL VERTICAL COMPRESSION APPARATUS

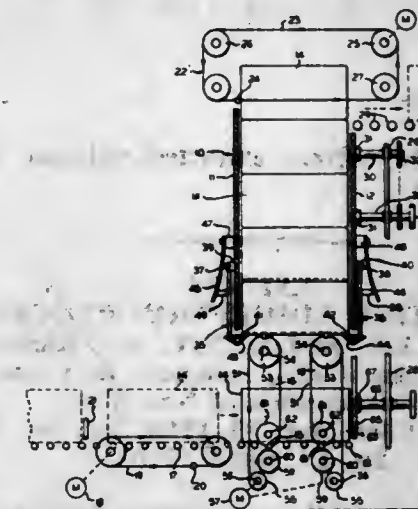
Robert L. Beninger, Sheboygan, Wis., assignor to H. G. Weber and Company, Inc., a corporation of Wisconsin

Filed Nov. 6, 1967, Ser. No. 680,933

Int. Cl. B65b 5/10

U.S. Cl. 53—387

21 Claims



Vertical compressor and sealer for loaded cartons, elevating the loaded cartons along a guide frame, one on top of another to compress and seal the cartons. The elevating mechanism is in the form of two laterally spaced vertically extending continuously operating endless conveyors, the chains of which are on the outsides of the vertical guides for the cartons. Each conveyor has a single flight. The two flights are always at the same relative elevation and support and elevate a carton to be deposited on catches on compressing guides, holding the lowermost carton of the stack of cartons from downward movement, as the flights change their direction of travel from an elevating to a return direction. The carton is delivered to the elevating conveyors along a loading ramp disposed above the drive sprockets for the conveyors and through which the conveyors pass. The flights are in the form of rollers coming into engagement with the bottom of a carton, or a separate lift plate supported on the loading ramp, as the flights move upwardly through the loading ramp. The conveyors and flights are guided to move angularly toward each other as they approach the loading ramp, to effect the deceleration of the flights upon kicking up a carton and the acceleration of the flights as the carton is picked up and elevated. The conveyors and guides may be adjusted toward and away from each other, and when a lift plate is used to lift the cartons, the stop for the cartons may be on the lift plate, which may be adjustable in accordance with the length of the cartons compressed and sealed.

3,517,483

CHROMATOGRAPHIC TECHNIQUE

Jack B. Carmichael, Amherst, Mass., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Continuation-in-part of application Ser. No. 585,012, Oct. 7, 1966. This application Apr. 14, 1969, Ser. No. 853,229

Int. Cl. B01d 15/08

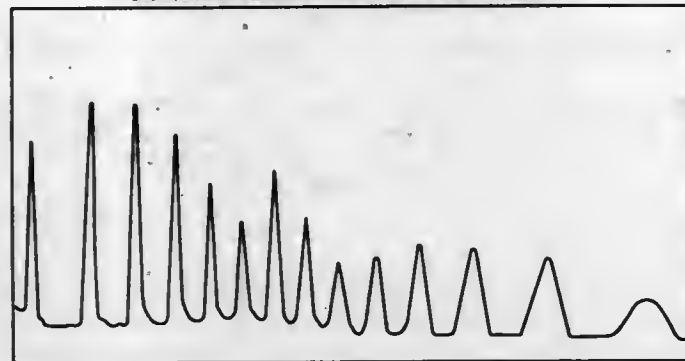
U.S. Cl. 55—67

3 Claims

Solvent extracted polymers for use as the liquid film for gas-liquid chromatography to separate organic compounds. Removal of low molecular weight species results

in more precise and exacting analyses and provides for an effective separation of high molecular weight materials.

ETAC RECORDER CHART FROM SEPARATION USING AN EXTRACTED DIMETHYL CYCLOSILOXANE MIXTURE



Illustrative of the solvent extracted polymer is a polydimethylsiloxane.

3,517,484

SELECTIVE ADSORPTION PROCESS

Max Nai Yuen Lee, Buffalo, N.Y., and Richard Joseph Schoofs, Moraga, Calif., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 13, 1968, Ser. No. 712,581
Int. Cl. B01d 53/02

U.S. Cl. 55-73

2 Claims

The removal of acidic components from gas streams containing same by selective adsorption on a zeolitic molecular sieve bed is vastly improved by adding to the gas stream, prior to entering the zeolite bed, a controlled quantity of ammonia.

3,517,485

APPARATUS FOR TREATING GASES

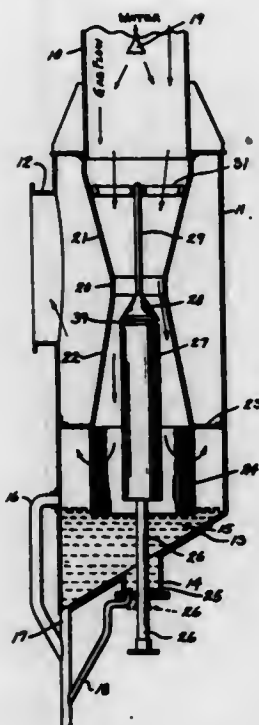
David E. DeFagnese, Port Washington, Wis., and Townsend Tinker, Easton, Md., assignors to Modern Equipment Company, Port Washington, Wis., a corporation of Wisconsin

Filed Jan. 4, 1968, Ser. No. 695,609

Int. Cl. B01d 47/06, 47/10

U.S. Cl. 55-226

10 Claims



To cleanse waste industrial gases a Venturi chamber is provided with a combination annulus adjustment plug and washing liquid distributor including an upper plate having a specially-formed concavity in its undersurface against which water or other washing liquid is forcibly

discharged, said concave plate surface deflecting the liquid downwardly against a lower plate which is formed to direct the same radially outwardly to intercept and entrain dirt particles and other suspended matter in the surrounding gas stream, said apparatus including means downstream of the Venturi chamber for separating said dirt-entraining liquid from the gas stream.

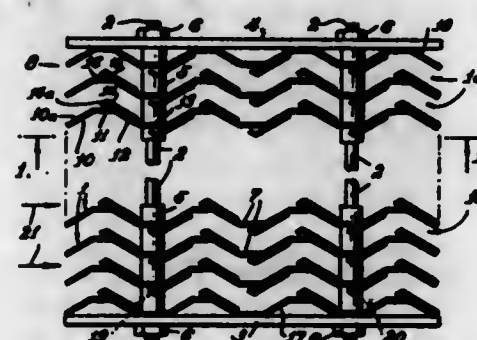
3,517,486

VANE-TYPE SEPARATOR

Billy G. Golden, Louisville, Tex., assignor, by mesne assignments, to Delta P Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 8, 1967, Ser. No. 636,914
Int. Cl. B01d 45/08

U.S. Cl. 55-440

1 Claim



A vane-type separator assembly for the inertial separation of entrained liquid particles from a stream of flowing gases comprises a bolted-together stack of vane subassemblies each of which is essentially a single thickness of sheet material and supplies a series of liquid trap and drainage channels opening at flush surfaces into the zig-zag passageways defined by the subassemblies in the vane assembly.

3,517,487

DRILLING MUD FLOW AND DIVIDER APPARATUS

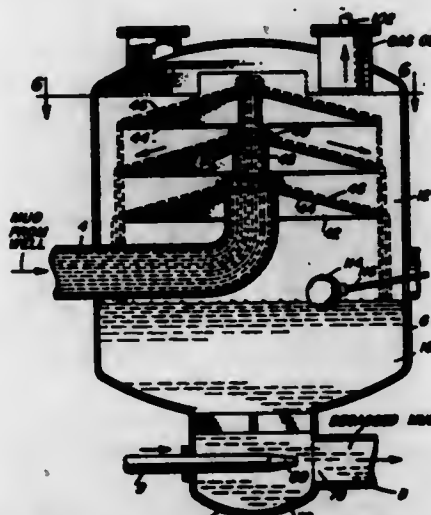
Gerald E. Burham, Sr., P.O. Box 52385, Lafayette, La. 70501

Filed Aug. 16, 1968, Ser. No. 753,145

Int. Cl. B01d 19/00

U.S. Cl. 55-192

3 Claims



Apparatus for degasification of drilling mud, including a vacuum tank having baffle means comprised of a stack of vertically spaced baffles with extending surfaces forming truncated cones with openings through the truncated portions and a single gas laden mud delivery means feeding upwardly through said openings. The diameters of the openings decrease in size upwardly through the stack so that a portion of the upflowing mud is blocked and diverted outwardly onto the upper surfaces of certain baffles to flow downwardly over said upper surfaces.

3,517,488

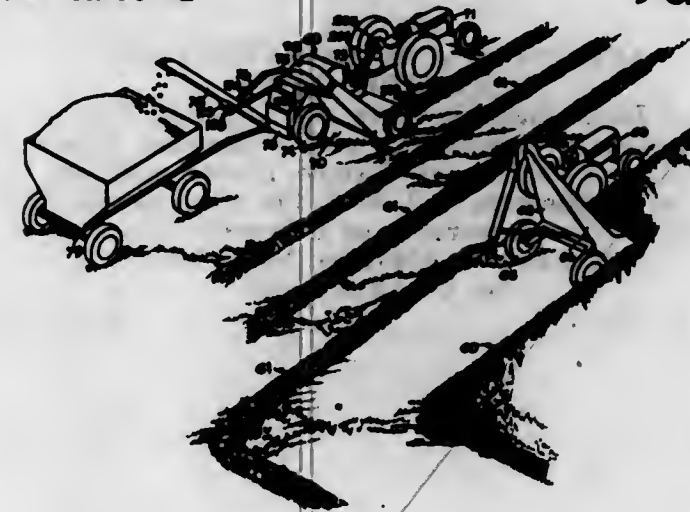
MACHINE FOR COMPACTING FORAGE CROPS

Vernon J. Lundell, Cherokee, Iowa, assignor to Massey-Ferguson Services, N.V., Curacao, Netherlands Antilles, a corporation of the Netherlands Antilles
Division of application Ser. No. 153,599, Nov. 20, 1961, now Patent No. 3,425,362, which is a continuation-in-part of applications Ser. No. 797,210, Mar. 4, 1959, Ser. No. 30,000, May 18, 1960, Ser. No. 74,919, Dec. 9, 1960, Ser. No. 110,224, May 15, 1961, and Ser. No. 140,876, Sept. 26, 1961. This application July 3, 1967, Ser. No. 661,744

Int. Cl. A01d 43/00

U.S. Cl. 56-1

9 Claims



A machine for preparing hay having a rotary flail pick-up and chopping unit and an enclosed chute for delivering hay to a wafering chamber with a divider partition in the chute defining two superimposed ducts such that an upwardly moving current of hay and air is generated in the upper duct and a downwardly moving current of air is generated in the lower duct by the rotary flail; the wafering chamber having a plurality of outwardly converging die cells with a roller mounted for movement within the chamber and means for directing hay over the entrance ends of the die cells in advance of the roller such that the roller successively forces the hay into and through the die cells thereby forming the hay into wafers; the machine also including provision for carrying fluid and spraying the fluid on the chopped hay prior to wafering and a conveyor for transporting wafers from the chamber with means for collecting hay particles from the wafers for reintroduction into the chamber.

3,517,489

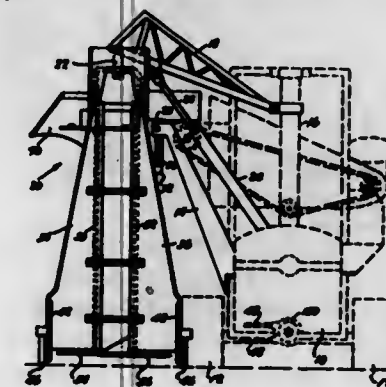
MACHINE FOR HARVESTING SUGAR CANE

Victor M. Alexandrino, P.O. Box 405, Fajardo, Puerto Rico 06448, and Jose Harold Acevedo Guardia, Derrisol 1149, Levittown, Puerto Rico 00632
Filed Oct. 13, 1967, Ser. No. 675,182

Int. Cl. A01d 45/02

U.S. Cl. 56-17

8 Claims



Cane harvesting machine for mounting on a tractor comprising a frame; overlapping knives rotatable about vertical axes mounted in said frame and operating very

near ground level; means for raising and lowering said frame with said knives; sets of spaced opposed, horizontal conveyors mounted in said frame and overlying said knives; a second knife above said conveyors, and toothed cane lifting wheels mounted on horizontal axes in advance of said first-named knives.

3,517,490

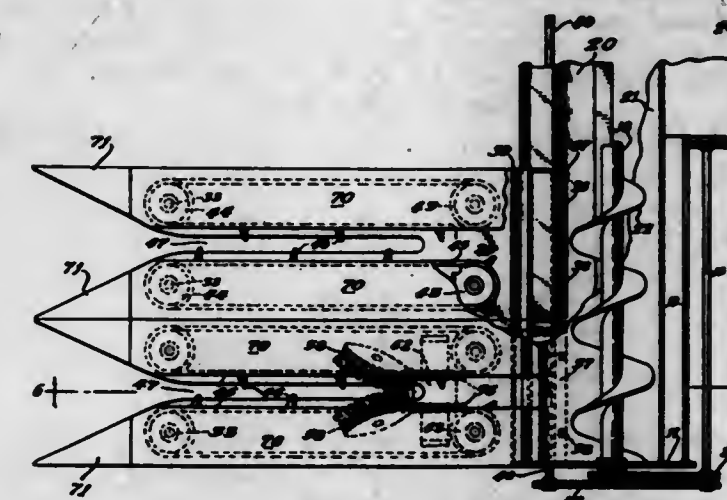
SNAPPER MECHANISM AND CORN HARVESTER EMBODYING SAME

Bernard C. Mathews, Box 70, Crystal Lake, Ill. 60014
Filed Mar. 22, 1967, Ser. No. 625,251

Int. Cl. A01d 45/02

U.S. Cl. 56-18

10 Claims



A corn harvester includes a plurality of head units adjustably mounted side by side on a support structure. Each head unit carries gathering chains on the upper surface of a slotted plate, and snapping wheel mechanism below it engages a corn stalk and draws it downwardly through the slot so that the ear is snapped off. The snapping wheel mechanism comprises two wheels which converge upwardly and rearwardly to provide a forwardly facing bite which engages the stalk and draws it rearwardly and downwardly through a vertically oriented bite provided by a back-up roller. A common drive shaft on the support structure is provided for the gathering chains and snapper mechanism of all units. The drive sprocket for each head unit is adjustably mounted on the drive shaft to accommodate the adjustable spacing of the head units.

3,517,491

HEADER SUSPENSION MOUNTING FOR PULL-TYPE HARVESTERS

Henry N. Laseck, Leacock, Lawrence M. Halls and Delmar C. Harer, New Holland, and Horace G. McCarty, Leola, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Aug. 8, 1968, Ser. No. 751,153

Int. Cl. A01d 43/10

U.S. Cl. 56-23

13 Claims



An improved header suspension mounting for pull-type harvesting machines imparting improved header flotation characteristics by a unique combination of counterbalancing springs and pivotal connecting link means, the latter of which in one embodiment are so related that when the cutterbar of the header unit hits a relatively immovable object (stone, stump, etc.) the inertia of the total header and flotation weight is readily overcome

vertically and rearwardly to relieve the guards of the impact against said object. In another embodiment, the mounting includes differently disposed pairs of substantially longer, parallel disposed upper and lower links of substantially equal length connecting the upper and lower portions of the header assembly to portions of the main frame to provide substantially improved lateral flotation characteristics of the header.

3,517,492

IMPLEMENT CONTROL ASSEMBLY

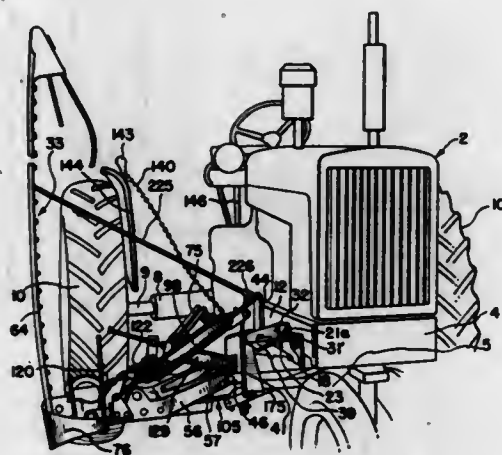
Thomas J. Scarnato, Barrington, Paul C. Gordon, Hinsdale, and James Morkoski, Clarendon Hills, Ill., assignors to International Harvester Company, a corporation of Delaware

Original application Dec. 2, 1964, Ser. No. 415,382, now Patent No. 3,471,167, dated Oct. 7, 1969. Divided and this application Feb. 14, 1968, Ser. No. 705,526

Int. Cl. A01d 35/02

U.S. Cl. 56—25

11 Claims



A mechanism for controlling the lifting of a mower mounting linkage which has an arm pivoted at one end to the tractor and at its other end to the mower, a rod beneath the arm pivoted at one end to the arm and at its other end extending through an opening in a stop plate depending from the tractor, the rod having a bolt threaded thereon for adjusting the effective length of the rod whereby to control the rise of the arm prior to the mower being tilted upwardly by associated linkage about its pivot to the arm. A quick adjusting means is provided which may be swung between the plate and nut on the rod to foreshorten the rod and thus further control the action of the arm and mower.

3,517,493

LAWNMOWER AND GRASS CATCHER THEREFOR

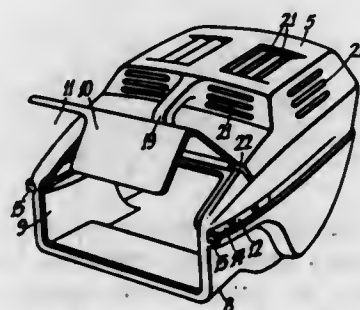
Peter W. Kiteley, Nunawading, Victoria, Australia, assignor to Turner Industries Limited, Nunawading, Victoria, Australia, a corporation of Australia

Filed Apr. 8, 1968, Ser. No. 719,340

Int. Cl. A01d 53/06

U.S. Cl. 56—194

6 Claims



A lawn mower has a rear outlet aperture disposed in a generally vertical plane and a base including a generally horizontal shelf. A removeable grass catcher comprises

a plastic molded body supported on said shelf and secured in operative position by mounting brackets mounted on opposite sides thereof. The grass catcher has an open front disposed in a generally vertical plane and a flap is swingably supported by the body, the flap having a cut-away portion registering with the outlet aperture so as to close off the open front of the grass catcher except in the area adjacent the outlet aperture. This flap automatically swings open when the grass catcher is removed from the lawn mower to allow grass cuttings to fall out through the open front of the grass catcher.

3,517,494

MOWING MACHINES HAVING AN ECCENTRIC DRIVE

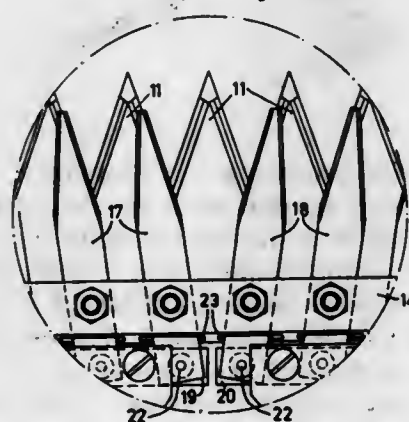
Bernard Joseph Beusink, Oerle, and Alexandre Horowitz, Eindhoven, Netherlands, and Wilhelmus Henricus Maria Van Den Heuvel, Saverne, France, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

Filed July 11, 1967, Ser. No. 652,445

Int. Cl. A01d 55/00

U.S. Cl. 56—293

8 Claims



A mowing machine in which two series of oscillating knives cooperate with a plurality of fixed knives in a cutting action. Each of the oscillating series is mechanically linked to an eccentric drive such that each series will symmetrically move in opposite directions for vibration-free operation.

3,517,495

MOWING MACHINE

Bernard Joseph Beusink, Oerle, Netherlands, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

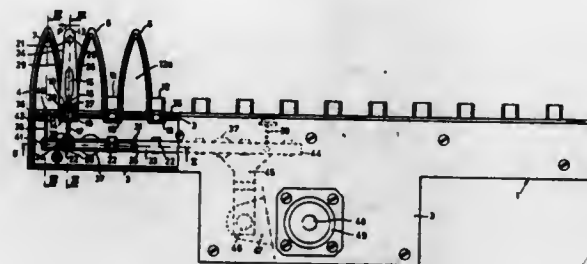
Filed Apr. 14, 1967, Ser. No. 630,952

Claims priority, application Netherlands, Apr. 16, 1966, 6605142

Int. Cl. A01d 55/08

U.S. Cl. 56—296

7 Claims



An arrangement of alternately spaced, fixed and movable cutter blades for a mowing machine. Each of the movable blades reciprocates between two fixed blades and is mounted to permit a longitudinal tilting movement of

the blade so as to exert a pressure on the two cutting edges of the respective movable and fixed blade during the cutting operation.

3,517,496

FRUIT PICKING DEVICE AND METHOD

Robert I. Kemp, 5812 Gamble Drive 32808, and Edmund T. Schaffer, 2412 Reef Court 32805, both of Orlando, Fla.

Filed Mar. 30, 1967, Ser. No. 627,015

Int. Cl. A01g 19/08

U.S. Cl. 56—328

20 Claims



A device for picking fruit which engages the fruit by a series of movable members which first rotate the hanging fruit about a first horizontal axis in order to orient generally horizontally the fruit's central axis, and then rotate the fruit about a horizontal axis perpendicular to the first horizontal axis in order to twist the fruit from its stem. Cooperating rollers effect the first rotation of the fruit, and a driven belt operating in conjunction with a platelike member produces the twisting action.

3,517,497

THREAD GUARD WITH THREAD BRAKE

Hans Rettenmund, Horn, Thurgau, Switzerland, assignor to Carl Hamel, Spinn- und Zwirnereimaschinen AG, Arbon, Switzerland, a corporation of Switzerland

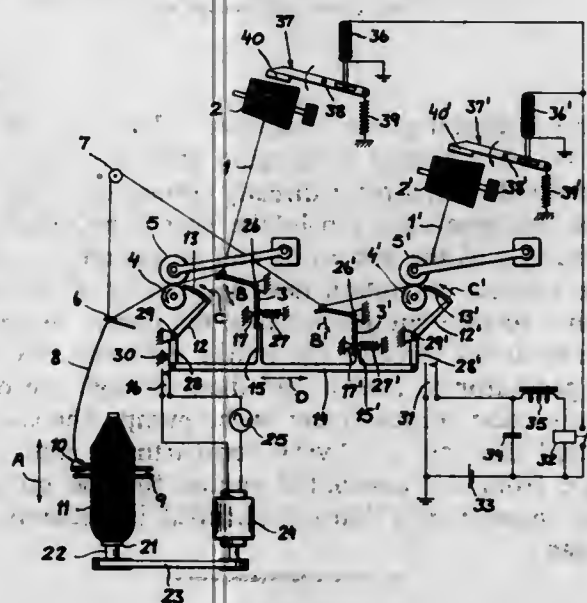
Filed June 24, 1968, Ser. No. 739,268

Claims priority, application Germany, June 27, 1967, H 63,122

Int. Cl. D01h 13/16

U.S. Cl. 57—81

10 Claims



In textile machinery wherein threads are drawn from respective reels and are engaged by respective thread guards which monitor their tension to sense the occurrence of a break, such occurrence resulting in the arresting of a bobbin core on which the threads are being wound, a delayed-action brake stops the rotation of each wheel a predetermined time after the bobbin core has been arrested, thereby preventing entanglement and avoiding the risk of rupture of an unbroken thread.

**3,517,498
APPARATUS AND METHOD FOR PRODUCING A DOUPION THREAD**

Georges J. Burellier, Lyon, and Jacques A. Menant, Venissieux, France, assignors to Rodiaceta, a company of France

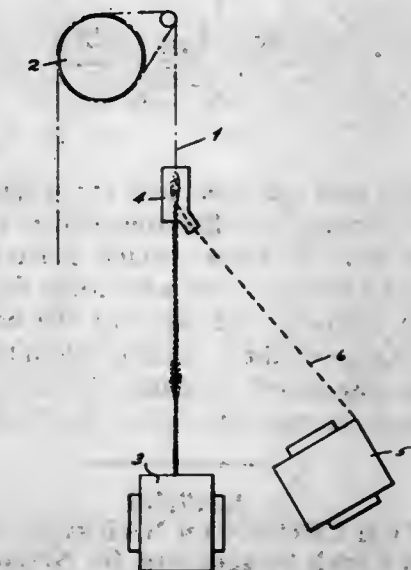
Filed June 21, 1968, Ser. No. 738,886

Claims priority, application France, June 22, 1967, 111,537

Int. Cl. D01h 1/08, 13/00

U.S. Cl. 57—91

10 Claims



There is provided a process and apparatus for producing a fancy thread of the douppion type. A looser thread, which is the effect thread, is caused to convolute, loop and interlace with a tighter thread, which is the core thread, by passing the two threads into a turbulence and suction zone. The turbulence and suction is accomplished by passing a fluid, e.g., air, into the zone, and by intermittently applying the fluid, the looser thread is intermittently overfed. Tension is maintained on the tighter thread by conventional means, while the tension on the looser thread is maintained by a fluid means.

3,517,499

TWENTY-FOUR HOUR ALARM

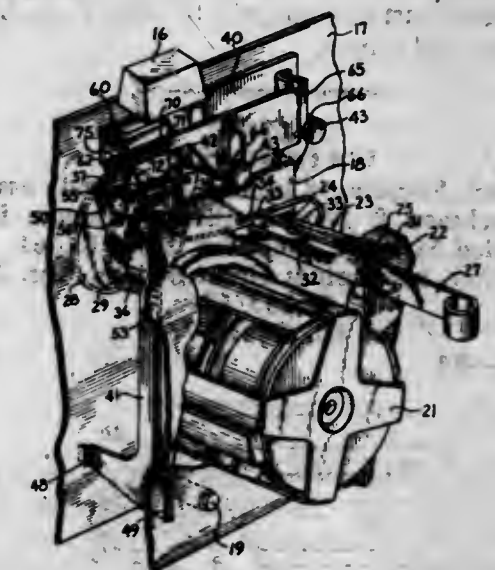
Raymond A. Keane, Jr., and Ralph C. Robinson, Athens, Ga., assignors to General Time Corporation, Stamford, Conn., a corporation of Delaware

Filed Nov. 17, 1967, Ser. No. 683,854

Int. Cl. G04b 23/08

U.S. Cl. 58—17

4 Claims



A mechanism that converts a conventional alarm clock into one whose alarm will sound every 24 hours at the time selected on a 12-hour clock face. The mechanism includes a latch for holding the alarm disabled through one 12-hour cycle. A latch release member enables the 24-hour alarm feature to be disabled at any time.

3,517,500

FRictional BEARING ARRANGEMENT FOR THE WINDING WEIGHT IN A SELF-WINDING WATCH

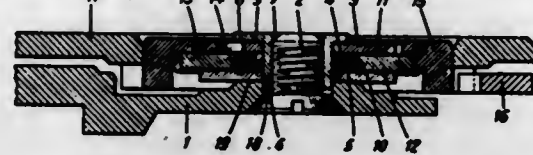
Urs Giger, Solothurn, Switzerland, assignor to Eta A. G. Ebauches-Fabrik, Grenchen, Solothurn, Switzerland
Filed Jan. 14, 1969, Ser. No. 791,104

Claims priority, application Switzerland, Jan. 30, 1968, 1,374/68

Int. Cl. G04b 5/02, 31/00

U.S. Cl. 58-82

6 Claims



The bearing part movable with the winding weight and subjected to friction is a flat ring which two fixed outer rings axially hold in place around a fixed middle ring. The three fixed rings are set with force fit on a common sleeve which holds all the parts of the bearing together when the winding weight is removed from the watch movement. In the assembled condition the fixing screw of the weight strongly clamps the set of the three fixed rings.

3,517,501

WATCH CROWN IN NARROW RECESS

Hans Ulrich Klingenberg, St. Niklaus, near Merzliigen, Bern, Switzerland

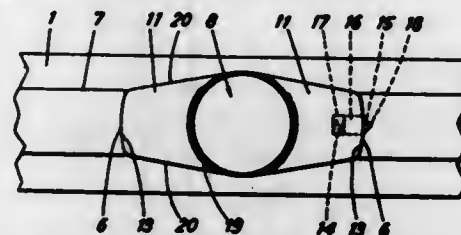
Filed Mar. 4, 1968, Ser. No. 710,154

Claims priority, application Switzerland, Mar. 6, 1967, 3,223/67

Int. Cl. G04b 37/10

U.S. Cl. 58-88

5 Claims



A watch crown and the combination of a crown with a watchcase wherein the crown is arranged to be shielded by adjacent portions of the watchcase and to transmit shocks and stresses to said case rather than to the movement stem, said crown being of elongated narrow form so as to lend itself more readily to such shielding and also so as to present surfaces adapted to deflect any blows imposed against said crown.

3,517,502

WATCHCASES

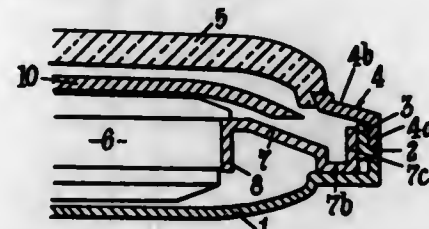
Albert Henry Fitzjohn, Chesham, England, assignor to David Shackman & Sons Limited, Chesham, England
Filed Mar. 18, 1968, Ser. No. 713,661

Claims priority, application Great Britain, Apr. 26, 1967, 19,233/67

Int. Cl. G04b 37/04

U.S. Cl. 58-94

1 Claim



A watchcase has a back in which is adapted to be located a movement box or mounting ring having a marginal portion shaped to engage a part of said back and be correctly positioned thereby without having to solder said box to the watch back.

3,517,503

HOROLOGICAL HAIRSPRING DEVICE

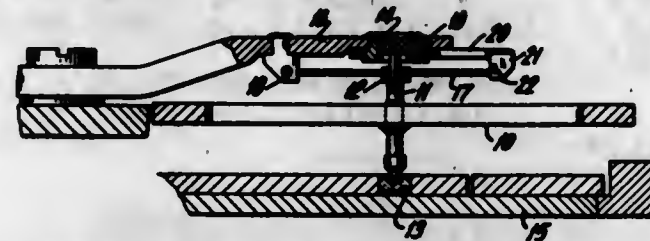
Frederic H. Smythe, Jr., Watertown, and Edward Kaufman, New Milford, Conn., assignors to Timex Corporation, a corporation of Delaware

Filed May 23, 1969, Ser. No. 827,346

Int. Cl. G04b 17/14

U.S. Cl. 58-109

6 Claims



A horological instrument includes an oscillator assembly and a hairspring. The hairspring, at one end, is fastened to the oscillator assembly and at its opposite end it is anchored to the frame or bridge. A regulator touches the hairspring and is movable at least partly along its length. A pre-stressing device, which may be a separate component or a part of the regulator, contacts the hairspring between its fixed end and the regulator.

3,517,504

CONNECTION MEANS FOR AIR INJECTION PUMP

Toshiyuki Sakamoto, Himeji, Japan, assignor to Mitsubishi Denki Kabushiki Kaisha, Tokyo, Japan

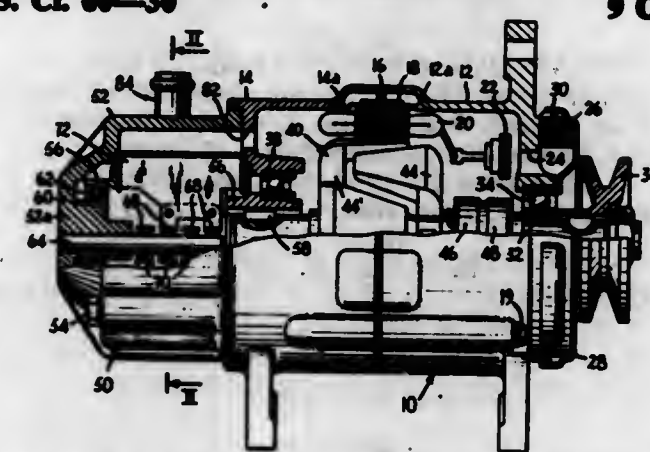
Filed Dec. 12, 1967, Ser. No. 689,882

Claims priority, application Japan, Dec. 20, 1966 (utility models), 41/115,899, 42/8,496, 42/8,497

Int. Cl. F01n 3/10; H02k 9/06

U.S. Cl. 60-30

9 Claims



An air injection pump comprises a housing erected on one of two brackets of a charging generator equipped on an automobile and a rotor directly connected to the rotary shaft of the generator. An intake port is provided on the other bracket of the generator and an opening formed on the one bracket communicates the interior of the generator with a suction compartment in the pump. In operation air is introduced through the intake port into the interior of the generator to cool it and then through the opening into the suction compartment in the pump. The sucked air is injected through a delivery compartment into a waste gas pipe from the associated engine for the purpose of burning incompletely burned harmful ingredients in the waste gas.

3,517,505

METHOD AND APPARATUS FOR SUPPRESSING CONTRAILS

Charles E. Anderson, Los Angeles, Calif., and Seymour J. Binstein, Sudbury, and Bernard A. Silverman, Natick, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 13, 1962, Ser. No. 237,406

Int. Cl. F23r 1/00; F03h 5/00

U.S. Cl. 60-39.5

6 Claims

1. The method of suppressing the formation of condensation vapor trails normally created by high flying jet

aircraft comprising the steps of preheating a hygroscopic material to decomposition temperatures and introducing the preheated decomposed hygroscopic material into the exhaust stream of said aircraft, said preheated decom-

rotor. The spring means is adjustable to permit the correlation of the torsional resonance frequency of the governor with the torsional resonance frequency of the turbine and rotor.

3,517,507

HYDRAULIC LAUNDRY MACHINE TRANSMISSION

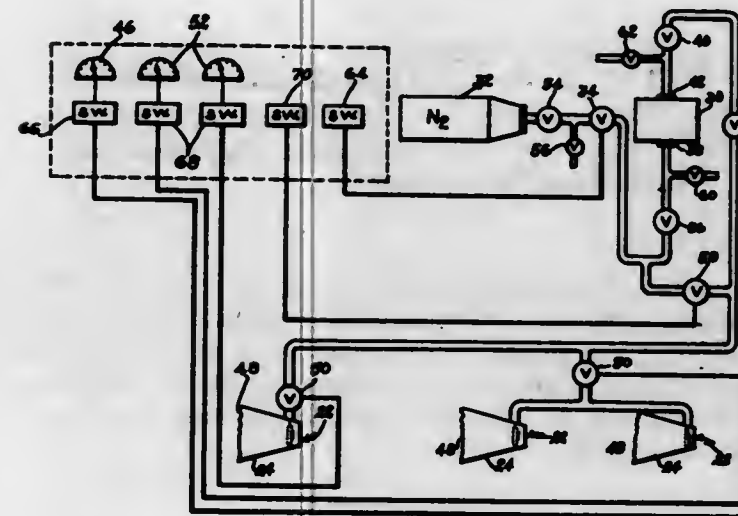
Robert W. Brundage, St. Louis, Mo., assignor to Emerson Electric Company, St. Louis, Mo., a corporation of Missouri

Filed June 5, 1968, Ser. No. 734,650

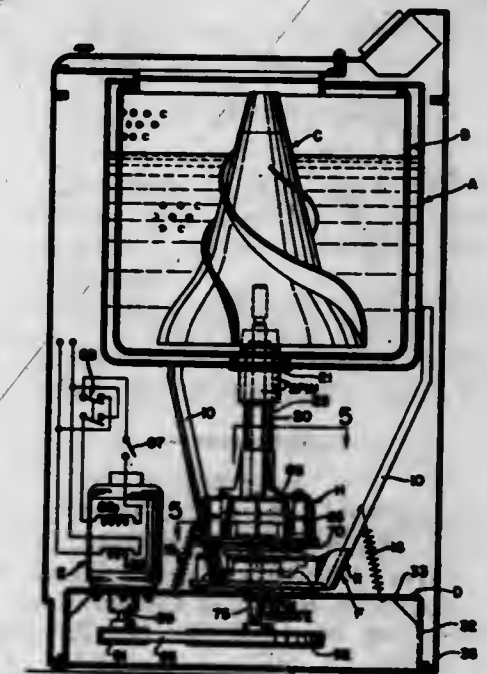
Int. Cl. D06f 29/00; F15b 15/18

U.S. Cl. 60-82

9 Claims



posed hygroscopic material being introduced in an amount sufficient to produce a large number of small particles to provide nuclei upon which the water produced by the burning jet fuel can condense to prevent the formation of a visible contrail.



3,517,506

FUEL CONTROL GOVERNOR

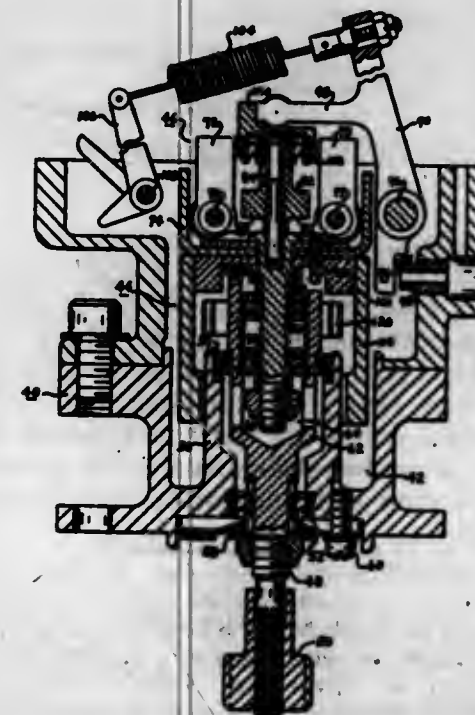
Joseph L. Peczkowski, and Francis G. Sellman, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed Oct. 25, 1967, Ser. No. 678,002

Int. Cl. F02c 9/02; F16d 3/14; G01p 3/18

U.S. Cl. 60-39.16

12 Claims



A governor for a free turbine engine for driving the rotor of a helicopter in which a coil spring is interposed between the main governor shaft and the weight assembly for eliminating or minimizing torsional instability of the drive shaft between the free turbine and the helicopter

A hydraulic transmission for laundry machines of the agitate-spin type. The transmission has an outer housing mounted for and held against rotation by a normally engaged brake which is released by a hydraulic piston cylinder arrangement. The transmission includes a positive displacement hydraulic pump which when rotated in one direction supplies hydraulic fluid to a vane type oscillating motor coupled to the agitator. When the pump is rotated in the opposite direction, it supplies fluid to the piston cylinder arrangement to release the brake. When the piston cylinder arrangement will not accept any more fluid from the pump, the pump becomes a slip clutch and drives the transmission housing to rotate the spin basket. A relief valve biased closed by a spring limits the maximum torque as the spin cycle starts. The valve member moves on a radial line and centrifugal force biases it against the spring so as to reduce the maximum opening pressure as the speed of rotation increases. This effectively limits the top speed of the spin cycle in the event of off balance.

3,517,508

ROCKET PROCESS EMPLOYING ELECTROLYSIS

Daniel D. Newman, Hawthorne, and Harold A. Rosen, Santa Monica, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Continuation-in-part of application Ser. No. 542,709, Apr. 8, 1966. This application Feb. 27, 1967, Ser. No. 618,651

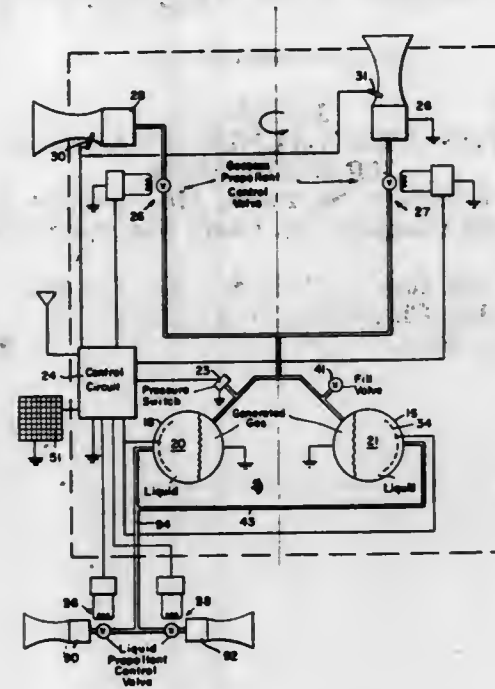
Int. Cl. C06d 5/08; F23r 1/08

U.S. Cl. 60-207

13 Claims

A spacecraft propulsion method and apparatus in which the propellant is stored as a liquid which is then electro-

lyzed to generate gaseous propellant as needed. The gas is either burned in an engine or employed in the cold

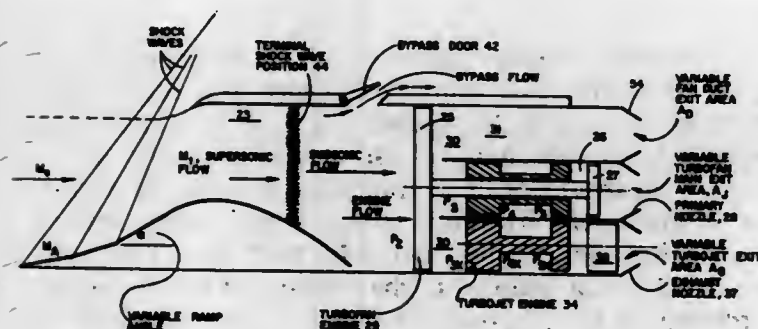


gas technique. The generated gas can also provide pressure to feed liquid propellant to an engine.

3,517,509

INTEGRATED AIRCRAFT PROPULSION CONTROL SYSTEM

Jamal E. Bayati, Placentia, Calif., assignor to North American Rockwell Corporation
Filed Aug. 26, 1968, Ser. No. 755,408
Int. Cl. F02k 3/12, 3/02
U.S. Cl. 60-226 24 Claims



A control system for controlling a multimode aircraft propulsion system having adjustable air inlet and bypass ducting, a fan type primary gas engine having an adjustable exhaust nozzle area, and at least one jet type auxiliary gas engine having an adjustable after-burner mode. Manually-operable signalling means generates a command signal indicative of a selected thrust condition, and a plurality of preselectively-thresholded closed loop controllers respond to preselected levels of the command signal to operate and control the primary and auxiliary gas engines alternately and concomitantly, for providing a wide range of thrust conditions over both subsonic and supersonic flight conditions.

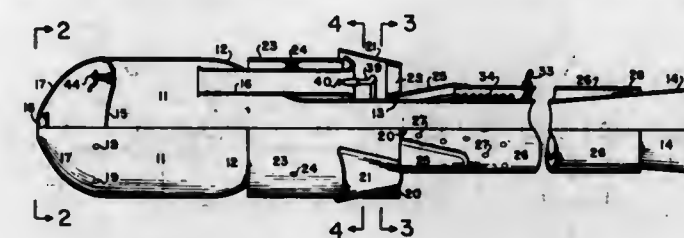
3,517,510

SELF-STARTING VALVELESS RESONANT PULSE-JET ENGINE AND METHOD

John A. Melenic, 409 E. Lane, Kerrville, Tex. 78028
Filed Mar. 11, 1968, Ser. No. 712,193
Int. Cl. F02k 7/04
U.S. Cl. 60-249 9 Claims

A self-starting resonant valveless pulse-jet engine comprising a substantially cylindrical combustion chamber,

a reduction cone and exhaust tube. A multiplicity of reverse flow air and fuel inlet tubes are equiangularly spaced and project through the reduction cone into the combustion chamber. Highly volatile fuels are injected under high pressure into the inlet tubes deflecting the mixture against the combustion chamber forward wall thereby



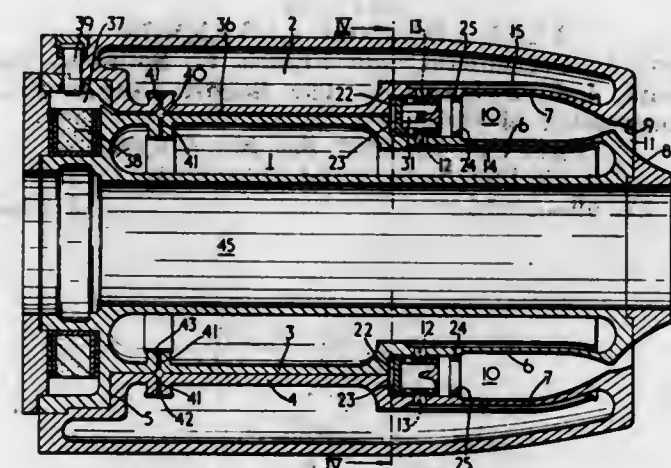
creating a homogenous mixture which is spark ignited; creating a self-sustained resonant combustion cycle. Configuration, arrangement of components and dimensional proportions accomplish maximum thrust heretofore not accomplished in valveless pulse-jet engines, including a fueling method.

3,517,511

BI-PROPELLANT ROCKET ENGINE

Edward George David Andrews, Cawston, near Rugby, and Harry Oldfield, Coventry, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Dec. 5, 1968, Ser. No. 781,478
Claims priority, application Great Britain, Dec. 9, 1967, 56,079
Int. Cl. F02k 9/02
U.S. Cl. 60-259 10 Claims



A bi-propellant rocket engine including a pair of coaxial annular tanks in which the propellants are stored separately of each other, each of the tanks communicating during operation of the engine, with a combustion chamber defined between a portion of the outer peripheral wall of the inner tank and a corresponding portion of the inner peripheral wall of the outer tank spaced apart radially and also shaped to define an annular propulsive nozzle communicating with the combustion chamber.

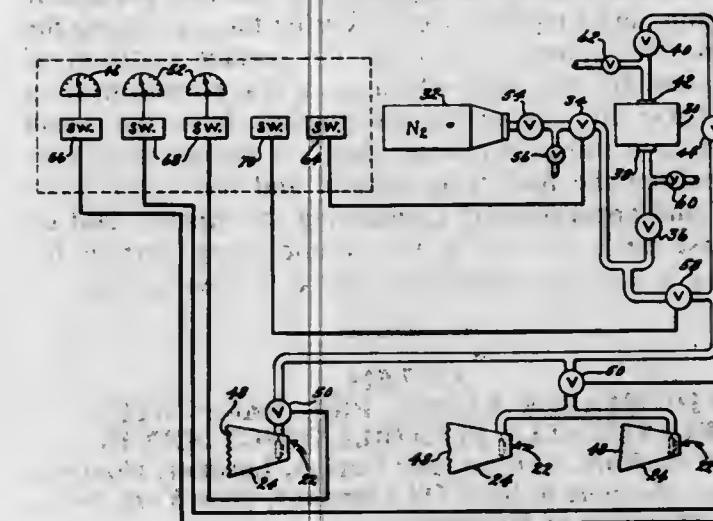
3,517,512

APPARATUS FOR SUPPRESSING CONTRAILS

Charles E. Anderson and Seymour J. Birstein, Sudbury, and Bernard A. Silverman, Natick, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Original application Nov. 13, 1962, Ser. No. 237,406. Divided and this application Feb. 2, 1965, Ser. No. 429,929
Int. Cl. F02k 3/04
U.S. Cl. 60-264 2 Claims

1. Apparatus for suppressing the condensation trail of a jet aircraft comprising an aircraft having jet engines with exhaust sections in the downstream end thereof,

a closed container for holding a supply of chlorosulfonic acid therein, said container having an inlet and an outlet, means communicating with the inlet for pressurizing said container, a conduit having one end attached to the outlet of said container for conducting said chlorosulfonic acid to the exhaust sections of the jet engines of said aircraft,



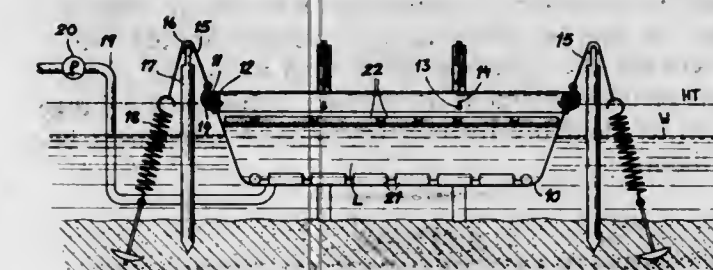
means for controlling the amount of flow of acid through said conduit, and a discharge nozzle ring attached to the other end of said conduit and located at the aft end of the jet engine exhaust section for receiving and injecting the chlorosulfonic acid into the exhaust stream as it passes out of the exhaust section.

3,517,513

FRESH-WATER CISTERN

Clarence Renshaw, 45 Sutton Place S. 10020, and Juan T. Trippe, 10 Gracie Square 10028, both of New York, N.Y.

Filed July 31, 1968, Ser. No. 749,214
Int. Cl. B65g 5/00
U.S. Cl. 61-1 8 Claims



A water reservoir of light-weight sheet material is partly submerged in a body of nonpotable water and anchored or suspended from yieldable moorings to rise and fall with the tides and/or with changing volume of collected rain water whereby the latter is stored by flotation on the underlying liquid body.

3,517,514

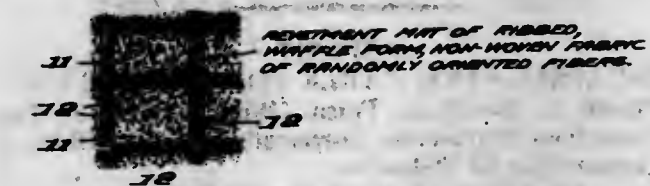
SOIL PROTECTION MATS

Christiaan Visser, deceased, late of Berwijk, Netherlands, by B. M. A. Batenburg, executor, Beverwijk, Netherlands, assignor to C. J. Vrendenberg, Nunspeet, and N.V. Vereenigde Tonnfabrieken, Rotterdam, Netherlands

Filed Mar. 8, 1968, Ser. No. 712,336
Int. Cl. E02b 3/12
U.S. Cl. 61-38 10 Claims

Revetment mats of non-woven fabrics having randomly oriented fibers are disclosed. Staking to a bank densifies the fabric about the stake rather than widening its meshes as occurs with woven fabrics. Polypropylene fibers are used. They resist attack by *Eriochlor sinensis*. Combinations of natural and synthetic fibers are employed; the

decay of the former restores porosity to the fabric when soil tends to clog the same. Bundles of long loose fibers are fastened in the mats. They extend upwardly therefrom into the water. They cause mud particles in the water to deposit on the mats. This aids in securing the mats



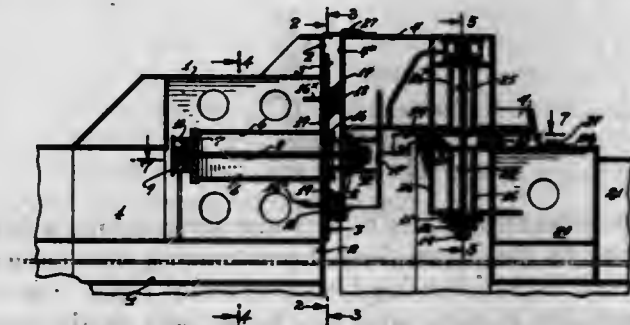
and in land reclamation work. Waffle-like formation may be used. The ribs strengthen the fabric. The compartments between ribs are thin and have relatively great permeability. Ribs or strips of polyester material reinforced with glass fiber may be attached. Strength and rigidity are correspondingly increased.

3,517,515

TUNNEL CONSTRUCTION SLIDING ASSEMBLY

Robert Warsaw, East Meadow, N.Y., assignor to Parsons, Brinckerhoff, Quade & Douglas, Inc., New York, N.Y., a corporation

Filed July 17, 1968, Ser. No. 745,463
Int. Cl. E01g 5/06
U.S. Cl. 61-42 10 Claims



The invention controls disturbance by earthquake or other forces upon tunnel tube sections leading to a caisson or building to which they are connected. The embodiment shown and described relates to a major parallel tunnel construction for vehicular passage, which provides a fixed caisson or building and watertight sliding joint between the caisson and the initial connected tube sections of the tunnel. Also, the invention is applicable to a single tunnel and as a joint between tunnel sections. It controls said dangerous disturbing forces by enabling vertical, transverse, and longitudinal, sliding and coordinate, movements at said joint, whilst maintaining watertight connection, the invention being specially applicable to caisson-tunnel or building-tunnel tube constructions under water.

3,517,516

FOLDING SUPPORT STRUCTURE FOR OFFSHORE DRILLING PLATFORMS

Robert G. Bea, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of New York

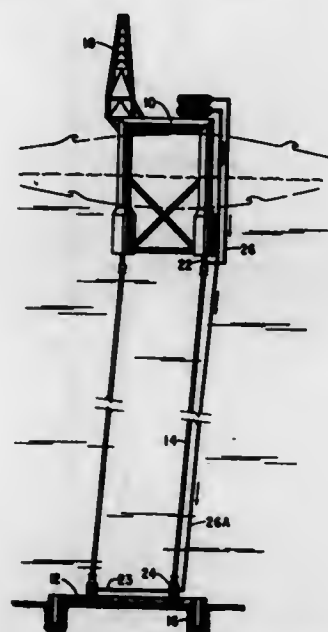
Filed July 31, 1968, Ser. No. 749,182
Int. Cl. E02b 17/02
U.S. Cl. 61-46.5 8 Claims



An offshore drilling structure having a buoyant, selectively floodable base unit and a plurality of buoyant, selectively floodable leg units pivotally attached to said base unit whereby the structure can be set-up by towing the

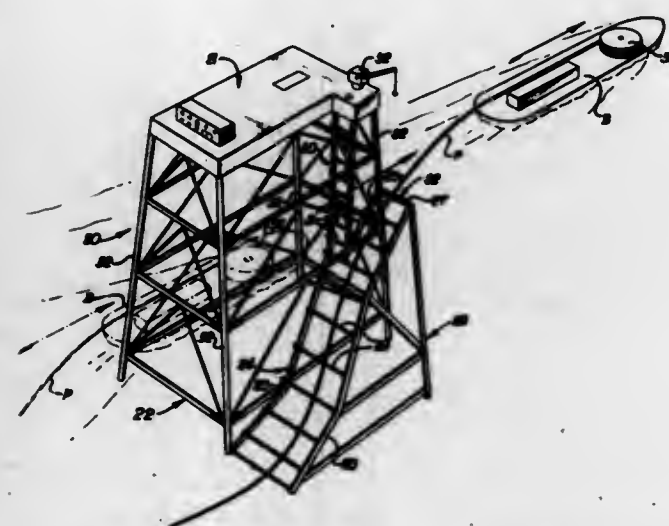
entire assembly on the surface of a body of water to a predetermined offshore location, lowering the assembly to the water floor by flooding the base unit and legs, and pivoting the leg units upwardly to form a composite offshore drilling structure.

3,517,517
ENCAPSULATED CABLE FOR MARINE USE
Kenneth A. Blankens, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Sept. 19, 1968, Ser. No. 760,895
Int. Cl. B63b 35/44; E02b 17/00
U.S. Cl. 61—46.5



This invention relates to a system for mooring a floating structure to the ocean floor. Load-bearing steel cables are preserved within non-load-bearing metal pipes. The cable connects the floating structure to anchors at the base of the body of water. Special terminations are provided which limit the curvature of the flexing of the cable. A non-corrosive fluid is contained within the encapsulating pipe.

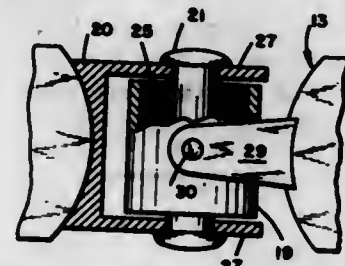
3,517,518
APPARATUS AND METHOD FOR TERMINATING A SUBSEA PIPELINE AT A SEA SURFACE STATION
Edward E. Horton, Portuguese Bend, Calif., assignor to Deep Oil Technology, Inc., Long Beach, Calif., a corporation of California
Filed June 26, 1968, Ser. No. 740,230
Int. Cl. F16l 1/00
U.S. Cl. 61—72.3



An apparatus and method for terminating a subsea-pipeline at an oil collection and distribution surface sta-

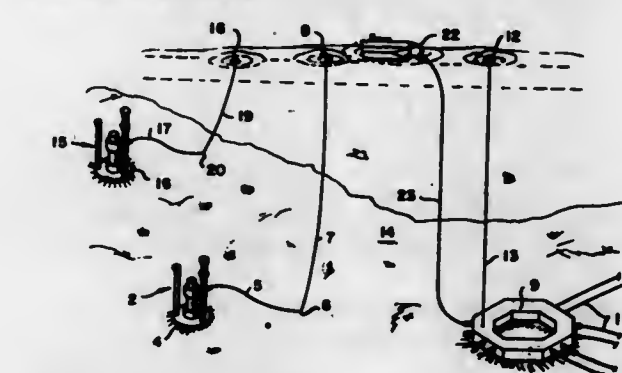
tion without making any subsurface terminal pipe connections and without subjecting the pipeline to undue stress. The disclosed method includes the laying of a continuous pipeline from a surface vessel with respect to a ramp having a curved shape for supporting the pipeline, cutting the pipeline at the vessel and moving the free end to the station where it is supported by another portion of the ramp, and supporting and securing the pipeline to the station. The apparatus includes the surface platform of the station and the ramp which has a first portion with an ogee curve for supporting the pipeline from the ocean bottom to a subsurface water depth, a second ramp portion between the first ramp portion and the station platform, and apparatus for transferring the pipeline laid on the first ramp portion to the second ramp portion for making a terminal connection above the sea surface.

3,517,519
ADJUSTABLE VESSEL PIPE RAMP WITH ELASTICALLY FLEXIBLE HINGE JOINTS
Robert H. Kolk, Cypress, and Carl G. Langer, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Feb. 18, 1969, Ser. No. 797,804
Int. Cl. E02b 1/00; F16c 7/00
U.S. Cl. 61—72.3



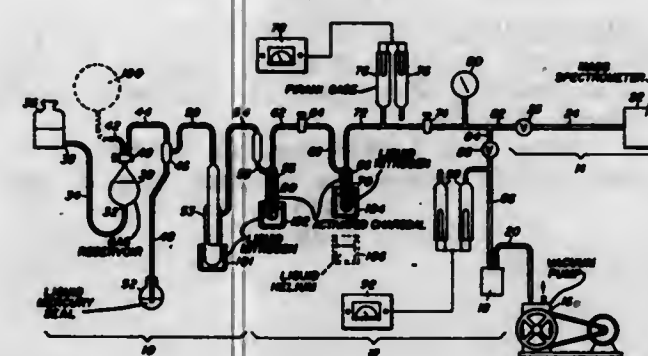
An articulated pipe discharge ramp attachable to a pipe laying vessel and constructed of a plurality of elongated ramp segments arranged in end-to-end relationship and interconnected by hinges. Each hinge is comprised of two hinge members, one connected to one segment and the other to an adjacent segment, with the hinge members arranged in spaced relationship to permit limited movement between the members other than about the pivoted axis. A resilient element is carried between the hinge members to yieldably restrain the relative movement between them.

3,517,520
METHOD OF CONNECTING UNDERWATER PIPELINES
Dillard S. Hammett, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of New York
Filed June 20, 1968, Ser. No. 738,531
Int. Cl. F16l 1/00
U.S. Cl. 61—72.3



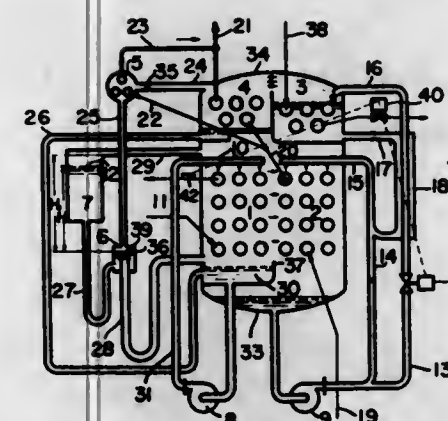
Method of coupling a pair of pipelines underwater by extending the pipelines into overlapped position, cutting off the overlapped portion of one of the pipelines, aligning the free ends of the pipelines and joining the free ends together.

3,517,521
METHOD AND APPARATUS FOR SEPARATING NEON FROM A MIXTURE OF GASES
David E. Emerson, Amarillo, Tex., assignor to the United States of America as represented by the Secretary of the Interior
Filed Jan. 24, 1968, Ser. No. 700,285
Int. Cl. F25j 3/08
U.S. Cl. 62—12



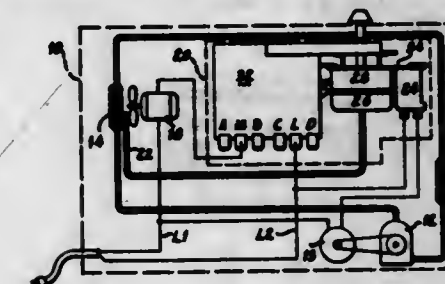
Method and apparatus for separating neon from a mixture of gases effectuated under a partial vacuum by initially freezing-out with adsorption in an activated charcoal cold trap cooled by liquid nitrogen, all contaminants of the gaseous mixture to obtain a mixture of helium and neon gases, followed by freezing-out with adsorption in a second activated charcoal cold trap cooled by liquid helium, the neon of said mixture while evacuating the helium of the mixture, and subsequently evolving neon separately by heating the activated charcoal in the second cold trap.

3,517,522
DEVICE FOR AUTOMATICALLY ADJUSTING CONCENTRATION OF ABSORBENT SOLUTION
Toshio Ozono, Hyogo-ken, and Hisashi Matsushima, Osaka-fu, Japan, assignors to Kabushiki Kaisha, Tokyo, Japan
Filed Oct. 11, 1968, Ser. No. 766,714
Int. Cl. F25b 15/00
U.S. Cl. 62—141



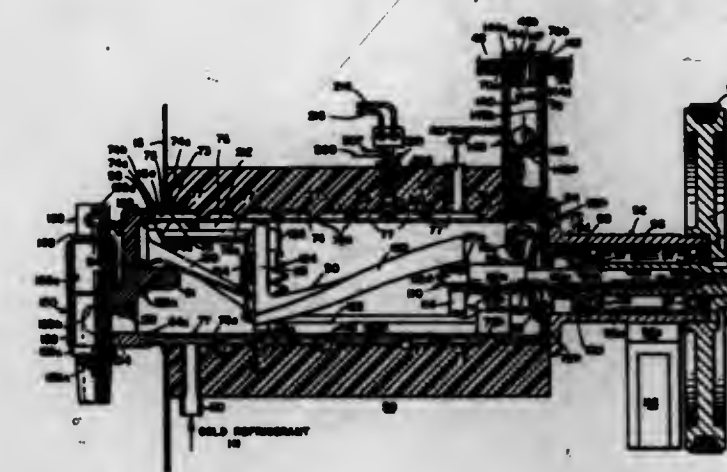
A device for automatically adjusting the concentration of an absorbent solution used in an absorption refrigerator, involves controlling the amount of absorbent solution supplied to the generator of the refrigerator in response to a signal from a sensing device which checks the outlet temperature of the cooling water discharged from the evaporator of the refrigerator. Further, a concentration adjusting condenser supplies refrigerant into a leveling tank which in turn supplies the refrigerant into the evaporator section of the refrigerator through a U-shaped conduit or through an accumulating tank.

3,517,523
AIR CONDITIONER COMPRESSOR AND AIR FAN SPEED CONTROLLER
Harry W. Brown, Big Bend, Wis., and Donald W. Fries, Decatur, Ala., assignors to Cedar-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 26, 1968, Ser. No. 755,177
Int. Cl. F25d 17/00
U.S. Cl. 62—100



A thermostatic controller providing coordinated "on-off" control of a refrigerant compressor motor, and "on-off" and temperature variable speed control of an air circulating fan motor. A known form of thermostatic controller provides normal snap-action, on-off, switch operation at adjustable high and low temperatures. Movement of a lever in accordance with temperature change in the snap-action mechanism is adapted to additionally change the value of resistance in the gate control circuit of a bilateral thyristor in accordance with temperature decrease to slow down a fan motor. Such lever additionally affords opening of a second switch to deenergize the fan motor when a low temperature limit is reached. A modified form of the controller permits selection of either the aforementioned temperature variable speed control of a fan motor, or manual adjustment of the fan speed.

3,517,524
APPARATUS FOR PRODUCING AND DISPENSING FROZEN AND SEMILIQUID PRODUCTS
Armin Fiedler, Chicago, Ill., assignor to Tastes Freez Industries, Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 22, 1968, Ser. No. 722,871
Int. Cl. F25c 7/10
U.S. Cl. 62—188



Apparatus for producing and dispensing frozen and semiliquid products comprising container means for holding a supply of said product in liquid form, a freezing chamber for freezing and agitating said product, conduct means communicating between said container means and freezing chamber for supplying liquid product to the latter for freezing, first dispenser means in communication with said container means for dispensing liquid product therefrom and second, independent, dispenser means in communication with said freezing chamber for dispensing frozen and semiliquid products therefrom.

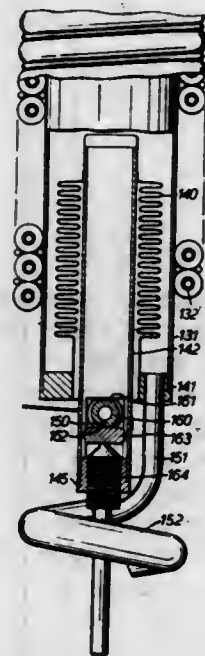
3,517,525 COOLING APPARATUS EMPLOYING THE JOULE-THOMSON EFFECT

David Neil Campbell, Redditch, England, assignor to The Hymatic Engineering Company Limited, Redditch, England

Filed June 24, 1968, Ser. No. 739,225
Claims priority, application Great Britain, June 28, 1967, 29,785/67; May 3, 1968, 21,042/68
Int. Cl. F25b 19/00

U.S. Cl. 62—222

11 Claims



A Joule-Thomson cryogenic cooler, producing a supply of liquid refrigerant, is provided with a valve for automatically regulating the effective area of the expansion orifice under the control of a sensor including a vapour bulb responding to the level of refrigerant liquid.

3,517,526 REFRIGERATED EQUIPMENT

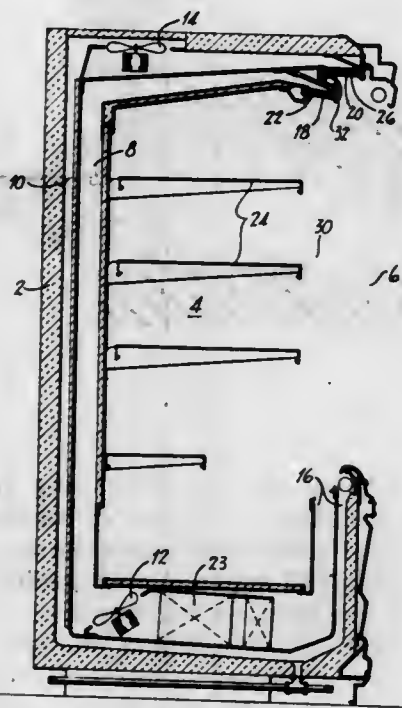
Malcolm D. MacMaster, Yardley, and Herbert R. Morris, Morrisville, Pa., assignors to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut

Filed Aug. 9, 1968, Ser. No. 751,582

Int. Cl. A4f 3/04

U.S. Cl. 62—256

8 Claims



A refrigerated display case embodying an insulated enclosure having an access opening in the front thereof with

means for establishing an air curtain including a plurality of layers of air directed across the access opening from an upper and outer air discharge opening and a lower and inner air discharge opening. A member presenting an arcuate air guiding surface is located between the air discharge openings and terminates in a lower edge adjacent the outer side of the lower and inner air discharge opening.

3,517,527 REVERSIBLE AIR CONDITIONING UNIT

André Bouchat, Brussels, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi (ACEC), Charleroi, Belgium

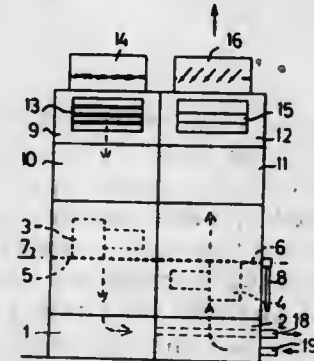
Filed Aug. 2, 1968, Ser. No. 749,860

Claims priority, application Belgium, Aug. 4, 1967, 47,053

Int. Cl. F25b 29/00

U.S. Cl. 62—325

6 Claims



This enclosure concerns a reversible air conditioning unit which may be changed over from summer to winter operation. Such unit comprises at least one fan mounted on a throttle having an aperture therein for the passage of intake air from one side of the throttle towards the other side thereof. The throttle may be pivoted in a duct so as to force air, in one position towards one end of the duct and, in the other position, towards the other end of the duct.

3,517,528 CONSTANT VELOCITY UNIVERSAL JOINT

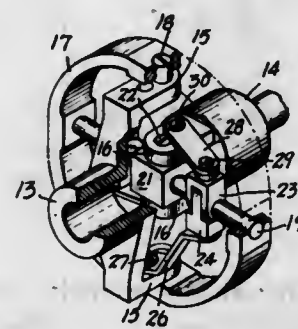
Oreste B. Eccher, 1 Sherman St., Brooklyn, N.Y. 11215

Filed June 4, 1968, Ser. No. 734,396

Int. Cl. F16d 3/30

U.S. Cl. 64—21

8 Claims



A coupling mechanism comprising a constant velocity universal joint which is self-positioning and free from endwise axial motion for all transmission angles within its range and, particularly, to couplings of this class which transmit uniform motion; i.e., the rotation of one shaft is exactly duplicated by the other shaft. Still further, the coupling mechanism can be dynamically balanced for high

speed operation and operate through transmission angles in excess of transmission angles possible in ball and socket joints.

3,517,529 KNITTING MACHINE

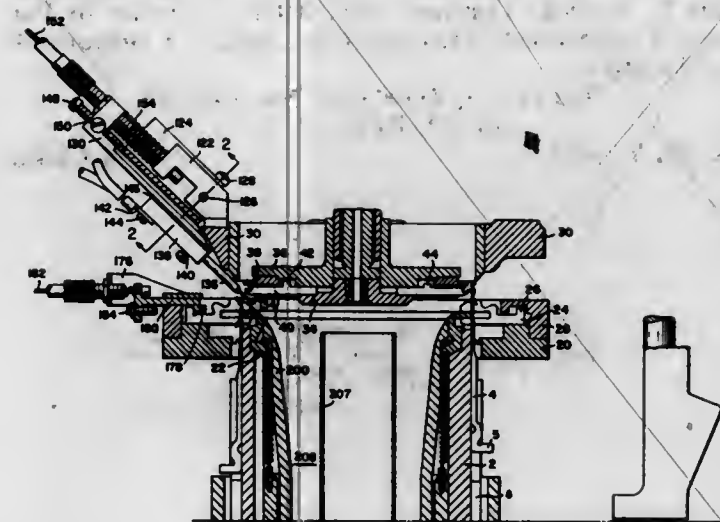
John A. Currier, Canterbury, N.H., assignor to Scott & Williams, Inc., Laconia, N.H., a corporation of Delaware

Filed Nov. 2, 1967, Ser. No. 680,224

Int. Cl. D04b 9/54

U.S. Cl. 66—41

4 Claims



A knitting machine for the knitting of stockings beginning with the toe and terminating with a turned welt is provided with fabric tensioning means for control of welt fabric during welt knitting. Tubes provide a central passage for reception of the leg and preceding portions of a stocking, and an annular passage for reception of the welt fabric. Suction is controlled in both passages to secure tensioning conditions desired at different portions of the knitting operation.

3,517,530 PROCESS FOR PRODUCING KNITTED ARTICLES HAVING LOOP FORMATIONS

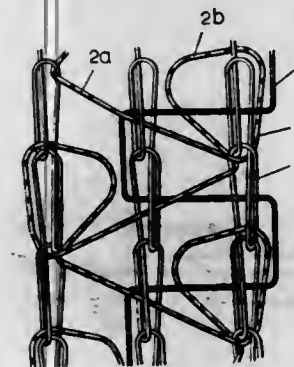
Hans Petter Magnus, Hop, near Bergen, Norway, assignor to Magnus & Co. A/S, Bergen, Norway

Filed Jan. 5, 1967, Ser. No. 607,470

Int. Cl. D04b 21/02, 31/00

U.S. Cl. 66—85

10 Claims



This invention relates to a warp knitted fabric and method of forming the same in which two sets of threads are knitted or laid into the fabric with a normal tension to form a firm ground structure while a third set of threads positioned between the former two sets is being knitted with a lap over two or more needles while overfeeding the threads so that the loops of the actual stitch are forced out on the surface of the fabric.

3,517,531 ROLLING MILL GAGE CONTROL ACTUATOR SYSTEM

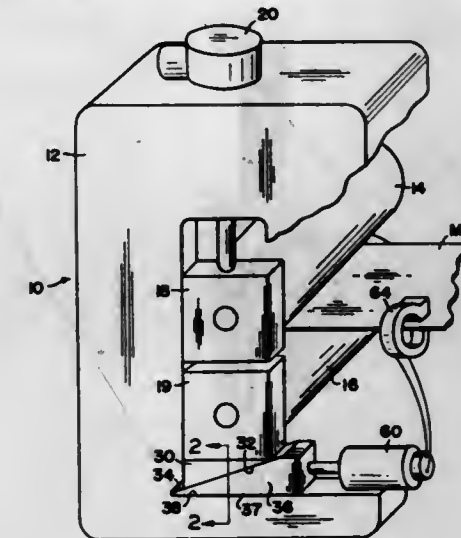
John Sherman Strance, Dover, Mass., assignor, by mesne assignments, to Gulf & Western Industrial Products Company, Grand Rapids, Mich., a corporation of Delaware

Filed Nov. 3, 1967, Ser. No. 680,412

Int. Cl. B21b 37/02

U.S. Cl. 72—16

3 Claims



A gage control actuator system for a rolling mill in which the rolls are adjustably separated by a wedge which in turn is actuated by a thickness gaging system. Hydrostatic bearings on the surfaces of the wedge provide an oil film which separates the surfaces of the wedge from the adjacent surfaces of the mill so that an essentially frictionless system is obtained.

3,517,532 APPARATUS FOR SLITTING SHEET METAL AND METHOD OF FORMING CIRCULAR MEMBERS THEREFROM

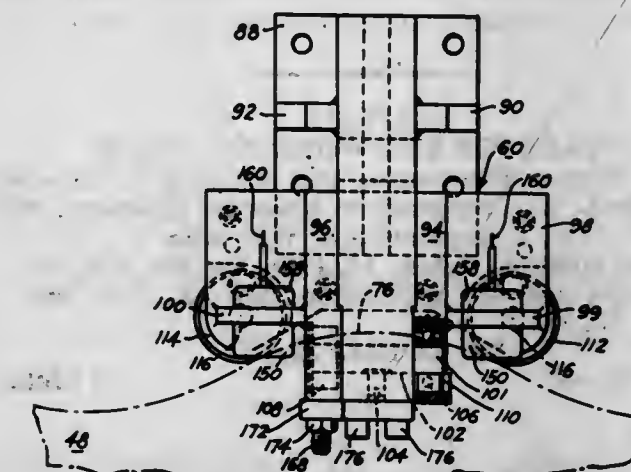
Eugene J. Zilkowsky, Wilber E. Sanders, Jr., Frederick R. Fischer, Robert L. Skinner, and Alfred Westrom, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Original application Sept. 27, 1965, Ser. No. 490,190, now Patent No. 3,388,582, dated June 18, 1968. Divided and this application Mar. 8, 1968, Ser. No. 711,766

Int. Cl. B21c 51/00

U.S. Cl. 72—31

4 Claims



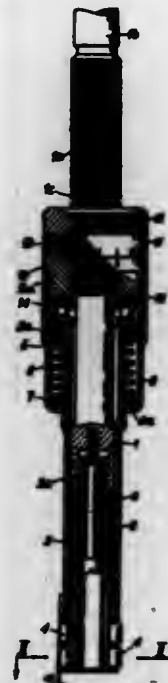
Apparatus for and method of slitting a continuous sheet of relatively heavy gauge sheet metal into a plurality of narrower strips having longitudinally extending serpentine edge portions from which tangential circular lanks partially outlined by the serpentine edge portions are stamped to thereby maximize the number of blanks obtainable from a given area of sheet metal.

3,517,533 ASSEMBLY FOR ROLLING CYLINDRICAL SURFACES

Jaroslav Kožnar, Prague, Czechoslovakia, assignor to Naradi, narodni podnik, Prague, Czechoslovakia
Filed July 10, 1968, Ser. No. 743,861
Claims priority, application Czechoslovakia, July 15, 1967, 5,155/67
Int. Cl. B21d 3/02

U.S. Cl. 72-76

12 Claims



An assembly for improving the qualities, such as hardness, smoothness, etc. of cylindrical surfaces. The assembly includes a plurality of roller bodies circumferentially and uniformly distributed about a predetermined axis. A cage means supports the rotary bodies for free rotary movement. An elongated tapered cam means whose axis coincides with the predetermined axis has a plurality of pressure surfaces engaging the roller bodies for urging them against the surface which is to be rolled, while between these pressure surfaces the cam means has a plurality of relief surfaces alternating with the pressure surfaces and providing relief of the pressure between the roller bodies and the cylindrical surface. A drive means is operatively connected with the cam means for rotating the latter as well as for axially feeding the cam means, and a spring means coacts with the cage means for yielding in opposition to the feed of the cam means when the pressure surfaces engage the roller bodies, while when the relief surfaces are respectively in alignment with the roller bodies the spring means brings about feeding of the cage means together with the roller bodies.

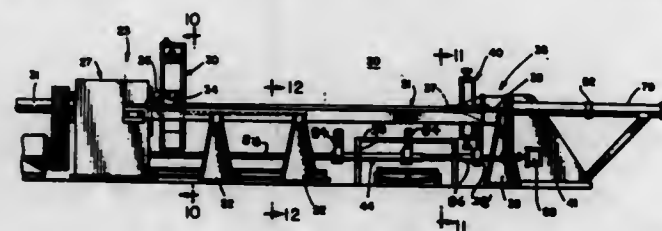
3,517,534 APPARATUS FOR WORKING TUBES

John A. Werner, Wauwatosa, and Kenneth A. Schaefer, Brookfield, Wis., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Original application Aug. 15, 1966, Ser. No. 572,336.
Divided and this application July 16, 1969, Ser. No. 842,311

Int. Cl. B21d 22/14

U.S. Cl. 72-83

9 Claims



A tubular metal blank is chucked at one end to a rotating mandrel and subjected to radial and axial deforming

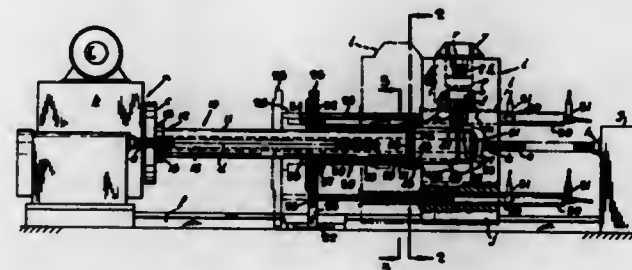
pressure by circumferentially spaced rollers, the working depth of each roller being precisely determined by adjustable gauge means which cooperate with the piston rod of an hydraulic shift cylinder for the roller and limit its in-feed toward the mandrel. A mechanism for loading work pieces upon the mandrel and unloading them therefrom is shiftable back and forth axially of the mandrel by a back and forth shiftable tail stock of the apparatus.

3,517,535 METHOD AND APPARATUS FOR ROLL-EXTRUDING LARGE DIAMETER THIN-WALLED TUBING

Class L. Sporch, Traverse City, Mich., assignor to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed July 9, 1968, Ser. No. 743,553
Int. Cl. B21b 19/16

U.S. Cl. 72-85

8 Claims



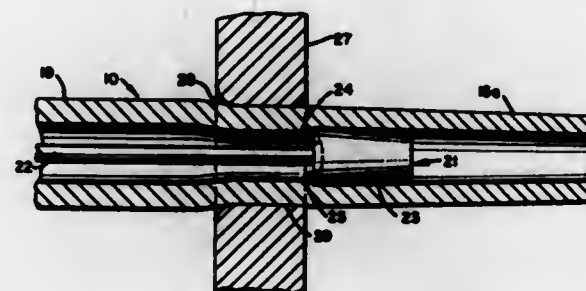
Relatively large diameter thin-walled tubing is roll-extruded from a generally cylindrical billet by a new method and apparatus, in part utilizing that type of power tooling having a power driven mandrel rotating between radially inward directed pressure rolls which are drawn axially by a lead screw. The torque of rotation is supplied at one end of the billet at which the extruding commences. Simultaneously, pressure cylinders apply axial tension to the billet through a bearing collar at its opposite end. This makes it possible to roll extremely thin-walled tubing without irregularities from localized stresses beneath the rolls.

3,517,536 METHOD OF MACHINING THE INSIDE WALL OF A TUBE

Thomas F. G. Fitzmaurice, Waterbury, Conn., assignor to Anaconda American Brass Company, a corporation of Connecticut
Filed June 1, 1967, Ser. No. 642,749
Int. Cl. B21c 1/00

U.S. Cl. 72-275

12 Claims



A method of manufacturing tubing wherein the outside diameter and the wall thickness of a first portion of the tubing are reduced simultaneously to a dimension slightly larger than that required and then the outside diameter of second portion is reduced to a size equal to that of the first portion, the wall thickness of the second portion being greater than the wall thickness of the first

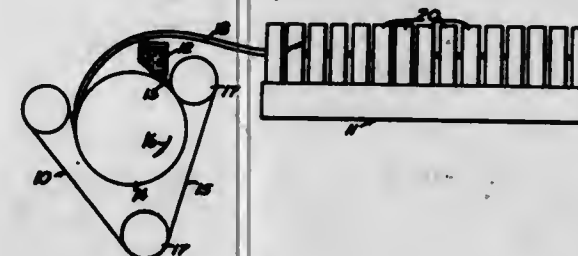
portion. The tubing is then reduced to the required outside diameter and immediately thereafter the interior wall surface is cut to the dimension required. The tubing is then severed at the juncture between the first and second portions and the first portion discarded. Novel apparatus is provided for carrying out the cutting operation on the interior wall surface.

3,517,537 METHOD OF HOT-FORMING CONTINUOUSLY CAST ALUMINUM

Daniel B. Cofer, Carrollton, Ga., assignor to Southwire Company, Carrollton, Ga., a corporation of Georgia
Filed Sept. 15, 1967, Ser. No. 668,003
Int. Cl. B21b 1/18

U.S. Cl. 72-234

10 Claims



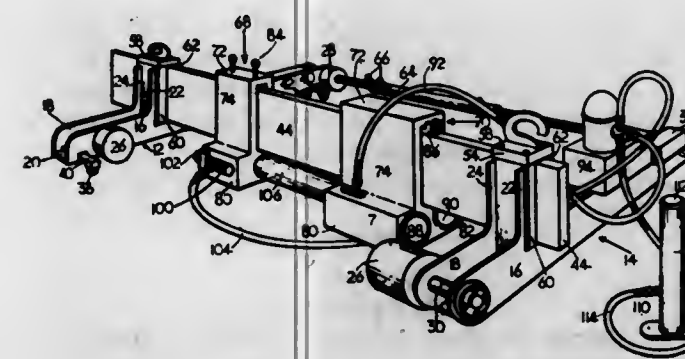
What is disclosed herein is a method of hot-forming continuously cast aluminum or a similar cast metal comprising feeding the cast metal from a continuous casting machine through a series of roll stands with the cast metal always subjected to a lengthwise compressive force between adjacent roll stands in spite of variations in the volume per unit of time of the cast metal resulting from the operating characteristics of the continuous casting machine. In each roll stand the cast metal is compressed to a smaller cross-sectional area and the lengthwise compressive force to which the cast metal is subjected between all roll stands is achieved by always feeding the cast metal toward a roll stand at a greater volume per unit of time than is required to adequately fill the space defined by the rolls of the roll stand but at not so great a volume per unit of time as to cause fins or cobbles.

3,517,538 APPARATUS FOR SEPARATING THE FLANGES OF LARGE STRUCTURAL CHANNELS

Joseph Manuel Tannenbaum, 4 Dewborne Ave., Toronto 10, Ontario, Canada
Filed June 3, 1968, Ser. No. 734,107
Int. Cl. B21d 7/00

U.S. Cl. 72-389

9 Claims



An apparatus for separating the flanges of distorted large channel sections to insert transverse stiffening members. A frame, riding on the edges of the flanges, carries a pair of blocks which depend into the channel; one block bears against the inside of one flange and the other block has

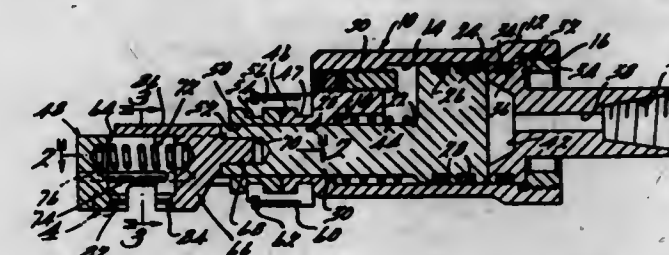
a piston which is moved against the inside of the other flange to effect separation. The thrust exerted during separation is borne by a reinforcing tube which connects the two blocks.

3,517,539 CRIMPING TOOL

Peter R. Chirco, Utica, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1968, Ser. No. 700,824
Int. Cl. B21d 17/02

U.S. Cl. 72-414

10 Claims



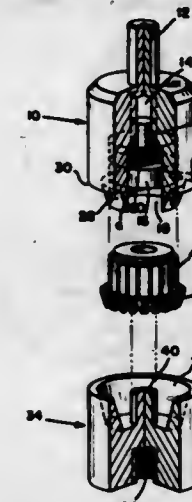
A tool for crimping fasteners by utilizing relative translational motion between two opposed jaws. The tool end portion which carries the crimping jaw members includes a rotatable feature which increases the versatility of the tool. The jaw members are provided with a relief for flow of displaced metal.

3,517,540 COMMUTATOR TOOL

Sol A. Kozma, Jr., Winston-Salem, N.C., assignor to Comm-Tang Corporation, Raleigh, N.C., a corporation of North Carolina
Filed July 24, 1968, Ser. No. 747,308
Int. Cl. B21d 3/10

U.S. Cl. 72-414

10 Claims



A commutator tool for salvaging or straightening commutators having a plurality of segments and tangs and having a mating plunger and base wherein a commutator supported by the base will be cooperatively received within a channel in the plunger when the plunger and base are mated and the sloped lower edge of the plunger will raise the commutator tangs to a predetermined position.

3,517,541 WHEEL FABRICATING MACHINE WITH LOADER AND UNLOADER APPARATUS

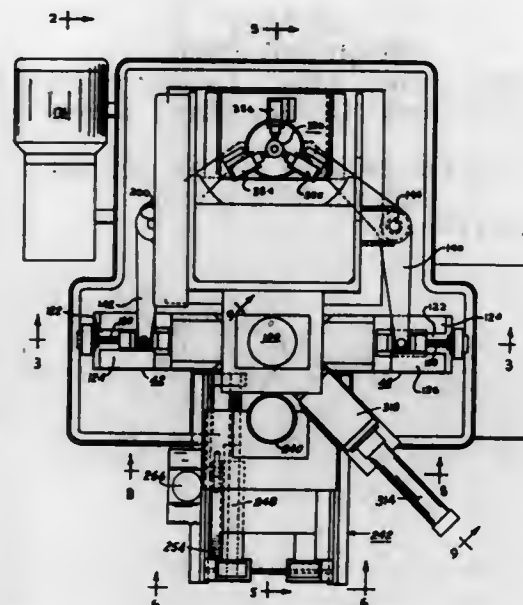
James H. Wagner, Muncie, Ind., assignor to Arrowhead Engineering Corporation, Knox, Ind., a corporation of Indiana
Filed Sept. 20, 1965, Ser. No. 488,651
Int. Cl. B21d 45/00

U.S. Cl. 72-426

4 Claims

A mechanism for inserting a blank into a pulley fabricating machine and for removing the form blanked

therefrom, in which a carriage conveys a blank between a magazine and a spindle where the pulley is formed and a carriage having a magnet thereon removes the



formed blank from between the spindles to a discharge station. A collar may be used around one of the spindles to disengage the formed blank from the spindle.

3,517,542

COMPLEMENTARY FINISHING DIES

Edwin J. Skierski, Riverside, Conn., assignor to Parker-Kalon Corporation, Clifton, N.J., a corporation of Delaware

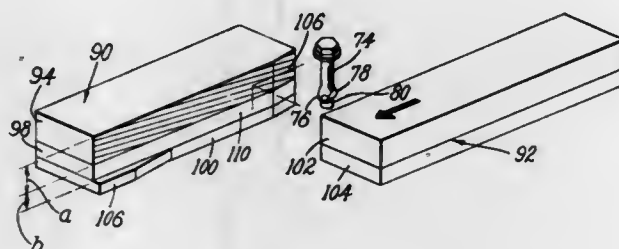
Original application July 5, 1968, Ser. No. 742,736.

Divided and this application June 26, 1969, Ser. No. 836,771

Int. Cl. B21h 3/06

U.S. Cl. 72-469

3 Claims



Complementary finishing dies comprising a first die having a thread forming member and a deburring member and cam member for removing excess material. A second die having a thread forming member and a deburring member.

3,517,543

APPARATUS FOR THE DETERMINATION OF HYDROGEN IN ALUMINUM MELTS

Adolf Gasser, Triesen, Liechtenstein, assignor to Feinmechanik-Anstalt, Schaan, Liechtenstein, a corporation of Liechtenstein

Filed Oct. 13, 1967, Ser. No. 675,197

Claims priority, application Austria, Oct. 14, 1966, A 9,626/66

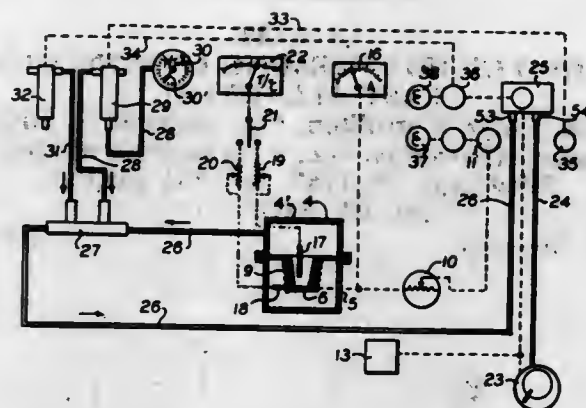
Int. Cl. G01n 7/14, 33/20

U.S. Cl. 73-19

7 Claims

An apparatus for determining the hydrogen content in aluminum melts comprising a vacuum chamber, an electrical resistance-heated testing crucible disposed therein,

an inspection window in the vacuum chamber, and a vacuum pump operatively connected to the vacuum chamber. A temperature measuring instrument and a vacuum meter are operatively connected with the vacuum chamber for indication of the temperature and of the pressure. A vacuum control member is operatively disposed be-



tween the vacuum pump and the vacuum chamber causing an automatic uniform pressure reduction, and means are provided for fixing a pointer, to indicate the prevailing pressure in the vacuum chamber at the instance upon observation through the inspection window of the first gas bubble on the surface of the melt.

3,517,544

GAS PRESSURE MEASURING DEVICE

Sylvain Jean Janssen, Paris, France, assignor to Compagnie des Compteurs, Paris, France, a company of France

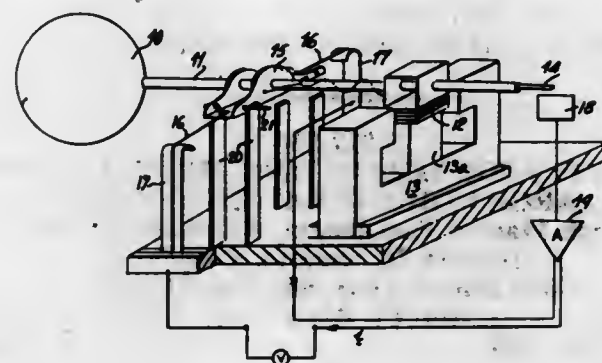
Filed Feb. 6, 1967, Ser. No. 614,270

Claims priority, application France, Feb. 8, 1966, 48,778

Int. Cl. G01n 7/00, 9/02

U.S. Cl. 73-30

3 Claims



The device comprises a balance with a beam with a hollow globe at one end, a coil at the other end, the assembly is immersed into the gas whose pressure is to be measured; the coil is fed by a counterbalancing current through a resistance whose potential difference at the terminals corresponds to the pressure of the gas.

3,517,545

FLUID SENSOR

Harvey D. Ogren, St. Paul, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Original application Jan. 3, 1966, Ser. No. 518,155, now Patent No. 3,435,688. Divided and this application Feb. 19, 1968, Ser. No. 706,348

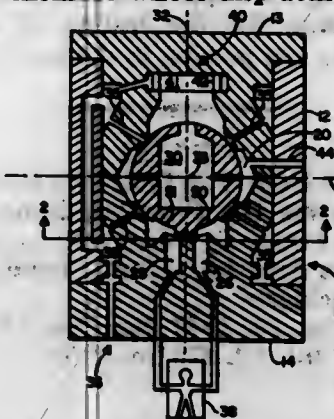
Int. Cl. G01b 13/00

U.S. Cl. 73-37.5

2 Claims

A displacement sensor which provides a fluid output signal indicative of the magnitude and direction of dis-

placement between two members. The fluid flow through a pair of apertures is controlled by a pickoff element mounted on a member whose displacement is to be sensed.



The pickoff element controls the flow of fluid through the apertures so as to develop a fluid flow or fluid pressure output signal therein.

3,517,546

DETECTOR CONFIGURATION FOR THE ULTRASONIC LEAK DETECTOR

John P. Fraser, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 6, 1968, Ser. No. 726,895

Int. Cl. G01m 3/24

U.S. Cl. 73-40.5

4 Claims



A system for detecting leaks in buried pipelines wherein an instrument is transported through the pipeline. The system utilizes an ultrasonic detection system having two hydrophones or pick-ups, one being positioned ahead and one behind the instrument. The two hydrophones are connected to a coincidence or differential circuit that indicates the unbalance between the two hydrophone signals.

3,517,547

METHOD OF AND APPARATUS FOR CHECKING THE TIGHTNESS OF A WATCHCASE

Ernest Morf, Domaine de Vandijon, Colombier, Neuchatel, Switzerland

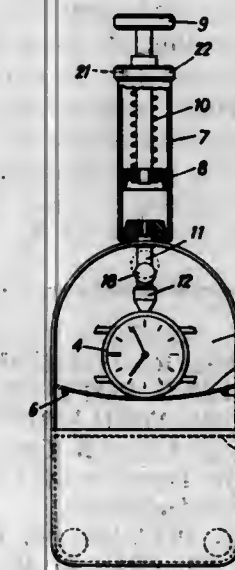
Filed May 1, 1968, Ser. No. 725,832

Claims priority, application Switzerland, May 31, 1967, 7,694/67

Int. Cl. G01m 3/06, 3/32

U.S. Cl. 73-45.5

4 Claims



The tightness of a watchcase is checked firstly by increasing the air pressure therewithin. Therefore, an addi-

tional amount of air is blown through the stem tube into the watchcase by means of a pump. If the overpressure thus created in the watchcase visibly stands, the watchcase is then immersed into a liquid exposed to the atmospheric pressure and having a low viscosity. The immersion is carried out while maintaining the overpressure in the watch. If the tightening means of the watch have some defect, air bubbles can immediately be observed in the liquid.

3,517,548

MEANS FOR AND METHOD OF DETECTING LEAKS IN THE SEAL OF A COMPONENT

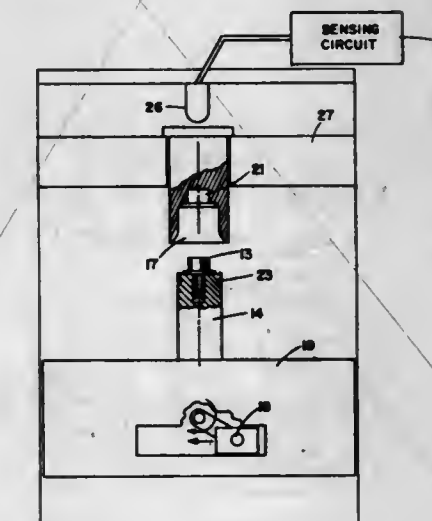
John W. Orter, Woburn, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed June 20, 1968, Ser. No. 738,487

Int. Cl. G01m 3/02

U.S. Cl. 73-49.3

10 Claims



A method and apparatus for detecting and measuring gross leaks in hermetically sealed components or devices and is applicable to components which can be subjected to a gas or air under pressure, and which contain a volume of free space within them. The leak detector includes a cylinder containing a gas-filled cavity with an opening to receive a plunger. A plunger conforming in shape and dimension with the cavity opening is provided. It also contains means for mounting a test component to be inserted within the cavity. When the plunger is inserted into the cavity it compresses the gas. An indicator which measures and displays the magnitude of pressure of the compressed gas is provided. The magnitude of pressure is an indication of whether or not the test component contains a gross leak.

3,517,549

MOISTURE-SENSING DETECTOR AND APPARATUS INCLUDING SAME

Aharon Teich, 4 Simat Hamaalot, Ramat Hasharon, Israel

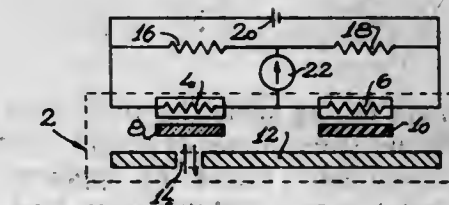
Filed June 16, 1966, Ser. No. 558,106

Claims priority, application Israel, June 22, 1965, 23,783

Int. Cl. G01n 25/18, 27/18, 25/56

U.S. Cl. 73-73

8 Claims

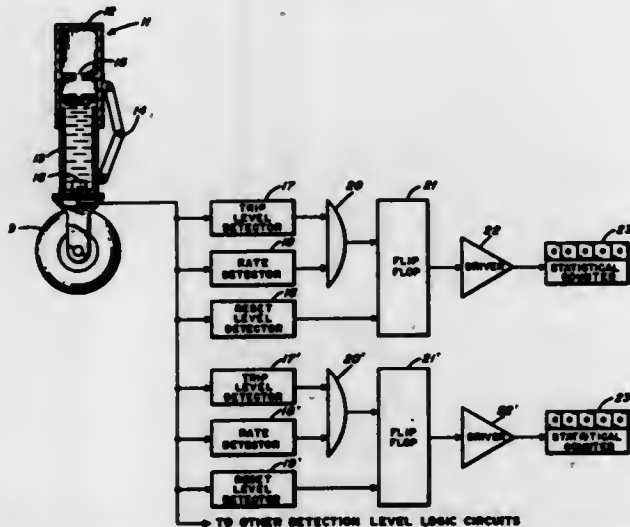


A moisture-sensing detector comprises a pair of electrical resistors one of which is in heat-conductive relationship with a moisture-absorbing material and the other of

which is in heat-conductive relationship with a nonmoisture-absorbing material, whereby the difference in thermal conductance between the latter two materials, caused by the absorption of moisture by the one but not by the other, may be used to produce an indication of the amount of moisture absorbed by the first-mentioned material.

3,517,550 LOAD AND RATE OF CHANGE OF LOAD DETECTION SYSTEM

Robert S. Leventhal, Granada Hills, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 8, 1968, Ser. No. 727,526
Int. Cl. G01b 7/16; G01l 1/02; G01n 3/00
U.S. Cl. 73-88.5 10 Claims

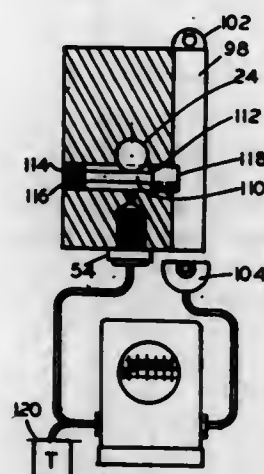


The present invention relates to a system for detecting and recording the level and rate of change of landing loads in the struts of aircraft landing gear. The system utilizes pressure sensors in the struts. The sensors are connected to a plurality of measuring circuits which are operable in response to a minimum pressure to record the level and rate of change of pressure detected by the sensor.

3,517,551 TENSILE TEST DEVICE

John E. Biigel, R.D. 2, Manlius, N.Y. 13104
Filed Apr. 30, 1968, Ser. No. 725,470
Int. Cl. G01n 3/10 7 Claims

U.S. Cl. 73-97

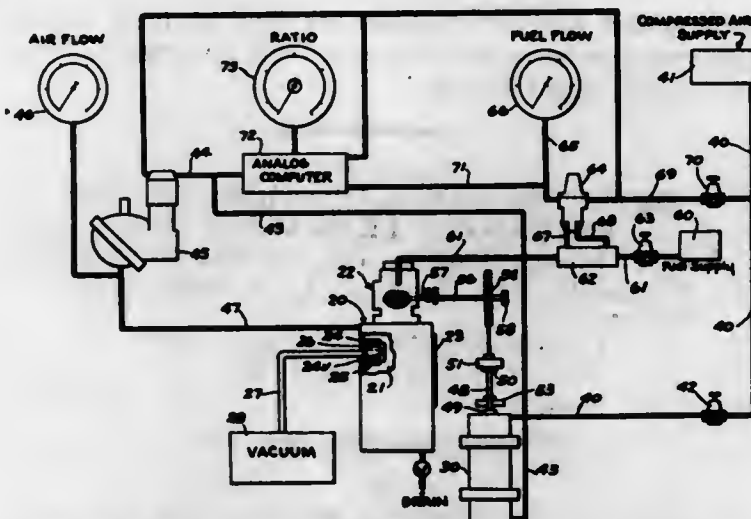


Tensile strength testing apparatus for testing specimens subjected to tensile stress alone or tensile strength while subjected to compressive forces the apparatus comprising a solid block having a test specimen bore to receive a dumbbell-shaped test specimen, and an intersecting bore adapted to receive a blank cartridge, a bolt and firing pin, the test bore being connected to a piezo crystal pressure transducer, and an oscilloscope capable of calibration.

The test specimen bore may be threaded at one end to receive and anchor a threaded end of the test specimen, and the bore may be stepped in diameter to provide a smaller vented bore for the testing of a stepped test specimen, with the test portion in the smaller vented bore.

3,517,552 APPARATUS FOR TESTING CARBURETORS

Vernon G. Converse III, Franklin, Robert W. Clayton, Plymouth, and James T. Westervelt, Livonia, Mich., assignors to Scans Associates, Inc., Livonia, Mich., a corporation of Michigan
Filed Sept. 14, 1967, Ser. No. 667,711
Int. Cl. G01m 15/00 12 Claims



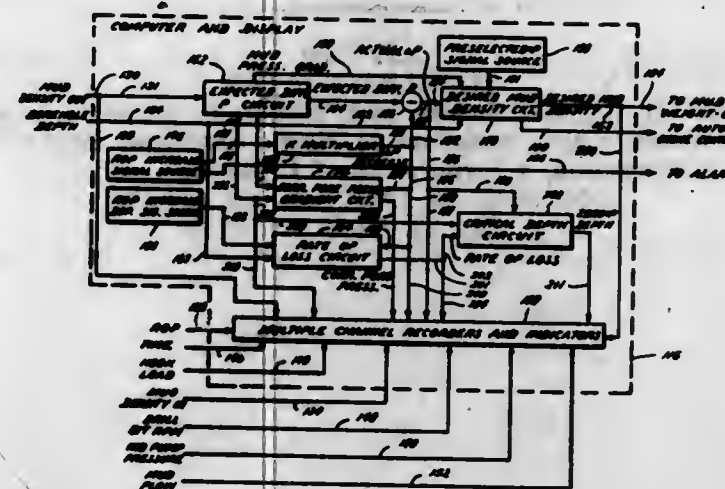
The application discloses method and apparatus for testing carburetors for their performance and giving simultaneously with the test continuous and direct indication of the mixture ratio produced by a test carburetor as well as deviations of such mixture from prescribed standard. The apparatus is adapted to reproduce in a tested carburetor a predetermined air flow and manifold vacuum known to occur in such carburetors at a certain point of its operation. With such air flow inducing a definite fuel flow in the test carburetor, the rate of fuel flow is measured and amplified. The signals produced by the measuring devices, which signals may be pneumatic, electric, or hydraulic, are impressed on an analog computer capable of dividing one value by the other and thus to produce another signal related to or representative of the mixture ratio produced by the carburetor. Such ratio is indicated on a specially graduated pressure indicating device, or an electric indicating device, and thus giving a direct and continuous reading of the mixture ratio produced by the carburetor. By virtue of many additional improvements, the apparatus is made suitable for rapid but precise testing of carburetors on a production line making such test one of manufacturing operations. For such purposes, indications may be of such character as to indicate the degree of deviations of the test carburetors from the prescribed standard for the purpose of accepting or rejecting a carburetor rather than to give exact value for the mixture ratios.

3,517,553 METHOD AND APPARATUS FOR MEASURING AND CONTROLLING BOTTOMHOLE DIFFERENTIAL PRESSURE WHILE DRILLING

Darrell W. Williams and Albert B. Crowmover, Jr., Lafayette, La., assignors to Tenneco Oil Company, Houston, Tex., a corporation of Delaware
Filed Dec. 6, 1967, Ser. No. 688,393
Int. Cl. E21b 47/06 11 Claims

Method and apparatus are provided for measuring and controlling the bottomhole pressure differential while

drilling oil and gas wells. The magnitude of change in bottomhole pressure differential may be derived as a function of changes in the actual rate of penetration from an expected rate through a preselected class of formations.

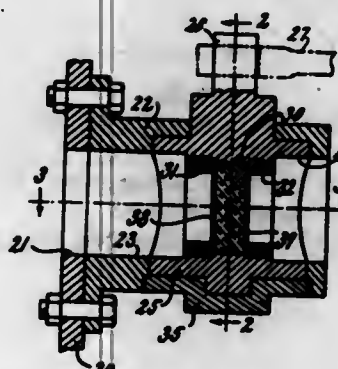


A corrected bottomhole pressure differential may be derived as a function of hydrostatic pressure, the expected formation pore pressure and the change in pressure differential.

3,517,554 SAFETY SIGHT GLASS

Andrew M. Smith, Baton Rouge, La., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey
Filed May 20, 1968, Ser. No. 730,492
Int. Cl. G01f 23/02 4 Claims

U.S. Cl. 73-332



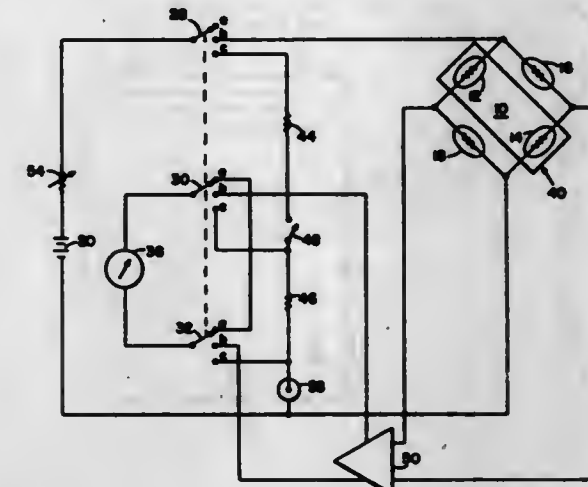
A safety sight glass for looking into a vessel or the like while it is under pressure is basically a plug valve with a sight glass mounted in the port of the plug. When the plug is in an "open" position the sight glass permits looking into the vessel; when the plug is rotated to a "closed" position, the glass is sealed off from the vessel. In the event of accidental breakage of the glass the plug can be rotated quickly to a "closed" position, thus preventing the contents of the vessel from rushing out.

3,517,555 RADIO FREQUENCY HAZARD DETECTOR

William L. Strickland, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 29, 1968, Ser. No. 717,193
Int. Cl. G01k 3/08, 7/22 1 Claim

An apparatus for detecting dangerous ignition conditions in a rocket squib having a thermistor bridge network with two active thermistor detectors in opposite legs, two compensating thermistors in the other two legs, a voltage source connected across the bridge network and a current

sensing device connected between the middle terminals of the bridge network. The two active thermistors are thermally linked with the rocket squib to detect any



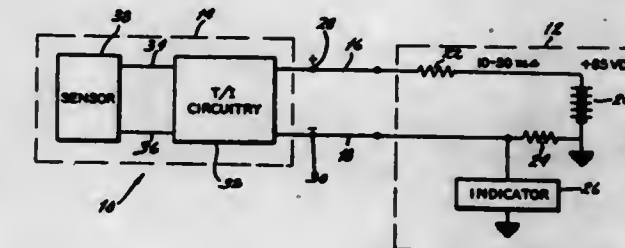
temperature change in the squib by recording a change of current in the current sensing device according to resistance change of the two active thermistors.

3,517,556 RESISTIVE-TYPE TEMPERATURE-TO-CURRENT TRANSDUCER

George E. Barker, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed May 2, 1967, Ser. No. 635,612
Int. Cl. G01k 7/20 13 Claims

U.S. Cl. 73-362

13 Claims



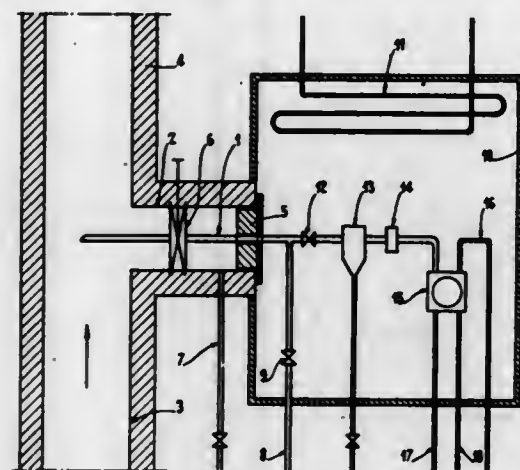
A temperature-to-current transducer adapted for field installation in an industrial plant, or the like, which requires only two leads for both information communication and power distribution between the control room and the field locations. The transducer includes a resistive bridge circuit having a bulb which senses temperature variations by resistance changes and delivers a corresponding voltage signal to a solid-state amplifier. The output of the amplifier drives a power transistor stage which in turn regulates the current level in the leads connecting the transducer to the control room. A constant-current power supply and feed-back circuits are provided to control the bridge circuit current in accordance with the measuring circuit output, thereby to enhance the accuracy and stability of the resulting temperature indication.

3,517,557 DEVICE FOR SAMPLING HOT GASEOUS MIXTURES CONTAINING CONDENSABLES

Camille Granger and Marc Demours, Martignes, and Michel Brader, Vincennes, France, assignors to Naphthachimie, Societe Anonyme, Paris, France
Filed Nov. 27, 1968, Ser. No. 779,514
Claims priority, application France, Nov. 30, 1967, 130,297 8 Claims

A sample is taken of a hot gaseous mixture containing easily condensable components by inserting a sampling

tube in a pipe carrying the mixture. The sampling tube leads to a sampling valve within a housing. The temperature within the housing is maintained at at least 150° C. by a heater. The sampling tube and sampling valve keeps



the sampled gas at a temperature above the condensating temperature of the condensable components. The sampling valve entrains the sampled gas with an inert gas and transmits the mixture to a chromatograph.

3,517,558

WHEEL SUPPORT FOR BALANCER

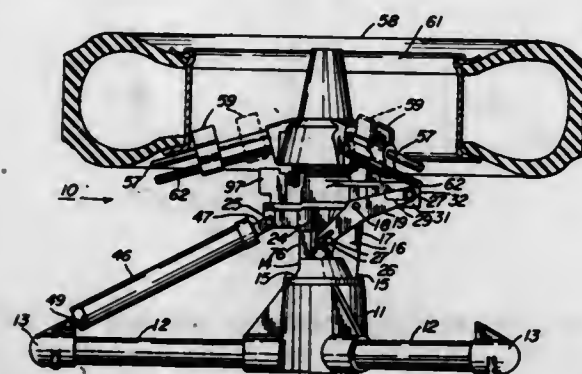
Walter P. Kushmuk, Niles, and Leo C. Bogaerts, Antioch, Ill., assignors to Amco Tools, Inc., North Chicago, Ill., a corporation of Illinois

Filed Feb. 20, 1967, Ser. No. 617,317

Int. Cl. G01m 1/14

U.S. Cl. 73-485

6 Claims



A heavy wheel is supported about a pivot bearing by wheel support arms that slant downward from a balancing head member and lie in the surface of an imaginary cone so that larger wheels rest at a lower location than smaller wheels. The wheels are automatically raised into position and clamped in place.

3,517,559

PNEUMATIC ACCELEROMETER

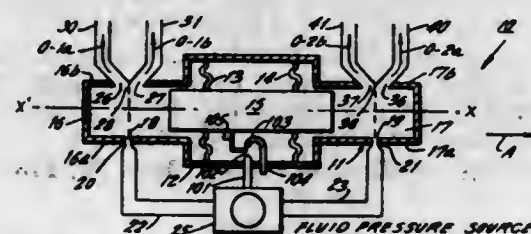
Henry Blazek, Nyack, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware

Filed Dec. 22, 1966, Ser. No. 604,013

Int. Cl. G01p 7/00

U.S. Cl. 73-503

10 Claims



A non-rotating seismic mass is mounted to vary the volume of a resonant cavity and in so doing vary the

frequency of a fluid output signal in accordance with applied acceleration. A fluid jet directed across the cavity impinges upon a knife edge to generate noise throughout a frequency spectrum including the resonant frequency range of the cavity for all positions of the seismic mass.

3,517,560

ACCELEROMETER

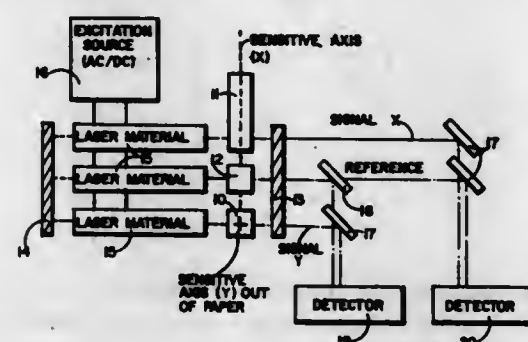
Earl D. Jacobs, Tustin, and Wilbur L. Zingery, Long Beach, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

Filed Mar. 23, 1965, Ser. No. 442,100

Int. Cl. G01p 15/02

U.S. Cl. 73-516

16 Claims



An accelerometer comprising at least one laser consisting of a lasing element and a pair of parallel reflectors, one of which is partially transmitting to provide an output. The light generated by the lasing element is reflected back and forth between the parallel reflectors. The optical path length of the laser beam is changed as a function of acceleration which causes the beam to change frequency. This change in frequency is detected by comparing the beam with a second reference laser beam which may be derived from the same lasing element or from a different one.

3,517,561

SPEEDOMETER MECHANISM

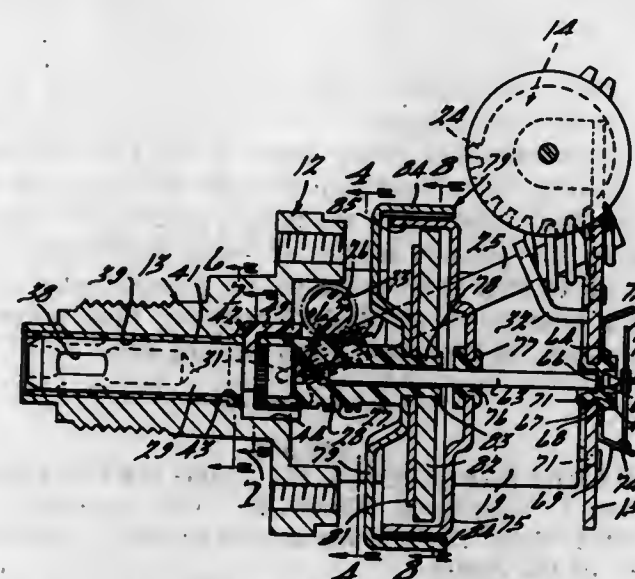
Rex R. Holbrook, Ann Arbor, Mich., assignor, by mesne assignments, to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed May 16, 1967, Ser. No. 638,805

Int. Cl. G01p 3/49

U.S. Cl. 73-519

14 Claims



An in-line speedometer construction including concentrically molded shaft aligning means maintaining the drive shaft and the pointer staff in concentric in-line relation and also featuring shaft retaining means maintaining one end of the drive shaft and one end of the pointer staff fixed against relative endwise movement for single point end play control thereof.

3,517,562

INERTIAL GYROSCOPE

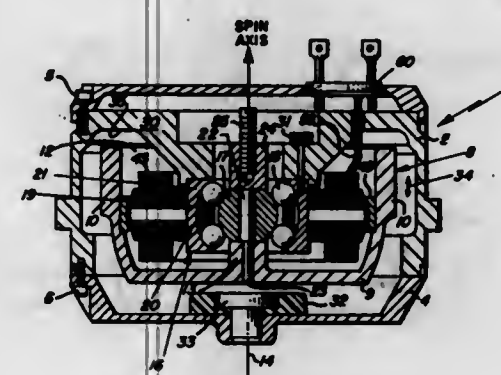
Warren W. Houghton, Framingham, Gerald M. Nearman, Manchester, and Robert C. Royce, Framingham, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Sept. 12, 1967, Ser. No. 667,238

Int. Cl. G01c 19/28

U.S. Cl. 74-5.6

5 Claims



An inertial gyroscope having an umbrella-shaped rotor gim-balled on spherical ball bearing means with an assembly of stator coils combined with a hysteresis ring carried by the rotor for actuation of positional pickoff and torquer functions. The spherical ball bearing means provides complete rotation about the spin axis and limited pivotal movement about the two orthogonal axes with resultant three-degrees-of-freedom in a unitary assembly.

3,517,563

GYROSCOPIC PLATFORM ASSEMBLY

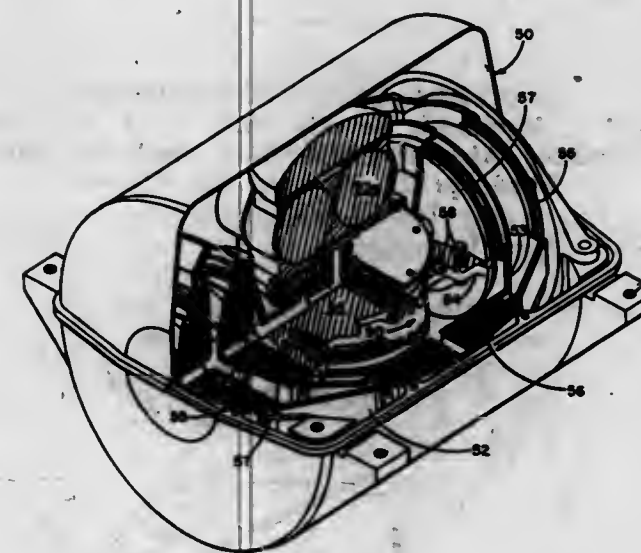
Christian H. Will, Jr., Grand Rapids, Mich., assignor to Lear Slegler, Inc.

Filed Mar. 2, 1966, Ser. No. 541,874

Int. Cl. G01c 19/02

U.S. Cl. 74-5.34

11 Claims



This invention relates to gyroscopic platform assemblies utilizing an inside-out gimballing arrangement wherein the component mounting platforms are individually and independently rotatably affixed to a pair of axially aligned supports. The relative rotational positions of the platforms are maintained by affixing a circular rack gear to the inner face of each of the platforms. A pair of spur gears each having a diameter substantially less than that of the rack gears are carried by the succeeding outer gimbal frame so as to transmit the rotational thrust of one of the platforms directly to the other platform.

3,517,564

NUTATING DRIVE

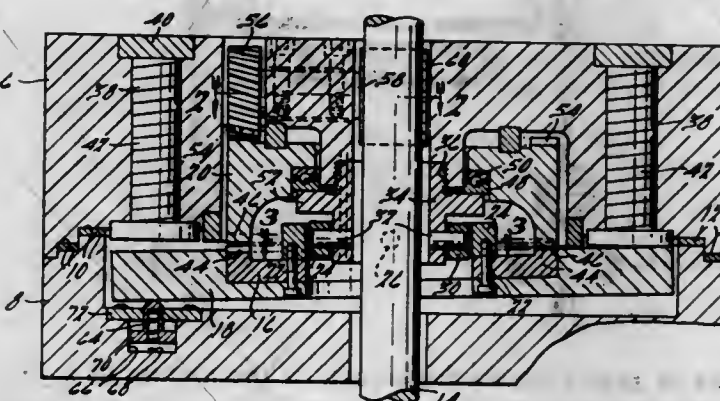
Clifford V. Johnston, Harbor Hills, Hebron, Ohio, assignor to Diamond Power Specialty Corporation, a corporation of Ohio

Filed Mar. 14, 1968, Ser. No. 713,190

Int. Cl. F16h 25/12; H02k 7/06

U.S. Cl. 74-89.17

10 Claims



A nutating drive motor of compact size and high torque comprising a housing in which a first gear is rotatably mounted and is disposed in driving relationship with respect to a drive rod which extends through the housing and through the center portion of the first gear for imparting linear movement to the drive rod in response to rotation thereof. Rotation of the first gear is achieved by a nutating gear disposed substantially concentric to the first gear and is caused to undergo nutational motion by the progressive sequentially-timed energization of a plurality of circumferentially spaced electromagnets mounted in the housing.

3,517,565

UNIVERSAL BELT DRIVE

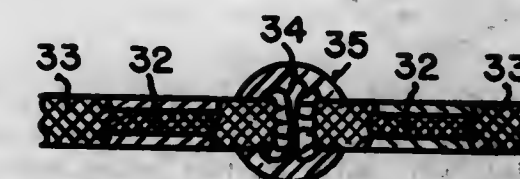
Roland C. Smith, 4433 Dover Ave. NE., Salem, Oreg. 97303

Filed Jan. 2, 1968, Ser. No. 694,905

Int. Cl. F16g 1/14, 1/28

U.S. Cl. 74-231

1 Claim



A power transmitting mechanism including a driving wheel, a driven wheel, a driving connection therebetween and wherein the wheels are provided with sockets for driving engagement with ball members formed on a belt comprising the driving connection and wherein by reason of the ball and socket relationship the reaches of the belt are self-conforming to any changes in angularity without twisting the belt.

3,517,566

DUAL PINION DRIVE

Arthur S. Cornford, Toronto, Ontario, Canada, assignor to Aerofall Mills Limited, Toronto, Ontario, Canada

Filed Feb. 29, 1968, Ser. No. 709,299

Claims priority, application Canada, Mar. 21, 1967, 985,833

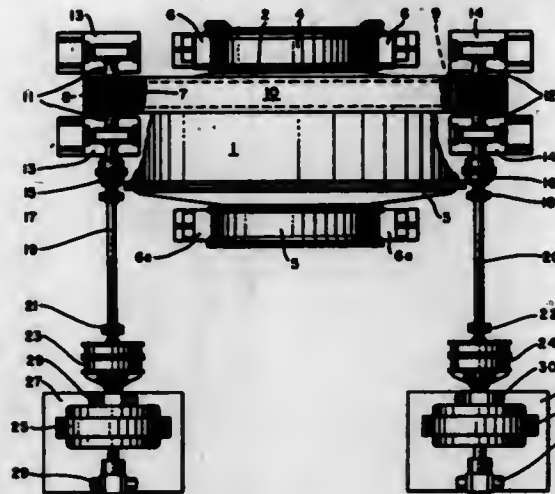
Int. Cl. F16h 57/00; H02k 7/10

U.S. Cl. 74-411

10 Claims

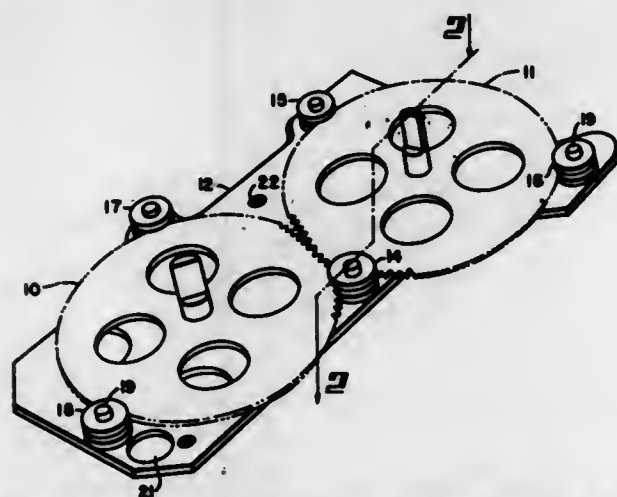
A dual pinion drive system for driving large diameter gear wheels which is capable of maintaining the rotors of two electric driving motors in their correct electrical

angular relationship one to the other. A drive transmitting element is provided between each pinion and its associated motor and is yieldable in operation to limit fluctua-



tions of power drawn from each of the motors to a predetermined percentage of the normal power output of each motor.

3,517,567
GEAR SUPPORT AND ALIGNMENT GUIDE
Donald F. Willmann, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Jan. 23, 1969, Ser. No. 793,510
Int. Cl. F16h 1/06; F16c 27/00
U.S. Cl. 74-414 9 Claims

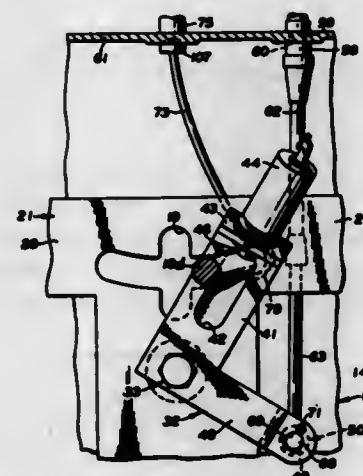
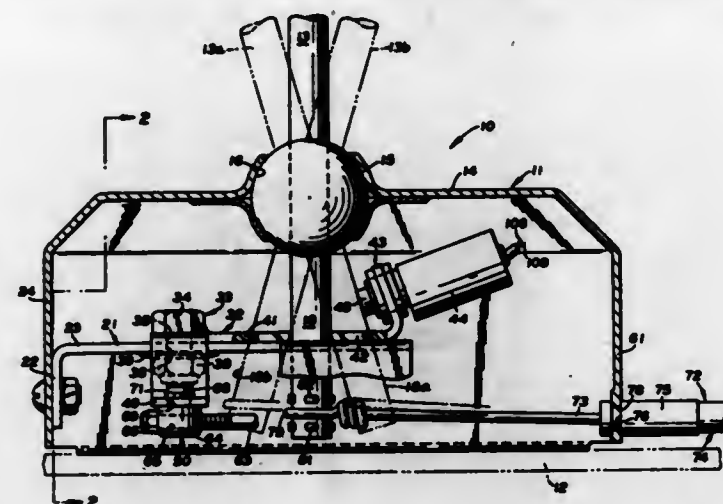


The invention is a gear support constructed of a single supporting plate and a single bearing in which each gear is journaled, with self-lubricating guides appropriately spaced on said support at the gear peripheries to support and align the mating gear faces.

3,517,568
SINGLE LEVER CONTROL
Frank S. Payerle, Akron, Ohio, assignor, by mesne assignments, to North American Rockwell Corporation, Pittsburgh, Pa., a corporation of Delaware
Filed July 5, 1968, Ser. No. 742,618
Int. Cl. F16h 21/02 6 Claims

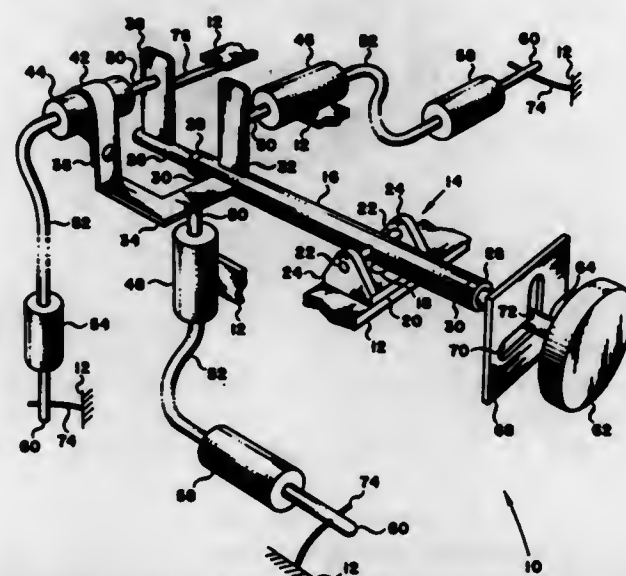
A single lever control unit for regulating a plurality of remote, servient mechanisms. Two motion transmitting mechanisms in the nature of push-pull control cables are individually, and selectively, operated by a single lever pivotally mounted in the unit. The core of one cable is attached to a throw arm portion of the lever movable directly with the handle portion of the lever. The core of the second cable is attached to a link plate that is movable in response to specific motion of the throw arm. A guide plate limits motion of the throw arm, and thereby the handle as well, to two, generally transverse courses.

Movement of the throw arm along one course effects motion transmission through only one of said push-pull cables and motion of the throw arm along the transverse course effects transmission through only the other of said



push-pull cables. A switch means is movably mounted within the unit to be selectively actuated by movement of the throw arm in selective directions along both courses.

3,517,569
CONTROL-ACTUATING DEVICE
Robert J. Robillard, Beverly Hills, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Apr. 22, 1968, Ser. No. 722,970
Int. Cl. G05g 9/00 13 Claims



A control-actuating device is disclosed which utilizes a single handle or similar structure so as to actuate three different control means located within three different planes of movement. The device includes a control lever mounted on a multiplane pivot structure and a control rod

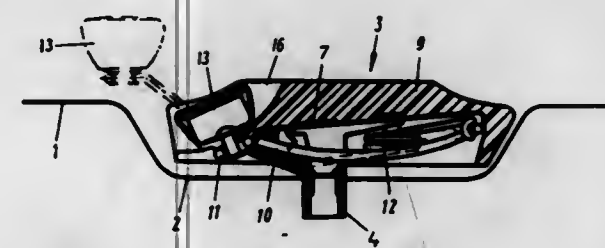
pivotally mounted on the control lever. A handle or similar structure is located on the control rod so that this rod may be rotated in order to actuate one control means. By movement of the handle or similar structure in either of two different planes, the control lever will actuate the other control means used with the device.

3,517,570
MULTI-POSITION ROTARY ACTUATING MECHANISM
Edgar C. Kolb, Freeport, Ill., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Aug. 7, 1968, Ser. No. 750,841
Int. Cl. G05g 5/06; H01h 13/22
U.S. Cl. 74-527 7 Claims



A multi-position rotary actuating mechanism which can be used with a switch device, for example, whereby maintained, momentary, or maintained-momentary operating modes of the mechanism, and hence the switch device, can be provided dependent upon the inclusion of detent means and the inclusion and location of rotation return means in the mechanism and whereby the number of discrete positions of the mechanism can be varied by way of selectively located rotation limiting means.

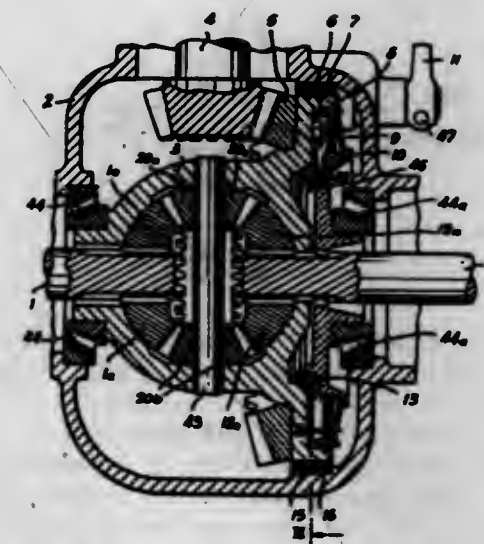
3,517,571
RETRACTABLE CRANK FOR THE MANUAL ACTUATION OF AN OPENING AND CLOSING DEVICE
Will O. Treber and Siegfried Nothacker, Wuppertal-Elberfeld, Germany, assignors to Gebr. Happich G.m.b.H., Wuppertal-Elberfeld, Germany
Filed Aug. 9, 1968, Ser. No. 751,603
Claims priority, application Germany, Aug. 31, 1967, H 63,756
Int. Cl. G05g 1/08, 1/10 11 Claims



A crank for opening and closing devices such as automobile windows or sliding roofs is provided with a retractable crank arm and a handwheel. The crank arm is mounted within the handwheel and is spring biased into the handwheel so that at rest the crank arm is held

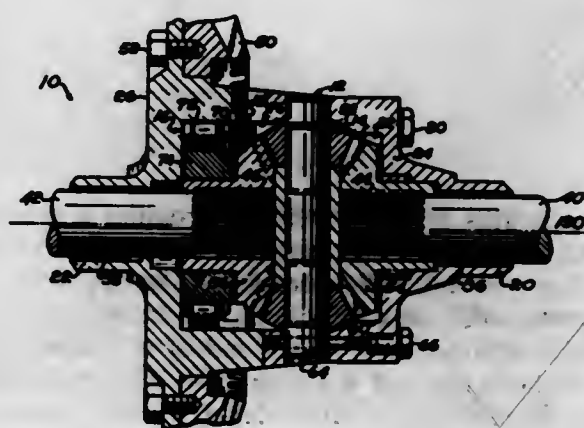
in the handwheel with the knob at the end of the crank arm positioned in a niche in the handwheel. The crank arm is generally U-shaped whereby the spring may be conveniently attached thereto and it has a curvature so that upon the pulling of the crank arm radially out of the handwheel, the knob moves away from the plane of the handwheel.

3,517,572
DIFFERENTIAL HANDBRAKE
Leopold Franz Schmid, Stuttgart, Germany, assignor to Alfred Teves GmbH, Frankfurt, Germany, a corporation of Germany
Filed Jan. 24, 1968, Ser. No. 700,249
Claims priority, application Germany, Jan. 25, 1967, T 33,066
Int. Cl. F16h 11/00; F16d 59/00
U.S. Cl. 74-710.5 9 Claims



A manually operated auxiliary handbrake for automotive vehicles acts upon the differential which is provided with an automatically operable brake device interposed between the differential housing and at least one of the wheel shafts. Action of the handbrake is independent of the action of the conventional vehicle footbrake and makes use of a band engaging a flange of the differential casing.

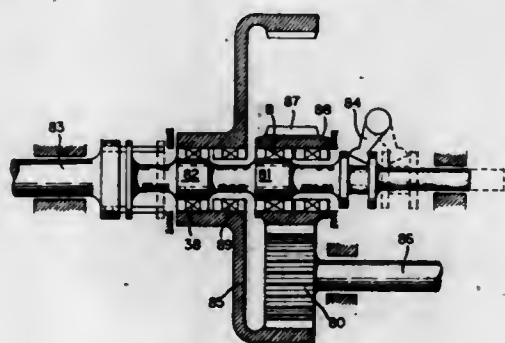
3,517,573
CENTRIFUGALLY ACTUATED LOCKING DIFFERENTIAL
Daniel W. Roper, Rochester, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 8, 1968, Ser. No. 727,566
Int. Cl. F16d 41/16, 43/00; F16h 1/44
U.S. Cl. 74-711 11 Claims



An improved drive mechanism includes a drive member, a driven member, and a clutch assembly which is

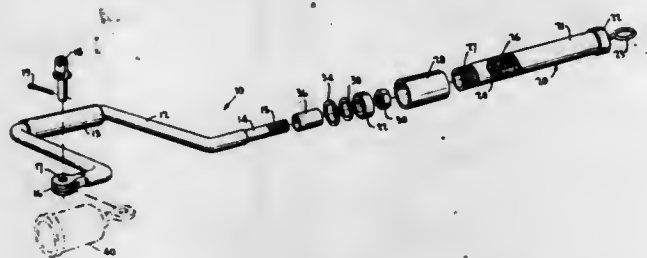
operable by an actuator assembly to an engaged condition wherein relative rotation between the members is retarded by the clutch assembly. The actuator assembly operates the clutch assembly to the engaged condition when a centrifugal force which results from relative rotation between the members exceeds a predetermined function of another centrifugal force which results from rotation of one of the members.

3,517,574
TWO-SPEED DRIVE FOR POWER TOOL
Edward William Glatfelter, 3514 Lewis Road,
Newtown Square, Pa. 19073
Filed July 12, 1968, Ser. No. 744,459
Int. Cl. F16d 3/34; F16h 5/52
U.S. Cl. 74—812 10 Claims



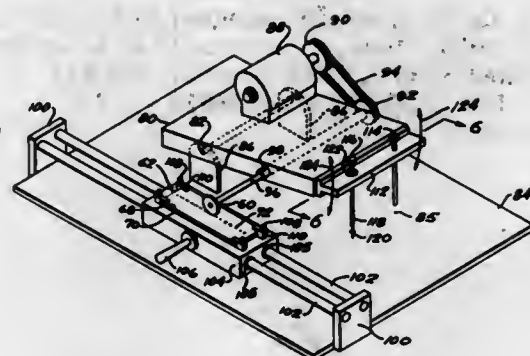
A two-speed drive for a power tool is disclosed in which the input shaft, driven by a constant speed reversible motor, is connected to the output shaft through one or the other of two gear trains designed to drive the output shaft in the same direction of rotation but at one or the other of two speeds. Each gear train includes a uni-directional clutch, but only one of the clutches is engaged at a time, the other being free running. Which clutch is engaged and which clutch is free-running depends solely upon the direction of rotation of the reversible drive motor.

3,517,575
ROD SPINNER
Jessie L. Roberson, Box 605, Kingsland, Tex. 78639
Filed Dec. 29, 1967, Ser. No. 694,641
Int. Cl. B25b 13/00
U.S. Cl. 81—73 4 Claims



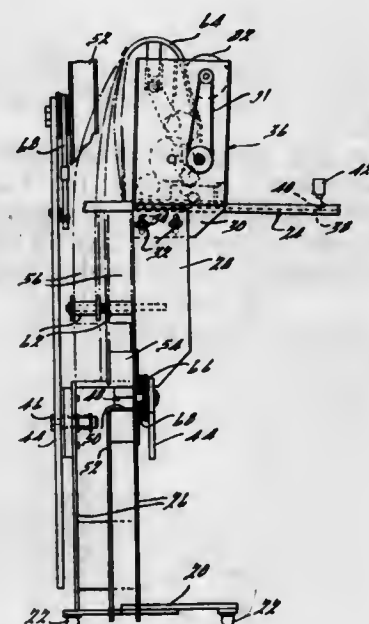
The apparatus of this invention provides a means for connecting and disconnecting sucker rod connections in conjunction with oil well operations. The apparatus comprises a rotatable crank handle having at one end a fixed connector for connecting to the end of a sucker rod and having at the other end a spring-loaded hanger assembly which is adapted to be suspended from the derrick and raised or lowered as is necessary in removing or replacing the sucker rods within the well-bore. Rotation of the crank handle provides an easy means for snapping-up or breaking sucker rods.

3,517,576
CUTTING PROCESS
Lloyd W. Hilty, Allegheny Township, Westmoreland County, and Robert W. Maler, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Original application Mar. 24, 1965, Ser. No. 442,260, now Patent No. 3,388,414, dated June 18, 1968. Divided and this application Nov. 9, 1967, Ser. No. 681,777
Int. Cl. B26d 3/06
U.S. Cl. 83—5 7 Claims



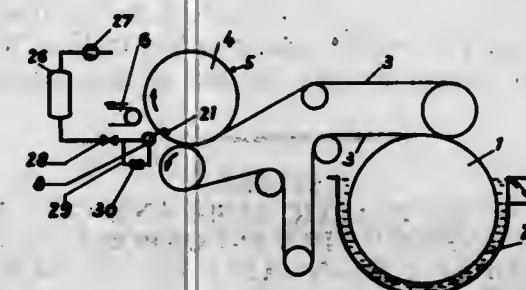
A process for producing a uniform shallow cut or scratch through a relatively soft coating, such as paint, on a hard base material, such as steel, without injuring or scratching the hard base. The cutting means is gravity biased towards the material being cut and is provided with spring means to cooperate with said gravity bias in urging the cutting means towards the material during the cutting operation so that no external downward force is required on said apparatus. The resiliency provided by the spring means permits the cutting means to penetrate through a shallow layer of paint on a steel surface without scratching even upwardly projecting peaks on said steel surface.

3,517,577
PACKET DISPENSER
Sanford K. Carlisle, Jr., Andover, Mass., and George F. Gordon, Nashua, N.H., assignors to Diamond Crystal Salt Company, a corporation of Michigan
Filed Nov. 29, 1967, Ser. No. 686,487
Int. Cl. B26d 5/20
U.S. Cl. 83—23 16 Claims



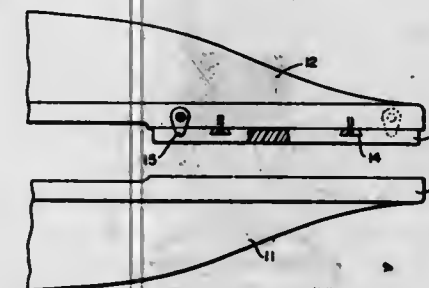
A dispenser for automatically dispensing one or a plurality of packets supplied in the form of a continuous ribbon by which the ribbon is intermittently severed at preselected intervals into an individual or a group of interconnected packets which are retained in a ready position from which they are ejected in response to receipt of a signal evidencing a dispensing condition.

3,517,578
DEVICE FOR CUTTING SHEET MATERIAL
Milos Krofta, 58 Yokum Ave., Lenox, Mass. 01240
Filed June 6, 1968, Ser. No. 734,915
Claims priority, application Germany, June 7, 1967, 1,561,667
Int. Cl. B26f 3/00; D21f 13/08
U.S. Cl. 83—98 4 Claims



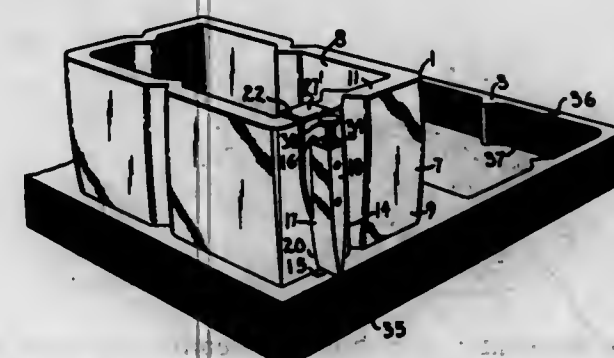
A cutting device for rolled sheet material has a nozzle carrying pipe near the roll exterior that can be shifted axially and turned about its axis, and high pressure fluid jets emanate from the nozzles towards the sheet material to cut it.

3,517,579
STRIKING PAD FOR DIE CUTTING MACHINES
Leonard K. Reichert, 16 Euston St.,
Brookline, Mass. 02146
Filed Oct. 2, 1968, Ser. No. 764,406
Int. Cl. B26d 7/00
U.S. Cl. 83—533 6 Claims



In a die cutting machine having a stationary cutting bed and movable striking arm, a pad of solid resilient resinous material detachably connected to the striking arm and having a smooth continuous surface for direct impact with the back of a conventional die placed on stock spread on the cutting bed for cutting.

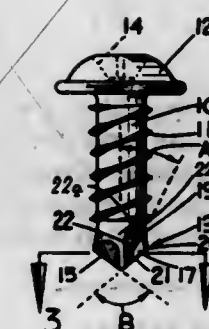
3,517,580
QUICK CHANGE CHISEL
Richard H. Sturm, Everman, Tex., assignor to Tension Envelope Corporation, Kansas City, Mo., a corporation of Delaware
Filed July 26, 1968, Ser. No. 747,853
Int. Cl. B26f 1/46
U.S. Cl. 83—652 5 Claims



A chisel, for use with envelope blank cutting dies to permit easy paper break-away, is secured to a resilient clip which removably retains the chisel adjacent the die

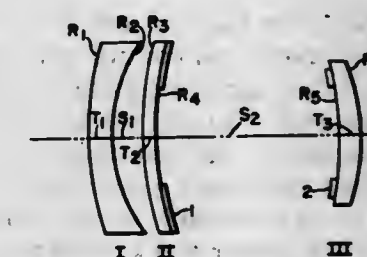
wall, the chisel having an adjustable abutment member projecting thereabove and cooperating with the clip for resisting separation between the chisel and die during blank cutting.

3,517,581
SELF-TAPPING SCREW
Kenneth John Stokes, Kildermister, and John Hilton Turnbull, Stourport, England, assignors to G.K.N. Screws & Fasteners Limited, Worley, England, a British company
Filed Dec. 27, 1968, Ser. No. 787,339
Claims priority, application Great Britain, Jan. 9, 1968, 1,346/68
Int. Cl. F16b 25/00
U.S. Cl. 85—47 5 Claims



A self-tapping screw designed to pierce its own pilot hole in a metal sheet, when used with a driving tool which applies simultaneously vibratory impacts and rotary torque to the screw, the screw having a point formation which comprises two planar piercing faces and two drill flutes, the edge which is formed between each piercing face and the leading face of its adjacent drill flute being a shearing and piercing edge in use.

3,517,582
ALBADA VIEWFINDER
Nicholas M. Pituley, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed June 12, 1968, Ser. No. 736,497
Int. Cl. G03b 13/02
U.S. Cl. 88—1.5 2 Claims

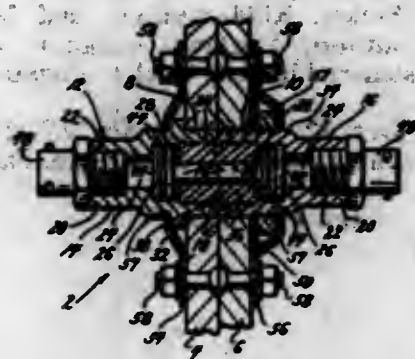


An Albada viewfinder comprising a negative objective and a positive eyepiece between which is located a positive meniscus element having on its rear surface a mirror for forming a virtual image of a reticle mark.

3,517,583
FASTENING DEVICE
John D. Fortenberry, St. Charles, Mo., assignor to McDonnell Douglas Corporation, St. Louis, Mo., a corporation of Maryland
Filed July 25, 1968, Ser. No. 747,758
Int. Cl. F16b 27/00
U.S. Cl. 89—1 10 Claims

A fastening device having a pair of fastening segments which are held together by an internally fitted fracturable insert. Each segment carries a piston which closes one

end of an explosion chamber into which the blast from an explosive cartridge is expelled. The pistons are prevented from advancing into the chambers by stop means and are maintained a predetermined distance apart by force transfer means which extend through the insert,



so that when a force is applied to one piston it is transferred to the other piston and the fastening segment containing that other piston. Accordingly, even when only one of the cartridges is triggered the segments will be forced apart and the insert will be fractured.

3,517,584

STORES EJECTION MEANS

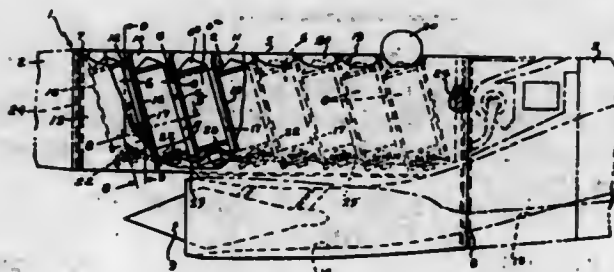
George C. Robinson and Edward F. Wilks, Dallas, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force

Filed Aug. 31, 1962, Ser. No. 221,410

Int. Cl. B64d 1/04

U.S. Cl. 89-1.5

5 Claims



1. In a high speed store ejecting aircraft, a fore or nose unit, an aft turbojet power and control unit, and an intermediate interchangeable explosive store carrier and ejection unit faired into said fore and aft units having a forward bulkhead adapted to be removably secured to the rear end of the fore unit, and a rearwardly spaced aft bulkhead adapted to be removably secured to the forward end of said aft turbojet power and control unit, said intermediate unit having an air intake formed at the bottom side thereof for supplying air into the turbojet power and control unit for operation thereof, and formed with a plurality of parallel elongated explosive store receiving and ejecting chambers disposed in two parallel rows extending upwardly in parallel vertical planes at opposite sides of the longitudinal axis of the carrier aircraft, each compartment inclining upwardly and forwardly toward its ejection end in one of said parallel vertical planes at an angle of substantially 75° to the flight axis of the carrier aircraft, a relatively long guide rail fixed to the fore side of each compartment extending from the bottom to substantially the ejection end thereof and a relatively short guide rail fixed to the aft side of each compartment extending upwardly from the bottom thereof to a point less than half the distance between the opposite ends of the compartment, said long and short rails disposed for supporting the

opposite sides of an elongated explosive store in each of said compartments in spaced relation to the opposite lateral and fore and aft sides of the compartment, for disengagement of the aft side of the explosive store upon partial ejection thereof from the compartment, to permit the store to tilt or rotate rearwardly about its lower end upon contact with the air stream passing the outer ends of the compartments, explosive store ejection means disposed in the bottom of each compartment for projecting each of said explosive stores axially out of said compartments in the aforesaid forwardly and upwardly inclined direction into the air stream passing the top of said intermediate unit.

3,517,585

REINFORCED PLASTIC TUBE AND GUN BARREL CONSTRUCTION INCORPORATING AN IMBEDDED EXPANDABLE WOVEN SCREEN LINING

Edwin Slade, 5700 Arlington Ave., Bronx, N.Y. 10471

Filed Mar. 10, 1966, Ser. No. 533,334

Int. Cl. F41f 17/04, 17/06, 17/08

U.S. Cl. 89-16

11 Claims



Hollow cylinders or tubes are prepared from reinforced plastic having an expandable fiber screen lining imbedded in and adhered to the internal surfaces of these hollow cylinders or tubes.

3,517,586

AUTOMATIC GUN BUFFER ASSEMBLY

Eugene M. Stomer, Rte. 1, Box 70, Port Clinton, Ohio 43452

Original application Sept. 29, 1965, Ser. No. 491,300, now Patent No. 3,455,204, dated July 15, 1969. Divided and this application July 22, 1968, Ser. No. 763,448

Int. Cl. F41d 11/12

U.S. Cl. 89-198

1 Claim



An automatic gun buffer assembly includes spring means which serve the dual function of buffering the bolt carrier in recoil and of buffering the sear engagement.

3,517,587

METHOD OF PRODUCING A FLUTED CONE MANDREL

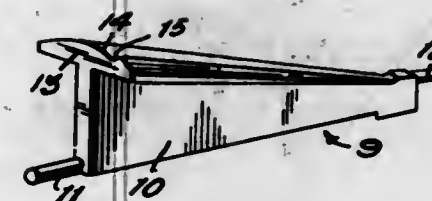
Charles W. Hyder, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Aug. 28, 1950, Ser. No. 181,905

Int. Cl. B23c 1/16

U.S. Cl. 90-13

2 Claims



1. That method of cutting from a conical workpiece, a generally conical fluted mandrel having a plurality of equally angularly spaced radially offset surfaces connected by smooth-canted surfaces, each canted surface and a contiguous offset surface constituting a segment, said method comprising, providing a master pattern shaped in correspondence with one segment only of the finished mandrel, mounting said pattern in operative relation with a cutter carried by a three-dimensional pantograph, traversing the stylus of the pantograph over the surface of said pattern to control the cutter to cut a single complete segment in the workpiece while holding the workpiece in fixed position, rotating the workpiece about its axis through the predetermined angle between successive offset surfaces, again traversing the pattern with the stylus of the pantograph to control the cutter to cut a second contiguous complete segment in the workpiece while again holding the workpiece in fixed position, and repeating the foregoing procedure until the entire surface of the workpiece has been cut.

3,517,588

SERVOMOTOR AND VALVE MEANS

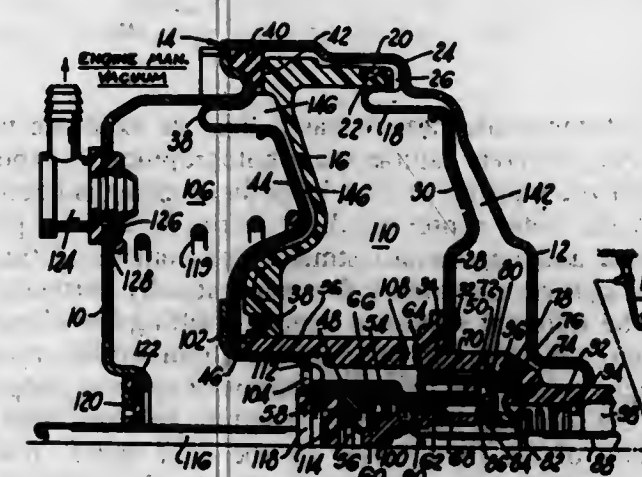
Oswald O. Kytta, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed May 29, 1968, Ser. No. 732,938

Int. Cl. F15b 9/10; F01b 19/00

U.S. Cl. 91-369

12 Claims



A servomotor of the fluid pressure type which is improved by a pre-assembled valve means that can be tested

prior to utilization to thereby avoid the necessity of rejection of a whole construction for deficiencies in valve piece parts.

3,517,589

METHOD AND APPARATUS FOR INTERCONNECTING A PLURALITY OF WEBS

Josef Herd, Munster, near Dieburg, and Hans Helmut Jacob, Darmstadt-Eberstadt, Germany, assignors to Maschinenfabrik Goebel G.m.b.H., Darmstadt, Germany

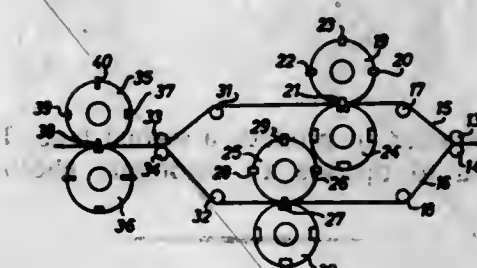
Filed May 23, 1966, Ser. No. 552,008

Claims priority, application Germany, May 26, 1965, M 65,380

Int. Cl. B31f 5/02

U.S. Cl. 93-1.1

8 Claims



An apparatus and a method for interconnecting superimposed web groups. A punch device provides one web group with tongue-shaped tabs and another web group with openings. The web groups are superimposed so that the tabs in the one group align with the openings in the other group. The tabs are then inserted through the openings to interlock the superimposed web groups.

3,517,590

SLIP FORM PAVER

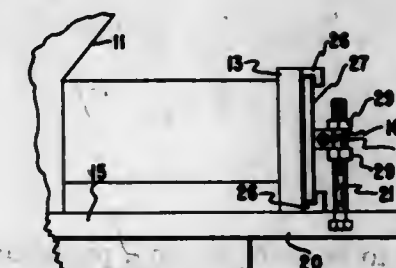
John E. Kessel, 503 E. 2nd, Canton, S. Dak. 57013

Filed Apr. 4, 1968, Ser. No. 718,816

Int. Cl. E01c 19/48

U.S. Cl. 94-46

2 Claims



A slip form paver having diagonal side forms which may be adjustable, thereby providing a paver which can turn a relatively clean radius. The side form is manually adjustable, but might also be adjustable by power means if desired.

3,517,591

AUTOMATED DRAFTING SYSTEM

Robert S. Cope, Covina, Calif., assignor to Cope Typewriting Service, Inc., Monterey Park, Calif., a corporation of California

Filed May 17, 1966, Ser. No. 550,755

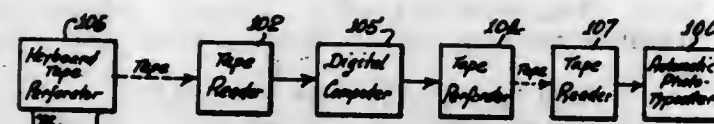
Int. Cl. B41b 21/00

U.S. Cl. 95-4.5

6 Claims

An automatic drafting system and method in which a keyboard operated tape perforator is used to produce a

tape containing character identifying and locating data. A computer combines the data on the first tape with data identifying and locating the interconnecting lines, of the one or more illuminated portions. The vertical lines are consecutively displayed at the same general location in a plane parallel to the photosensitive material and are



desired schematic, to produce a second tape. The second tape is used to operate an automatic phototypesetting apparatus.

3,517,592

RECIPROCATING LENS PHOTOCOMPOSER

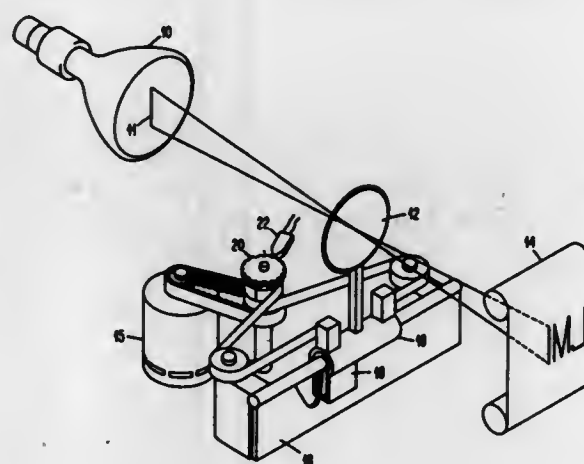
Ernest P. Kollar, Broomfield, Colo., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Nov. 14, 1967, Ser. No. 682,843

Int. Cl. B41b 19/02

U.S. Cl. 95-4.5

1 Claim



Characters to be recorded on a photosensitive material are divided into a series of vertical lines each having one or more illuminated portions. The vertical lines are consecutively displayed at the same general location. Horizontal displacement of the vertical lines relative to the photosensitive material is accomplished by variable light coupling between the photosensitive material and the location at which the vertical lines are displayed.

3,517,593

RECIPROCATING LENS PHOTOCOMPOSER

James L. Overacker, Boulder, Colo., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Nov. 14, 1967, Ser. No. 682,845

Int. Cl. B41b 19/02

U.S. Cl. 95-4.5

2 Claims

Characters to be recorded on a photosensitive material are divided into a series of vertical lines each having

positioned for horizontal displacement by a reciprocating lens located between the photosensitive material and the vertical line display.

3,517,594

CAMERA WITH TWO DIFFERENT AUTOMATIC PHOTOGRAPHIC MECHANISMS

Kiyoshi Kital, Tokyo, Japan, assignor to Kabushiki

Kaksha Hattori Tokuten

Filed Aug. 23, 1967, Ser. No. 662,691

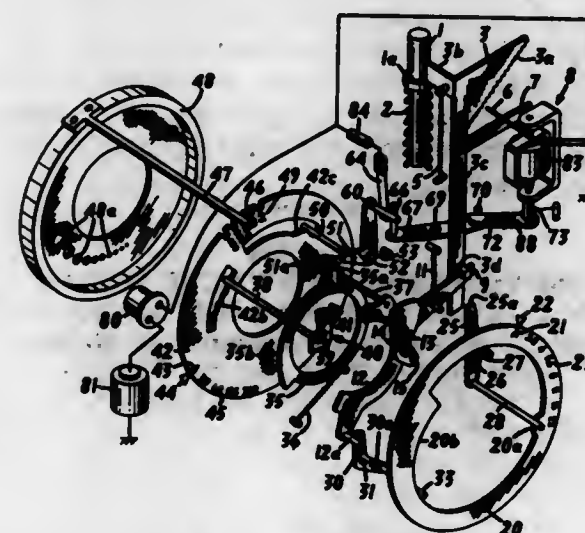
Claims priority, application Japan, Aug. 24, 1966,

41/55,373

Int. Cl. G01j 1/00

U.S. Cl. 95-10

9 Claims



A photographic camera has a light or exposure meter and two different automatic photographic or exposure control mechanisms to which the light meter is common. The light meter senses the light in the field to be photographed and applies adjustments for control of the iris diaphragm of the camera for automatically correctly setting the different exposure aperture settings or sizes taking into consideration the ambient illumination sensed by the light meter. The two mechanisms or systems cooperate with the common light meter in setting aperture sizes as a function of the light sensed by the light meter. When a first one of the mechanisms is used a photographic exposure is controlled according to programmed exposure time and aperture on a manually preset film sensitivity setting and an indication of the light or exposure meter.

When a second one of the automatic mechanisms or systems is used the aperture is adjusted according to a pre-selected exposure time on a manually preset film sensitivity setting and an indication of the exposure or light meter. A completely manual exposure control system or mechanism is provided with which the camera operator can render the light meter ineffective and can select the exposure time and aperture settings without regard to the light or exposure meter. The three systems have many common components thereby simplifying the mechanisms and making them quite compact.

3,517,595

FLASH UNIT FOR USE WITH FLASHCUBES OR THE LIKE

Karl Wagner, Ottobrunn, Klaus Nicolay and Engelbert Flessner, Munich, Franz Landbrecht, Unterhaching, near Munich, and Johann Putscher, Munich, Germany, assignors to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany

Filed Sept. 25, 1967, Ser. No. 670,130

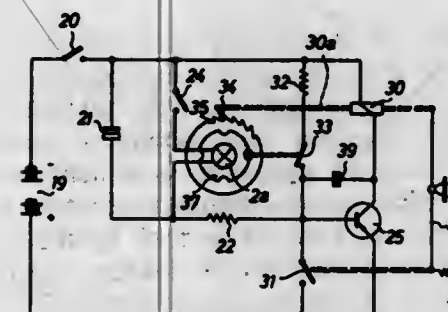
Claims priority, application Germany, Sept. 29, 1966,

A 53,619

Int. Cl. G03b 9/70

U.S. Cl. 95-11.5

24 Claims



A flash unit for use with Flashcubes wherein the socket which receives the plug of a Flashcube is indexible by a motor or by the reciprocable armature of an electromagnet to place successive flash bulbs into firing position. A capacitor is charged during indexing of the socket and is ready to discharge and to cause firing of a flash bulb in response to closing of the synchronizing switch. The motor or electromagnet is energized when the charge of the capacitor is within a predetermined range, always when a flash bulb has been fired so that the socket is indexed upon firing. The motor or electromagnet is de-energized automatically not later than at the time when a fresh flash bulb moves into firing position. The flash circuit includes a transistor element which is activated by the capacitor discharge to subsequently energize the motor or electromagnet for indexing the flash unit.

3,517,596

SCREENING UNIT FOR HALF-TONE COLOR REPRODUCTION

Sigurd W. Johnson, Trenton, N.J., and Marvin A. Leedom, Warminster, Pa., assignors to RCA Corporation, a corporation of Delaware

Filed Dec. 27, 1967, Ser. No. 693,777

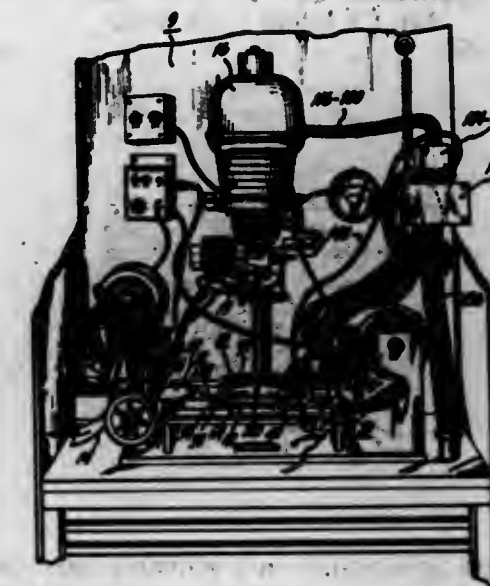
Int. Cl. G03b 33/00

U.S. Cl. 95-12.2

12 Claims

A screening unit for use in a half-tone reproduction process comprises a carriage member and a rotary member supported for rotation about its axis within a through opening in the carriage member. Roller means support the carriage member over a recording element so that a

half-tone screen, adjacent one end of the rotary member, is a predetermined distance from the recording element at an exposure station. Pawl and ratchet wheel means rotate the rotary member intermittently when the screen-



ing unit is moved along a predetermined path. The screening unit is adapted to use in combination with a reciprocating processing head to which the screening unit can be coupled selectively by magnetic means.

3,517,597

ZOOM LENS CONTROL MECHANISM

Walter Rausser, Munich, Germany, assignor to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany

Filed June 18, 1968, Ser. No. 738,065

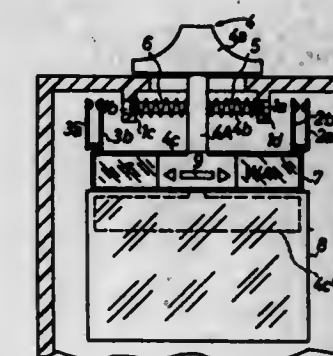
Claims priority, application Germany, June 30, 1967,

A 27,955

Int. Cl. G03b 3/00

U.S. Cl. 95-45

12 Claims



A photographic camera with a zoom lens wherein the movable lens component is reciprocable by a reversible electric motor whose circuit includes two switches. One of the switches is closed when the motor drives the movable lens component to wide angle position and the other switch is closed when the motor drives the movable lens component to telephoto position. The operating mechanism for the switches includes a reciprocable knob rigid with a two-armed trip each arm of which can close one of the switches, and a dial which shares all movements of the knob and whose front face carries symbols visible in or close to the viewfinder. The symbols indicate the directions in which the knob must be moved to close the one or the other switch. Springs are provided to automatically return the knob to a neutral position in which the switches are open.

3,517,598

SYSTEMS FOR REMOVING A NORMALLY FIXED MASK FROM A LENS APERTURE

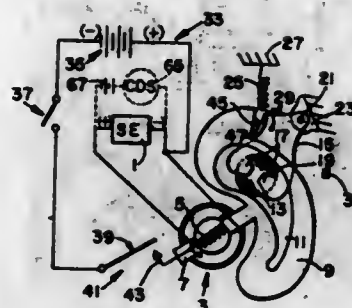
Donald M. Harvey, Webster, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation of application Ser. No. 695,610, Jan. 4, 1968. This application Oct. 27, 1969, Ser. No. 869,962

Int. Cl. G03b 7/08, 9/02

U.S. Cl. 95—64

10 Claims



A mask and an aperture in a movable vane cooperate to form the exposure aperture of a camera. During high and medium scene light conditions a conventional photo-electric exposure control system adjusts the position of the vane in response to scene light brightness, thereby regulating the size of the portion of the vane aperture in the light path of the camera. Under certain low scene light conditions, an electrical circuit is completed for driving the vane in a direction for obtaining the maximum exposure aperture. During this movement of the vane, it becomes coupled to the mask and swings the mask out of the camera light path, thereby increasing the size of the exposure aperture.

3,517,599

FLASH AND DAYLIGHT EXPOSURE CONTROL

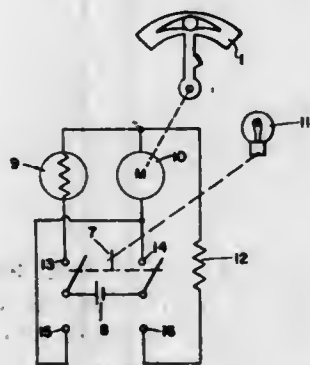
Hubert Beard Sapp, Jr., and Edmund F. Deffenbaugh, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 25, 1967, Ser. No. 670,075

Int. Cl. G03b 9/02

U.S. Cl. 95—64

5 Claims



An exposure control is provided in which the diaphragm opening is controlled by an actuator which has the ability to move in either of two directions from a rest position. When the actuator is moved in a first direction, the diaphragm opening is changed in accordance with the level of illumination of the scene to be photographed. When the actuator is moved in a second direction, the diaphragm opening is determined by the distance from the camera to the subject which determines the correct exposure when using on-camera flash.

3,517,600

APPARATUS FOR PROCESSING PHOTOGRAPHIC MATERIALS

Derrick Sannucks Woolacott, Kent, England, assignor to Derrick Sannucks Woolacott, Kent, Roland Albert Pargeter, Hove, Sussex, Charles Christopher Kelth, Lingfield, Surrey, and David Evans, London, England

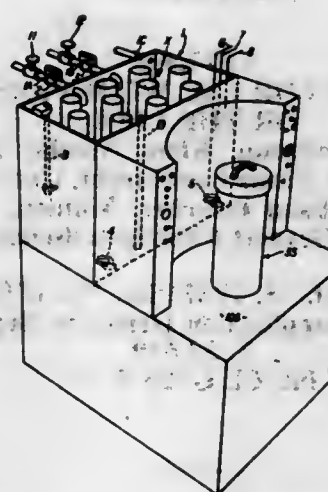
Filed June 5, 1968, Ser. No. 734,781

Claims priority, application Great Britain, June 8, 1967, 26,539/67

Int. Cl. G03d 3/06

U.S. Cl. 95—89

13 Claims



An apparatus for processing photographic material such as prints or film. The material is placed in a light-proof container which is fitted onto the remainder of the apparatus, a vertical feed pipe extending upwardly in the container. When the apparatus is switched on, water and chemicals which are maintained accurately at the desired temperature and pumped in turn up the feed pipe, strike the top of the container and cascade over the material, are returned to the pump and recirculated.

3,517,601

AIR INTAKE, MIXER AND RECIRCULATOR SYSTEM

Germain Courchesne, 167 Chemin du Golf, Drummondville, Quebec, Canada

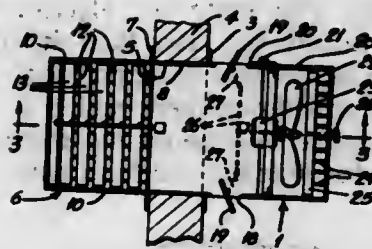
Filed June 21, 1968, Ser. No. 739,075

Claims priority, application Canada, June 24, 1967, 993,913

Int. Cl. F24f 13/00

U.S. Cl. 98—33

9 Claims



A ventilating system for a room comprising the combination of an air intake, mixer and recirculator apparatus with an exhaust ventilator, said apparatus capable of operating in such a manner that the exhaust ventilator controls the admission of fresh air into the apparatus and, consequently, into the room to be ventilated. Thus, the system enables to obtain complete air recirculation at all times to prevent air stratification within the room with automatic suitable addition and complete mixing of fresh air, according to the needs, with practically no change of the static pressure within the room. In case the temperature differential between the room and the outside is too small or inexistent, damper doors on the apparatus can

be closed to stop the air recirculation and the air circulating means within the apparatus, together with the exhaust ventilator, will then operate in series to increase the admission of fresh air.

3,517,602

BARBECUE COOKER

James P. Horton, 1505 E. Lantrip, Kilgore, Tex. 75662

Filed July 8, 1968, Ser. No. 743,240

Int. Cl. A47j 47/02

U.S. Cl. 99—259

5 Claims



A barbecue cooker having a combination of electric heating and wood burning for the barbecuing of meat to obtain the benefits of cooking over a wood fire and wood-smoke while eliminating the disadvantages associated therewith.

3,517,603

INFUSION TYPE COFFEE URNS

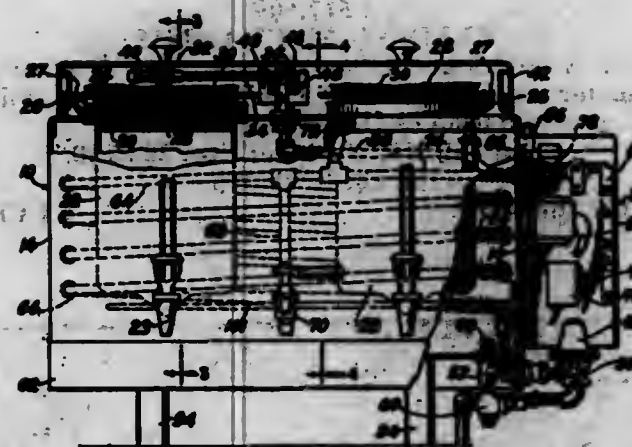
Wilhelm H. Bruesjes, 143 Springfield Ave., Rutherford, N.J. 07070; and Sidney T. Hefetz, 1430 Parkchester Road, 10462; and Benjamin Kahn, 1505 Townsend Ave. 10452, both of New York, N.Y.

Filed Feb. 6, 1968, Ser. No. 703,478

Int. Cl. A47j 31/00

U.S. Cl. 99—283

7 Claims



An infusion type urn for consistently making liquid coffee of predetermined strength in dispensing containers in preselective full-container or fractional container batches corresponding to the particular full or fractional quantity of grounds being brewed, said urn having a vented nonpotable-water boiler-jacket surrounding a heat-absorbing potable-water coil, both jacket and coil having the same water supply source but said waters being isolated against admixture, a spray head at the outlet end of the potable water coil and disposed over the coffee grounds, a pressure reducing regulating valve located at the inlet end of the coil to provide potable hot water at constant pressure to the spray head. An electronically-operated normally-closed valve located downstream of the coil and a manually-initiatable electrical timer in an electric circuit with the valve to start and control the duration of flow of potable water required for any particular batch to produce brewed liquid coffee of predetermined strength.

3,517,604

COMBINED TRAPOT COVER AND TEA BAG HOLDER

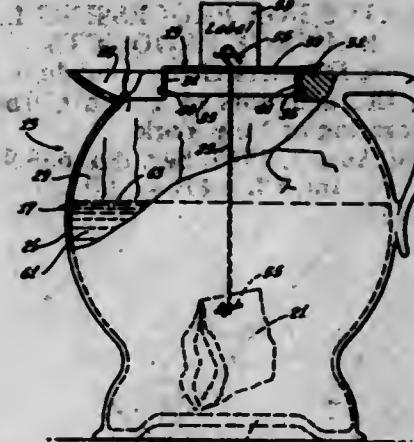
Robert M. Coors, 1501 Chelsea Road, Palos Verdes Estates, Calif. 90274

Filed Sept. 20, 1968, Ser. No. 761,189

Int. Cl. A47g 19/14; A47j 31/00

U.S. Cl. 99—323

10 Claims



This disclosure describes a teapot and a cover therefor. The cover has an aperture extending therethrough and the aperture has a relatively wide section and a relatively narrow section. The wide section is sufficiently wide to permit the string from a tea bag to be slidably received therein and the narrow portion is sufficiently narrow so as to clampingly retain the tea bag string when the tea bag string is moved into the narrow section. Thus, with the cover in place on the teapot and a tea bag string in the aperture, the user may first elevate the tea bag out of the water when the tea has completely brewed, and then move the string into the narrow section to retain the tea bag in the elevated position.

3,517,605

BUN TOASTER

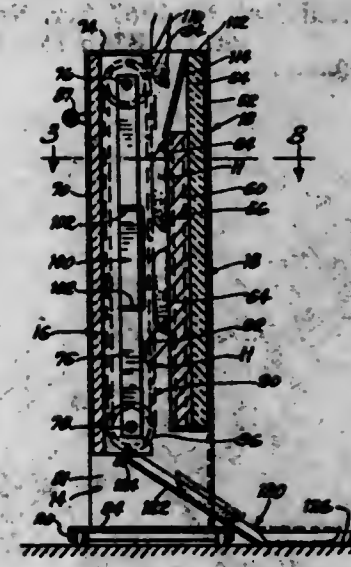
James R. Hirsch, Addison, Ralph E. Welmer, Lombard, Dye O. Miller, Jr., Mount Prospect, and Frank F. Welz, Park Ridge, Ill., assignors to McDonald's System, Inc., a corporation of Illinois

Filed Sept. 6, 1968, Ser. No. 757,931

Int. Cl. A47j 37/08

U.S. Cl. 99—423

13 Claims



A compact and easily cleaned bun toaster such as for the heels and crowns of hamburger buns and the like. A conveyor confronts a toasting platen for driving buns along the surface of the conveyor to toast them. The conveyor is removable as a unit from the frame mounting the platen, thereby to expose both the conveyor and the platen for easy cleaning. The platen is movable toward

and away from the conveyor to adjust the space there-between. The platen is stepped to facilitate simultaneous toasting of bun heels and crowns of different thicknesses. The conveyor is in driven engagement only when moved into suspended engagement with the frame.

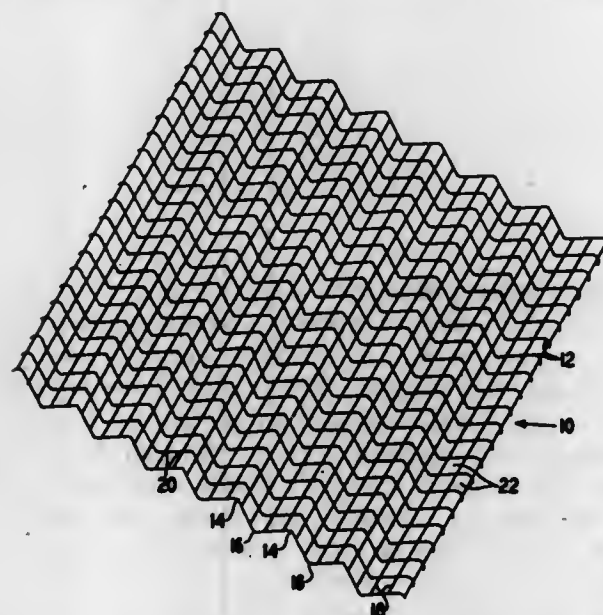
3,517,606

APPARATUS FOR PROCESSING LARGE SAUSAGE PRODUCTS

Michael J. Myles, Downers Grove, and John P. Spellman, Oak Lawn, Ill., assignors to Union Carbide Corporation, a corporation of New York
Filed Aug. 7, 1967, Ser. No. 658,922
Int. Cl. A47j 43/00

U.S. Cl. 99—450

4 Claims



A rigid, self-supporting grid-like member can be utilized to support encased food products horizontally during the processing of such food products. The grid-like member can be fabricated and assembled for use with conventional smoke cages.

3,517,607

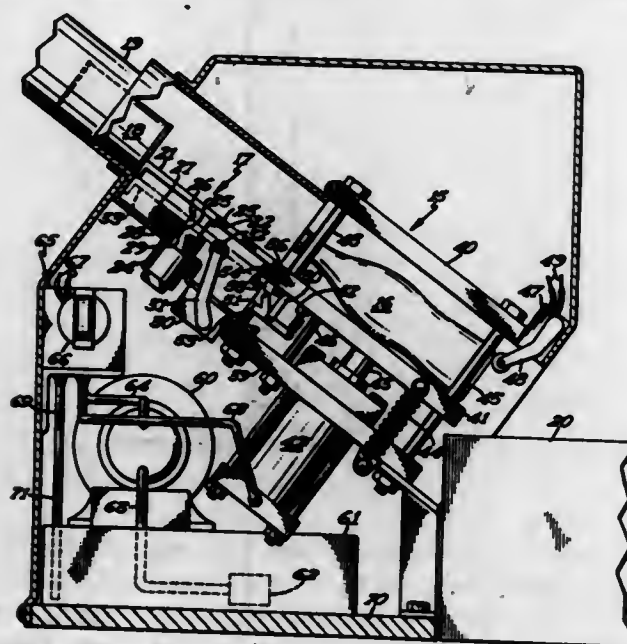
AUTOMATIC ARTICLE CRUSHING APPARATUS

Stanley E. Keagle, Sarasota, Fla., assignor to Earl Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 18, 1967, Ser. No. 668,431
Int. Cl. B30b 15/14

U.S. Cl. 100—49

14 Claims



A fully automatic bottle and can crusher in which articles are fed, one at a time, into the crusher by a feeder.

The feeder control is responsive to the presence of an article in the feeder, and the crusher control is responsive to the presence of an article in the crusher. The crusher is operated by an electrically actuated hydraulic valve which discontinues operation of the crusher at a predetermined hydraulic pressure.

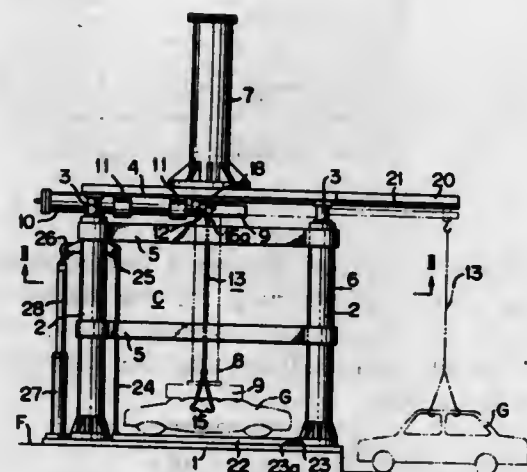
3,517,608

PRESS FOR SCRAP CARS

Kunitoshi Tezuka, 14-3, 6-chome, Higashi-suna Koto-ku, Tokyo, Japan
Filed Mar. 28, 1968, Ser. No. 716,778
Int. Cl. B30b 15/30

U.S. Cl. 100—100

21 Claims



A transportable press for scrap cars comprises a bed and a plate located above said bed and movable towards and away from the bed to crush scrap cars placed on the bed and motor means to move the plate. Preferably, the bed carries feeding means to feed scrap cars onto the plate.

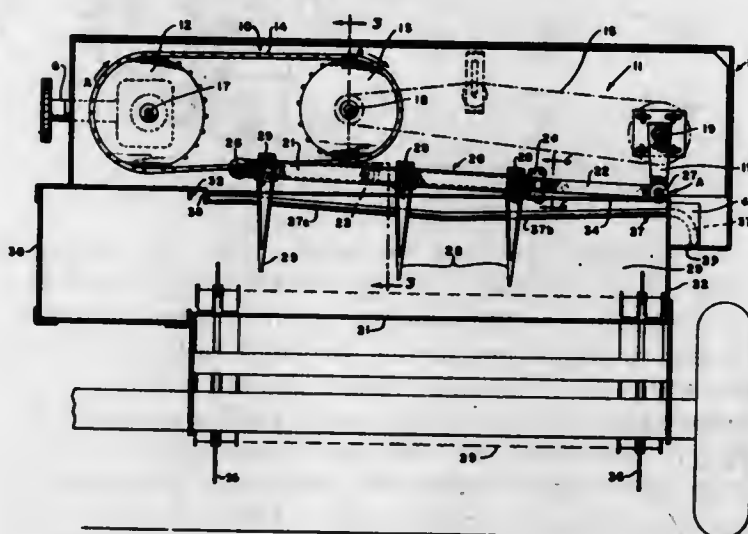
3,517,609

FEEDING MECHANISM

Charles A. Smith and Edwin B. Nolt, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Feb. 19, 1968, Ser. No. 706,230
Int. Cl. B30b 1/00

U.S. Cl. 100—189

31 Claims



A feeding mechanism for a hay baler comprising a telescopic bar, having feeder teeth fixed thereto, which is adapted to be reciprocated while moving in a vertical plane above a hay receiving platform by an endless chain and a rotary crank member so that hay is fed from the platform to a bale case in timed relation with a plunger reciprocating in the bale case.

3,517,610

PRESS FOR THE PRODUCTION OF HOT-PRESSED SHEETS

Eugen Stempelkamp, Hohenzollernstr. 69, Krefeld, Rhineland, Germany
Filed Sept. 19, 1967, Ser. No. 668,805
Claims priority, application Germany, Jan. 12, 1967, S 107,833; Jan. 19, 1967, S 107,899
Int. Cl. B30b 7/02, 15/34; B02c 11/08

U.S. Cl. 100—198

5 Claims



A multiplaten press for the production of hot-pressed board from comminuted material, such as wood or other cellulosic fibers with or without addition of a binder, and method of operating such press, wherein the raw layer of comminuted material is fed between the heated platens of the press with interposition of a sheet-metal heat-conductive liner in surface contact with the respective platens in the closed condition of the press, the liners being mounted to define a narrow gap breaking heat conductivity between themselves and the platens when the press is opened. An array of nozzles direct cooling gas (e.g. air) against the liners to cool them without cooling the platens which are continuously heated.

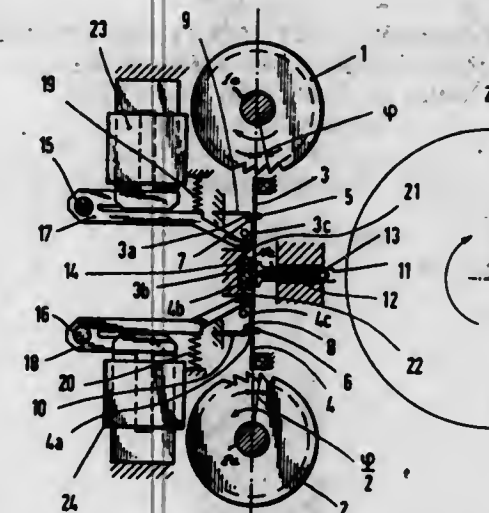
3,517,611

DUAL IMPACT MEANS FOR PRINT HAMMERS IN HIGH SPEED PRINTERS

Wolfgang Fink, Munich, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Aug. 21, 1968, Ser. No. 754,417
Claims priority, application Germany, Aug. 24, 1967, 1,549,879

U.S. Cl. 101—93

10 Claims



In a high-speed printer in which a flying printing hammer associated with a continuously-rotating type-carrier is coupled at the appropriate time to mechanical timing and actuating means for each hammer, the mechanical means consisting of two impact wheels having interlaced operating times fixedly related to the rotation of the type-carrier and each having a coupling means for operating a common associated printing hammer, the coupling members being pivotable and brought into the operative position by a longitudinal movement produced by an electromagnet.

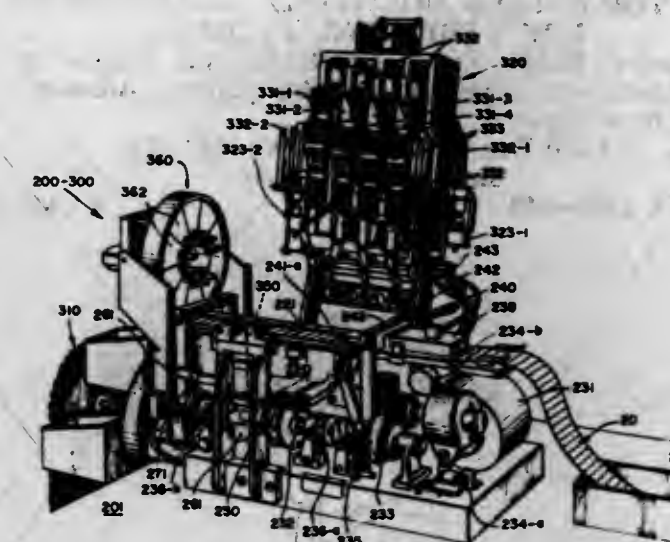
3,517,612

PRINT WHEEL SETTING AND RESETTING MEANS

Richard F. Stucchi, Hudson, Mass., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Nevada
Continuation of application Ser. No. 681,831, Nov. 9, 1967. This application Dec. 9, 1968, Ser. No. 787,294
Int. Cl. B41j 7/48, 5/00

U.S. Cl. 101—99

13 Claims



A print wheel assembly including a print wheel having type characters thereon movable to present a selected character opposite a print point, said assembly having a rotatable shaft, a gear slippedly mounted on said shaft and adapted to be rotated therewith in forward and reverse directions to set and reset said print wheel, first stopping means cooperating with one portion of said gear means to arrest rotating movement thereof in one direction to present the selected type character in print position and second stopping means spaced from said first stopping means in order to arrest gear movement in the other direction to return said print wheel to reset position.

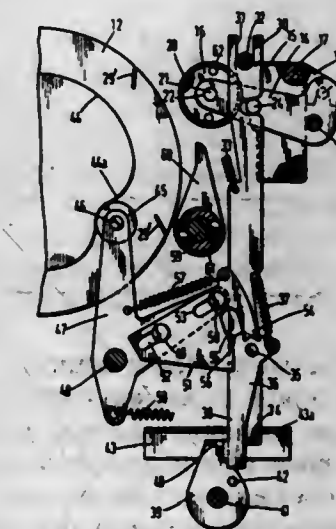
3,517,613

OFFSET PRINTING MACHINE WITH INTER-CHANGEABLE APPLICATION AND ETCH-ING ROLLERS

Heinz Joachim Schinke, Unterkirnach, and Hermann Raible, St. Georgen, Germany, assignors to Math. Bauerle G.m.b.H., St. Georgen, Germany
Filed Mar. 26, 1968, Ser. No. 716,141
Claims priority, application Germany, Mar. 28, 1967, B 91,803; Apr. 17, 1967, B 92,104
Int. Cl. B41f 7/24

U.S. Cl. 101—142

7 Claims



A compact offset duplicating machine is equipped with two application rollers transferring ink and dampening fluid from a common distributor roller to a metal master

on the plate cylinder. When paper or plastic foil masters are to be used, one of the application rollers is replaced on its carrier by an etching roller with etching medium supply. The carrier moves the etching roller toward and away from the plate roller during the printing cycle, but this movement is automatically prevented when the etching roller is again replaced by the application roller.

3,517,614

DUCTOR ROLLER MOUNTING ARRANGEMENT FOR A PRINTING MACHINE

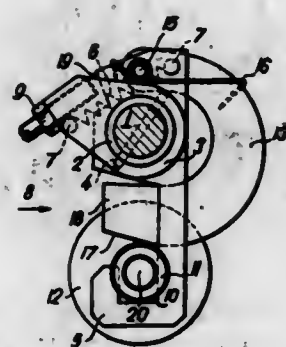
Frantisek Bohac, Krtiny, Czechoslovakia, assignor to Adamovske strojárny, narodni podnik, Adamov, Czechoslovakia

Filed Dec. 1, 1967, Ser. No. 687,321

Int. Cl. C41f 31/30

U.S. Cl. 101—349

4 Claims



The two coaxial bearing sleeves which support the trunnions of a ductor or drop roller in an offset printing machine are received in respective upwardly open recesses of two hangers mounted on a common support in axially spaced relationship and slotted in planes transverse of the roller axis. A flat latch is pivotally mounted in each slot and spring biased toward a position in which a portion of the latch blocks upward movement of a bearing sleeve from the corresponding recess. An arcuate cam face on the latch portion engages the sleeve and is eccentric relative to the pivot axis of the latch in such a manner that upward pressure of the sleeve against the latch tightens the latter.

3,517,615

EXPLOSIVE WAVE SHAPER

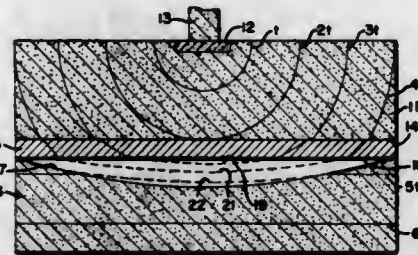
Sigmund J. Jacobs, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed July 14, 1961, Ser. No. 126,443

Int. Cl. F24b 1/00; F24d 1/00

U.S. Cl. 102—22

7 Claims



1. An explosive wave shaper comprising a donor high explosive, an acceptor explosive spaced from the donor explosive in close proximity thereto, and a substantially flat inert metal plate of uniform thickness disposed contiguous to and coextensive with the working surface of said donor explosive and between the acceptor explosive and the donor explosive and initially supported thereby, at least one of said donor and acceptor explosives having a shallow symmetrical cavity of spherical configuration

coextensive with the working surface thereof formed therein opposite said plate whereby the plate is deformed during travel thereof across said cavity sufficiently to effect a planar detonation wave through the acceptor explosive in response to sudden impact of the plate therewith as the donor explosive is initiated.

3,517,616

AXIALLY EXPANDABLE AND CONTRACTABLE CONTAINER

Graham D. Martin, Wilmington, Del., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

Filed Dec. 19, 1967, Ser. No. 691,807

Int. Cl. F42b 3/00

U.S. Cl. 102—24

8 Claims



A thin-walled cap well is provided having bellows disposed along its length for axial expansion and contraction. The cap well is useful in combination with a container having materials therein which undergo variation in volume through physical or chemical changes. The container is particularly useful for containing blasting compositions and for forming an explosive column assembly comprising a number of individual containers.

3,517,617

SHOTGUN SHELLS AND METHOD OF FORMING HULLS FOR SHOTGUN SHELLS

John R. Hall, P.O. Box 45901,

Houston, Tex. 77045

Continuation-in-part of application Ser. No. 589,014,

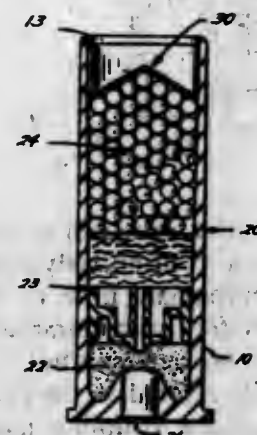
Oct. 24, 1966. This application Mar. 18, 1968, Ser.

No. 713,816

U.S. Cl. 102—42

Int. Cl. F42b 7/06

5 Claims



A shotgun shell and hull, and method for forming the hull, made entirely of a plastic material and having its discharge end sufficiently thin for slight rolling radially

inwardly to retain the over-shot wad and other shell components within the hull. An over-shot wad means including a generally tubular portion having an outside diameter approximately equal to the inside diameter of the hull and having a general conical closure portion spanning the interior of the tubular portion from or near one end of the tubular portion.

3,517,618

ELECTRIC "POINT BLANK" BOMB FUZE

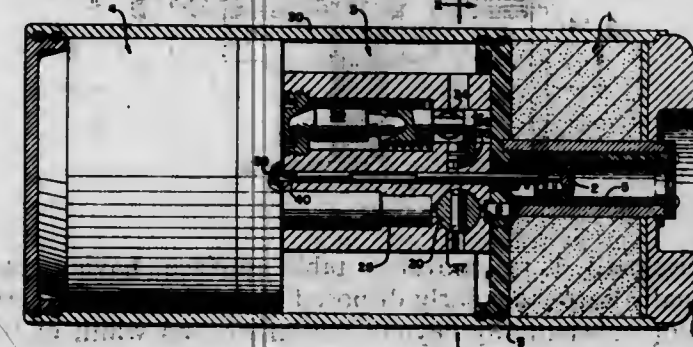
Dell K. Tower, Poughkeepsie, N.Y., Eugene L. Cecil, Jr., Bethesda, Md., and George J. Hack, Poughkeepsie, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Apr. 19, 1960, Ser. No. 23,334

Int. Cl. F42b 25/22; F42c 9/10; 11/06

U.S. Cl. 102—70.2

4 Claims



An electromechanical fuze for a bomb intended to fire upon impact with a target. The fuze includes a first time delay which will disable the bomb if the bomb makes any impact within a predetermined time after launch. If no impact contact occurs within the predetermined period, a pyrotechnic actuator releases a restrained inertia mass, rotates an arming rotor from its safed to armed position, and activates a time delay circuit to delay detonation of the bomb for a predetermined period after impact with a target.

3,517,619

PRACTICE AMMUNITION, PARTICULARLY TARGET IMAGE AMMUNITION

Rudolf Niemann, Mullheim, Baden, Germany, assignor to Industrie-Werke Karlsruhe Aktiengesellschaft, Karlsruhe, Germany, a corporation of Germany

Filed Feb. 1, 1968, Ser. No. 702,241

Claims priority, application Germany, Feb. 8, 1967,

J 32,952

Int. Cl. F42b 13/20

U.S. Cl. 102—92.7

5 Claims



Practice ammunition comprising a target image projectile having a point or nose to the rear end of which is attached a disintegrating body consisting of a filling of metal powder or of compacted metal powder arranged in

a jacket of plastics which has a bottom wall subjected to the pressure of a propellant charge. The open end of the jacket partially surrounds and extends along the rear section of the projectile nose and in the region of the filling the jacket is provided with an outwardly extending guide band which upon firing of the firearm is cut by the rifling in the barrel of the firearm.

3,517,620

RAILWAY CAR TRUCK WITH FRICTION DAMPENED AXLES

Hans B. Weber, Bedford, Ohio, assignor to Midland-Ross Corporation

Filed Nov. 16, 1966, Ser. No. 594,737

Int. Cl. B61f 5/00, 5/12, 5/30

U.S. Cl. 105—167

9 Claims



A four-wheel, two-axle railway car truck of the non-integral side frame and rigid bolster type having its axles in cushioned-snubbed relation with the side frames and its side frame-bolster connection in closefitting rockable relation in both the lengthwise and transverse direction of the side frame.

3,517,621

CARGO CONTAINER LOCKING ASSEMBLY

Frank L. McClaskey, 440 Banning Blvd.,

Wilmington, Calif. 90744

Continuation-in-part of application Ser. No. 656,823,

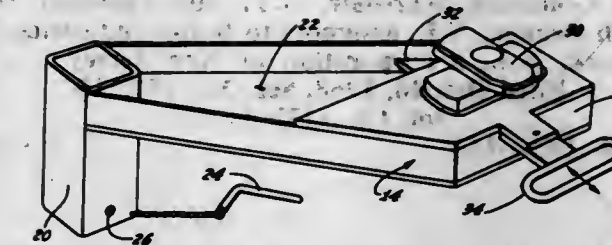
July 28, 1967. This application Sept. 12, 1968, Ser.

No. 759,338

Int. Cl. B65j 1/22; B60p 7/18

U.S. Cl. 105—366

7 Claims



An improved attachment assembly for locking large size heavy cargo containers on the deck of a flat car, box car, truck, trailer, or the like, is provided. The use of the improved attachment assembly of the invention obviates any need for straps, chains, blocks, or other means to position or hold the cargo containers securely in place on the deck of the vehicle. The locking attachment of the invention is in the form of a unit which fits into the stake pockets of a flat car, or equivalent apertures in other vehicles. These stake pockets are usually in the form of rectangular holes, and extend as a series down each side of the flat car for receiving stakes which, in turn, support sides for the flat car. In the practice of the invention, for example, a separate attachment unit is provided at each corner of the cargo container to be supported thereon. The cargo container is then lowered into place over the four units, and the units have respective heads which may be locked into pockets on the under side of the cargo container, securely to hold the cargo container in place on the deck of the vehicle.

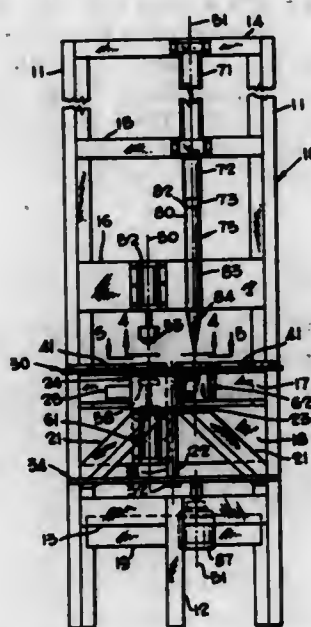
3,517,622

APPARATUS FOR FORMING AND ROLLING BAGEL DOUGH

Kenneth Schneider, 7731 Wild Plum Lane, University City, Mo. 63130, and Melvin W. Ensor, St. Louis County, Mo.; said Ensor assignor to said Schneider
Filed May 3, 1968, Ser. No. 726,485
Int. Cl. A21c 11/00

U.S. Cl. 107—4

10 Claims U.S. Cl. 108—137



Bagel dough is fed to a cavity having a deflectible bottom wall. At a first operating station, it is formed substantially into an annulus connected by a slotted membrane. At a second, rolling station, a taper tip mandrel, descending from above, penetrates the slotted membrane, smooths the membrane into the inner wall of the annulus, deflects the bottom of the body and rolls the annulus downward about the mandrel through a hollow member. Spinning the mandrel centrifugally enlarges the rolled annulus, to release it.

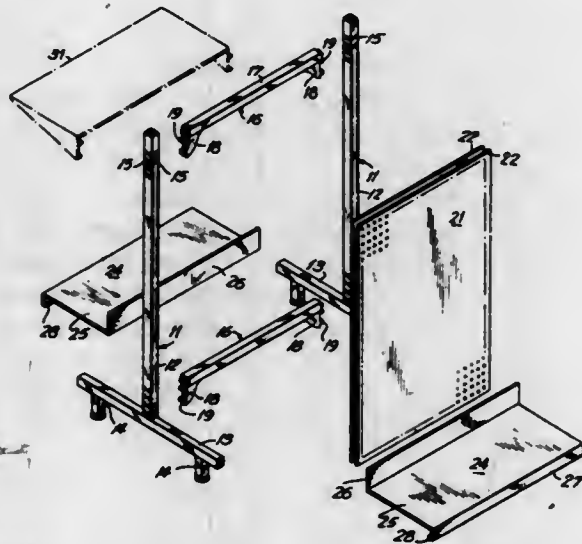
3,517,623

RACK SYSTEM

Arthur Goldstein, Scarsdale, N.Y., and Theodore Sobel, South Orange, N.J., assignors to Butler Industries, Inc., Newark, N.J., a corporation of New Jersey
Filed Oct. 28, 1968, Ser. No. 771,215
Int. Cl. A47b 3/06

U.S. Cl. 108—114

9 Claims



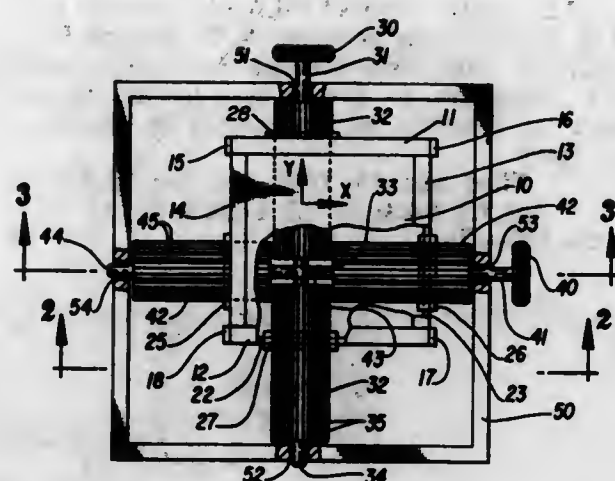
A rack system having component elements which can be assembled to form a continuous rack of any selected length. The basic components consist of uprights, spacers, panels and shelves for retaining the panels in position.

MOVABLE TABLE SURFACE AND MEANS OF POSITIONING SAME

John D. Helms, Farmers Branch, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 29, 1968, Ser. No. 725,086
Int. Cl. A47b 1/10

U.S. Cl. 108—137

9 Claims



Disclosed is a movable table surface having two mutually perpendicularly disposed pinions respectively extending substantially beyond the length and width of the table, each pinion engaging a pair of four racks mounted on the table so that the rotation of one pinion moves the table along the direction of the other pinion.

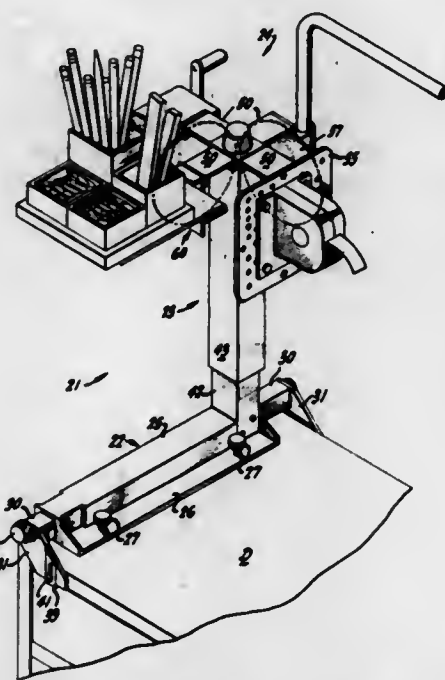
3,517,625

EXTENSIBLE MOUNTING ASSEMBLY WITH MEANS TO GRIP DESK

Erwin G. Swett, 462 22nd Ave., Apt. 6, San Francisco, Calif. 94121
Filed July 24, 1968, Ser. No. 747,172
Int. Cl. A47l 5/06

U.S. Cl. 108—144

13 Claims



A mounting assembly holds objects in desired positions near a working surface such as a top of a desk or stand without interfering with or reducing the size of such working surface. The mounting assembly includes an adjustable desk gripper which will not mar or otherwise damage the furniture, and mounting brackets which are capable of both accommodating objects having various mounting facilities and holding them at any desired angle.

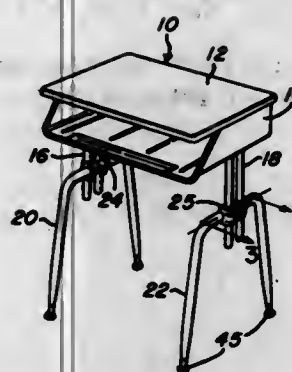
3,517,626

VERTICALLY ADJUSTABLE CLAMPING ASSEMBLY FOR A DESK OR THE LIKE

Gordon C. Lambert, Dick E. Shoemaker, and Robert C. Gann, North Manchester, Ind., assignors to New Castle Products, Inc., New Castle, Ind., a corporation of Indiana
Filed Nov. 14, 1968, Ser. No. 775,623
Int. Cl. A47b 41/00

U.S. Cl. 108—144

5 Claims



A student's desk has unitary inverted U-shaped leg members provided with a pair of vertical depressions formed symmetrically about the midpoint of their horizontal portions which are each formed to accommodate a pair of vertically extending spaced parallel columns depending from the book-box. The horizontal portion of the leg member is located inwardly of the spaced parallel columns and the depressions formed in it are preferably formed at a small angle with the vertical such that the tapered leg portions are caused to project slightly outward rather than straight to the floor. Inner and outer clamping brackets are formed to fit around the horizontal portion of the leg member and the vertical parallel columns respectively. The outer clamping bracket has a pair of inwardly extending ends which fit around the horizontal portion of the leg member. The entire assembly is secured tightly together by means of a releasable fastener.

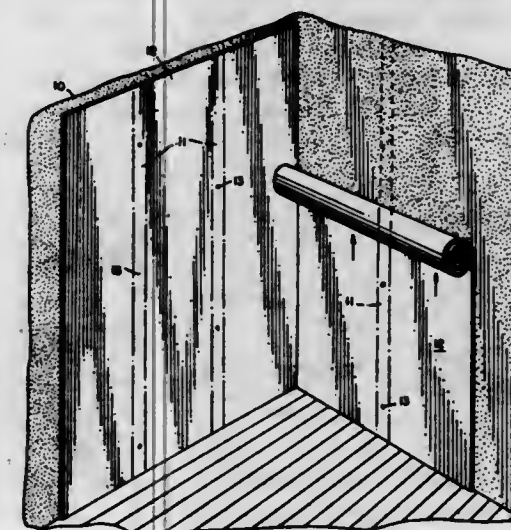
3,517,627

RADIATION PROTECTIVE WALL CONSTRUCTION AND CLAD FURRING STRIPS THEREFOR

Robert C. Kruse, Broadview, Ill., assignor to Gertrude H. Tucci, doing business as Poersch Metal Manufacturing Company, Chicago, Ill.
Filed Dec. 13, 1967, Ser. No. 697,258
Int. Cl. G21f 1/08, 7/00

U.S. Cl. 109—82

10 Claims



A radiation-protective wall construction and clad furring strip therefor which permits the application of conventional wall coverings such as plaster board, ceramic

tile, and the like, thereto without impairing the radiation-protective character thereof. Each clad furring strip is covered on the appropriate side or sides thereof with a layer of radiation-protective material and is secured to a wall lined with a layer of such radiation-protective material. Suitable fasteners, such as masonry nails, toggle bolts or common nails, are to be driven through the clad or unclad furring strip and into the wall, and such fasteners are then covered by the outer layer of radiation-protective material. Suitable fasteners such as brads, nails, screws or mastic, are also to be used to secure conventional wall covering to the clad furring strips. These fasteners do not penetrate the inner layer or lining of the radiation-protective material and thus the radiation-shielding character of the lining is not impaired.

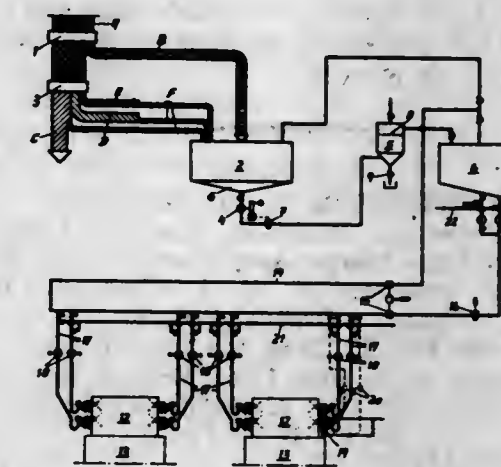
3,517,628

PROCESS FOR THE TREATMENT OF CRUDE COAL SLURRY FOR FUEL PURPOSES

Heinz Harnisch, Heinz Friedrich Ottiny, and Rudolf V.d. Gathen, Dortmund, Hermann Hennecke, Mulheim-Saarn, Werner Hektmüller, Bielefeld, and Heinz Jochims, Moers, Germany, assignors to Deutsche Babcock & Wilcox-Dampfkessel-Werke-Aktien-Gesellschaft, a corporation of Germany
Filed June 12, 1968, Ser. No. 736,381
Int. Cl. F23k 1/02

U.S. Cl. 110—101

15 Claims



This invention provides for hydro-mechanically produced coal a coal handling and firing system. In this system a slurry of fine coal granules is separated from a stream of larger coal pieces and then thickened up to the limit of its pumpability. Means are provided for pumping the thickened slurry to a reservoir. The thickened slurry is taken from the reservoir by a circulating pumping system and continuously circulated through a closed circuit and returned to the reservoir. By means of a burner system having an inlet into the circulating system, at least a portion of the thickened slurry is pumped at high pressure through a furnace burner.

3,517,629

TREE SEEDLING CAPSULE PLANTING TOOL

Robert L. Bridges, Kelso, and James Dick, Centralia, Wash., assignors to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Aug. 18, 1967, Ser. No. 661,580
Int. Cl. A01c 5/02

U.S. Cl. 111—96

8 Claims

A tree planting tool for planting seedlings contained in plastic capsules, the tool comprising an elongated barrel having a diameter large enough to permit the plastic capsules containing the seedling to be pushed therethrough, a planting tube telescopically engaged within the barrel adapted to engage the top of the plastic capsule and force

the capsule into the ground on the downward stroke of the planting tube, a receptacle for holding a series of capsules each separated by a web, a cutting mechanism



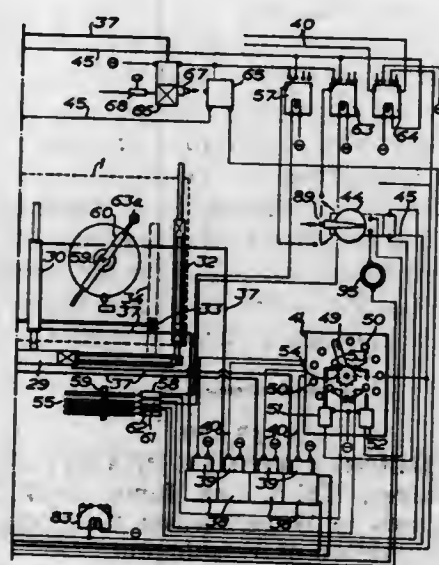
for separating the capsules from each other and a feeding mechanism for preventing multiple feeding of capsules into the barrel for planting.

3,517,630

STITCHING OF MATERIALS

Michael Newstead Bennison, Bardsey, Leeds, and Gregory John Margerison, South Parade, Pudsey, England, assignors to W. J. Clarkson Limited, Leeds, England, a British company
Filed July 25, 1968, Ser. No. 747,691
Claims priority, application Great Britain, July 26, 1967, 34,276/67; Mar. 22, 1968, 13,890/68
Int. Cl. D05b 21/00
U.S. Cl. 112-121.12

9 Claims



Apparatus for profile stitching a cut-out piece of material to a layer of material, including a sewing machine, a movable workplate carrying a hinged template beneath the machine needle, said template being adapted to hold a cut-out piece of material, fold its edges inwardly and then press said piece down onto the layer of material

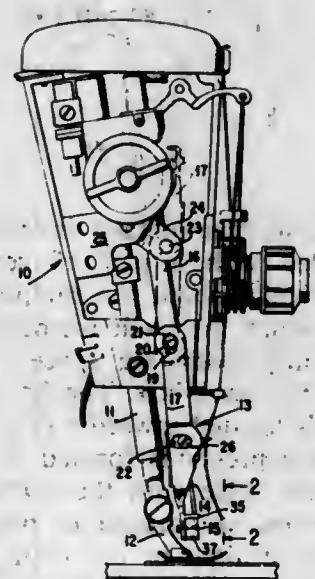
on the workplate, said workplate having a guide track with a stationary follower therein, and fluid pressure operated rams for giving movement to the workplate and loaded template in their own plane according to the guide track, said sewing machine stitching round the folded cut-out piece during said movement to secure the piece and layer together.

3,517,631

NEEDLE THREADER

Max E. Weber, Karlsruhe Baden, Germany, assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 15, 1967, Ser. No. 690,885
Int. Cl. D05b 87/00
U.S. Cl. 112-225

5 Claims



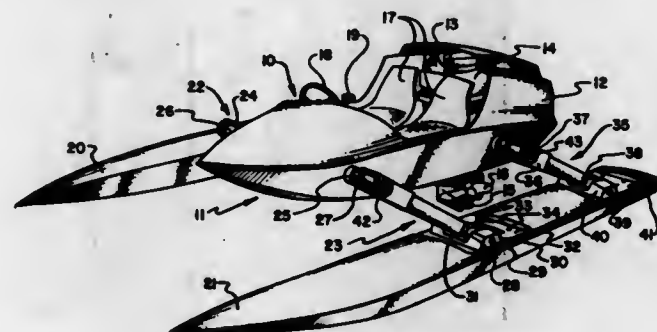
A needle threading device for a sewing machine including an arm mounted for sidewise as well as vertical swinging movement and limited vertical shift on the sewing machine head and having a needle thread engaging member disposed at the free end of the device adapted to enter the eye of the needle when the device is placed in its operative threading position. The alignment of the needle thread engaging member with the needle eye is assured by means of a pair of spaced offset fingers formed at the free end of the needle threading device for straddling the needle and guiding the member through the needle eye.

3,517,632

BOAT SUSPENSION SYSTEM

Dudley Justin Gray, 7476 Jackson St., Ventura, Calif. 93003
Filed July 15, 1968, Ser. No. 744,790
Int. Cl. B63h 1/14, 1/20
U.S. Cl. 114-61

10 Claims



A suspension system for a speed boat hull has a pair of elongated laterally spaced pontoons aligned on opposing hull sides and a first pair of angularly adjustable arms

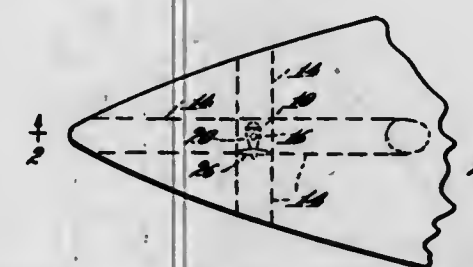
that interconnect forward portions of the hull and pontoons. A second pair of angularly adjustable arms arranged in tandem with the first pair of arms interconnect rearward sections of the pontoons and the hull. When the hull is accelerated to planing speed, the rearward arms may be pivoted upwardly to raise the hull to a cruising attitude above the pontoons and water surface. With the hull in this position, one forward arm may be pivoted downwardly as the other is pivoted upwardly to tilt the hull in a direction in which the boat is sought to be turned.

3,517,633

BOW THRUSTER

Arthur W. Wanzel, Yarmouth Port, Mass., assignor to Mathewson Corporation, Quincy, Mass., a corporation of Massachusetts
Filed Sept. 10, 1968, Ser. No. 758,821
Int. Cl. B63h 25/46
U.S. Cl. 114-151

10 Claims



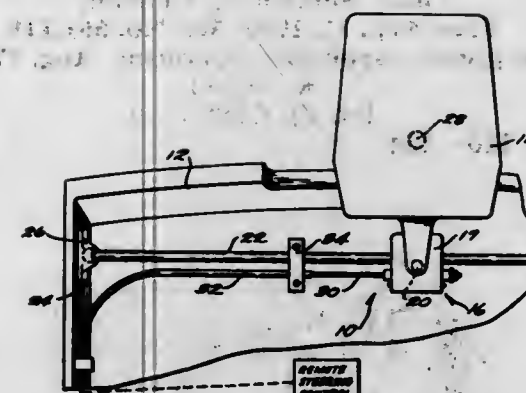
Apparatus comprising, in combination with the hull of a ship, a chamber located in the hull below the water line, draft tubes extending from the sides of the chamber athwart ship and fore and aft, and a propeller mounted in the chamber for rotation about a horizontal axis and for movement about a vertical axis to enable disposing the rotating blade in confronting relation to any one of the draft tubes for directional thrust and obtaining flow to the propeller from the remaining three tubes.

3,517,634

STEERING MECHANISM FOR A MARINE PROPULSION UNIT

Finn T. Irgens, Milwaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Continuation of application Ser. No. 639,813, May 19, 1967. This application Mar. 6, 1969, Ser. No. 805,049
Int. Cl. B63h 21/26, 25/06
U.S. Cl. 114-172

18 Claims



Disclosed herein is a marine propulsion unit steering mechanism which is connected to a steering wheel by a cable or two ropes. The steering mechanism includes a slide connected to the marine propulsion unit by a ball and socket joint and a slide support rod which extends through the slide and which is pivotally mounted to the boat hull by a ball and socket joint. The slide

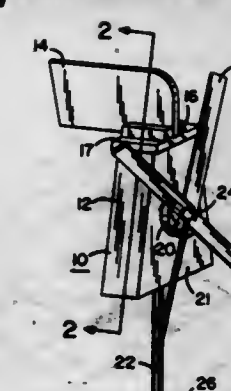
includes two levers which are located within a slide cavity and which have apertures for receiving the slide support rod. The apertures are slightly larger in diameter than the slide support rod and are spring biased to an angular clamping position on the rod in the absence of movement of the cable. Movement of the cable caused by movement of a steering control member changes the angular position of the levers with respect to the rod and affords relative movement therebetween.

3,517,635

GOPHER CHASER APPARATUS

Philip J. Kuhl and Ivy B. Kuhl, both of 925 Highway 80, Alpine, Calif. 92001
Filed Mar. 5, 1969, Ser. No. 804,518
Int. Cl. G08b 9/00
U.S. Cl. 116-22

6 Claims



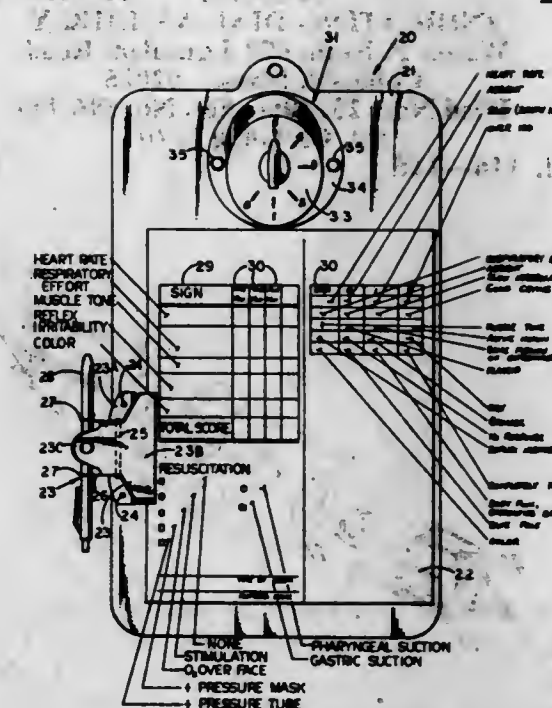
A gopher chaser apparatus having pivoting members that are supported on a rod that is inserted into the ground, which pivoting members are respectively pivotally moved by a wind driven, rotating cam member to successively impact metal ends against the rod, creating noise vibrations that chase gophers from the adjacent area of the ground.

3,517,636

DEVICE FOR MONITORING PHYSIOLOGICAL PHENOMENON

Miguel Angel Colon-Morales, Rio Piedras, Puerto Rico (G.P.O. Box 4547, San Juan, Puerto Rico 00936)
Filed June 25, 1969, Ser. No. 836,381
Int. Cl. G08b 3/00
U.S. Cl. 116-67

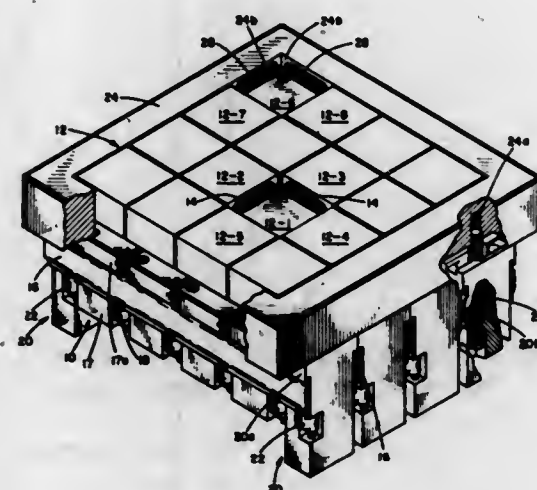
1 Claim



This disclosure is directed to an aid in monitoring certain physiological phenomenon, and more particularly the ascertation of prompt and accurate diagnosis of newborn depression. The device comprises a clip board with

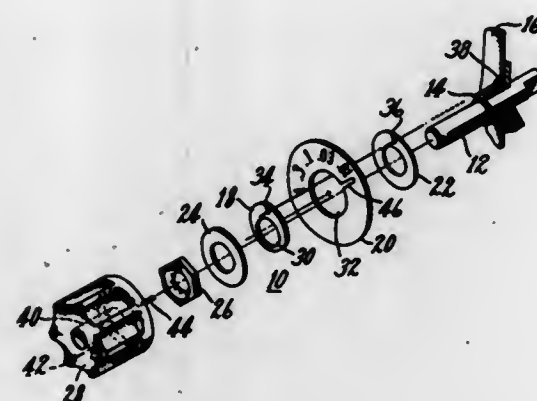
means for detachably securing a tablet thereon which is provided with indicia thereon for quickly summarizing various physical signs which experience has shown have a direct relationship to the depression of a newly born baby and/or causes for the development of neuromuscular deficiencies in childhood. A timing unit is operatively associated on the clip board for precisely timing the intervals between the recording of the necessary observations, as the time of such observation is especially critical within the first few minutes of life.

3,517,637
PUSHBUTTON SIGNALING ARRANGEMENT
David D. Kaiser, Cedarville, Ill., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Apr. 29, 1968, Ser. No. 724,793
Int. Cl. G01d 21/00
U.S. Cl. 116-114 6 Claims



A signal arrangement especially for a pushbutton keyboard or matrix where indication of an actuated pushbutton is provided by the exposure of the side walls of adjacent pushbuttons which are distinctly colored with respect to the remainder of the arrangement.

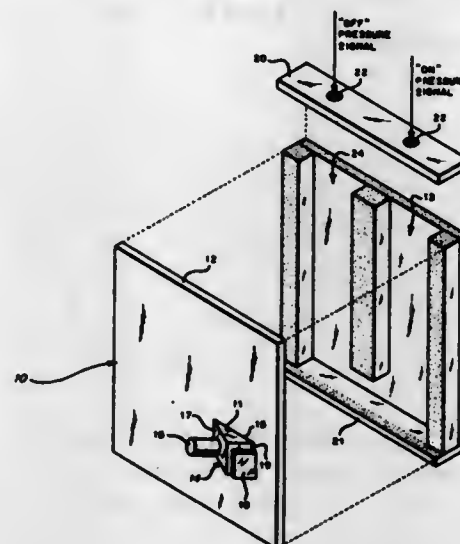
3,517,638
INDICATING DIAL ASSEMBLY
Walter P. Kern, 672 Jerusalem Road, Cohasset, Mass. 02025
Filed Nov. 25, 1966, Ser. No. 596,900
Int. Cl. G05g 1/10
U.S. Cl. 116-115 4 Claims



An indicator dial assembly for mounting onto a rotatable control shaft extending from a support panel. The dial is rotatably mounted on an eccentric bushing, or washer, which is mounted on the control shaft. This arrangement

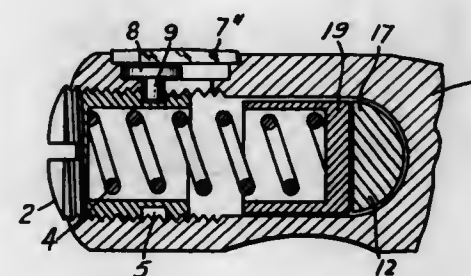
permits the dial to be rotated about an axis offset from the axis of rotation of the control shaft so that indicia on the periphery of the dial are fully exposed from behind the periphery of an operating knob disposed on the shaft only when positioned in a predetermined orientation in relation to the control shaft.

3,517,639
PURE FLUID ANNUNCIATOR
Ronald J. Whitsel, Southampton, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 8, 1968, Ser. No. 743,137
Int. Cl. G01f 23/00; G01l 7/18
U.S. Cl. 116-118 8 Claims



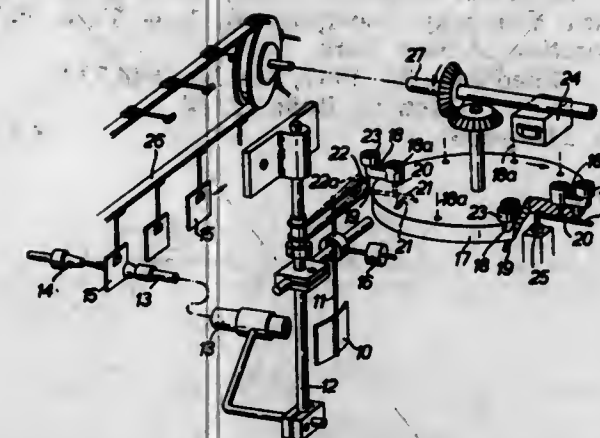
A fluid annunciator having a U-shaped tube initially filled with a liquid covering the hypotenuse of a right-angle prism interposed in one leg of the tube. Application of a pressure signal into the one leg of the tube causes the liquid to fall and expose the hypotenuse to the air whereby light incident normally on one diagonal face of the prism will be reflected from the hypotenuse through the other diagonal face indicating the presence of the pressure signal.

3,517,640
PRESSURE INDICATING MEANS FOR SAFETY SKI BINDING
Paul Unger, 113 Bruckwiesenstrasse, 8501 Altenberg, near Nuremberg, Germany
Filed Aug. 16, 1967, Ser. No. 661,118
Claims priority, application Germany, Aug. 27, 1966, K 55,350
Int. Cl. G09f 9/00
U.S. Cl. 116-124 3 Claims



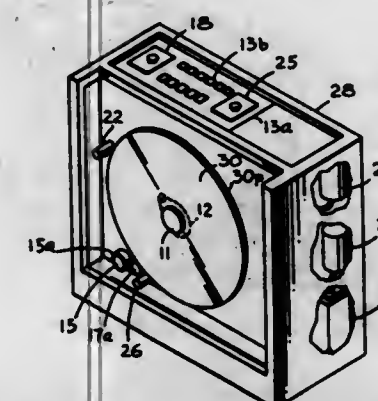
Pressure indicating device for safety ski binding, where an indicator is associated with the tightening screw or screws for the springs which regulate the release forces to indicate the pressure to which the binding is adjusted.

3,517,641
ARTICLE DETECTING DEVICE
Guy Baron Boyce, Blagdon, England, assignor to Binks-Bullows Limited, Brownhills, England
Filed July 9, 1968, Ser. No. 743,461
Claims priority, application Great Britain, July 13, 1967, 32,298/67
Int. Cl. B05c 11/00
U.S. Cl. 118-2 4 Claims



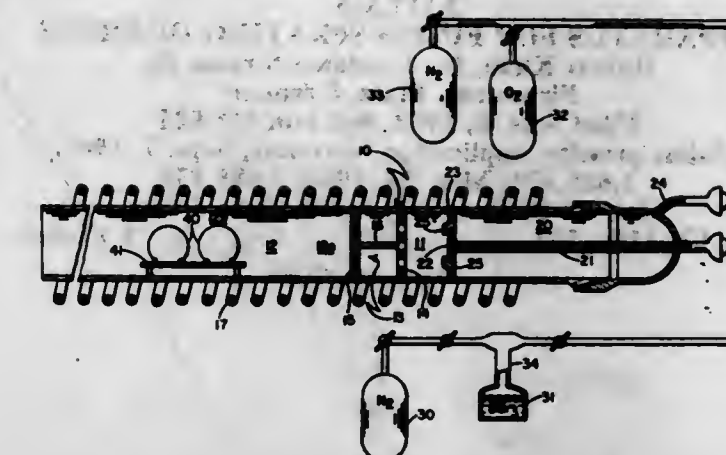
A device for detecting the presence of an article on which it is desired to carry out an operation by means of a further device or machine, comprising a pivotally mounted vane and at least one nozzle arranged to be connected to a supply of pressurised fluid, the article being arranged to pass between the nozzle and the vane so that the absence of an article between the nozzle and the vane will result in a stream of pressurised fluid impinging on the vane to move it to a first position, whereas the pressure of an article between the nozzle and the vane will interrupt the stream of pressurised fluid to enable the vane to move to a second position in which the vane or a part movable therewith actuates means for initiating operation of said further machine or device.

3,517,642
APPARATUS FOR EDGING MAGNETIC DISC
Charles W. David, Los Angeles, Calif., assignor to Data Products Corporation, Culver City, Calif., a corporation of Delaware
Filed Mar. 29, 1965, Ser. No. 443,186
Int. Cl. B05b 67/00
U.S. Cl. 118-7 1 Claim



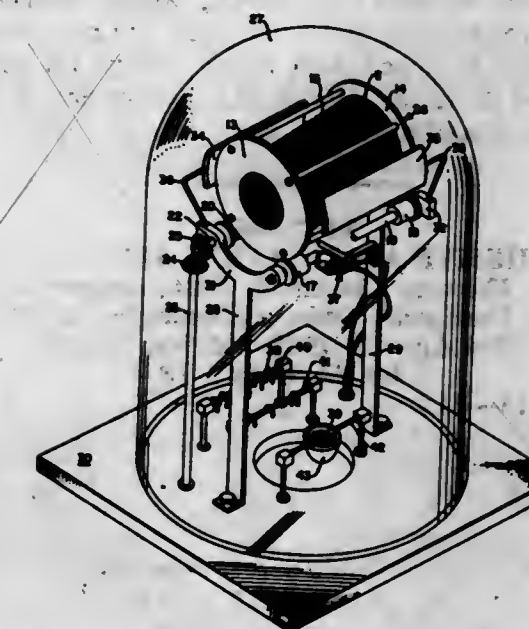
An apparatus for edging magnetic discs includes a drive means for rotating a disc about its center. A grinding assembly is arranged to be moved into contact with the periphery of the disc to grind magnetic material therefrom. A vacuum system removes the ground off magnetic material. A nozzle is mounted adjacent the periphery of the disc for depositing a protective liquid on the periphery of the disc. A second nozzle is provided for applying a neutralizing liquid to the disc. Automatic control means are provided to control the movement of the grinding assembly and the sequence and timing of the grinding and nozzle operations.

3,517,643
VAPOR DEPOSITION APPARATUS INCLUDING DIFFUSER MEANS
David R. Goldstein, Peabody, and Pravin C. Parekh, Cambridge, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 25, 1968, Ser. No. 778,554
Int. Cl. C23c 11/00
U.S. Cl. 118-48 1 Claim



Deposition furnace apparatus for reacting boron tribromide (BBr_3) and oxygen (O_2) to produce boron oxide (B_2O_3) which deposits on silicon wafers. Vapors of boron tribromide and oxygen are mixed in a high temperature mixing section of the furnace. A gas diffuser arrangement retards the flow of gases from the mixing section to the deposition section of the furnace. Thus, the gases are thoroughly mixed and the reaction approaches completion before the gases reach the silicon wafers in the deposition section.

3,517,644
APPARATUS FOR MAKING METAL ALLOY RESISTORS
Charles A. Baer, Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Continuation of application Ser. No. 466,290, June 23, 1965. This application Dec. 16, 1968, Ser. No. 785,438
Int. Cl. C23c 13/08
U.S. Cl. 118-49 9 Claims



A foraminous cylinder mounted in a vacuum chamber and having an axis at an angle to the horizontal is rotated about a horizontal axis, so that substrates retained therein are tumbled both radially and longitudinally. A heater and a vaporization source provide coating material which condenses on the substrates. A source for vaporizing a dielectric material may also be provided. A method of coating resistor substrates envisages loading the substrates into a foraminous container mounted in

a vacuum chamber, rotating the container so as to impart both rotational and lateral motion to the substrates, heating the substrates to a suitable temperature, and evaporating a conductive film onto the substrates. A dielectric film may also be evaporated onto the substrates, and they may be annealed.

3,517,645

APPARATUS FOR FINISH-SPRAYING OF SHOES

Robert Klein, Jr., Landauer-Strasse 56,
Pirmasens, Pfalz, Germany

Filed Sept. 6, 1968, Ser. No. 758,021

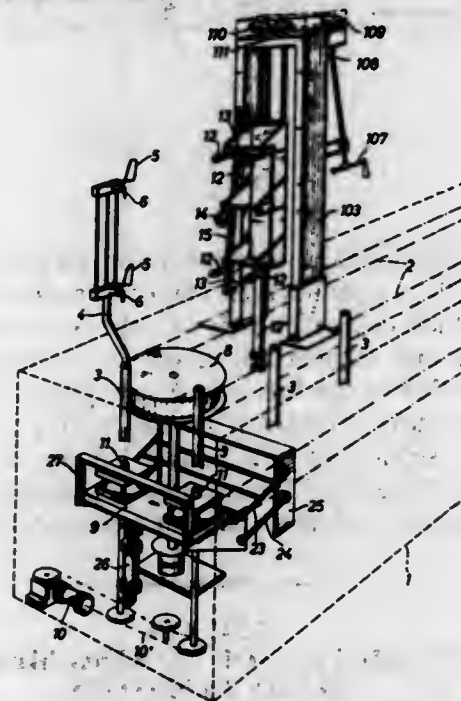
Claims priority, application Germany, Sept. 7, 1967,

1,685,433; Mar. 13, 1968, 1,685,436

Int. Cl. B05b 15/04, 13/04; B05c 5/00

U.S. Cl. 118—301

9 Claims



Apparatus for finish-spraying of shoes comprising a transport means and a spraying cabinet where the transport means conducts the shoes through the spraying cabinet in which spray nozzles for spraying the finishing or dressing agent are disposed, and for guiding the shoes through the spraying cabinet, supports having yokes for hanging individual shoes are provided which supports are equipped with nozzle means for supplying compressed air to the interior of the shoes and, if desired, against the area of the sole.

3,517,646

ADHESIVE APPLICATION APPARATUS

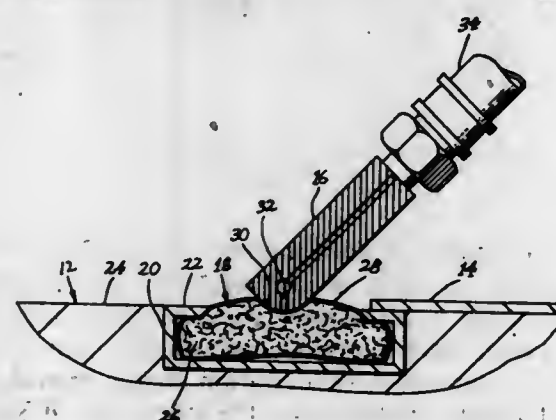
Buford L. Thomas, Cincinnati, Ohio, assignor to Valco,
Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 25, 1968, Ser. No. 724,202

Int. Cl. B05c 3/18

U.S. Cl. 118—411

8 Claims



An improved apparatus for the application of adhesive, such as glue, to cartons or containers. The improvement

resides in the use of a flexible wick surrounded by a sheet of plastic, such as polytetrafluorethylene resin, and mounted adjacent the applicator head through which the adhesive or glue is applied to a moving work piece.

3,517,647

COATING APPARATUS INCLUDING MEANS TO SHAPE SURFACE OF COATING BED

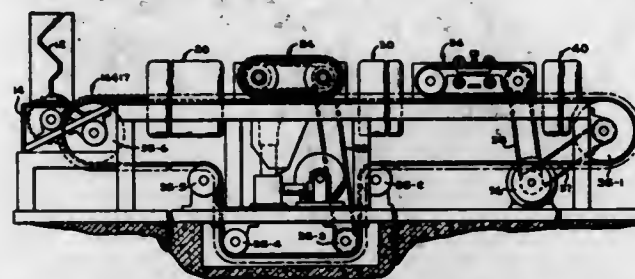
Benny H. Sharp, Bethany, Okla., assignor to Western
Electric Company, Incorporated, New York, N.Y., a
corporation of New York

Filed June 26, 1967, Ser. No. 648,734

Int. Cl. B05c 11/14

U.S. Cl. 118—600

8 Claims



Tubular resistors having axial leads are heated and rolled over the top of a continuously-rising bed of powdered resin to pick up a coating of resinous material. Scrapers between adjacent resistors dress the surface of the bed to a contour matching the contour of the resistor in order to apply a uniform thickness of resin on all surfaces of the resistor. After passing through a curing oven to partially set the resin, the resistors are rolled over a long, contoured die that smooths and equally distributes the coating and squeezes air pockets out of the resin. The coating is then fully cured in another oven.

3,517,648

METHOD AND APPARATUS FOR GROWING FREE OYSTER SEED

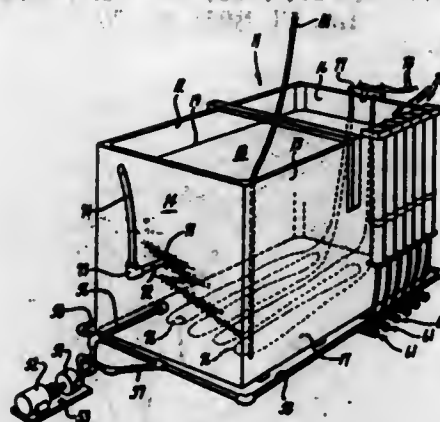
William W. Budge, Hillsborough, Calif., assignor to Pacific
Mariculture Co., Inc., Pescadero, Calif., a corporation
of California

Filed Sept. 10, 1968, Ser. No. 758,827

Int. Cl. A01k 61/00

U.S. Cl. 119—4

15 Claims



The method and apparatus for growing free oyster seed in which water is continually introduced up through the oyster seed to thereby carry food to the oyster seed and also to carry away detritus from the oyster seed.

3,517,649

FLOATING AQUATIC SCENE

Edward F. Holden, Ann Arbor, Mich., assignor to Aeroquip Corporation, Jackson, Mich.

Filed Sept. 24, 1968, Ser. No. 761,925

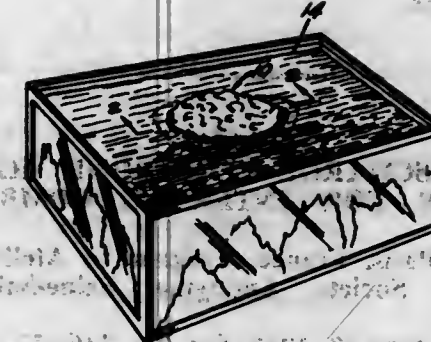
Int. Cl. A01k 64/00

U.S. Cl. 119—5

5 Claims

An accessory for home aquariums comprising a unitary decorative thin-walled body shaped to resemble a float-

ing body of land and having a concave underside and including structure on its underside forming at least one



enclosed air cell to enable the body to float for prolonged periods of time.

3,517,650

FAN ARRANGEMENT FOR AUTOMOTIVE VEHICLES AND THE LIKE

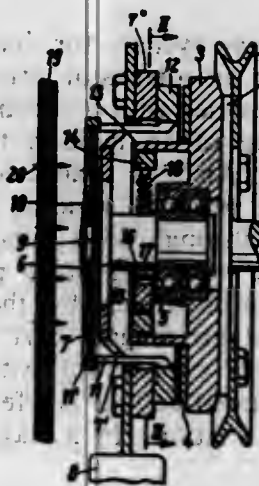
Gerd W. Seifert, 190 Seestr., Unterschondorf
(Ammerssee), Germany

Filed Feb. 15, 1968, Ser. No. 705,743

Int. Cl. F01p 11/10; F16d 13/18, 17/00

U.S. Cl. 123—41.12

11 Claims



A fan-blade assembly for the internal-combustion engine of an automotive vehicle which, in addition to a thermostatically controlled clutch, is provided with an idler clutch operative to couple the fan blade with the fan pulley at speeds in the idling range and thereafter decoupling the fan blade to allow the thermostatically controlled clutch to be exclusively effective.

3,517,651

ROTARY TWO-CYCLE ENGINE

Clinton L. Graybill, Superior, Mont., assignor to Graybill
Industries, Inc., Superior, Mont., a corporation of
Montana

Filed Mar. 11, 1969, Ser. No. 806,254

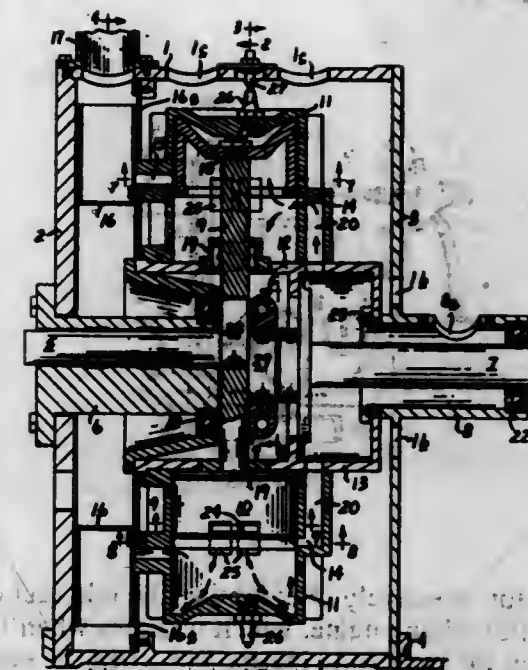
Int. Cl. F02b 57/06

U.S. Cl. 123—44

7 Claims

A rotary engine is provided wherein a stationary casing has two pairs of cylinders mounted therein at right angles to each other upon bearings within the casing. A power delivery shaft is affixed to the cylinders and fits close to the casing wall so as to feed all exhaust gases to an exhaust outlet on the casing. Fuel gas is introduced to a central chamber and from this chamber into the cylinders through passages that enter the cylinders intermediate

their ends. Pistons are slidable in the cylinders and the pistons in opposite cylinders are connected to each other by rigid piston rods extending along the axes of the cylinders. The pairs of opposite cylinders are offset axially of the shaft so their piston rods clear each other. The pistons are cup shaped and have skirts which, when the piston is extended almost to the outer end of its cylinder,



uncovers an inlet in the side of the cylinder to admit gas into the interior of the piston and into the cylinder between the piston and the inner end of the cylinder. The reciprocation of the pistons within their cylinders is controlled by two oppositely disposed like eccentric cams on an idler shaft that is offset with respect to the power delivery shaft and rotatably supported in the casing.

3,517,652

TWO-CYCLE ENGINE

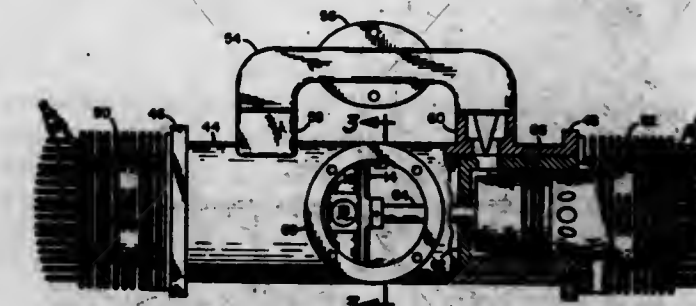
Victor N. Albertson, Minneapolis, Minn., assignor to The
Johnson Engine Works Company, Minneapolis, Minn.,
a corporation of Minnesota

Filed May 10, 1968, Ser. No. 728,207

Int. Cl. F02b 33/12, 75/24; F16b 21/18

U.S. Cl. 123—65

5 Claims



A floating piston type two-cycle engine that requires less critical tolerances in connecting the crankshaft to the piston rods and which has an improved cylindrical crankcase, a translator for cooperating with the crankcase and being slidably mounted therein with the crankcase acting as a bearing surface, and a crankshaft assembly for changing the rectilinear motion of the piston assembly into rotary motion of the crankshaft.

3,517,653

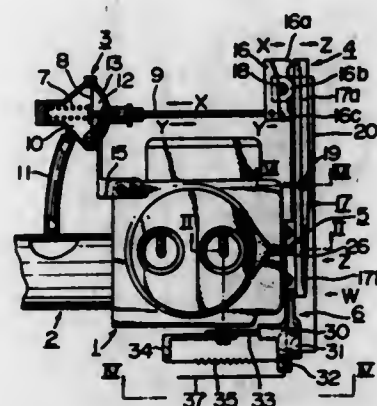
DEVICE FOR INTERRUPTING IDLE FUEL CIRCUIT OF A CARBURETOR

Hajime Ariga, Yokohama, and Isao Murase, Kohoku-ku, Yokohama, Japan, assignors to Nissan Jidosha Kabushiki Kaisha, Yokohama, Japan

Filed Apr. 30, 1968, Ser. No. 725,464

Claims priority, application Japan, June 26, 1967, 42/54,354, 42/40,520
Int. Cl. F02d 9/00

U.S. Cl. 123—97



A device for selectively interrupting the idle fuel circuit of a carburetor of an engine, which operates when the engine is driven by an outside inertia and when the engine is in run-on state. The device comprises a diaphragm means capable of detecting the vacuum pressure in the intake manifold of the engine, an interrupting valve means engageable with a valve port formed on the idle fuel circuit, and a link means connecting said diaphragm means with said interrupting valve means.

3,517,654

EVAPORATIVE EMISSION CONTROL SYSTEM

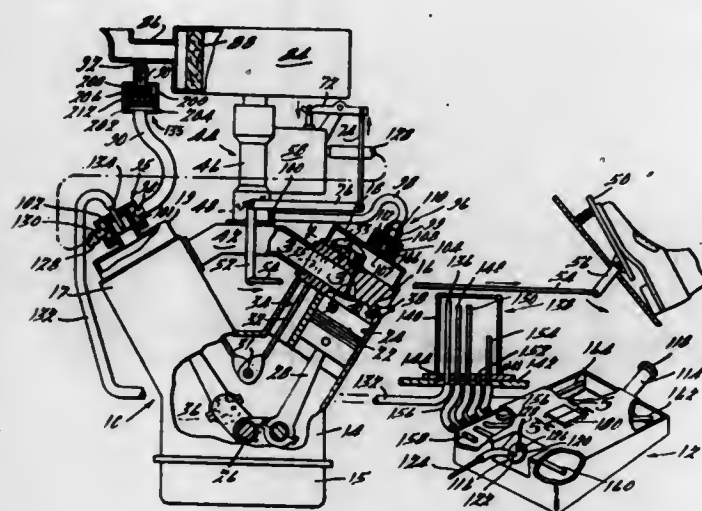
Jorma O. Sarto, Orchard Lake, and William A. Hunter, Royal Oak, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Mar. 8, 1968, Ser. No. 711,680

Int. Cl. F02m 37/00

U.S. Cl. 123—136

8 Claims



A system for controlling evaporative emissions from the fuel system of a motor vehicle wherein the fuel tank and carburetor bowl are vented to the crankcase of the engine so that the crankcase serves as an accumulator to

collect fuel vapors from the fuel tank and fuel bowl while the engine is turned off; the crankcase is in turn vented to the engine intake so that the collected vapors are subsequently burned in the engine during subsequent operation of the engine.

3,517,655

CAPACITY-DISCHARGE ELECTRONIC IGNITION APPARATUS FOR INTERNAL COMBUSTION ENGINES

Eric Jaulmes, Paris, France, assignor to Ateliers de la Motobecane, Societe Anonyme, Seine-Saint-Denis, France

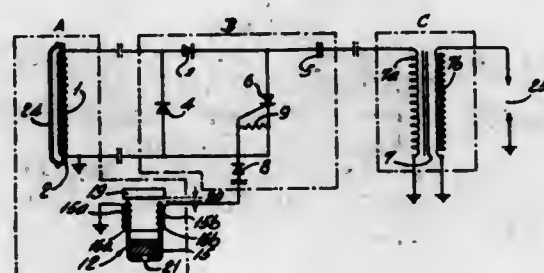
Filed June 12, 1968, Ser. No. 736,312

Claims priority, application France, June 14, 1967, 110,239

Int. Cl. F02p 1/02

U.S. Cl. 123—148

8 Claims



An electronic ignition system for internal combustion engines comprises an alternator driven by the engine and connected in series with a rectifier, a capacitor and a primary winding of an ignition transformer, to form a charging circuit. An SCR connected in series with the capacitor and the primary winding serves to discharge the capacitor through said winding upon the SCR being fired by a triggering pulse produced by a triggering pulse generator driven by the engine. The alternator includes a stator magnet carrying a generating winding and a rotor cooperating with said magnet. Regulation of the generated voltage is effected, independently of engine speed variations, by a magnetic shunt by-passing said magnet.

3,517,656

CENTRIFUGAL TYPE PROJECTING DEVICE

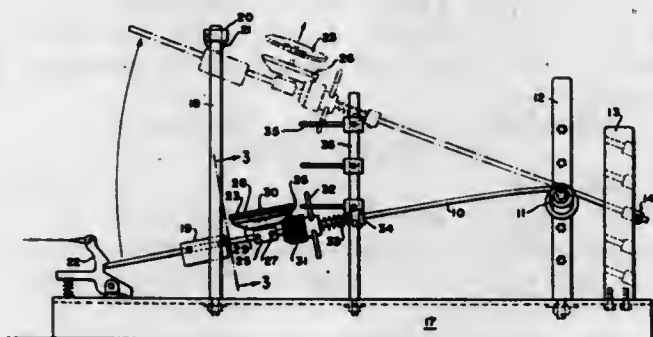
George H. Darrell, 25 Chestnut St., Dedham, Mass. 02026

Filed Aug. 13, 1968, Ser. No. 752,356

Int. Cl. F41f 7/00

U.S. Cl. 124—7

7 Claims



A target trap of catapult type for training purposes including a spring steel rod affixed at one end and carrying a

target seat at an intermediate point in its length, together with means for latching the rod under tension at its free end and a stop for arresting unlatched movement of the rod in launching a target. Projecting pins are provided on the target seat and engage a series of pins on an adjacent support to impart rotary movement to the target seat and a projectile thereon as the rod moves upward after being unlatched. The target seat also is adjustable about the longitudinal axis of the rod so that the target may be launched into the air in flatwise or edge wise condition. A spiral twist is provided at the fixed end of the rod to adjust the rod's propelling force.

3,517,657

ELASTIC TYPE PROJECTILE PROJECTING DEVICE

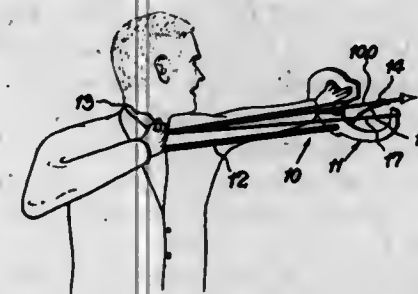
John M. Alban, 173 Father Zeiser Place, Bronx, N.Y. 10468

Filed May 20, 1968, Ser. No. 730,272

Int. Cl. F41f 7/00

U.S. Cl. 124—20

4 Claims



Apparatus for firing conventional arrows including a firing head with a rigid rod attached to one side of the firing head and a support stub projecting from the free end of the rigid rod. The firing head is an open member to which elastic firing means are fastened. Attached to the opposite side of the firing head from the rigid rod is an arrow guide. An arrow to be fired is placed through the firing head and supported by the arrow guide. The notch in the arrow receives the elastic firing means which are stretched to hold the arrow in a cocked position. The elastic firing means are held stretched by a person who is firing the arrow holding the elastic firing means in one hand and bracing that hand against the support stub. The other arm of the person is extended and grips the firing head to aim the arrow. The arrow is fired when the hand that holds the elastic firing means and the arrow therewith adjacent the firing stub releases the elastic firing means. Also disclosed is apparatus that can be attached to weapons such as longbows, slingshots and other catapulting devices, to enable those devices to be fired by a person using an extended arm to aim the projectile, the extended arm applying no force to the device to hold it in a cocked position. Simultaneously, while the extended arm aims the weapon the hand of other arm of the person firing the weapon is holding the weapon in a cocked position.

3,517,658

ARCHERY BOWS

Donald E. Shurts, 317 N. Wright Ave., Dayton, Ohio 45403

Filed Jan. 18, 1968, Ser. No. 698,785

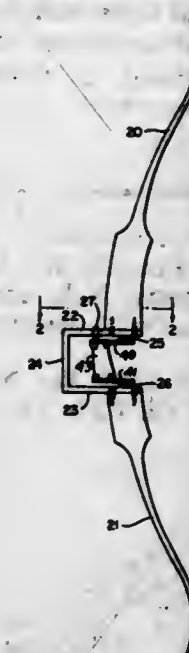
Int. Cl. F41b 5/00

U.S. Cl. 124—23

2 Claims

An archery bow with a bail-like swivel hand-hold which is pivoted to the limbs of the bow so that, when the hand-hold is grasped and the string is drawn, the

string, the longitudinal axis of the bow, and the thrust vector of the bow-hand lie in the same plane. The hand-



hold is offset from the bow limbs in a direction away from the string side of the bow.

3,517,659

APPARATUS FOR AUTOMATICALLY DRESSING A GRINDING WHEEL CONTOUR

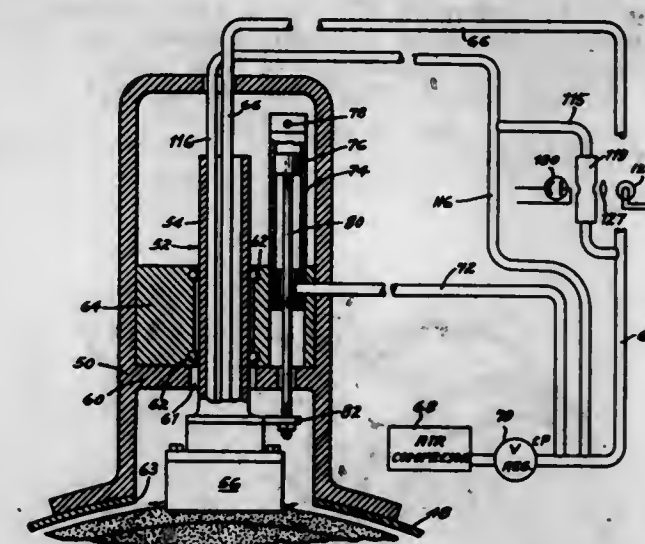
Donald R. Stewart and Ellis D. Kane, Detroit, Mich.; said Kane assignor to said Stewart, doing business as Stewart Instrument Company, Detroit, Mich.

Continuation of application Ser. No. 607,351, Dec. 5, 1966. This application May 1, 1969, Ser. No. 824,360

Int. Cl. B24b 53/04

U.S. Cl. 125—11

4 Claims



The disclosure embodies a dressing tool control system including a body mounted over the grinding contour of a grinding wheel proximate thereto and mounted for movement toward the grinding contour. A counterbalance in the form of a pressure responsive piston is connected to the movable body and is in communication with a source of constant pressure, and in the body and overlying the grinding surface of the grinding wheel there is an outlet port which is also in communication with the source of constant fluid pressure. As a consequence, the pressure at said outlet decreases as the diameter of the wheel decreases during a dressing operation allowing the body to move toward the wheel so as to maintain the distance between the movable body and the grinding contour at a predetermined substantially constant distance irrespective of decrease in the wheel diameter. A cavity in the body overlies the grinding contour of the wheel and is in communication with the source of constant fluid pressure, the pressure within the cavity decreases as the wheel grinding

contour gradually loses its desired contour due to the grinding operation and when the pressure decreases to a predetermined low limit a pressure responsive switch activates the dressing tool to redress the grinding contour. As the contour is redressed, the fluid pressure in the cavity rises and at an upper limit opens the control switch to retract the dressing tool.

3,517,660

FIREPLACE SCREEN

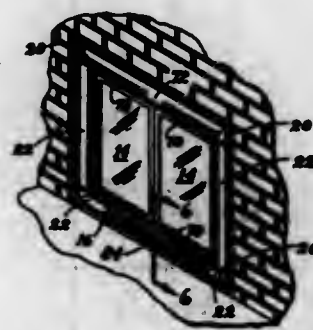
Leonard Springer, Tenafly, N.J., and Abraham D. Lambert, Atlantic Beach, N.Y., assignors to Knickerbocker Metal Guild, Inc.

Filed Jan. 28, 1969, Ser. No. 794,664

Int. Cl. F24c 15/36

U.S. Cl. 126-139

10 Claims



The frame of a fireplace screen is fabricated from a plurality of extruded sections secured together with suitable fastening means.

3,517,661

DIFFERENTIAL PLETHYSMOGRAPHY

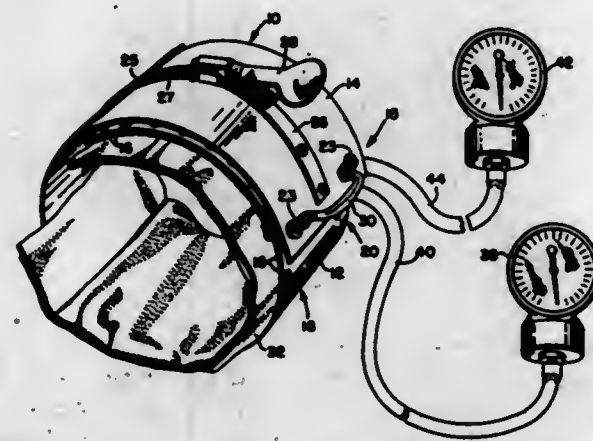
Marvin A. Buffington, Cleveland, Ohio, assignor, by mesne assignments, to Picker Corporation, White Plains, N.Y., a corporation of New York

Filed Apr. 24, 1967, Ser. No. 633,011

Int. Cl. A61b 5/02

U.S. Cl. 128-2.05

4 Claims



Apparatus for measuring blood flow variations including a precisely adjustable cuff for establishing a predetermined air pressure in a bladder partially surrounding the limb of a subject, a transducer for converting the variations transmitted through the bladder to an electrical signal, a monitor for recording the signals, a control for varying the gain of the monitor, and calibrating mechanism for injecting a fixed quantity of air into the bladder to pulse the transducer.

One form of cuff comprises two overlapping sheets with gross adjusting mechanism including dogs on one sheet engaging holes on the other and fine adjusting mechanism including a pair of straps connected to said sheets and drawn together by a continuously adjustable device.

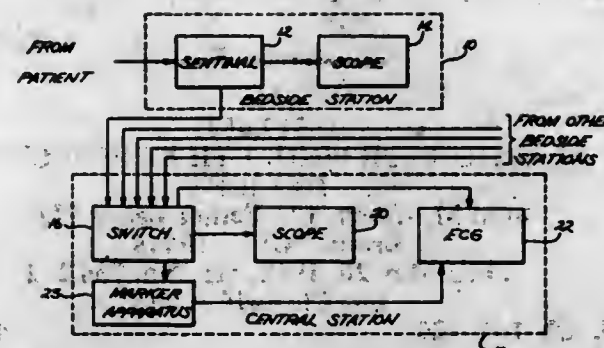
3,517,662
PATIENT IDENTIFICATION MARKER APPARATUS

Horace T. Finch, Arcadia, and Donald L. Emmott, Rowland Heights, Calif., assignors to The Birtcher Corporation, Los Angeles, Calif., a corporation of California
Continuation-in-part of application Ser. No. 624,007, Mar. 17, 1967. This application May 17, 1968, Ser. No. 730,003

Int. Cl. A61b 5/04

U.S. Cl. 128-2.06

6 Claims



In a patient monitoring system, a central station sequentially monitors ECG signals from a plurality of bedside stations. When the central station dwells on an input from a patient having an abnormal pulse rate, operation of a marker generator and a marker control circuit is initiated. The marker generator produces square wave pulses until disabled by the marker control circuit; the number of pulses generated is indicative of the particular patient being monitored. A single ECG associated with the central station prints out the square wave pulses followed by the ECG pattern of the patient having the abnormal condition, the recorded marker pulses thus serving to identify the ECG trace.

3,517,663

THRESHOLD ANALYZER FOR AN IMPLANTED HEART STIMULATOR

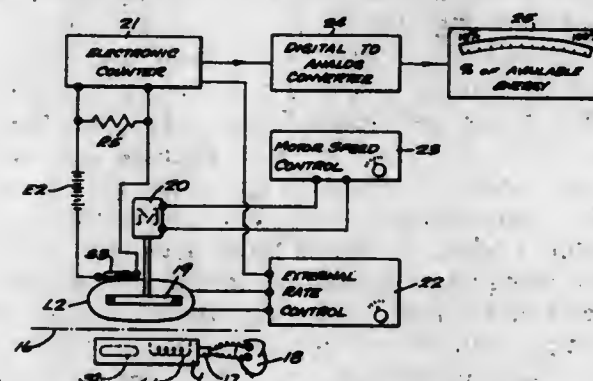
David L. Bowers, Wauwatosa, and David C. Fisher, Brookfield, Wis., assignors to General Electric Company, a corporation of New York

Filed Apr. 15, 1968, Ser. No. 721,492

Int. Cl. A61n 1/36

U.S. Cl. 128-2.06

7 Claims



An implanted electric heart stimulator has a coupling capacitor in series with the heart load. Electronic switches charge and discharge the capacitor over a short interval in which case current flow and energy from the capacitor are high enough to stimulate the heart. Heart threshold is defined as the point where just enough energy is delivered to the heart to produce or inhibit ventricular contraction. The output energy from the stimulator is decreased by transferring available stimulating energy or charge from the coupling capacitor to a small parallel capacitor and discharging the latter. A magnetic reed switch, operated with an external pulse magnetic field,

controls the charging and discharging of the small capacitor. By increasing the magnetic pulse frequency, the coupling capacitor energy is reduced to a level where it is just insufficient to stimulate in which case the heart is allowed to miss a few beats indicating that threshold has been reached. Means are provided for displaying threshold energy as a percentage of energy that is available from the stimulator.

3,517,664

CONSTANT STETHOSCOPIC MONITORING SYSTEM

William R. Ploss, Gainesville, Fla., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Mar. 19, 1968, Ser. No. 714,226

Int. Cl. A61b 5/02

U.S. Cl. 128-2.05

4 Claims



A device for monitoring blood pressure, pulse and respiration during anesthesia, having a two-way valve in which the passage from a blood pressure acoustic pickup to the earpiece is always open, but a pressure activated valve closes off the passage from a chestpiece to the earpiece automatically in response to inflation of the blood pressure cuff.

3,517,665

NEGATIVE PRESSURE TREATMENT DEVICE

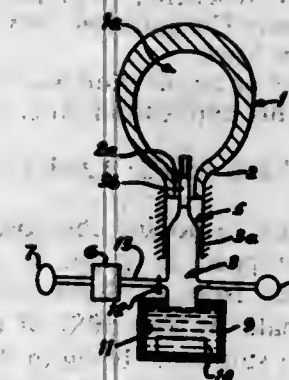
Edward Emanuel Sheldon, 30 E. 40th St., New York, N.Y. 10016

Filed June 28, 1967, Ser. No. 649,504

Int. Cl. A61m 1/00

U.S. Cl. 128-24

7 Claims



A device for treatment of hollow organs which comprise means for producing a negative pressure within the

cavity of said organs, either alone or in combination with fluids containing medicinal compounds. In addition, in some embodiments of invention sonic energy is used to increase the effects of said negative pressure and of said fluids.

3,517,666

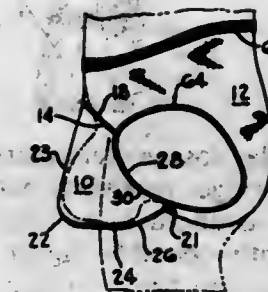
MEN'S UNDERWEAR

John S. Atlee, Monroeville, Pa.
(2142 Green St., Philadelphia, Pa. 19130)
Filed May 25, 1966, Ser. No. 552,835

Int. Cl. A61f 5/40; A41b 9/02

U.S. Cl. 128-159

11 Claims



A man's undergarment in which the front and crotch portions are formed into a pouch of such size and shape as to cover the genitals with substantially no support or other restriction thereof; the pouch additionally being constructed of multiple plies which are vertically extensible and made of non-absorbent and urine-repellent fibers in a combination which inhibits seepage of moisture there-through but facilitates maximum ventilation.

3,517,667

AEROSOLIZED INHALATOR DISPENSER

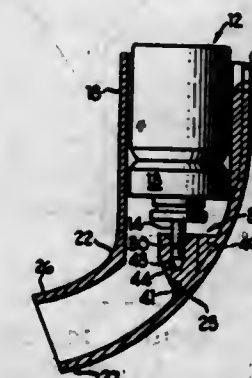
Saul A. Babbitt, Henrietta, and Alfred V. Mohr, Island Park, N.Y., assignors to Pennwalt Corporation, a corporation of Pennsylvania

Filed Sept. 21, 1967, Ser. No. 669,627

Int. Cl. A61m 15/00; 11/00

U.S. Cl. 128-173

6 Claims



A tubular dispenser useful with a dispensing aerosol container has top, intermediate and bottom portions constructed to dispose the bottom and intermediate portions at an angle with respect to the top portion and to each other. An actuator in the intermediate portion has an upwardly-extending bore engaging the valve stem of an aerosol container in the top portion and communicating with an orifice by a passageway angularly disposed with respect to the upwardly-extending bore. The internal configuration of the device presents generally smooth curving surfaces to reduce air turbulence and promote smooth air flow around the container and help prevent coalescence of the atomized medicament on the sides of the device.

3,517,668

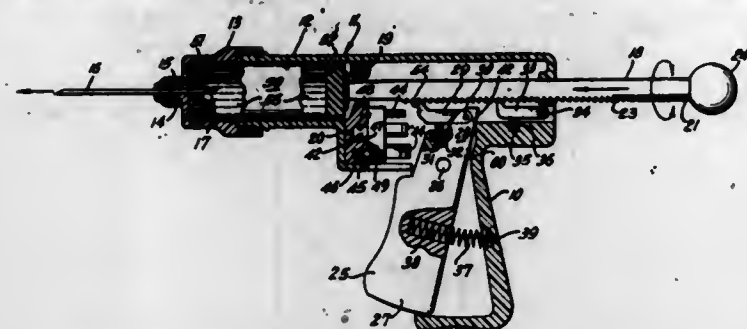
MULTIPLE DOSAGE VETERINARY INJECTION GUN

William L. Brickson, Indianapolis, Ind., assignor to Bio-neering, Inc., Carmel, Ind., a Canadian corporation

Filed Oct. 16, 1967, Ser. No. 675,577
Int. Cl. A61m 5/24

U.S. Cl. 128-218

1 Claim



A multiple, variable dosage veterinary injection device including a cartridge receiving barrel, a plunger means adapted to be advanced in a cartridge received in said barrel, intermittently operable trigger actuated mechanism to impose dispensing force on said plunger means to advance it in said cartridge, a variable rotatable annular stop means which controls and arrests the distance of forward advance of said trigger actuated means thereby controlling the distance of forward advance of said plunger means in said cartridge, and a mechanical holding means engageable with said plunger means to prevent retraction of said plunger means after advancement thereof by said trigger actuated mechanism even after disengagement and retraction of said trigger actuated mechanism from said plunger means.

3,517,669

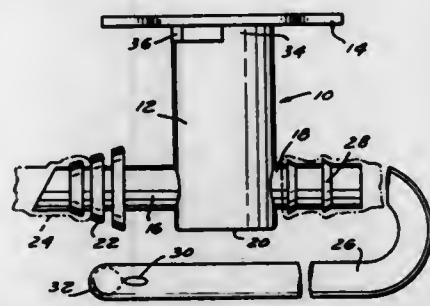
VALVED SUCTION CATHETER

Frank S. Buono, Garfield, N.J., and Robert A. Gandi, New York, N.Y., assignors to Becton, Dickinson and Company, East Rutherford, N.J., a corporation of New Jersey

Filed Mar. 12, 1968, Ser. No. 712,459
Int. Cl. A61m 1/00

U.S. Cl. 128-276

10 Claims



A regulator-valve structure for eliminating suction forces at a catheter tip and controlling, by means of a fluid flow in an apparatus of the suction catheter type, suction surges. An elongated catheter member adapted to be connected to a source of suction by the regulator-valve structure whereby body cavities may be controllably suctioned.

3,517,670

BLOOD-LETTING LANCET

Irving A. Speelman, Roslyn Heights, N.Y., assignor to Propper Manufacturing Co., Inc., Long Island City, N.Y., a corporation of New York

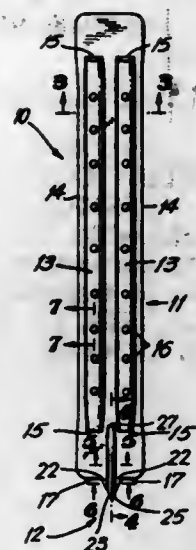
Filed Nov. 9, 1967, Ser. No. 681,664
Int. Cl. A61b 17/32, 17/34

U.S. Cl. 128-314

7 Claims

A blood-letting lancet having a plurality of stiffening ribs spaced inwardly of the longitudinal side edges of the body of said lancet and terminating in said body in sub-

stantially squared ends, and one or two substantially flat pointed portions extending longitudinally from the end of ends of said body, said point or points having a relatively



narrow longitudinal stiffening rib extending into said body portion. The points of the double-pointed lancet are of different lengths.

3,517,671

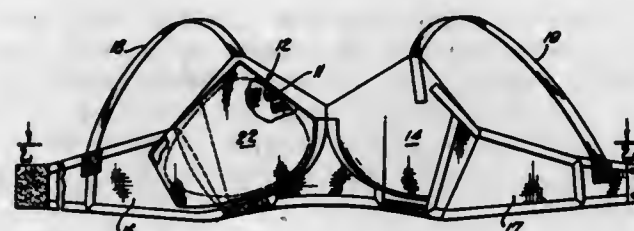
BRASSIERE POCKET FOR BUST FORM

Ruth Freedman, 233 W. 77th St., New York, N.Y. 10024

Filed Sept. 5, 1968, Ser. No. 757,732
Int. Cl. A41c 3/10

U.S. Cl. 128-478

4 Claims



A brassiere having a novel pocket for receiving and securing a removable artificial female bust form.

3,517,672

METHOD OF TREATING A SMOKING COMPOSITION TO REDUCE UNDESIRABLE PRODUCTS THEREFROM

Irving Michelson, New Rochelle, N.Y., assignor to American Safety Equipment Corporation, New York, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 678,184, Oct. 26, 1967. This application Aug. 9, 1968, Ser. No. 751,413

Int. Cl. A24b 15/02; A24d 1/02

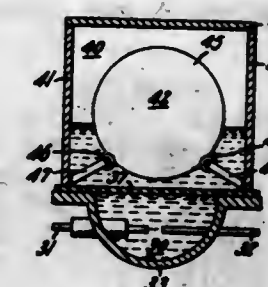
U.S. Cl. 131-140

5 Claims

A method of treating a smoking composition composed of cured tobacco wrapped in paper is disclosed, said composition containing from 0.1% to 1.0%, by weight, of ammonium sulfamate, at least 50% of the ammonium ion of the ammonium sulfamate being in the tobacco and at least 70% of the sulfamate ion of the ammonium sulfamate being in the paper, whereby the smoke produced from said tobacco composition has a significantly reduced amount of components which cause tumors on the skin of mice and other biological damage, and the toxicity of

tars capable of being condensed from said smoke is significantly reduced while, at the same time, the taste of said smoke, the burning of said tobacco composition, and the appearance of the ash resulting from the burning of said composition is not adversely affected. The method for producing such a composition includes adding am-

washing, cleaning of tableware, metal castings, stripping electrowon metals from electrodes, cleaning of tanks, ship



hulls and the like by electrohydraulically generated shock waves is taught.

3,517,675

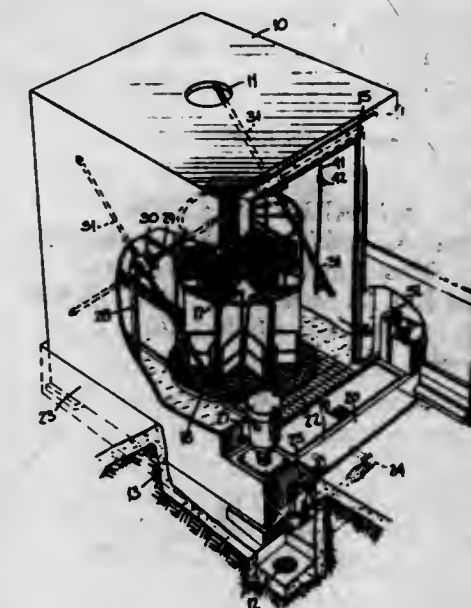
APPARATUS FOR WASHING INDUSTRIAL ARTICLES

Howard M. Sadwith, Colts Neck, N.J., assignor to Industrial Washing Machine Corporation, Matawan, N.J., a corporation of New Jersey

Filed Oct. 30, 1967, Ser. No. 679,097
Int. Cl. B08b 3/02

U.S. Cl. 134-144

7 Claims



monium sulfamate to the paper and allowing the ammonium sulfamate to remain on the paper until a significant amount of the ammonium ion has migrated to the tobacco. Preferably, the ammonium sulfamate is added to the paper in the form of a solution (e.g. an aqueous solution).

3,517,673

EYELASH MEASURING DEVICE AND TRIMMER

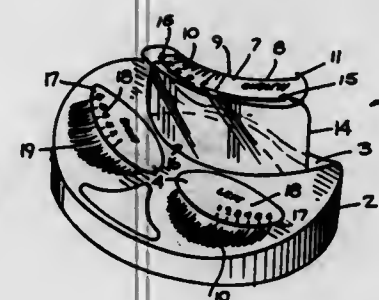
Charles Kim, 215 W. 83rd St., New York, N.Y. 10024

Continuation-in-part of application Ser. No. 750,427, July 31, 1968. This application Apr. 23, 1969, Ser. No. 818,635

Int. Cl. A45d 40/00

U.S. Cl. 132-79

34 Claims



The measuring device permits a false eyelash to be accurately sized to complement the user's eye both as to shape and length. The trimmer allows a false eyelash to be cut accurately to size and shape. The measuring device is used manually by an individual to suit the individual's taste.

Apparatus for washing industrial articles, involving placing the articles to be washed on a platform rotating at a predetermined speed in an enclosure; directing a series of streams of water on said articles, said streams of water issuing from nozzles on a rotating spray head, whereby through the rotation of the articles and the rotation source of the streams of water, variation in the incident angles of the streams of water impinging on the articles is greatly increased to produce a scrubbing, scouring, or lifting effect on dirt and foreign matter present on the articles being washed.

3,517,674

RUPTURE OF ADHESIVE BONDS

Merton Allen and Edward C. Schrom, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed June 28, 1965, Ser. No. 467,251

Int. Cl. B08b 7/02

U.S. Cl. 134-1

9 Claims

Electrohydraulically generated shock waves are utilized to cause the rupture of a mechanical or adhesive bond securing a solid material to a solid substrate causing separation thereof without damaging the substrate. Clothes

3,517,676

QUENCH APPARATUS FOR PROVIDING PULSATING AND SWEEPING FLOW OF QUENCH FLUID

Byron Paddock, Jr., McLean County, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Oct. 25, 1967, Ser. No. 678,073

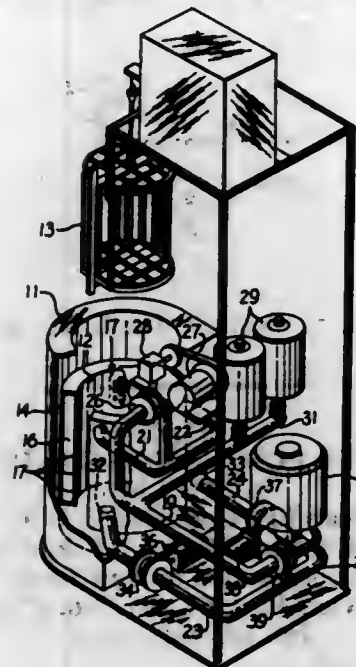
Int. Cl. C21d 1/64

U.S. Cl. 134-199

7 Claims

A quench system in which quenching fluid directed through orifices of a quench tube onto parts being quenched has pulsating and sweeping characteristics which are selectively variable to improve quench proper-

ties of the parts. Quench fluid is provided to the orifices through accumulators and a butterfly valve to cause flow variations which result in the fluid passing through the orifices as pulsating jets. A pair of valves control flow



from the bottom of the quench tube and overflow from the top of the quench tube respectively so that the jets of quench fluid from the orifices may be caused to sweep the parts being quenched in a variable direction.

3,517,677

INVALID WALKER

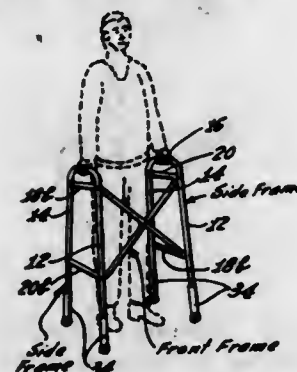
Alfred A. Smith, 13114 Margate St.,
Van Nuys, Calif. 91401

Filed Jan. 21, 1969, Ser. No. 793,930

Int. Cl. A61h 3/06

U.S. Cl. 135-45

7 Claims



An invalid walker comprises two side frames interconnected by a front frame, each of the two side frames forming the two side legs of the walker, each side frame including two lateral members that interconnect the two side legs at different levels, said two lateral members being integral extensions of the front frame. The front frame narrows centrally in cross section to form a torque portion that permits slight relative rotation of the two side frames in their planes for self-leveling of the walker.

3,517,678

HAND GRIP FOR CRUTCH

Robert B. Gledorf, 4020 Bryant Ave. S.,
Minneapolis, Minn. 55407

Filed Dec. 31, 1968, Ser. No. 788,147

Int. Cl. A61h 3/02

U.S. Cl. 135-51

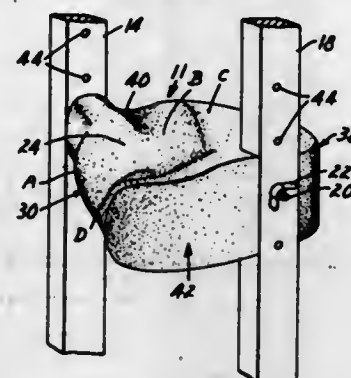
7 Claims

A crutch comprising a ground-engaging support member, at least one vertical support strut extending from said ground-engaging support member, a body support member disposed in an anterior and posterior direction so as to receive a crutch user's axilla and positioned on

the upper end of said vertical support strut, and a shaped hand grip attached to said vertical support strut, said hand grip having

(a) A generally horizontally disposed upper surface shaped to accommodate substantially the entire palmar surface of the user's hand including the metacarpal-phalangeal pad, the mid-palm area, the thenar pad and the hypo-thenar pad thereof,

(b) A maximum horizontal dimension at least twice that of its maximum vertical dimension,



(c) An overall size sufficient to prevent the user's ulnar fingers from wrapping completely around said grip, thereby facilitating dorsi-flexion of the hand at the wrist and distributing the body's weight evenly over the palmar surface during use, and

(d) One side converging anteriorly so as to form an angle of between about 20° and about 45° with the plane defined by the said body support member and the said vertical support strut, said side having a length sufficient to accommodate the user's four ulnar fingers.

3,517,679

DUAL FLUID CROSSOVER CONTROL

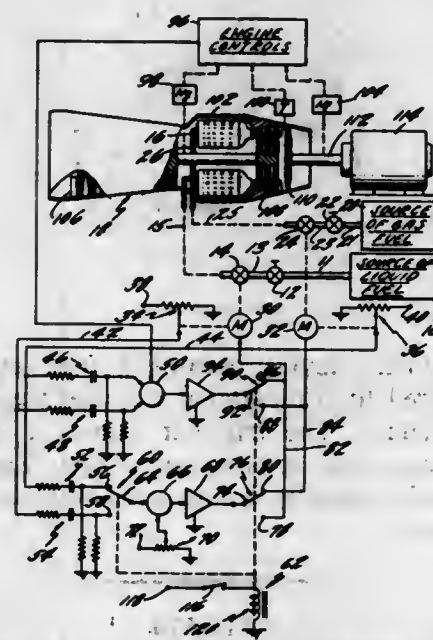
John S. Williamson, Ellington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 8, 1968, Ser. No. 711,754

Int. Cl. F17d 3/00; F16k 11/20

U.S. Cl. 137-1

1 Claim



A dual manifold gas turbine operates on either gaseous fuel or liquid fuel supplied thereto through respective servocontrol valves, the valve relating to fuel in use being controlled by operating conditions of the engine through a servoloop. To change from one fuel to the other, the oncoming valve is controlled by the operating servoloop which has as one input the closing of the offgoing valve. The offgoing valve is closed by a special servoloop used only for that purpose.

3,517,680

CONTROL APPARATUS AND METHOD FOR PROCESSES HAVING LONG TIME LAGS

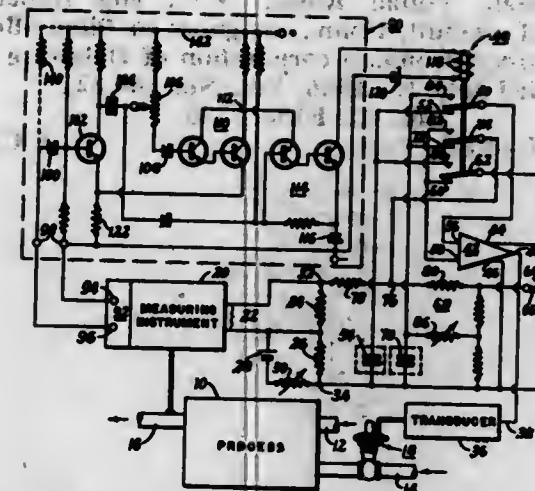
David A. Richardson, Sheldonville, and Allan L. Flanagan, Attleboro, Mass., assignors to The Foxboro Company, Foxboro, Mass.

Filed Mar. 14, 1968, Ser. No. 713,199

Int. Cl. F17d 3/00; F16k 31/02

U.S. Cl. 137-2

12 Claims



A process control system especially for use with processes having relatively long dead-time delays, or wherein elements of the control system introduce unusually long time delays, the system including an electronic analog controller suited for producing a control current having a reset component, there also being provided cyclically operable switch means for transferring the controller between normal active automatic control status and a fixed output status with the control signal held at the level existing at the end of the preceding period of active automatic control, the system including a first memory capacitor to continuously sense the control current level during periods of automatic control so as to remember the value at the end of each such period in order to hold the control current at that level during the periods of fixed-output operation, the system also including a second memory capacitor to continuously sense certain process variables during the period of fixed-output operation, and operable thereby to provide a smooth bumpless return to active automatic control at the end of such period.

3,517,681

VISCOSITY INDEPENDENT PRESSURE REGULATING VALVE

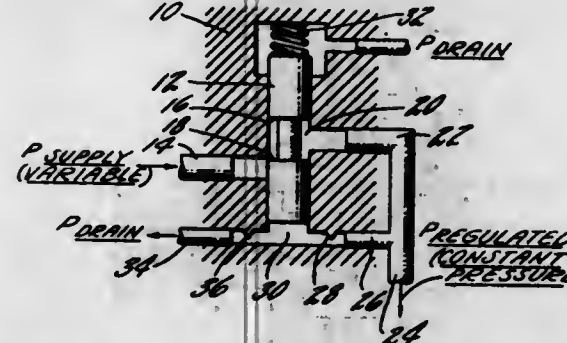
Bartholomew J. Davison, Simsbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed May 23, 1968, Ser. No. 731,380

Int. Cl. F16k 31/12

U.S. Cl. 137-505.18

1 Claim



Damping of a spool valve in a hydraulic pressure regulator is accomplished by disposing a variable volume chamber at one end of the spool valve which is between and in communication with the regulated pressure and drain pressure. A set of sharp-edged orifices is located in the communicating conduits and damping of the valve is obtained by forcing incompressible fluid through the

orifices thereby restricting the flow to provide damping which is relatively independent of fluid viscosity. Continuous, steady state, turbulent fluid flow through the chamber occurs due to the drain of fluid from the chamber.

3,517,682

INFLATION MEANS

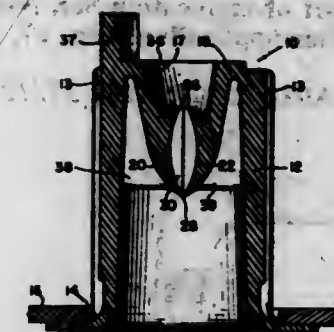
Franklin G. Smith, Portland, Oreg., assignor to Flo-Container Incorporated, Lake Oswego, Oreg., a corporation of Washington

Filed Sept. 28, 1967, Ser. No. 671,314

Int. Cl. F16k 13/04

U.S. Cl. 137-68

19 Claims



An inflation means for introducing air into an inflatable article comprising an elastic inflation tube extending from the inflatable article. The inflation tube includes therewithin an inner tubular skirt carrying a pair of suction cup valve elements providing an air passageway therebetween except when the valve elements are pressed together. A relatively stiff strut or web joins the substantial center of the back of each suction cup to the wall of the inflation tube so that pressure applied to the sides of the inflation tube forces the suction cups together to close off the air passage. The central back of each suction cup is otherwise substantially free of connection to the inflation tube so the suction cup may freely collapse into engagement with the other suction cup. The portion of the inflation tube including the suction cup valve means is insertable within the inflatable article and within a lower portion of the inflation tube which joins the inflatable article. The inflation tube has external ribs lying in the same plane as the struts. When the inflation tube is inserted into the article, the ribs abut each other to press the suction cups tightly together. The pressure exerted by the ribs is conveyed through the struts to maintain the suction cups in their engaged relation.

3,517,683

THERMAL PRESSURE RELIEF DEVICE

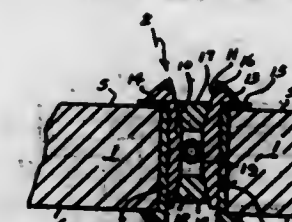
Herman R. Chandler, 31 Shaver Circle,
Dayton, Ohio 45409

Filed Oct. 3, 1968, Ser. No. 764,799

Int. Cl. F16k 17/38

U.S. Cl. 137-74

8 Claims



A thermal pressure relief device is disclosed for immediately opening the fluid contents of a closed vessel to the atmosphere when the temperature of the fluid exceeds a predetermined value. It consists of two tubular portions, concentrically arranged and in contact with one another. The surface of contact is threaded so that when one portion is turned with respect to the other, the overall length of the plug can be changed and foreshortened when necessary. There are extensions at the ends of the

plug which serve to clamp against the pressurized and the nonpressurized sides of a vessel, assuming that the plug is inserted in an opening in the vessel. Small round plugs of a eutectic metal (alloy) and having a tapered periphery are tamped into recesses formed in the ends of the inner tubular portion. A sphere of sealing material is positioned within a space left between these round plugs.

3,517,684 AUTOMATIC WATER SPRINKLER CONTROL SYSTEM

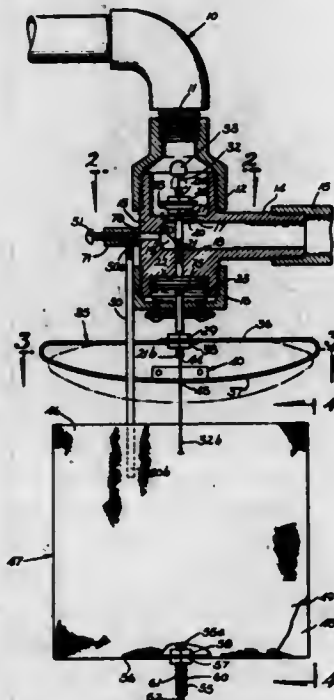
Bruce Mitchell, 13794 Astoria St.,
Sylmar, Calif. 91342

Continuation-in-part of application Ser. No. 478,154,
Aug. 9, 1965. This application Aug. 17, 1967, Ser.
No. 662,846

Int. Cl. A01g 25/00; F16k 31/12

U.S. Cl. 137—78

9 Claims



An automatic liquid flow control device having a flow control valve and a container which is filled with liquid at a controlled rate through the valve when the latter is opened to provide a bias force for closing the valve and from which the liquid is thereafter dissipated at a controlled rate by evaporation and/or drainage to effect re-opening of the valve.

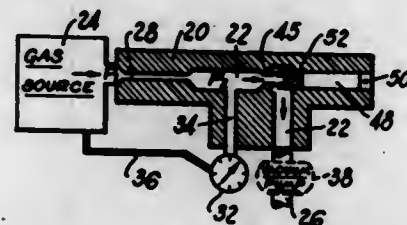
3,517,685 GAS PRESSURE REGULATOR

James M. Eastman, South Bend, Ind., assignor to The
Bendix Corporation, a corporation of Delaware
Original application June 9, 1967, Ser. No. 644,898, now
Patent No. 3,438,258, dated Apr. 15, 1969. Divided and
this application Jan. 29, 1969, Ser. No. 794,969

Int. Cl. F15c 3/00

U.S. Cl. 137—81.5

4 Claims



A temperature sensing and fluid pressure regulating apparatus having a gas transmitting conduit provided with a laminar flow restriction and a sonic flow restriction downstream from and in series with the laminar flow restriction. A gas pressure drop generated across the laminar flow restriction is an essentially linear function of the temperature of the gas flowing therethrough thereby providing a sensible pressure signal indicative of the gas

temperature. By varying the area of the sonic flow restriction as a function of the gas temperature, the gas pressure drop across the laminar flow restriction may be maintained substantially constant and regulated relative to the supply gas pressure for control purposes.

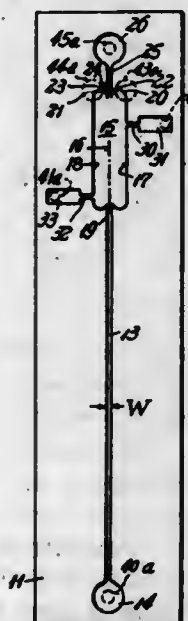
3,517,686 FLUID OSCILLATOR SYSTEM

Brooks Lyman, Pound Ridge, N.Y., and Robert F.
O'Keefe, Trumbull, Conn., assignors to Pitney-Bowes,
Inc., Stamford, Conn., a corporation of Delaware
Filed July 13, 1966, Ser. No. 564,821

Int. Cl. F15c 1/08

U.S. Cl. 137—81.5

6 Claims



A fluidic oscillator that includes a single turbulence type fluid amplifier, to the collector of which is connected a plenum chamber and to the side of the interaction chamber of which is connected a fluid outlet line whereby the alternate automatic filling and emptying of the plenum chamber produces corresponding periodic fluid pressure changes in the said outlet line.

3,517,687 METHOD AND DEVICE FOR THE OSCILLATION- FREE OPERATION OF A ROTARY PUMP

Günter Oskar Nordt, Berghausen, Germany, assignor to
H. Schroeder & Co., Elbach-Kalkkuhl über Engelskir-
chen, Rheinland, Germany, a firm

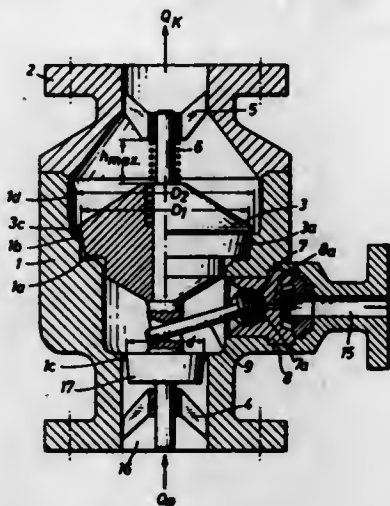
Filed May 29, 1968, Ser. No. 733,059

Claims priority, application Germany, June 1, 1967,
Sch 40,809

Int. Cl. F04b 49/08; F04d 15/00

U.S. Cl. 137—117

7 Claims



A valve device for stabilizing discharge from a pump. The valve device comprises a discharge throttling cone which throttling cone actuates an auxiliary by-pass relief valve member.

3,517,688 ASEPTIC FILLING VALVE

William R. Scholle, Long Beach, Calif., assignor to
Scholle Container Corporation, Northlake, Ill., a
corporation of Illinois

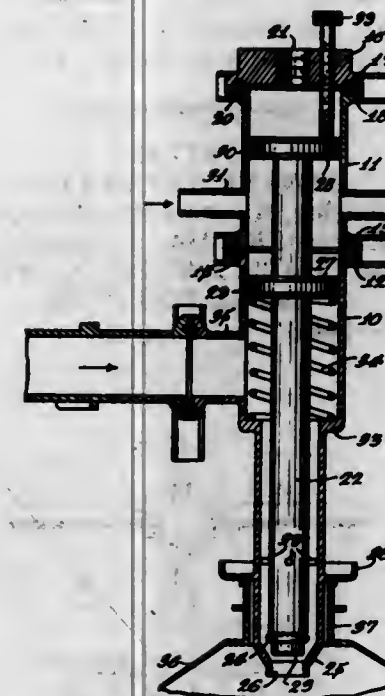
Filed Oct. 8, 1968, Ser. No. 765,924

Int. Cl. F16k 1/00, 31/12

U.S. Cl. 137—240

4 Claims U.S. Cl. 137—330

2 Claims



A valve assembly comprising a housing formed with a dispensing opening at one end defining a valve seat, a valve stem, a valve head for cooperation with said seat, and a liquid inlet conduit opening to and extending laterally from said housing. The invention is characterized by an intermediate and terminal end spaced pair of discs on said stem and forming a chamber between them and the housing and an opposed pair of conduits opening to the chamber between said discs for passage of an aseptic gas therethrough. The assembly for this comprises expansion spring means in said housing tending to unseat said valve head and an aperture at the opposed end of said housing for admission of valve actuation gas under pressure and to act on the terminal one of said discs.

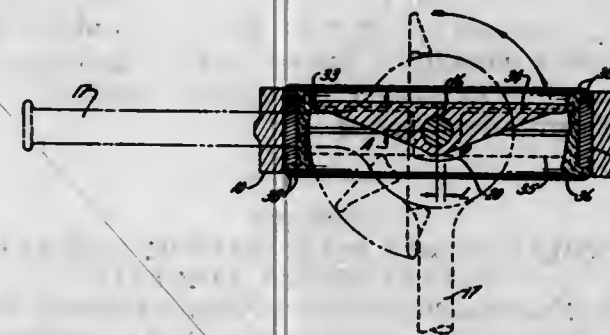
3,517,689 BUTTERFLY VALVE

William N. Roos, St. Cloud, Minn., assignor to De Zurik
Corporation, Sartell, Minn., a corporation of Minnesota
Filed Sept. 26, 1968, Ser. No. 762,781

Int. Cl. F16k 1/22

U.S. Cl. 137—329.01

3 Claims



A butterfly valve is described in which a pivoted valve disk may be shifted from sealing contact with a first seat to a second alternate seat by rotation through 180°. The valve seats and the pivot axis of the disk are offset laterally from the flow axis of the valve to eliminate scuffing of the alternate seat when not in use.

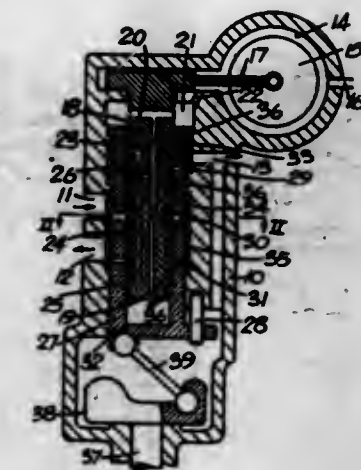
3,517,690 STATIC FRICTION FREE VALVE

Richard Joseph Isfeld, Beccroft, New South Wales,
Australia, assignor to Joseph Lucas (Industries)
Limited, Birmingham, England, a British company
Filed Dec. 7, 1967, Ser. No. 688,725

Int. Cl. F16k 29/02

4 Claims U.S. Cl. 137—330

2 Claims



In a valve having an angularly movable valve member static friction between this and the body part is removed by an axially movable sleeve disposed between the body part and the valve member, there being means for imparting axial reciprocating motion to the sleeve.

3,517,691 AIRFLOW CONTROL FOR AN AIR-FLUID MIXING PUMP

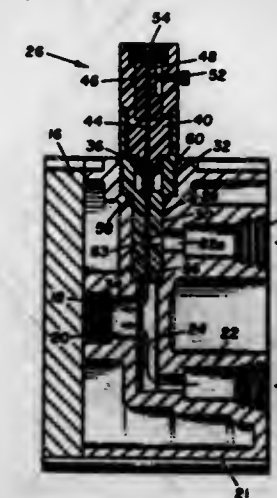
James S. Kilgore, Dallas, Tex., assignor to Polyspede
Electronics Corporation, Dallas, Tex., a corporation
of Texas

Filed Apr. 4, 1968, Ser. No. 718,878

Int. Cl. F16k 7/06, 19/00

U.S. Cl. 137—550

9 Claims



An air valve for a pump which mixes metered amounts of air with fluid includes a valve member with an air opening therethrough fitted within a counterbore in the pump casing. A resilient member is contained within the valve member and has a bore therethrough which communicates with the air opening through the valve member. A screw is threaded through the valve member and abuts against the resilient member. The screw may be adjusted lengthwise to selectively deform the resilient member to constrict the bore and control the amount of air passing through the air opening. A check valve is also contained within the valve member to prevent the passage of fluid through the air opening.

3,517,692

PRESSURE RELIEF VALVE ASSEMBLY

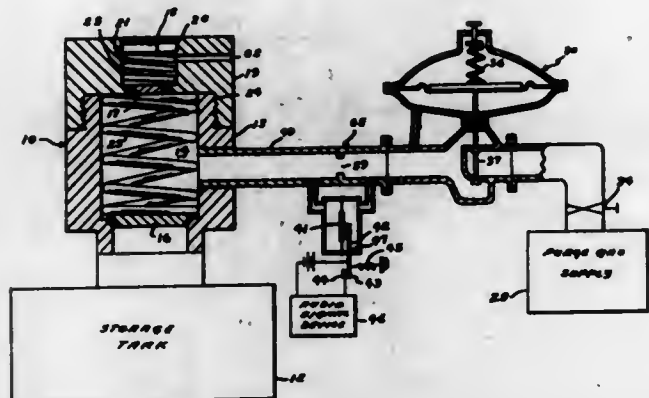
Charles W. Elrod, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed July 10, 1968, Ser. No. 743,811

Int. Cl. F16k 17/04, 21/06

U.S. Cl. 137-557

6 Claims



A pressure relief valve assembly for a vessel containing a vaporizable fluid has a pair of spring-loaded valve plungers with a purge chamber positioned between the plungers. A high pressure gas supply which contains a gas, either of the same composition as that in the vessel or a neutral gas, is connected to the purge chamber through a pressure regulator and flow sensor. When either of the two plungers remain unseated, purge gas flows from the purge gas supply through the purge chamber and the unseated plunger. The flow of gas through the flow sensor operates an audio signal device.

3,517,693

LOW GAS SIGNAL AND INDICATOR FOR GAS CYLINDERS

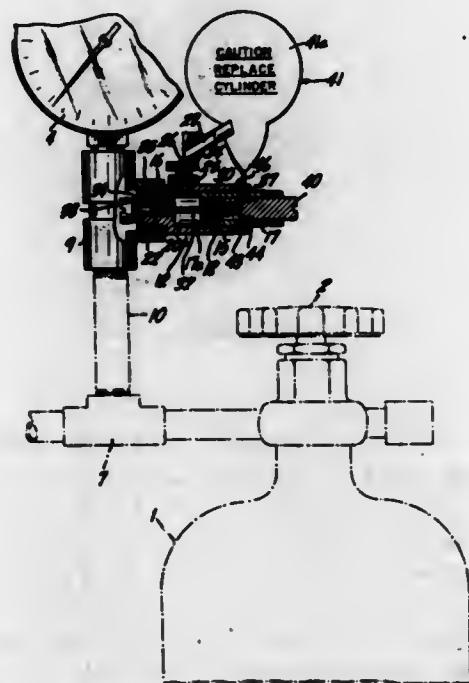
Henry G. Dietz, 275 New Hyde Park Road, Garden City, N.Y. 11040

Filed Aug. 24, 1967, Ser. No. 663,124

Int. Cl. G01l 19/12; F17c 13/02

U.S. Cl. 137-557

4 Claims



Apparatus mountable on a gas cylinder having a piston sensing the internal pressure of the gas cylinder and effective to turn "on" and "off" an acoustic signal. The pis-

ton responds to a variably set reduced pressure level set by a spring and is actuated by the spring overcoming the reduced gas pressure for turning on the audible signal. The audible signal is in turn turned "off" by a visual signal means or an indicator continuing the indication visually that the gaseous contents of the cylinder are at a reduced level. If the visual signal is moved from its visual indicating position the audio signal is automatically turned "on" again so that there is always a continuous signal, visual or audible, that the reduced pressure level, and therefore reduced contents, obtains in the gas cylinder.

3,517,694

SWIVEL APPARATUS

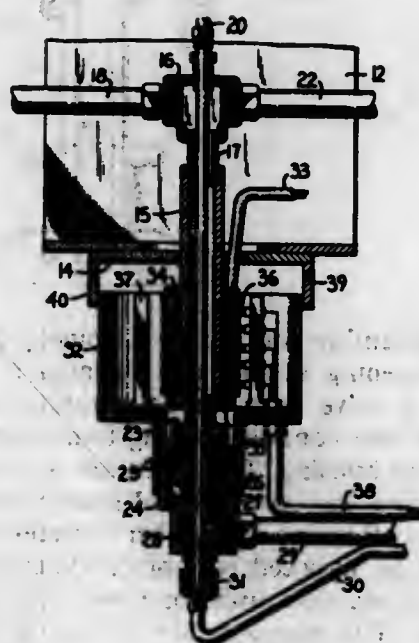
Gordon V. Lieffring, Kansas City, Mo., assignor to Robo-Wash, Inc., Kansas City, Mo., a corporation of Missouri

Filed June 28, 1967, Ser. No. 649,651

Int. Cl. F16l 39/04

U.S. Cl. 137-560

6 Claims



A swivel apparatus having separate flow paths for conducting separated fluids therethrough from a stationary source to a movable unit connected thereto and including electrical connections for supplying controls and power equipment on the movable unit. The swivel includes stationary pipes or tubes one within the other and with bearing means on the outer pipe rotatably mounting a coupling having one fluid-delivery pipe carried thereby and extending therefrom said coupling rotating on the inner pipe with fluid seals between the coupling and both pipes. A second delivery pipe communicates with the inner pipe and rotates with the coupling. An electrical collector ring is carried by the outer pipe and insulated therefrom with a plurality of spaced circuit rings engaged by conductor brushes carried in a housing supported by and rotatable with the coupling.

3,517,695

CONTROLLER FOR A PLURALITY OF HYDRAULIC AND ELECTRICAL CIRCUITS

John W. Eveleigh, Purdy Station, Leon Castellani, Bronx, and Jack Isreell, Mamaroneck, N.Y., assignors to Technicon Corporation, Ardsley, N.Y., a corporation of New York

Filed Nov. 13, 1967, Ser. No. 682,430

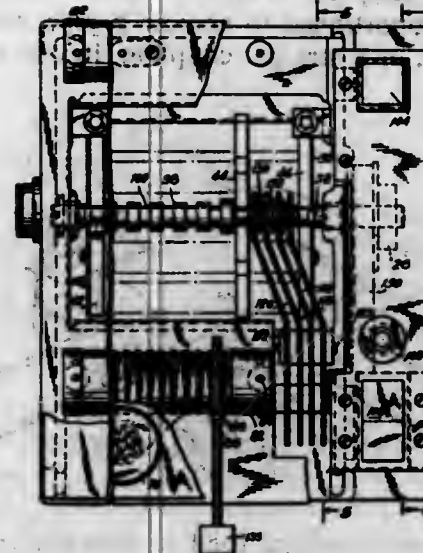
Int. Cl. F16l 55/14

U.S. Cl. 137-566

6 Claims

A controller for a plurality of hydraulic and electrical circuits includes a spool having a plurality of releasable shafts. Each shaft has a plurality of cams, some for oc-

cluding resiliently compressible tubes against a platen, others for operating switches. Each shaft in succession



is indexed into operative position. Each shaft may be inserted and removed with its cams as a complete unit.

3,517,696

SAFETY VALVE

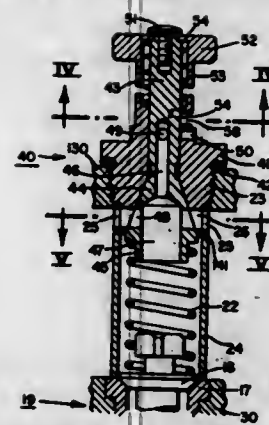
Alphonse W. Faure, Philadelphia, Pa., assignor to C.S.S. Machine & Tool Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 6, 1968, Ser. No. 757,895

Int. Cl. F16k 11/12

U.S. Cl. 137-596

4 Claims



Safety valves are provided for a cam-controlled multiple valve block which controls the distribution of compressed air to various parts of automatic equipment. The safety valve shuts off the air supply to the cylinder. Additionally, in the off position, the valve provides a vent to the atmosphere to allow any air leaking through to reach the cylinder.

3,517,697

PRESSURE REGULATING VALVE

Melville W. Hett, Jr., and Fred A. Holmich, Cincinnati, Ohio, assignors to Richards Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Dec. 13, 1967, Ser. No. 690,182

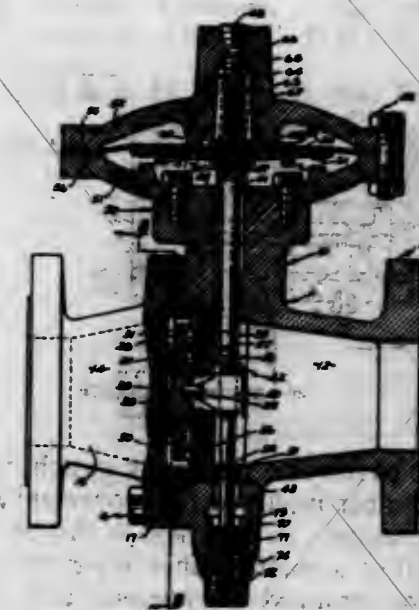
Int. Cl. F16k 11/06, 39/04, 3/00

U.S. Cl. 137-625.33

8 Claims

A pressure regulating valve in which flow is controlled by a stationary plate and a slidable disc in facial contact with one another. The disc and plate are each provided with a series of apertures aligned in one position of the disc to permit flow through the valve. When the disc is

in a second position in which the apertures are not aligned, the valve is sealed to prevent fluid flow. The disc is shifted by a reciprocating stem connected to a diaphragm having pressure chambers above and below it. A return spring applies an upward force to the stem urging



the stem toward the diaphragm and the disc to its closed position. A balance spring applies a downward force to the stem opposing the return spring force in excess of the static frictional resistance force on the disc, but less than the force of the return spring.

3,517,698

PNEUMATIC ACTUATOR CONTROL SYSTEM

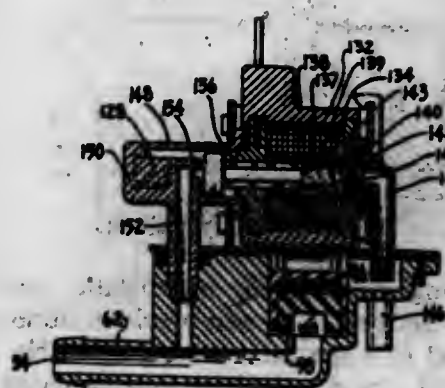
Raymond A. Deibel, Cheektowagh, and William C. Riester, Williamsville, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.

Original application July 20, 1966, Ser. No. 566,521, now Patent No. 3,402,288, dated Sept. 17, 1968. Divided and this application Apr. 23, 1968, Ser. No. 739,596

Int. Cl. F16k 11/06, 35/06

U.S. Cl. 137-625.64

1 Claim

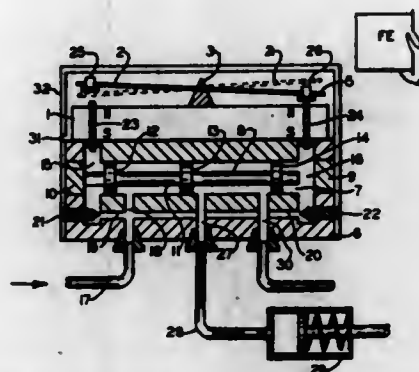


A retractable headlamp system for motor vehicles utilizing an electro-pneumatic pilot valve for controlling a servo-valve. The servo-valve in turn controls application of vacuum from a source including the engine intake manifold and a vacuum storage tank to differential pressure actuated power units. Through a linkage system the power unit moves the headlamp assembly from operative to retracted position and vice versa. Venting occurs through the pilot valve. A manual switch simultaneously energizes the headlight circuit and the solenoid of the pilot valve. A manual mechanical actuator is provided to operate the servo-valve in case of electrical failure.

3,517,699

MAGNETIC-PNEUMATIC PROXIMITY SWITCH
Charles R. Marcum, Louisville, Ky., assignor to General Equipment and Manufacturing Company, Inc., Louisville, Ky., a corporation of Kentucky
Filed Oct. 20, 1967, Ser. No. 676,762
Int. Cl. F16k 11/07; F15b 5/00
U.S. Cl. 137—625.64

5 Claims

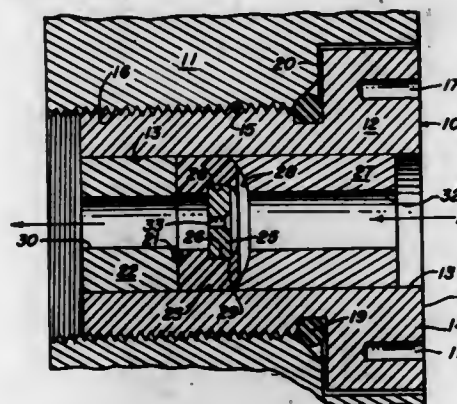


The magnetic-pneumatic proximity switch comprises a magnetizable member mounted for movement in the field of a permanent magnet as that field is shifted by the approach or retreat of a magnetizable object to be detected, the member being arranged in a pneumatic circuit to open or close passages as an object is detected. Preferably the switch also includes a spool pilot valve in the assembly arranged to control a fluid operated work cylinder.

3,517,700 COMPENSATING ELEMENT FOR HYDROSTATIC BEARINGS

Alan F. Williams, Palo Alto, and William T. Zee, South San Francisco, Calif., assignors to Tydeman Machine Works, Inc., Redwood City, Calif., a corporation of California
Filed Dec. 23, 1968, Ser. No. 786,121
Int. Cl. F15d 1/02
U.S. Cl. 138—44

9 Claims



A compensating element for hydrostatic bearings includes an orifice formed in a semi-precious stone material which is mounted in a special retaining assembly with deformable material whereby leakage is eliminated at high pressures and the stone material is able to withstand mechanical and thermal shock while providing accurate, precise flow control for improved bearing performance.

3,517,701 REPAIR FITTING

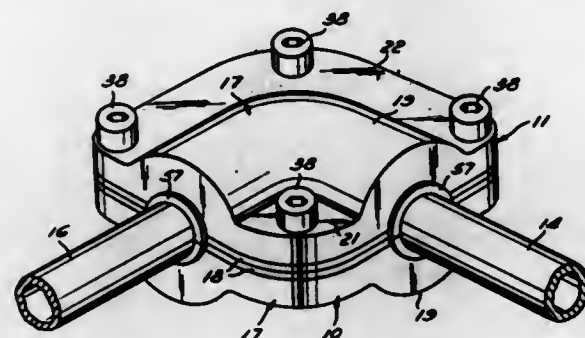
Joseph B. Smith, % The Pipe Line Development Co., 1831 Columbus Road, Cleveland, Ohio 44113
Filed Apr. 8, 1968, Ser. No. 719,537
Int. Cl. F16l 55/18, 23/00

U.S. Cl. 138—97

11 Claims

A pipe repair fitting is disclosed which includes flanged fitting halves, each consisting of a rigid metal body and an elastomeric sealing material bonded thereto. The two

halves are proportioned so that, when assembled, the sealing material along the flanges cooperates with the sealing material along spaced pipe clamping zones to completely close a chamber proportioned to loosely enclose the leaking portion of the pipe. In the illustrated embodiments the chamber is proportioned to enclose a pipe fitting such as an elbow, a T, or a straight coupling. In one embodiment

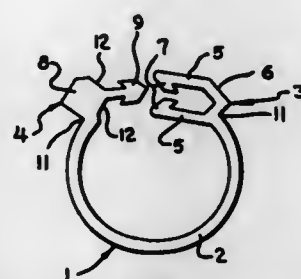


a single assembly may be used to selectively repair leaks at a T, an elbow, or a straight coupling by selectively positioning a separate plug element in the assembly when the pipe being repaired joins only two pipes. The disclosed method of forming the coupling halves includes molding the elastomeric sealing material to the fitting half body while the body is positioned in a pattern and curing the sealing material while the body is so positioned.

3,517,702 FLEXIBLE MATERIAL TO FORM A TUBULAR MEMBER

Arthur Llewellyn Mueller, Havertown, and John Omer Trimble, Malvern, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed July 8, 1966, Ser. No. 563,905
Int. Cl. F16l 11/00; H01b 7/28
U.S. Cl. 138—128

4 Claims



A plastic tubing comprises a strip of material having a thin wall body section provided with a receiving section along one longitudinal edge and a barbed section along another longitudinal edge, the receiving section defining a U-shaped configuration and the barbed section having a barb, the receiving section and the barb is mateable with the receiving section to form the body section into a tube having an inner surface of substantially constant diameter.

3,517,703 HEALD CONTROL AND DRIVE MECHANISM FOR DOUBLE LIFT DOBBIES

Rudolf Schwarz, Horgen-Zurich, Switzerland, assignor to Gebr. Stäubli & Co., Horgen-Zurich, Switzerland, a corporation of Switzerland
Filed June 27, 1968, Ser. No. 740,550
Claims priority, application Switzerland, June 27, 1967, 9,116/67

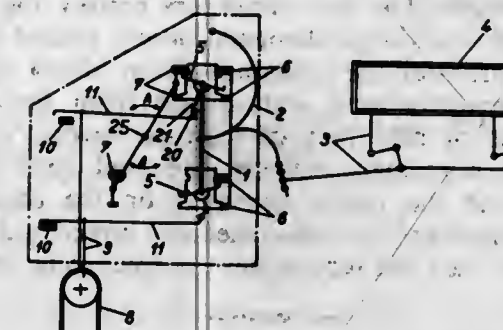
Int. Cl. D03c 1/00, 1/06

U.S. Cl. 139—68

5 Claims

In a double lift dobby having a heald control and drive mechanism comprising a baulk with attachment

hooks, a pivotal connection between the baulk and the attachment hooks permits a rotative swinging movement



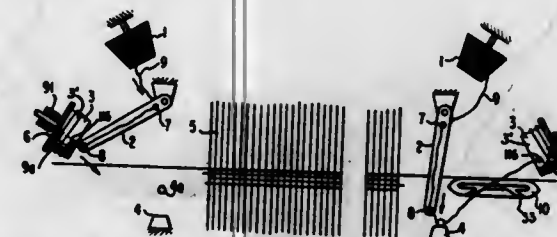
and also a straight line movement in the plane of the baulk.

3,517,704 WEFT INSERTING DEVICE

Gustav Dubs, Arbon, Switzerland, assignor to Adolph Saurer Ltd., Arbon, Switzerland, a corporation of Switzerland
Continuation-in-part of application Ser. No. 395,701, Sept. 11, 1964. This application Oct. 21, 1966, Ser. No. 588,545
Claims priority, application Switzerland, Sept. 12, 1963, 11,321/63, 11,323/63, 11,327/63
Int. Cl. D03d 47/00

U.S. Cl. 139—122

11 Claims

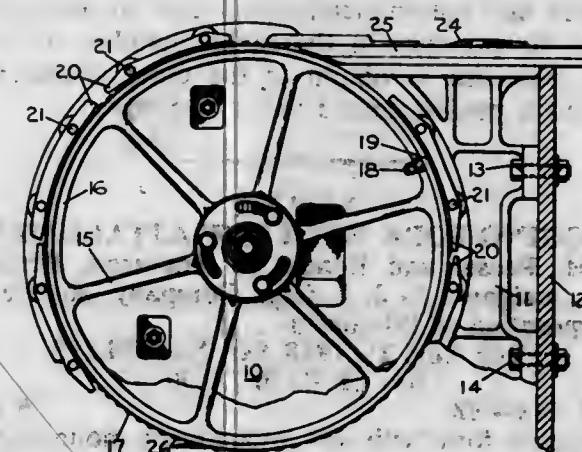


A loom is provided with a measuring device having a rotatable drum on which lengths of weft are wound and a weft holder which releasably grips the weft at a point spaced from the drum so that a weft between the drum and holder can be picked up by a picking member. In addition, a rocking lever is mounted to supply the weft in alternating fashion to the drum and holder. Also, a combination clamp and cutter is mounted on the drum to clamp the weft feed to the drum from the lever so that the weft can be cut thereat.

**3,517,705
TAPE MOTION FOR SHUTTERLESS LOOMS**
William M. McClure, Jr., Upton, Mass., assignor to North American Rockwell Corporation, Pittsburgh, Pa., a corporation of Delaware
Continuation of application Ser. No. 701,650, Jan. 30, 1968. This application Aug. 4, 1969, Ser. No. 852,148
Int. Cl. D03d 47/18

U.S. Cl. 139—122

2 Claims

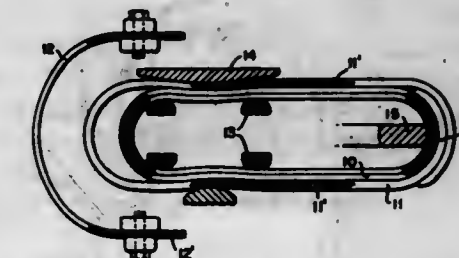


Flexible filling carrier tape members for shutterless looms having means for reducing the frictional contact

with their guiding shoe members and the outer periphery of oscillatable tape wheels about which they are wrapped and extended during the performance of their intended function.

**3,517,706
CHECK STRAP ASSEMBLY**
Chester R. Messer, Concord, N.H., assignor to Page Belting Company, Concord, N.H., a corporation of New Hampshire
Filed Sept. 17, 1968, Ser. No. 760,229
Int. Cl. D03d 49/40
U.S. Cl. 139—161

3 Claims

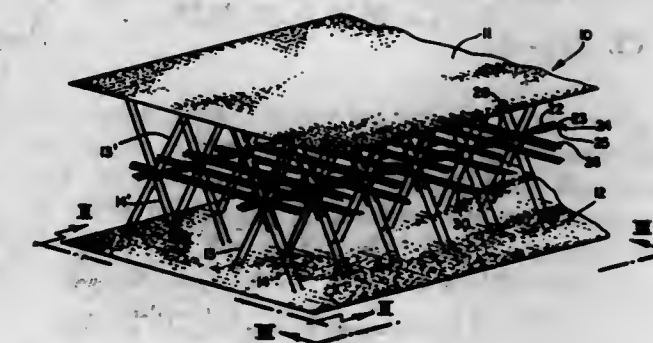


A check strap assembly comprising a closed inner loop of predetermined length, a closed center loop of greater length slidably containing the said inner loop and being itself bodily movable in respect to picker stick action, and an open outer auxiliary loop fixed at both ends in position to arrest endwise movement of the contiguous inner and center loops, together with friction fingers engaging the inner and center loops and the said loops being stiffened to prevent creeping in the operation of the loom.

**3,517,707
DUAL WALL FABRIC WITH REINFORCING STRANDS**
John T. Hayes, Durham, and Robert G. Currier, Roxboro, N.C., assignors to Collins and Altkman Corporation, New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 702,925, Feb. 5, 1967. This application Oct. 1, 1968, Ser. No. 764,138
Int. Cl. D03d 11/00

U.S. Cl. 139—410

17 Claims



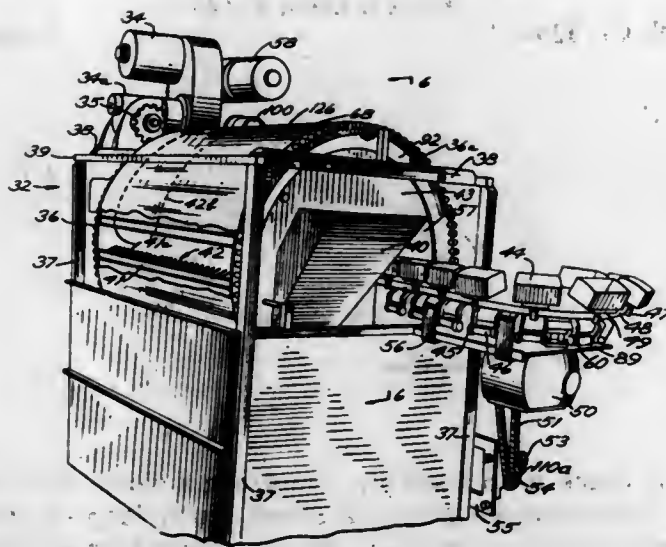
A dual wall fabric is provided, with integrally woven warp direction drop threads which extend back and forth a plurality of times between opposed fabric layers, when the fabric layers are spaced by warpwise extending spacing gauges. The connecting or drop threads engage or loop around weft threads disposed above and below the gauges adjacent associated fabric layers, with the weft threads being supported by the gauges prior to removal of the fabric material from the gauges. The fabric material can be expanded upon removal from the gauges, in a manner utilizing weft and warp strands as reinforcing strands.

3,517,708
**MACHINE AND METHOD FOR TRANSFERRING
 PREDETERMINED AMOUNTS OF MATERIAL**
 Bernard C. Elsenberg, Rockaway, N.J., assignor to
 Solbern Corp., Fairfield, N.J., a corporation of
 Delaware

Filed Mar. 17, 1967, Ser. No. 623,994
 Int. Cl. B65b 43/63, 1/36

U.S. Cl. 141-1

26 Claims

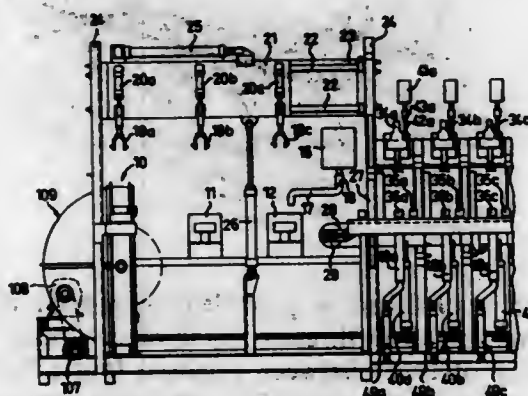


The machine and method relating to the establishment of a predetermined amount of material in a receptacle and the transferring of the material in the receptacle to a container. Agitation of the receptacle establishes the predetermined amount of material therein. The receptacle is then available to deliver the predetermined amount of material to a container which, due to its construction, cannot be agitated to control the amount therein during a filling operation. Thus the receptacle becomes an intermediate measuring and transferring device between a source of material and the container or other device to which the material is to be delivered.

3,517,709
**LABORATORY SYSTEM FOR AUTOMATICALLY
 ANALYZING MASHED SUGAR BEET SAMPLES**
 Laws Herbert Westesson, Arlov, Sweden, assignor to
 Ingenjorsfirman Nils Weibull AB, Malmo, Sweden
 Filed Feb. 29, 1968, Ser. No. 709,378
 Int. Cl. B65b 1/30, 3/26

U.S. Cl. 141-83

5 Claims



In a laboratory system samples of mashed sugar beets are automatically analyzed in respect of their sugar content as the samples in open-top sample containers are conveyed through a number of stations distributed in a row along belt conveyors, in which stations various

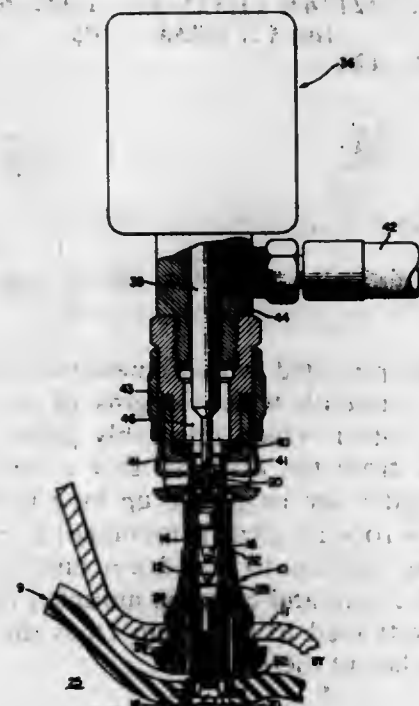
analyzing steps are performed. Having traveled through said row of stations, the sample containers are returned from one end of the row of stations to the other on a return conveyor. The belt conveyors convey the sample containers as individual elements loosely placed thereon, and means transfer the containers from either of a pair of feed conveyors to a station and from that station to the other of said pair of feed conveyors, and also transfer the containers between the feed conveyors on one hand and the return conveyor on the other hand while the containers are simultaneously turned and washed clean so that they can receive new samples to be analyzed.

3,517,710
**AUTOMATIC INFLATING AND PRESSURE
 CHECKING MEANS FOR DUAL CHAMBER
 TIRES**

Joseph S. Hawkes, Cuyahoga Falls, Henry W. Krohn, North Olmsted, and William C. Radwell, Tallmadge, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
 Filed Apr. 2, 1968, Ser. No. 718,058
 Int. Cl. B65b 1/30

U.S. Cl. 141-95

5 Claims



A system for automatically inflating the two chambers of a dual chamber tire having means for providing pressurized air to at least the inner chamber of the tire for a predetermined time interval and then for applying pressurized air only to the outer chamber of the tire for a predetermined time interval, subsequent to which the tire is automatically disconnected from the pressurized air source and automatically connected to means for indicating the pressure in the outer chamber of the tire and/or indicating deviation of the outer chamber pressure from a predetermined value or range.

3,517,711
LOGGING FORK WITH SAW ATTACHMENT
 Earl M. Reeser and Ronald L. Anderson, Burlington, Iowa, assignors to J. L. Case Company, Racine, Wis., a corporation of Wisconsin

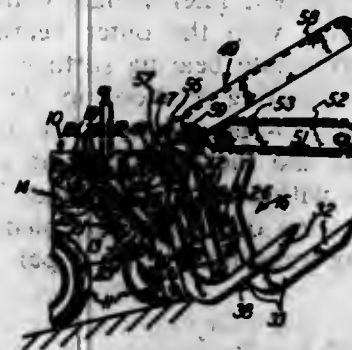
Filed Aug. 21, 1968, Ser. No. 754,295
 Int. Cl. B27b 17/00

U.S. Cl. 143-32

5 Claims

A logging fork with saw attachment mountable on a tractor having fork tines pivotally mounted on the front of the tractor. A chain saw is pivotally mounted adjacent

the upper end of the fork for pivoting downwardly through powered pivot means. A log held by the fork tines is then

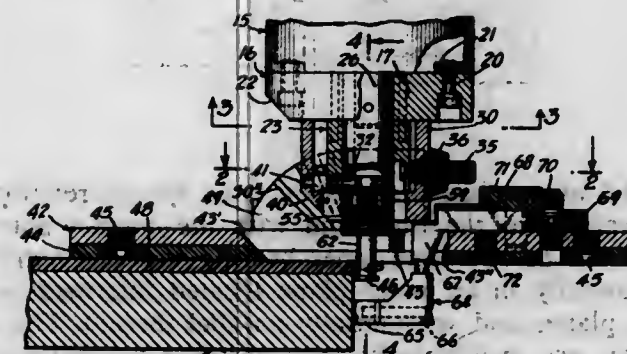


cut by the saw which is operated by a motor. Cutting the log from above avoids pinching the saw by the log being cut.

3,517,712
WORKPIECE EDGE TRIMMING DEVICE
 Charles Selowitz, Rego Park, N.Y., assignor to Ronald Selowitz, Deer Park, N.Y.
 Filed Mar. 23, 1967, Ser. No. 625,429
 Int. Cl. B27c 5/10

U.S. Cl. 144-134

7 Claims

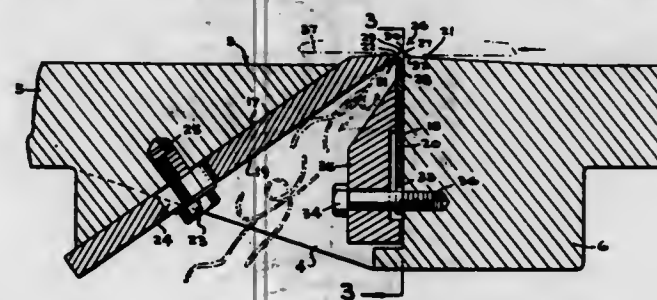


A plastic top, table, board or the like edge trimmer device, comprising a base plate, on which is adjustably supported a tool supporting hollow head detachably mounted on a block coupled with an electric motor and wherein the motor shaft has means adjustably supporting a trimming tool projecting below the lower surface of said base plate, the base plate having below the tool a workpiece engaging guide.

3,517,713
FIBRE CUTTING MACHINE
 Franklin C. Flippo and Arthur P. Flippo, both of
 Doswell, Va. 23047
 Filed Aug. 2, 1968, Ser. No. 749,818
 Int. Cl. B27i 11/04

U.S. Cl. 144-186

6 Claims

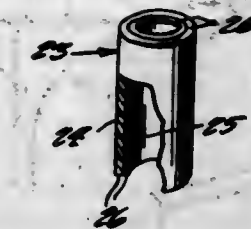


An excelsior making machine having a toothed wood-slitting blade and a slicing knife mounted in a reciprocating gate frame in angular relation and movable over a wood block, with the slicing knife contacting and bridging the slitting blade teeth, to provide sizing openings between the teeth and knife edge through which wood strips must pass to enter the final product.

3,517,714
SCREWDRIVER
 Edward W. Desbarats, 552 Lakeshore Road,
 Beaurepaire, Quebec, Canada
 Filed Nov. 3, 1967, Ser. No. 680,425
 Int. Cl. B25b 23/08

U.S. Cl. 145-50

1 Claim

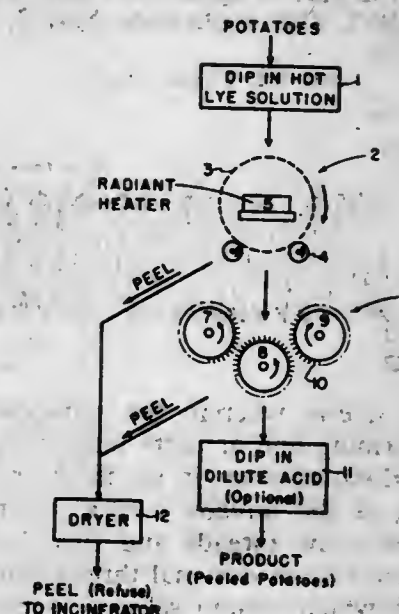


An improved screwdriver including a slideable sleeve which is slideable along the screwdriver shank and across the screwdriver blade for the purpose of preventing the blade from slipping out of a screw slot, the sleeve when being positioned around the blade also enclosing the screw head.

3,517,715
PROCESS FOR PEELING POTATOES
 Robert P. Graham, El Cerrito, Charles C. Huxsoll, San Pablo, Marcus R. Hart, Concord, and Marie L. Weaver, Martinez, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
 Filed Dec. 19, 1967, Ser. No. 691,740
 Int. Cl. A23n 7/02

U.S. Cl. 146-231

2 Claims



Potatoes are dipped in hot lye solution, exposed to radiant heat under controlled conditions to attain loosening of the peel without any charring effect, and the loosened peel is removed by dry brushing. A key feature of the procedure is that the waste—the removed peel—is in a solid condition and easily disposed by burning.

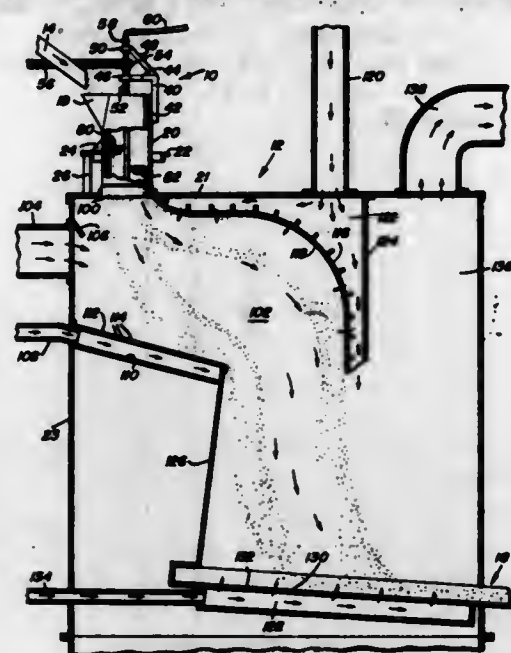
3,517,716
**METHOD FOR COMMUNUTING AND DRYING
 COOKED FOOD PRODUCTS**
 Albert Carlson, 4705 Hillcrest Drive, Boise, Idaho
 83705, and Armand J. Evans, Box 331, Blackfoot, Idaho 83221
 Original application May 11, 1962, Ser. No. 194,081,
 now Patent No. 3,391,631, dated July 9, 1968. Divided
 and this application May 23, 1968, Ser. No. 731,493
 Int. Cl. A23i 1/12; A23n 15/00

U.S. Cl. 146-230

4 Claims

Cooked potatoes are conditioned by comminution and aeration for free fall into a drier in which the comminuted particles are heated and further fluidized so as

to undergo baffled, retarded gravitational flow. By such exposure to the drier chambers, moisture is completely



removed from the cooked food particles in a continuous and rapid manner.

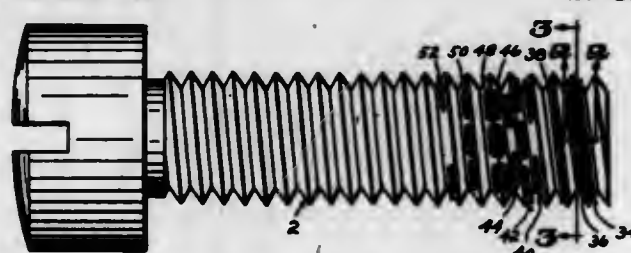
3,517,717 SELF-LOCKING SCREWS

Roger W. Orlowski, Paxton, Mass., assignor to Reed Rolled Thread Die Co., Holden, Mass., a corporation of Massachusetts
Continuation-in-part of application Ser. No. 701,944, Jan. 31, 1968. This application May 3, 1968, Ser. No. 734,833

Int. Cl. F16b 39/30

U.S. Cl. 151-22

25 Claims



Self-locking screws wherein the self-locking result is achieved by forming one or more outwardly turned ribs, continuous or discontinuous, in the flank or flanks of one or more turns of the threads over a selected length of the screw. The screw threads and ribs therein may be made by the use of conventional thread rolling dies (flat or circular) in which certain selected threads in one of the dies (preferably the movable die), over a suitable length have been deformed in a particular manner. The deformed die threads must be located at a proper distance from the end of the die so that the self-locking ribs formed in the threads of the screw will not be subsequently wiped out by encounter with the undeformed threads in the other die. Preferably, however, the ribs should have the leading and trailing ends thereof faired back into the flank of the screw thread sufficiently to facilitate entry into and removal from the internal thread.

3,517,718 VEHICLE SUSPENSION AND COUPLING THEREFOR

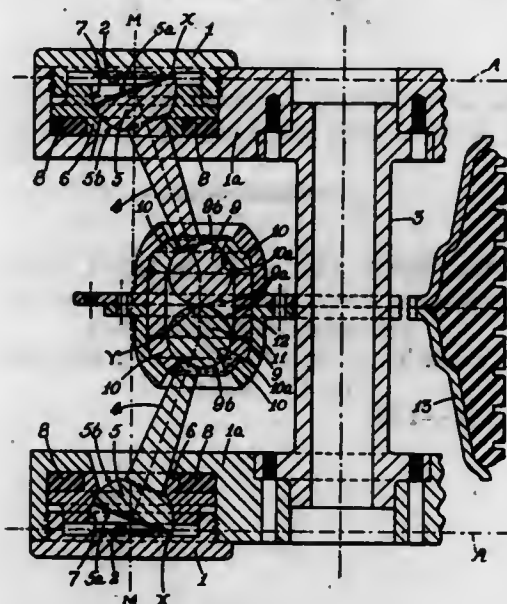
Edmond Eric Johnson, Chingola, Zambia (P.O. Box 207, Unkomass, Natal, Republic of South Africa)
Filed Dec. 11, 1967, Ser. No. 689,413
Claims priority, application Republic of South Africa, Dec. 22, 1966, 66/7,749
Int. Cl. B60b 9/00, 9/10

U.S. Cl. 152-27

14 Claims

A resilient, self-centering coupling which is particularly suitable for vehicle suspensions. A pair of links are

disposed between a pair of convex outer bearing surfaces located in fixed spaced relationship. At their outer ends the links present intermediate convex bearing surfaces co-operating with the outer bearing surfaces, the outer and intermediate bearing surfaces being resiliently retained in co-operating relationship. At their inner ends the links present co-operating convex inner bearing surfaces. The links and the outer bearing surfaces are relatively movable with the contact zones between the two sets of co-operating outer and intermediate bearing surfaces remaining substantially in a pair of substantially

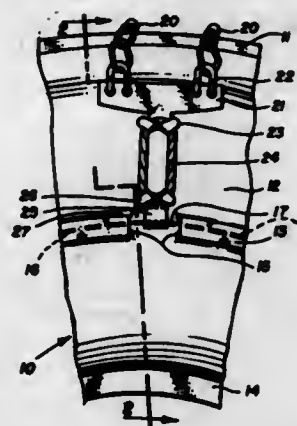


parallel outer planes located in fixed spaced relationship transversely to the links and with the contact zone between the co-operating inner bearing surfaces remaining substantially in an inner plane located intermediate the outer planes and substantially parallel thereto. The components are resiliently biased towards a normal position in which the links are located substantially in alignment with one another and substantially at right angles to the outer and inner planes. The links are displaceable out of alignment with one another and away from a right angular relationship to the inner and outer planes.

3,517,719 TIRE AND CHAIN COMBINATION

U.S. Cl. 152-223

7 Claims



A vehicle tire and anti-slip device combination which comprises a tire provided with integrally formed mounting means and anti-slip devices which include flexible yielding members and means for quickly and easily detachably connecting the members to the mounting means of the tire. The mounting means comprises a cable-covering annular lip on the external surfaces of the tire sides. The

lip may be formed in circumferentially spaced apart sections, between which the cable is exposed, or the lip may be continuous and provided with marking means at intervals to indicate the location of the cable. The marked area is designed to be cut away to expose the cable for attachment of the anti-slip device thereto.

3,517,720 PNEUMATIC TIRE

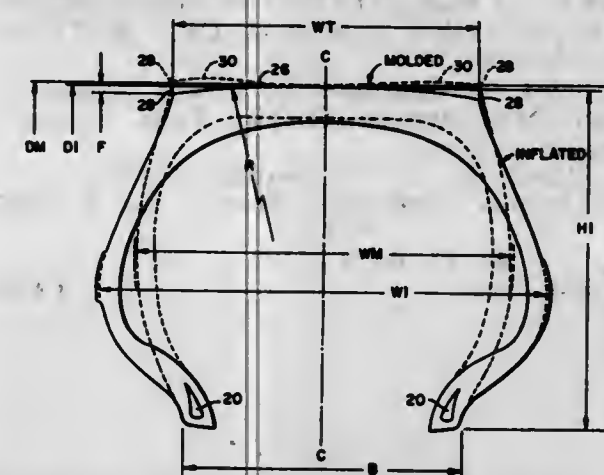
Ellsworth R. Brown, Branford, Conn., assignor to The Armstrong Rubber Company, West Haven, Conn., a corporation of Connecticut

Continuation-in-part of application Ser. No. 660,503, Aug. 14, 1967. This application Apr. 29, 1969, Ser. No. 826,767

Int. Cl. B60c 3/00, 11/00

U.S. Cl. 152-352

10 Claims



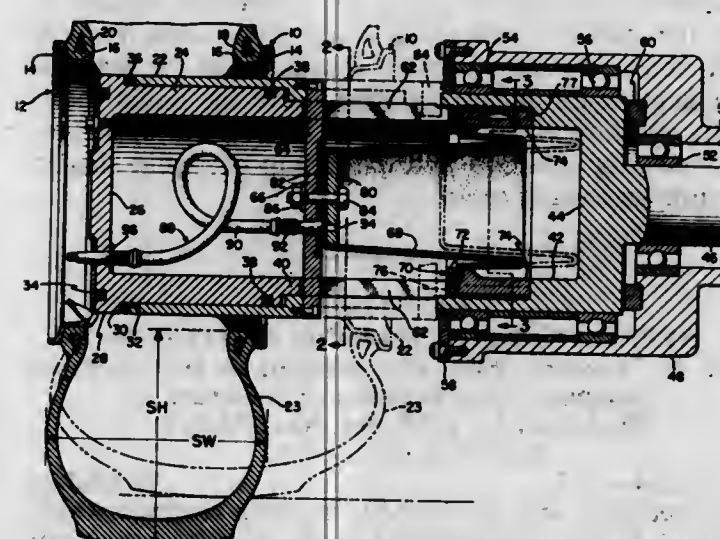
A pneumatic tire construction having a wide tread in which the load on the tire is more uniformly distributed over the entire area of contact between the tire and road surface due to an ox-bow shaped profile of the tread when molded, and to the manner in which the tire is constructed and molded in order to make it take the desired shape when inflated.

3,517,721 AXIALLY EXPANDABLE TIRE AND RIM ASSEMBLY

Edwin S. Woodhall, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 23, 1968, Ser. No. 761,643
Int. Cl. B60c 3/00

U.S. Cl. 152-352

10 Claims



A tire and wheel assembly for a vehicle which is axially expandable and contractible to vary the tire cross-section while the tire is inflated and mounted on and supporting the vehicle so as to provide for greater flotation when necessary or desirable.

3,517,722 WIRE CABLE-TO-RUBBER ADHESION

Norman G. Endler, Cuyahoga Falls, Charles N. Meier, Stow, and Lewis T. Lukich, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 21, 1965, Ser. No. 427,168

Int. Cl. B60c 9/16; B29b 9/08; B32b 15/06

U.S. Cl. 152-359

10 Claims

Discloses rubber and wire reinforced rubber structures wherein the rubber is modified with a resin formed in situ from the reaction of a methylene acceptor such as resorcinol and a methylene donor reactable therewith. The donors include N-(substituted oxymethyl) derivatives of urea, N-(substituted oxymethyl) derivatives imidazolidine, N-(substituted oxymethyl) derivatives of hydantoin, N-(substituted oxymethyl) derivatives of melamine, an N-(substituted oxymethyl) carboxylic acid amide, an N-(substituted oxymethyl) cyclicimide, a 5-substituted-1-aza-3,7-dioxabicyclo[3.3.0]octane, a 5-substituted-1,3-di (substituted oxymethyl) hexahydrotriazin-2-one, trimeric methyleneamino acetonitrile, and an azomethine.

3,517,723 VEHICLE TIRE FITTING AND REMOVAL APPARATUS

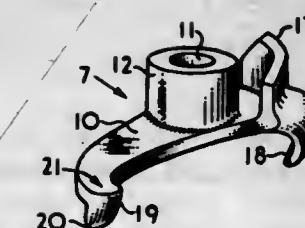
Derek Hogg, Sutton Coldfield, and William G. Leeson, Tamworth, England, assignors to The Dunlop Company Limited, London, England, a British company
Filed Feb. 5, 1968, Ser. No. 702,949

Claims priority, application Great Britain, Feb. 23, 1967, 8,666/67

Int. Cl. B60c 25/08

U.S. Cl. 157-1.24

10 Claims



A combination tire fitting and removal head adapted for use with known apparatus comprising a flat, elongated plate having a fitting element extending from one surface, a guide element extending from the other surface and located opposite the fitting element and a removal element on said other surface spaced away from the removal element. The fitting element may be in the form of a curved plate and in use engages with the radially inner surface of a tire bead to force it radially outwardly over the wheel rim and into the well. The guide element in the form of a hooked member engages the wheel rim and locates the head with respect to the wheel. The removal element in the form of a wedge also engages with the wheel rim and in use removes the tire bead from out of the wheel well over the rim after the initial use of a tire lever.

3,517,724 GATE CLOSER AND TIGHTENER

Ernest W. Jones, 3208 4th Ave., Council Bluffs, Iowa 51501

Filed July 23, 1968, Ser. No. 746,979

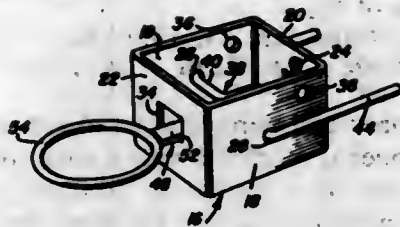
Int. Cl. E05c 5/00

U.S. Cl. 160-328

5 Claims

A gate closer embodying a box-like frame having an end wall secured to a fence post. A rocker shaft spans the frame and has handle-equipped end portions journaled in suitable bearing holes. A swingable crank projects and retracts a gate post fastener comprising a push-pull link

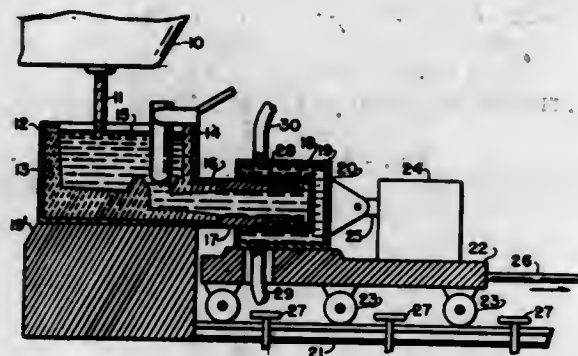
having a knuckle hinged to the crank. The alidable outward end of the link has an integral keeper ring releasably hitched over the upper end of the openable and



closable gate post. When the crank of the shaft is seated atop the inward limit stop lug the wires of the closed gate are tightened.

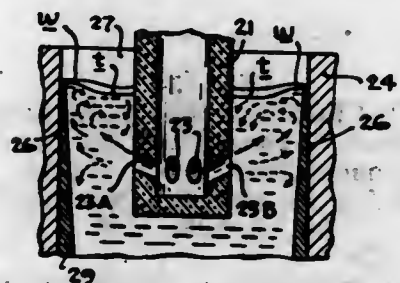
3,517,725 CONTINUOUS CASTING PROCESS AND APPARATUS

Leonard Watts, Cedarhurst, N.Y., assignor to Technicon Corporation, Tarrytown, N.Y.
Filed Feb. 14, 1968, Ser. No. 705,491
Int. Cl. B22d 11/08, 11/10
U.S. Cl. 164-82 10 Claims



Billets of steel or other metals are continuously cast in lengths from a closed end water cooled mold which is moved away from a source of molten metal. The closed end mold forms solidified sides of the billet being cast through which molten metal flows to the retreating mold. Thus the closed end mold forms the outer shell of the billet at its end remote from the source of molten metal.

**3,517,726
METHOD OF INTRODUCING MOLTEN METAL INTO A CONTINUOUS CASTING MOLD**
Norman Thomas Mills, Highland, Charles Richard Jackson, Hammond, and James Wood Halley, Chesterton, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 779,088, Nov. 26, 1968. This application Aug. 4, 1969, Ser. No. 857,263
Int. Cl. B22d 11/10
U.S. Cl. 164-82 14 Claims

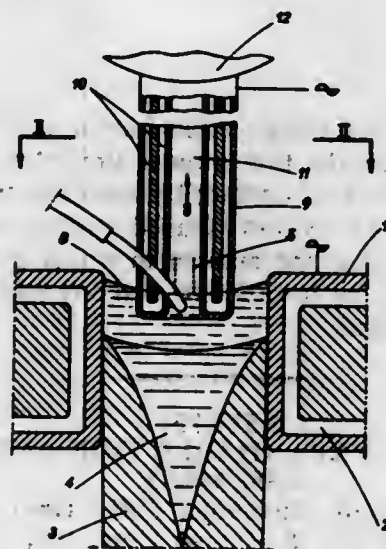


A continuous casting process whereby objectionable surface inclusions are substantially eliminated from the continuous casting and wherein molten steel is introduced

into a continuous casting mold by an injection means which discharges the molten metal into the mold below the surface of the molten metal pool maintained in the mold through controlled streams having an upwardly and outwardly flowing component which contact the solidifying casting surfaces to wash away objectionable inclusion materials normally frozen into the casting and deliver the objectionable inclusion material to the surface of the molten metal pool where they can be readily removed.

Injection nozzles adapted for use with continuous casting molds are disclosed which comprise tubular sections having circumferentially spaced lateral discharge openings for introducing the molten metal into the mold.

**3,517,727
APPARATUS FOR CONTINUOUSLY CASTING AND REFINING A METAL IN A BOTTOMLESS MOLD**
Louis Babel, Sauvigny-les-Bois, France, assignor to Societe Metallurgique d'Imphy, Paris, France, a company of France
Filed Dec. 27, 1967, Ser. No. 693,954
Claims priority, application France, Jan. 6, 1967, 90,258
Int. Cl. B22d 27/02, 11/10
U.S. Cl. 164-250 3 Claims

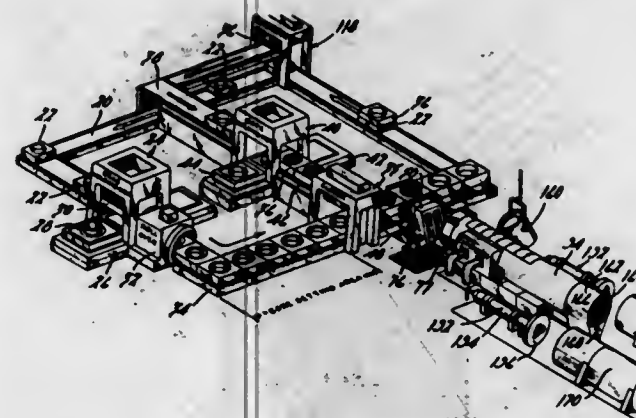


A process for refining metal in a continuous casting installation, comprising a cooled, bottomless mould in which the metal is cast, slag being introduced into the mould above the metal level, characterised in that the slag is kept liquid and is replaced above the liquid metal level by addition and extraction of the slag. An apparatus is provided for addition and extraction of liquid slag in a continuous casting mold.

**3,517,728
APPARATUS FOR MAKING CASTINGS**
Russell W. Taccone, Erie, Pa., assignor to Kelsey-Hayes Company, a corporation of Delaware
Filed Sept. 18, 1967, Ser. No. 674,044
Int. Cl. B22d 27/16
U.S. Cl. 164-255 13 Claims

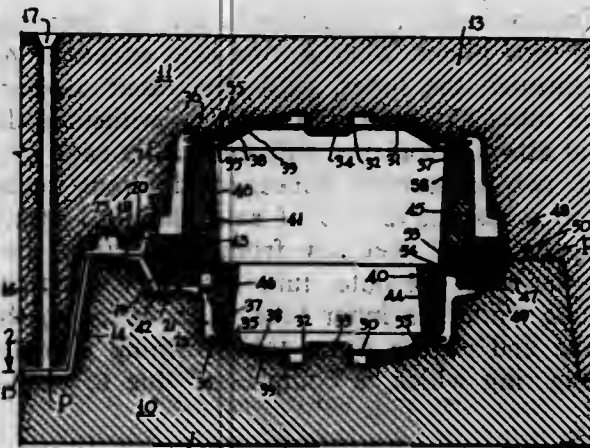
An apparatus and method for making castings which consist of successively forming a drag of a compacted green sand mixture having a cavity therein of a pre-selected pattern and disposed in an open ended flask, successively transferring the flasks by a transfer device into alignment with the inlet end of a casting tube adapted to guidably support a plurality of the molds disposed in face-to-face abutting relationship and pressing the mold from

the flask in a manner to effect a trimming of the periphery of the mold to correspond with and to provide a sliding sealing fit with the inner surface of the casting tube, pouring molten metal into the cavities of the molds while disposed in stacked face-to-face abutting relationship within the casting tube and thereafter successively ejecting and transferring the filled molds to an elongated cooling tube provided with cooling means for accelerating the removal of heat from the molds. In some aspects of the apparatus



and method comprising the present invention; a subatmospheric pressure is applied to the periphery of the molds while in the casting tube for removing gaseous products formed during the casting operation. An improved mold is also described which consists of a mass of compacted green sand having a core of a thin walled shell of bonded sand disposed in overlying relationship on one face thereof providing porosity and precision in castings heretofore unobtainable.

**3,517,729
CASTING APPARATUS HAVING ALIGNING MEMBERS IN COPE AND DRAG**
Dale W. Wouns, Grosse Pointe Woods, Mich., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Original application Oct. 23, 1965, Ser. No. 503,597, now Patent No. 3,429,364. Divided and this application Nov. 15, 1968, Ser. No. 776,091
Int. Cl. B22c 9/10
U.S. Cl. 164-366 4 Claims



Casting apparatus for simultaneously casting two articles in a single pour, one in the cope and one in the drag, is provided. By utilizing portions of the cope member and portions of the drag member for aligning the members, a common sprue and gate are used to pour the separate articles.

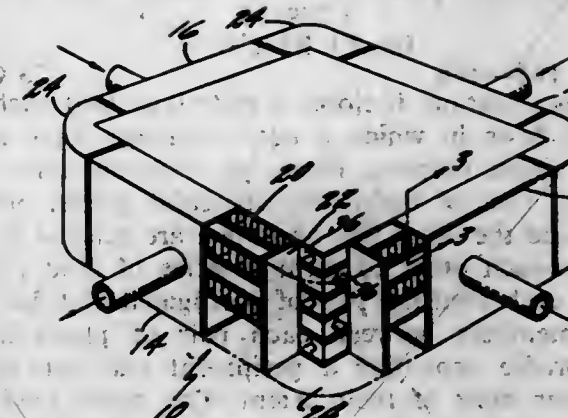
**3,517,730
CONTROLLABLE HEAT PIPE**
Theodore Wyatt, Union Bridge, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 15, 1967, Ser. No. 624,697
Int. Cl. F28d 15/00; G21h 1/10
U.S. Cl. 165-32 23 Claims



The object of the present invention is to provide apparatus for controlling the temperature within a space vehicle such as an earth satellite. The invention utilizes a heat pipe having a portion within the satellite and a portion extending exteriorly thereof, and having condensable and non-condensable gases therein. The condensable gas is vaporized by heat from within the satellite and forced by pressure into the portion of the pipe that extends exteriorly of the satellite, at the same time forcing the non-condensable gas into a bellows (or cylinder) connected to the outer end of the pipe. Vapor reaching the exterior portion of the pipe conducts heat from the satellite into free space. Vapor in the exterior portion of the pipe is condensed and returned to the interior portion thereof by a wick. The bellows may be compressed (or a piston in the cylinder moved), by remotely controlled means, for forcing non-condensable gas into the pipe for limiting vapor flow and thus heat discharge from the satellite.

In modified embodiments the invention is used for controlling the output of one or more thermoelectric generators.

**3,517,731
SELF-SEALING FLUID/FLUID HEAT EXCHANGER**
Edward A. Rothman, South Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 25, 1967, Ser. No. 670,356
Int. Cl. F28H 11/00
U.S. Cl. 165-70 7 Claims



The core of a plate-fin heat exchanger is made up of individual modules consisting of a pair of spaced plates sandwiching corrugated fins wherein sealant is disposed between each module so as to prevent leakage from one module to the other.

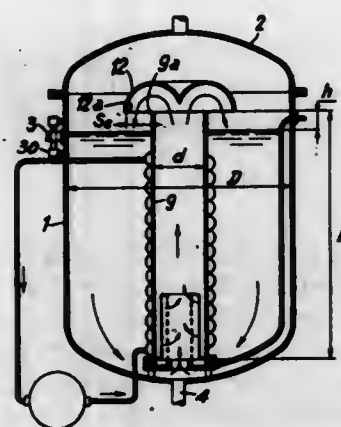
3,517,732 APPARATUS FOR TREATING A LIQUID WITH A GAS, NOTABLY FOR DEODORIZING EDIBLE OIL

Robert Brebant, Saint-Mande, France, assignor, by mesne assignments, to Sodeo, Societe Anonyme, Paris, France, a French body corporate

Filed Dec. 22, 1967, Ser. No. 692,921
Int. Cl. B01f 5/02; F28f 13/12

U.S. Cl. 165—108

8 Claims



Apparatus for treating a liquid with a gas, in particular for deodorizing edible oil, comprises a vessel, pipe lines for introducing into the vessel a certain quantity of liquid to be treated and for discharging treated liquid from the vessel and a vertically extending chimney open at its bottom and top ends and positioned in the vessel with its bottom end near the bottom of the vessel and its top end extending above the liquid level in the vessel. A steam injector discharges into the chimney to heat the liquid and produce strong upward flow of liquid in the chimney. By a deflecting baffle spaced above the top of the chimney and having a diameter greater than the chimney, the liquid discharged from the top of the chimney is directed outwardly and downwardly over the surface of liquid in the vessel. The chimney preferably has a hollow wall in which a temperature fluid is circulated.

3,517,733 HEAT EXCHANGERS

Ronald Vivian Tasker, Newcastle-upon-Tyne, and Raymond Leslie Holmes, Cleland, Sunderland, England, assignors to Clarke, Chapman & Co. Limited, Gateshead, Durham, England, a company of Great Britain and Northern Ireland

Continuation of application Ser. No. 699,257, Jan. 19, 1968. This application Aug. 20, 1969, Ser. No. 852,982
Claims priority, application Great Britain, Jan. 25, 1967, 3,759/67

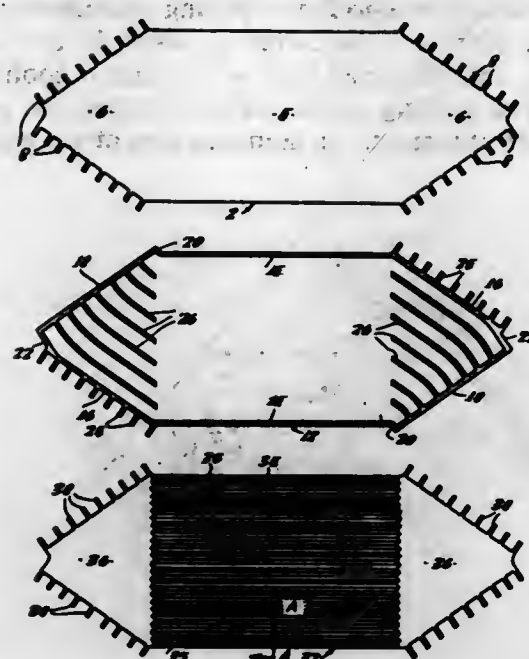
Int. Cl. F28f 3/00

U.S. Cl. 165—166

23 Claims

The specification discloses a plate-type heat exchanger for fluid flows in which a heat exchange stack can be built up from different forms of relatively thin planar members. Two of the forms are solid plates, one corrugated and the other flat, and these are stacked in alternation to each other to form a series of fluid passages between each abutting pair of corrugated and flat faces. Spacer members between each pair of plates have a closed profile providing a peripheral seal between the plates over most of their extent. The plates have symmetrical profiles but the spacer members are asymmetrical at two mutually remote end regions and inlet and outlet openings are thereby provided for the fluid passages between the plates. By reversing each successive spacer member, their asymmetrical location disposes alternate inlet and outlet openings at alternate peripheral positions where manifolds extending transversely to the

members may conduct the two fluids to and from the heat exchange passages. Such manifolds can be formed integrally with the spacer members so that they are built up with the assembly of the stack. Each corrugated plate



has flat end regions and elements integral with the spacer members extend inwardly over these regions to maintain the plates flat and to guide the flow to the passages formed by the corrugations.

3,517,734

HEAT EXCHANGERS

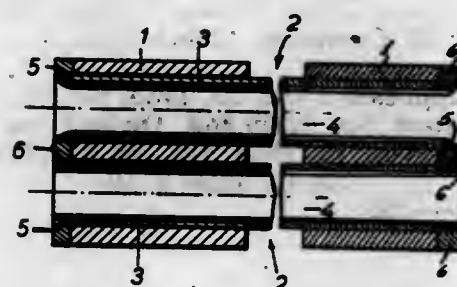
Johannes Anders Krosby, Hauke, Norway, assignor to Kvarner Brugs Kjøleavdeling A/S, Sandvika, Norway
Filed Feb. 23, 1968, Ser. No. 707,519

Claims priority, application Norway, Mar. 16, 1967, 167,315

Int. Cl. F28f 21/00

U.S. Cl. 165—178

3 Claims



An improvement in the attachment of heat exchange tubes to tube plates, wherein one heat exchange medium passes through the tubes, while the other medium contacts the tubes externally. In order to withstand different chemical attacks from the different media each tube consists of two concentric tubes of different metals resistant to a respective one of said chemical attacks. To prevent the outer medium from contacting the inner tube at the ends, the outer tube is made shorter than the inner tube while the inner tube is expanded in the tube plate, the end of the outer tube forming a seating for a packing ring which is compressed due to said expansion.

3,517,735

UNDERWATER PRODUCTION FACILITY

William J. Fairbanks, Midland, and William H. Petersen, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 28, 1968, Ser. No. 755,935

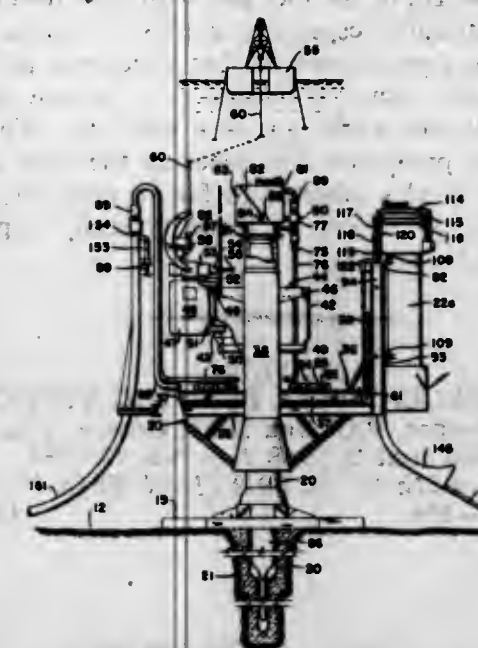
Int. Cl. E21b 33/035

U.S. Cl. 166—5

13 Claims

An underwater production facility for gathering, separating and/or metering production fluids from a plurality

of offshore wells and conveying the oil and/or other phases of the production fluid to suitable storage areas located either offshore or on land. The various components of



the facility are in modular form and may be independently remotely positioned at the facility site or removed therefrom as desired.

3,517,736

SUBSURFACE WIRELINE SYSTEM

Stoddard S. Waldron, Woodland Hills, Calif., assignor to North American Rockwell Corporation
Filed July 18, 1968, Ser. No. 745,832

Int. Cl. E21b 33/035

U.S. Cl. 166—5

12 Claims



A hollow chamber is connected to one end of a pipe section. The other end of the pipe is affixed with a connector for connecting the pipe to an underwater wellhead. A valve is interposed in the pipe section to separate the communication path between the chamber and the wellhead. Mounted within the chamber is a cable reel containing a length of cable and means for winding and unwinding the cable from the reel. Affixed to one end of the cable is a well cleaning tool which is normally stored in the pipe section. A lubricator is positioned in the pipe section between the tool and the chamber to lubricate the cable, thereby minimizing any wear that may take place. The chamber is connected to a surface vessel by a lowering cable with power and control being remotely accomplished from the surface through hydraulic and/or electrical lines extending to the system.

3,517,737 MARINE RISER FULL-DOWN DEVICE

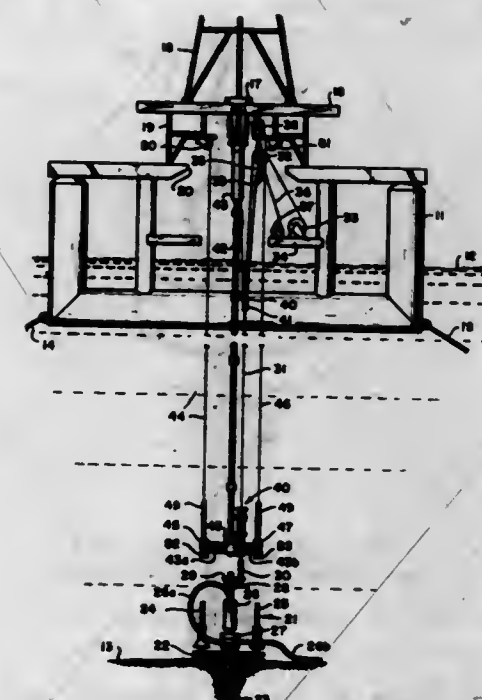
William H. Petersen, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 23, 1968, Ser. No. 731,495

Int. Cl. E21b 7/12; E21c 19/00

U.S. Cl. 166—6

2 Claims



Apparatus for bringing a wellhead connector, comprising part of a marine conductor pipe assembly depending from a floating vessel, into operative engagement with a landing mandrel of an underwater wellhead structure.

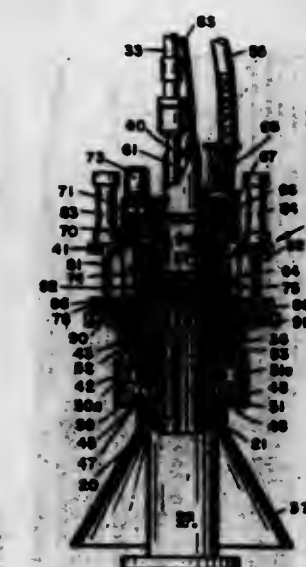
3,517,738 SELECTIVE BORE WELLHEAD LUBRICATOR SYSTEM

William H. Petersen, Metairie, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Jan. 8, 1969, Ser. No. 789,770

Int. Cl. E21b 33/035

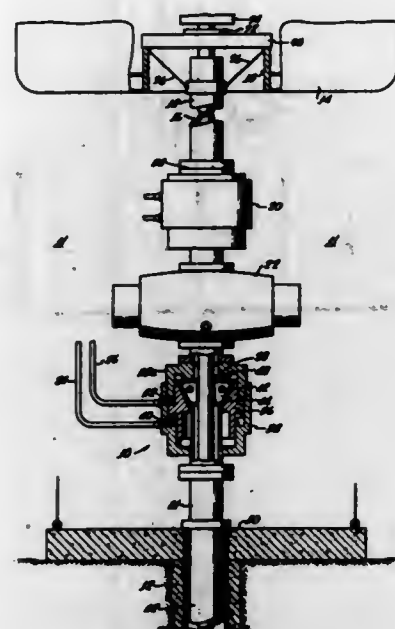
U.S. Cl. 166—6

5 Claims



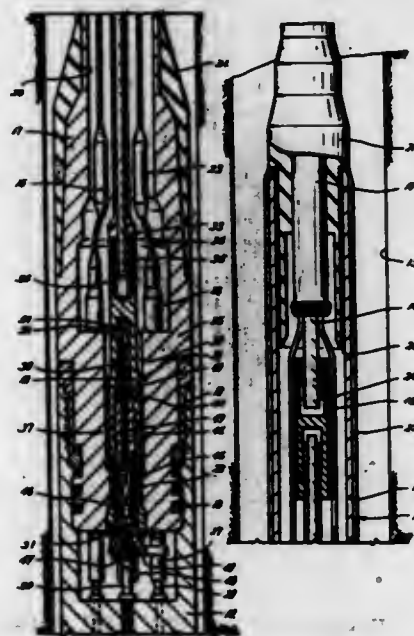
A lubricator mechanism for use with underwater wells and including indexing means for placing a single tube production riser into selective engagement with each of a plurality of tubing runs in a well in a sequential manner.

3,517,739
APPARATUS FOR SUPPORTING A TUBULAR MEMBER AT THE OCEAN FLOOR
 Paul Robert Rowley, Long Beach, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania
 Filed Dec. 26, 1967, Ser. No. 699,003
 Int. Cl. E21b 33/035, 33/06
 U.S. Cl. 166—6



This application discloses a benthonic well head slip assembly and an apparatus and method for supporting at the ocean floor, a drill pipe or other tubular member extending between a drilling vessel floating over the well and the ocean floor, to prevent relative movement between said drill pipe and the blowout preventers when the blowout preventers are closed around the drill pipe or tubular member.

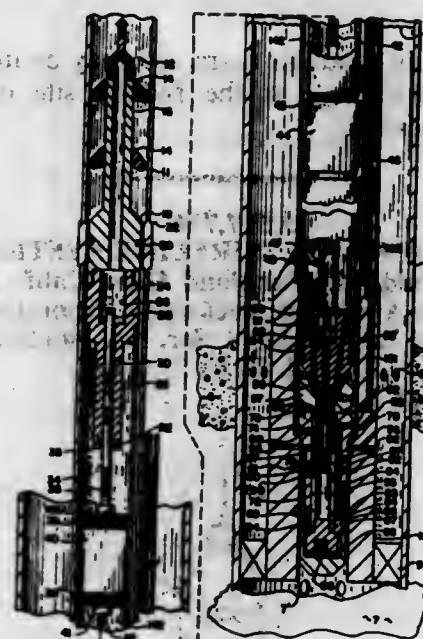
3,517,740
APPARATUS FOR SELECTIVELY RELEASING CABLE-SUSPENDED WELL TOOLS
 Albert W. Johnson, Houston, Tex., assignor to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas
 Filed May 27, 1968, Ser. No. 732,456
 Int. Cl. E21b 29/02
 U.S. Cl. 166—63



The particular embodiment of selectively-operable releasing apparatus disclosed herein as illustrative of the

present invention includes a load-bearing support member adapted to dependently couple a well tool to a suspension cable. Although the support member has sufficient strength to carry the weight of the tool and withstand normal loads thereon, electrically-responsive explosive means are arranged on the support member for selectively parting the support member should it be desired to release the cable from the well tool while it is in a well bore. To provide an alternative procedure for releasing the tool, the support member is also adapted to fail in response to cable tension forces in excess of those typically experienced during normal operations.

3,517,741
HYDRAULIC WELL PUMPING SYSTEM
 George K. Roeder, P.O. Box 3931, Odessa, Tex. 79760
 Filed June 3, 1968, Ser. No. 733,954
 Int. Cl. E21b 43/16; F01l 21/04; F04b 47/10
 U.S. Cl. 166—106



Apparatus for operating a down hole hydraulic well pumping system. One aspect of the invention is directed to a method for injecting spent power fluid into a lower or upper stratum of the ground while extracting energy from the power fluid in order to pump oil from another stratum to the surface of the ground. The apparatus comprehends a new combination of a production unit having a piston and control valve assembly which forms an engine for actuating a down hole pump. The piston and control valve assembly cooperates with the down hole pump motor in a manner to enable spent power fluid from the engine to be injected through a standing valve assembly and into a stratum located below or above the producing formation.

3,517,742
WELL PACKER AND PACKING ELEMENT SUPPORTING MEMBERS THEREFOR
 Robert C. Williams, Dallas, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
 Filed Apr. 1, 1969, Ser. No. 811,924
 Int. Cl. E21b 33/129
 U.S. Cl. 166—134

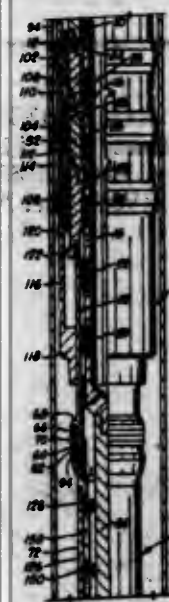
An improved support assembly for preventing extrusion of a packing element is disclosed herein. The support assembly includes an annular support member positioned adjacent each end of the packing element. The support member includes a base portion and a wall portion.

The wall portion has a plurality of circumferentially spaced corrugations or convolutions formed therein. Due to the presence of the corrugations, the wall portion can



flatten and, yet, provide a continuous support for the packing element.

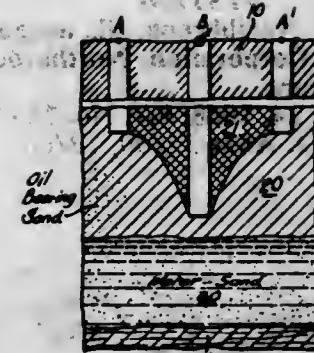
3,517,743
SELECTIVE INTERVAL PACKER
 Robert C. Pumpelly and Harry E. Simpson, Dallas, and Marion D. Kilgore, Houston, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
 Filed Dec. 13, 1968, Ser. No. 783,601
 Int. Cl. E21b 33/124
 U.S. Cl. 166—127



A selective interval packer for isolating a plurality of formations in a well bore or for isolating zones within a single formation and for selectively treating and/or producing the isolated formations or zones. The selective interval packer includes a plurality of spaced packing elements that are deformable into sealing engagement with a well bore wall to isolate the formations or zones, gripping means for retaining the packer in position when the packing elements are deformed, a tubular mandrel extending through the packer having a plurality of spaced seals thereon arranged to selectively isolate ports extending through the packer between the packing elements, and an indexing mechanism that permits a treating port located in the mandrel to be aligned with a selected one of the ports in the packer. The apparatus contemplates the use of a locating device such as a packer or anchor previously set in the well bore to which the selective interval

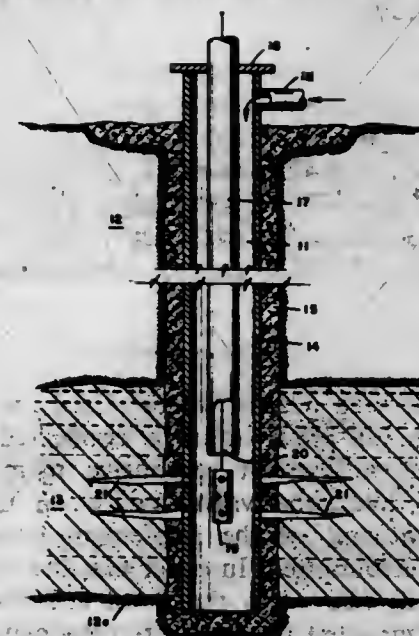
packer can be releasably attached whereby the selective interval packer will be accurately positioned or located for treating the desired formations in the well bore.

3,517,744
HYDROCARBON PRODUCTION BY IN-SITU COMBUSTION AND NATURAL WATER DRIVE
 William D. Horton, Midland, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
 Filed Nov. 14, 1968, Ser. No. 775,841
 Int. Cl. E21b 43/24
 U.S. Cl. 166—245



Relates to a secondary recovery in situ combustion method involving three wells in line for exploiting a hydrocarbon-bearing formation under the influence of an aquifer providing an active water drive. The center well of the line, where in situ combustion is initiated, is completed for air injection low in the formation adjacent the aquifer, and offset wells are completed as production wells adjacent the top of the formation. When breakthrough of the combustion front occurs, all wells are put on a standby basis to permit the exploited part of the formation to be resaturated with formation fluids by the influence of the aquifer. Alternatively, the functions of the wells could be exchanged or only that of the center injection well, the wells suffering breakthrough being placed on a standby basis.

3,517,745
WELL PERFORATING METHOD
 George O. Suman, Jr., Metairie, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
 Filed June 20, 1968, Ser. No. 735,530
 Int. Cl. E21b 43/25
 U.S. Cl. 166—297



A method of perforating a well casing extending into communication with a subterranean hydrocarbon-bearing

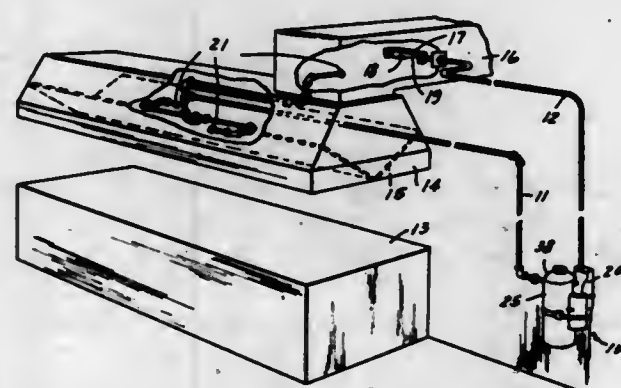
formation having an interval portion adjacent the formation by introducing a fluid into a restricted zone of the well casing and adjacent the interval portion under controlled pressure conditions raising the pressure of the fluid to a pressure at least sufficient to drive the fluid out of the well casing and into the formation upon perforation of the casing and perforating the casing and adjacent interval portion so as to force the fluid through the established perforations and into the hydrocarbon-bearing portion of the formation.

3,517,746 DRY CHEMICAL FIRE EXTINGUISHING SYSTEM

Mark E. Balmer, Sr., Northbrook, Ill., assignor to General Fire Extinguisher Corporation, Northbrook, Ill., a corporation of Delaware

Filed Apr. 24, 1968, Ser. No. 723,765
Int. Cl. A62c 35/00, 13/00

U.S. Cl. 169-9 1 Claim



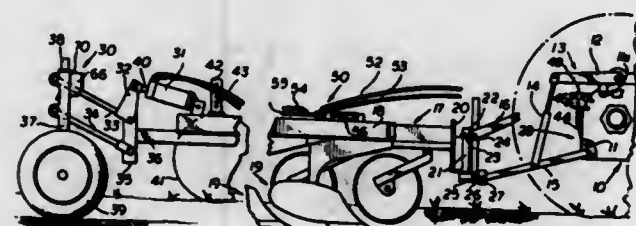
A dry chemical fire extinguisher system having a separate pressurizable storage container for dry chemical extinguisher and a pressure vessel for liquid gas with a siphon tube therein for introducing liquid gas to the storage container wherein it can vaporize and intermix with the dry chemical to propel the same through a piping system to a fire source.

3,517,747 AUTOMATIC CONTROL MEANS FOR IMPLEMENT

Raymond C. Fischer, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 21, 1967, Ser. No. 661,874
Int. Cl. A01b 63/112, 63/16

U.S. Cl. 172-7 9 Claims



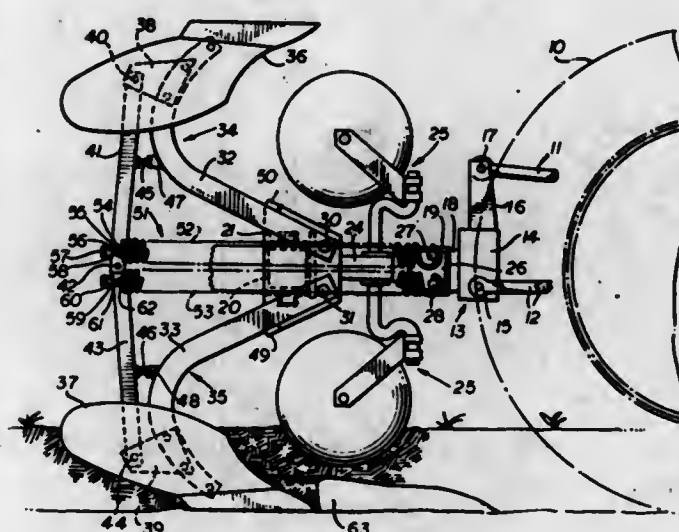
A plow carrying a rear wheel raised and lowered by a cylinder on the plow frame is connected to a tractor through a movable draft responsive member which is connected to hydraulic valve means on the tractor to raise the front end of the implement when high draft resistance is encountered. In order that the rear end of the implement will rise when the front end rises, a control member is connected to the draft responsive member to move with it and is electrically connected to the valve means to also actuate the cylinder connected to the rear wheels to raise the rear of the plow.

3,517,748 TWO-WAY FLOW TRIP

Raymond C. Fischer, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 26, 1968, Ser. No. 755,047
Int. Cl. A01b 5/14, 61/00, 35/24

U.S. Cl. 172-224 4 Claims



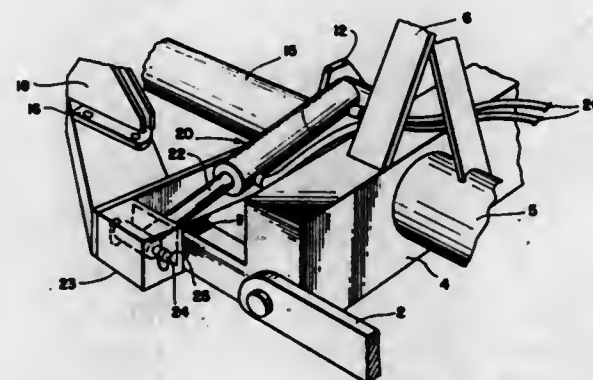
An automatic return beam trip for a two-way plow wherein the right- and the left-hand plow units are mounted approximately 180° apart on a support which is rotatable about a longitudinal axis. The plow units are mounted on the support for tripping of the operating unit under abnormal draft load independently of the non-operating unit, and means are provided for returning the tripped unit to its operating position.

3,517,749 TWO-WAY FLOW ROLL-OVER MECHANISM

Irwin J. Callahan, 107 11th Ave. N., Nampa, Idaho 83651

Filed Mar. 9, 1967, Ser. No. 621,919
Int. Cl. A01b 3/40

U.S. Cl. 172-225 1 Claim



A roll-over mechanism for a two-way plow wherein a carrier frame, fixedly mounted on a tractor hitch, has a bracket upstanding from a tubular hub with a plow frame being pivotally mounted in the tubular hub and a hydraulic ram unit pivotally connected between the bracket and the plow frame by means of a lost motion connection on the plow frame so that retraction of the hydraulic ram unit will pivot the plow frame past its mid-position. There is also a mounting arrangement for a colter wheel whereby the colter may pivot through a limited angle and an arrangement for adjusting a gage wheel with respect to the plow frame.

3,517,750 ROLL-OVER FLOW STRUCTURE

Henry Thomas Bell, Rte. 2, Odessa, Mo. 64076

Filed Mar. 8, 1967, Ser. No. 621,485
Int. Cl. A01b 3/28

U.S. Cl. 172-226 5 Claims



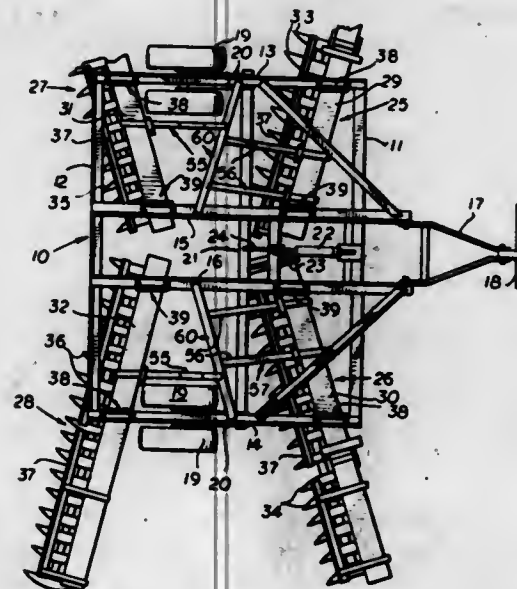
A two-way plow structure which is ground supported at the rear during roll-over comprises a hollow rigid elongated support tube or beam angling rearwardly and laterally of the pulling tractor and has tool carriers rigidly secured to and spaced therealong with both right and left hand plow units. A rear wheeled carriage providing the rear support, is maintained in constant ground contacting relation during roll-over through torsional rigidity supplied by a torsional shaft extending through the support beam and connected by universal joints forwardly to draft structure and rearwardly to the wheeled carriage. An hydraulic cylinder located at the forward end of the plow structure is adapted to telescope in response to the plow structure pivoting laterally about the tractor and is connected through hoses to an hydraulic cylinder at the rear of the plow structure which guides the rear supporting wheel to produce desirable trailing characteristics.

3,517,751 FLEXIBLE GANG HARROW

James Morkoski, Clarendon Hills, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Feb. 9, 1968, Ser. No. 704,423
Int. Cl. A01b 35/28

U.S. Cl. 172-572 5 Claims



In a disk harrow of the tandem type each of the rectangular front and rear disk carrying transverse beams is secured to the supporting frame by pivot and cushion

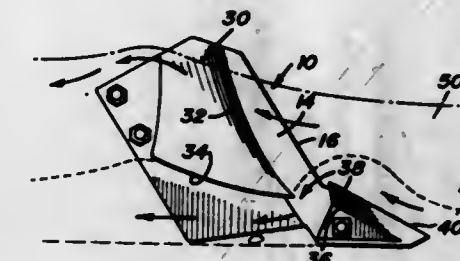
means allowing the beam to be disposed generally horizontally in operation but allowing it to swing rearwardly and upwardly relative to the frame when obstructions are encountered.

3,517,752 PLANTING SHOVEL

Lyle L. Glee, Chester, Mont. (P.O. Box 113, Galata, Mont. 59444)

Filed Feb. 23, 1968, Ser. No. 707,785
Int. Cl. A01b 39/20, 39/28

U.S. Cl. 172-721 3 Claims



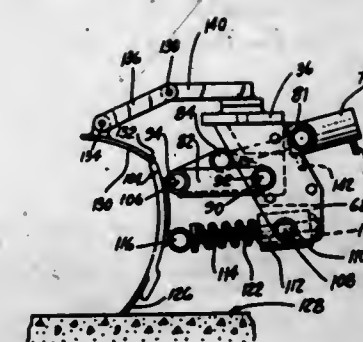
A planting shovel for shallow planting including a pair of side wings mounted thereon positionable so as to contact, upwardly lift, and momentarily delay the return of the top layer of dry soil so as to provide for a covering of deposited seed by a lower layer of wet or moisture-containing soil which moves beneath the soil return retarding wings.

3,517,753 TRUCK UNDERBODY SCRAPER FOR HIGHWAY MAINTENANCE VEHICLES

Leo R. Tift, Hastings, Mich., assignor to James M. Hare, Secretary of State of Michigan

Filed Dec. 4, 1967, Ser. No. 667,585
Int. Cl. E02f 3/76

U.S. Cl. 172-795 8 Claims



A scraper blade construction adapted to be mounted on the underbody chassis structure of heavy, wheeled, road maintenance vehicles, comprising a mold board and a deflector arranged in articulated fashion whereby the mold board may be raised and lowered without causing interference with the vehicle chassis structure, and providing an optimum blade cutting edge angle with respect to the road surface.

3,517,754 ROCK DRILL BIT DRIVE

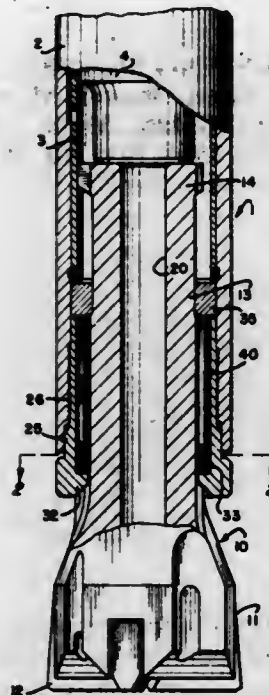
Robert W. Hughes, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 16, 1968, Ser. No. 767,970
Int. Cl. E21c 3/00

U.S. Cl. 173-104 19 Claims

A coupling for rotatably connecting a rock drill bit to a rock drilling machine. The drill bit and chuck of the drilling machine are provided with spaced apart longitudinal ribs with pins positioned between the ribs on the chuck

and the ribs on the drill bit. These pins transfer torque from the chuck to the drill bit when the drilling machine



is rotated on one direction. In the other direction of rotation, torque is transferred through the ribs.

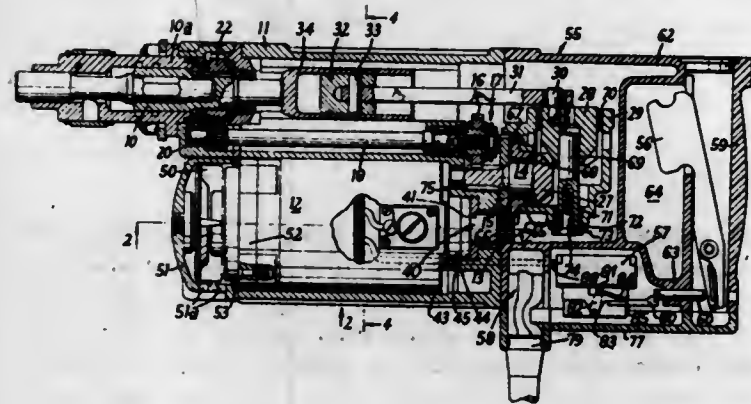
3,517,755

PORTABLE ELECTRIC PERCUSSION TOOLS
David Norman William Badcock, Streatham, London, England, assignor to Kango Electric Hammers Limited, London, England, a British company
Filed Apr. 29, 1968, Ser. No. 725,035
Claims priority, application Great Britain, May 4, 1967, 20,883/67

Int. Cl. B25d 11/12

U.S. Cl. 173-117

9 Claims



In a portable tool, such as an electric hammer, incorporating a tool holder, an electric motor and gears for interconnecting the motor with the tool holder, the motor is enclosed by the external casing of the tool and is removable and replaceable as a unit from the casing without disturbing the tool holder and the gears. The electrical contacts between the motor and the motor switch are made and broken by the acts of inserting and removing the motor. The handle of the tool is a one-piece moulding of an insulating material and provides compartments for the motor switch and the cable entry assembly and a substantial recess for the gearbox in which said gears are mounted.

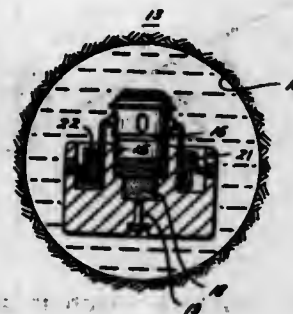
3,517,756
METHODS AND APPARATUS FOR PROCURING FORMATION SAMPLES FROM WELL BORES
Jack P. Goss, Lake Charles, La., assignor to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas

Filed Oct. 23, 1968, Ser. No. 769,790

Int. Cl. E21b 49/04

U.S. Cl. 175-4

15 Claims



In accordance with the new and improved methods disclosed herein, a coring bullet is impelled into an earth formation with sufficient force to drive a columnar sample thereof into the axial bore of the bullet. To retract the bullet from the formation, it is at least partially rotated and, preferably simultaneously therewith, pulled in a generally-rearward direction away from the formation. A preferred embodiment of the invention is provided by connecting two flexible cables of unequal length between a suitable tool and circumferentially-spaced points on each coring bullet so that longitudinal movement of the tool will initially tighten the shorter cable and twist the bullet about its longitudinal axis as it is being pulled rearwardly. When the longer cable is subsequently tightened by continued movement of the tool body, an added pull will be imparted to the bullet to complete its withdrawal.

3,517,757

SWITCHING APPARATUS FOR SELECTIVELY ACTUATING EXPLOSIVE WELL-COMPLETION DEVICES

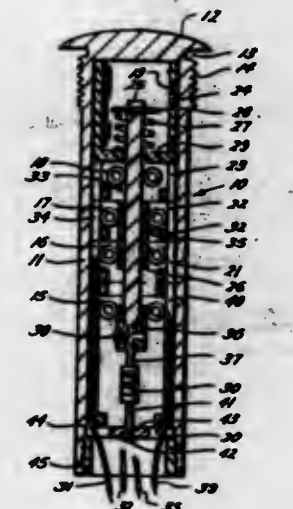
Herbert J. Hart, Houston, Tex., assignor to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas

Filed Sept. 23, 1968, Ser. No. 761,410

Int. Cl. E21b 43/117

U.S. Cl. 175-4.55

11 Claims



This disclosure is directed to shock-resistant switching apparatus for controlling well-completion tools having a plurality of explosive devices such as shaped charge

perforators that are to be successively operated. The shock-resistant switching apparatus is normally retained in one position by an electrical resistor that is of substantial mechanical strength but is selectively adapted to fail upon passage therethrough of a predetermined electrical current. Upon passage of sufficient current through the resistor to cause its failure, the switch moves to another position to connect one or more associated explosive devices into a firing circuit for subsequent detonation.

3,517,758

CONTROL APPARATUS FOR SELECTIVELY OPERATING ELECTRICAL WELL-COMPLETION DEVICES

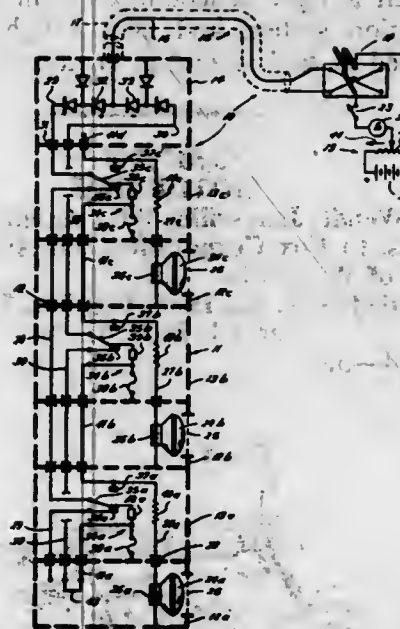
Nick A. Schuster, Darien, Conn., assignor to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas

Filed Sept. 23, 1968, Ser. No. 761,454

Int. Cl. E21b 43/17

U.S. Cl. 175-4.55

17 Claims



This disclosure is directed to control circuits for well-completion apparatus having one or more electrically-responsive devices that are to be selectively operated. The circuitry includes one or more normally-disabled controls that are selectively actuated by a predetermined electrical current. Upon application of sufficient current thereto, each selectively-operable control enables its associated electrical device and connects it into a selected circuit for subsequent operation.

3,517,759

RECIPROCATING DRILLING TOOL

Woodrow W. Crumbo, El Paso, Tex.
(1400 Bellevue, La Junta, Colo. 81050)
Filed May 10, 1968, Ser. No. 728,178

Int. Cl. E21b 1/06, 5/00, 9/35

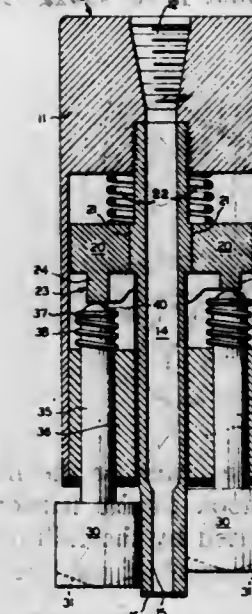
U.S. Cl. 175-298

3 Claims

The invention consists of a rotary-type drilling tool carrying a plurality of reciprocating and self-rotating drill bits.

The tool includes a hollow housing in which is seated a cam imparting a reciprocating drilling action to the push rods of cylindrical drill bits, the latter being arranged peripherally around a central drill pipe. Each of said drill bits is free to rotate on the axis of its push rod, and a portion of its periphery extends beyond the diameter of

the housing into contact with the sidewalls of the borehole. Consequently rotation of the tool causes reciprocatory drilling action by the bits while sidewall contact by



the bits causes constant changes in the position of the teeth carried by each drill bit with respect to the earth formation being drilled.

3,517,760

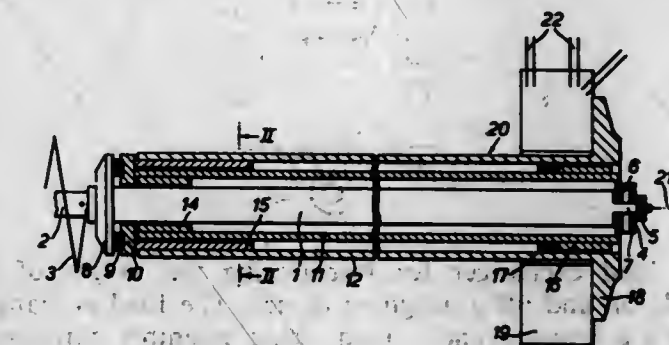
TELESCOPIC DRILL RODS FOR SOIL DRILLING EQUIPMENTS

Achim Kehrberger, Neffingen, Germany, assignor to Dalmag-Maschinenfabrik Reinhold Dornfeld, Esslingen, Germany, a corporation of Germany
Filed Mar. 14, 1969, Ser. No. 807,305
Claims priority, application Germany, Mar. 22, 1968, 1,287,534

Int. Cl. E21b 17/00

U.S. Cl. 175-321

7 Claims



A telescopic drill rod for a soil drilling equipment comprises an innermost drill rod member provided at its lower end with means for attaching a drill bit and at its upper end with a swivel for suspending the drill by a rope from the drilling equipment, a first telescopic tube surrounding the innermost drill rod member and at least a second telescopic tube surrounding the first telescopic tube, a first damping means fastened to the lower end of the innermost drill rod member to provide a seating for the telescopic tubes, an end collar inside the lower end of the first telescopic tube, a second damping means demountably attached to the upper half of the innermost drill rod member and abutting when the drill rod is extended the end collar, and a third damping means attached to the other end of the first telescopic tube and abutting when the drill rod is extended a further end collar at the lower end of the second telescopic tube.

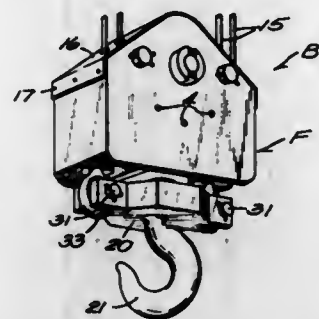
3,517,761

WEIGHING BOTTOM BLOCK

Wilbur E. Bartley, West Bend, and Harry W. Wigman, Milwaukee, Wis., assignors to Harnischfeger Corporation, Milwaukee, Wis., a corporation of Wisconsin
 Filed Feb. 13, 1969, Ser. No. 799,034
 Int. Cl. B66c 1/40; G01g 19/14

U.S. Cl. 177-147

12 Claims



A falling block for a crane or the like and including a weight measuring hook of the tension load cell type. A lateral collar is carried by the falling block frame for restraining lateral movement of the hook.

3,517,762

LOAD EXCHANGER FOR WEIGHER

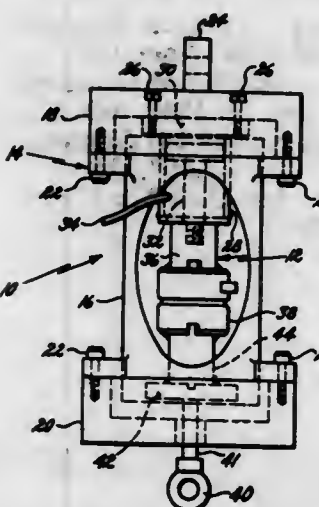
John Henry Hedger, Lakeside, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 7, 1969, Ser. No. 797,480

Int. Cl. G01g 19/14, 23/02

U.S. Cl. 177-153

4 Claims



A load exchanger for transferring the weight of an article on and off a weighing device. The load exchanger having a housing and a load string assembly containing a weighing device, whereby raising the load string assembly places the weight of an article on the weighing device and lowering of the load string assembly transfers the weight of the article off the weighing device.

3,517,763

PRECISION BALANCE

Jon Peer, Stafa, Switzerland, assignor to Mettler Instrumente A.G., Zurich, Switzerland, a corporation of Switzerland

Filed May 20, 1968, Ser. No. 730,348

Claims priority, application Switzerland, Dec. 14, 1967, 17,557/67

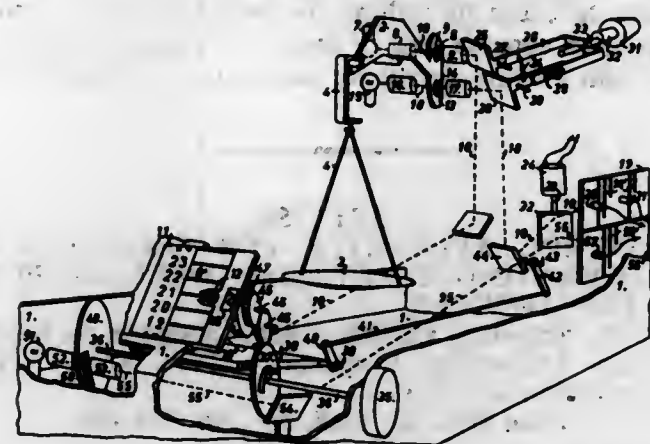
Int. Cl. G01g 23/14, 23/32, 23/42

U.S. Cl. 177-173

4 Claims

Precision balance of the type including a balance beam on which are provided scales for reading off the weight decimals of the weighing result according to the particular inclination of the balance beam. By means of

a first optical projection system said weight decimals may be read off in digital form from a screen visible from the outside of the balance. A second projection system and an electric scanning device are provided for transforming said weight decimals into corresponding



electrical values. An adjusting device is included for resetting the zero point of the balance, said device controlling both a light deflecting element inserted in said first projection system and also a light deflecting element inserted in said second projection system.

3,517,764

MOTORBIKE

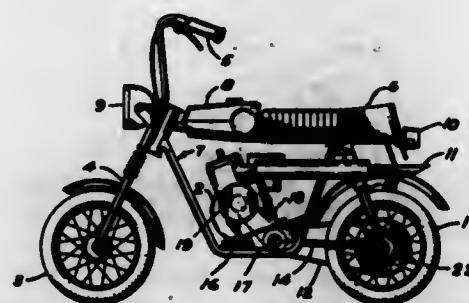
David W. Wendt, Janesville, Wis., assignor, by means assignments, to Fox Corporation, Janesville, Wis., a corporation of Wisconsin

Filed Nov. 12, 1968, Ser. No. 774,857

Int. Cl. B62d 61/02

U.S. Cl. 180-33

10 Claims



A motorbike, operable with either direct chain drive or jackshaft chain drive, includes a one-piece engine mount fixed on the bike frame and inclined from horizontal about twenty degrees to thereby tilt the engine forwardly, permitting a low, compact bike frame design and use of a conventional industrial engine. The mount is slotted for adjusting the engine thereon to obtain chain adjustment. The mount is bored to provide bearing support for the jackshaft. An opening in the mount passes a chain through. The mount has slots and holes therein for connecting a swing arm H-frame thereto, the slots providing a second chain adjustment with a jackshaft drive. The H-frame is reversible for use with either direct drive or jackshaft drive. Rear shock absorbers connect the upper portion of the bike frame to the rear wheel axle.

3,517,765

VEHICLE REAR UNDERBODY STRUCTURE

Henry W. Wessells III, Paoli, and Walter S. Eggert, Jr., Huntingdon Valley, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 21, 1968, Ser. No. 730,852

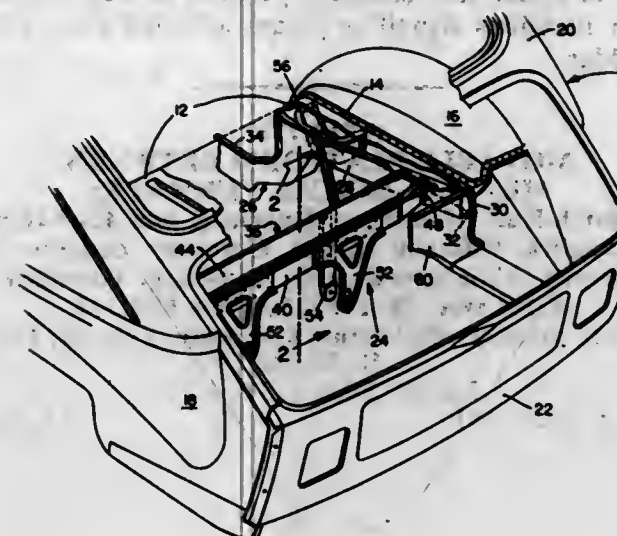
Int. Cl. B60k 5/12

U.S. Cl. 180-64

6 Claims

A vehicle rear underbody structure for supporting a rear mounted engine. The supporting sidesills are formed

by joining a Z-shaped angle member, floor pan and inner wheel housing whereby the inner wheel housing panel acts as a shear panel. The motor mount consists of a cross beam connected to the sidesills and generally L-shaped



support brackets secured to the cross beam and sidesills and adapted to support the engine. The sidesills are reinforced at the points of maximum stress where the shock-spring support brackets are connected to the sidesills.

3,517,766

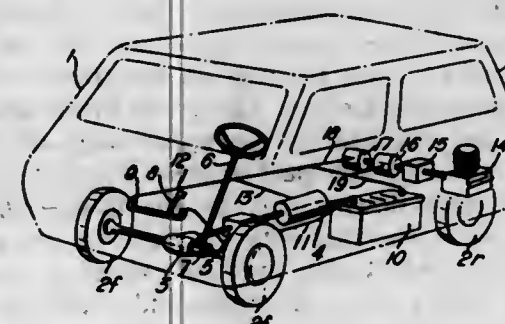
ELECTRIC VEHICLE POWERED BY A CONTINUOUSLY CHARGED ELECTRIC BATTERY AND HAVING AN ELECTRICAL CIRCUIT CONTAINING A TWIN ELECTRIC GENERATOR POWER SYSTEM

De Witt Henry West, Port Eynon, Swansea, Glamorgan-shire, Wales, assignor to Anthony William Deller Continuation-in-part of application Ser. No. 612,143, Jan. 27, 1967. This application Feb. 12, 1969, Ser. No. 802,322

Int. Cl. B60k 1/00; B601 11/04

U.S. Cl. 180-65

15 Claims



An electric vehicle and an electric power supply system for a battery-operated vehicle comprising a traction motor, and internal combustion engine driving a pair of electrical generators, and a battery. The battery is continuously charged by one generator and the traction motor has its field winding connected to the battery and its armature receives a variable voltage from the other generator.

3,517,767

CALIPER SYSTEM FOR FOCUSING DUAL TRANSDUCERS IN LOGGING TOOL

Andrew J. D. Straus and Joseph Zemanek, Jr., Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

Filed Apr. 4, 1969, Ser. No. 813,431

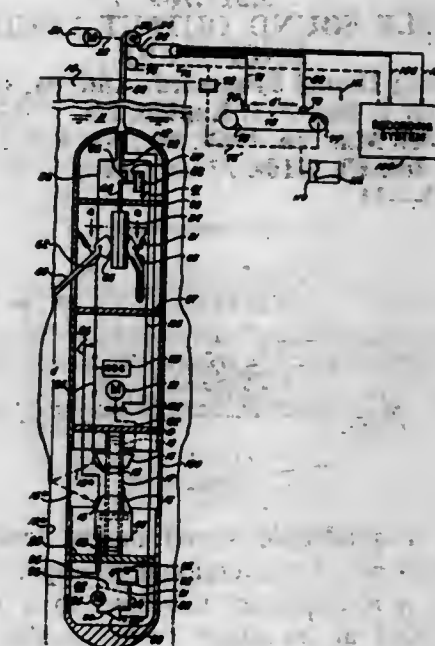
Int. Cl. G01v 1/40

U.S. Cl. 181-5

8 Claims

The specification discloses a transducer assembly supported for rotation in a borehole tool and including a directional acoustic transmitter and a directionally sensitive receiver spaced from each other and operated respectively to transmit acoustic pulses to the borehole wall and to detect reflected acoustic energy. Means is provided for

receiver spaced from each other and operated respectively to transmit acoustic pulses to the borehole wall and to detect reflected acoustic energy. Caliper means coupled to the tool is provided for sensing variations in the cross-sectional size of the borehole. Means coupled to the cali-



per means and to a focusing means actuates the focusing means for varying the relationship between the transducers in accordance with variations in the cross-sectional size of the borehole to enhance the detection of reflected energy as the cross-sectional size of the borehole varies.

3,517,768

FOCUSING SYSTEM FOR DUAL TRANSDUCER LOGGING TOOL

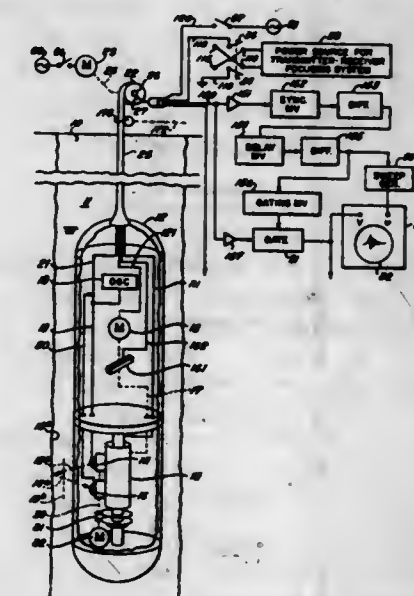
Andrew J. D. Straus, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York

Filed Sept. 3, 1968, Ser. No. 756,805

Int. Cl. G01v 1/40

U.S. Cl. 181-5

4 Claims



The specification discloses a transducer assembly supported for rotation in a borehole tool and including a directional acoustic transmitter and a directionally sensitive receiver spaced from each other and operated respectively to transmit acoustic pulses to the borehole wall and to detect reflected acoustic energy. Means is provided for

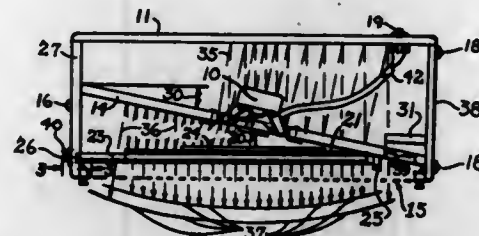
varying the angular relationship between the transmitter and receiver to obtain an optimum reflected signal even though the borehole diameter may vary. This means is controlled from the surface whereby focusing may be carried out while the tool is in the borehole.

3,517,769 QUADRUPLE SOUND OUTPUT LOUDSPEAKER ENCLOSURE

Paul Daniel Broussard, Andrew, La.
(Rte. 2, Box 271, Kaplan, La. 70548)
Filed Mar. 26, 1969, Ser. No. 810,503
Int. Cl. G10k 13/00; H04r 7/00

U.S. Cl. 181-31

7 Claims



Basically, a quadruple sound output loudspeaker enclosure comprised of conventional loudspeaker enclosure components, a loudspeaker mounted to a ported baffle which is placed at an angle from parallel to the enclosure back, port baffle plates which are placed at an angle away from parallel to the enclosure baffle, a loudspeaker bridge lightly secured to the front of the loudspeaker cone, a flexible membrane or diaphragm tensioned between a fixed member and an adjustable tensioning means, and a less flexible membrane or diaphragm secured to the flexible membrane.

3,517,770 FOLDABLE LADDER

Gilbert L. Lotz, 22 Chassanee Bruneaut,
Wilhonne, Belgium

Filed Dec. 16, 1968, Ser. No. 783,919
Claims priority, application Belgium, Dec. 27, 1967,
41,581; June 28, 1968, 41,813
Int. Cl. E06c 9/08

U.S. Cl. 182-96

8 Claims



A ladder has two upright sections positioned one in front of the other and whose perpendicular sides within the plane of the ladder carry two longitudinal ribs with facing perforations receiving pivots for the pivotal mounting of the steps in order to fold by bringing together the uprights, and the ladder has the rail perpendicular to the

plane of the ladder and constituted also by two uprights which can be brought near one another; there are also provided means for securing one of the uprights of the ladder on the support and means for maintaining the ladder in folded and unfolded position as well as audible and/or luminous signalling means actuated upon folding the ladder.

3,517,771 MOVABLE PLATFORM BETWEEN METALLURGICAL FURNACES

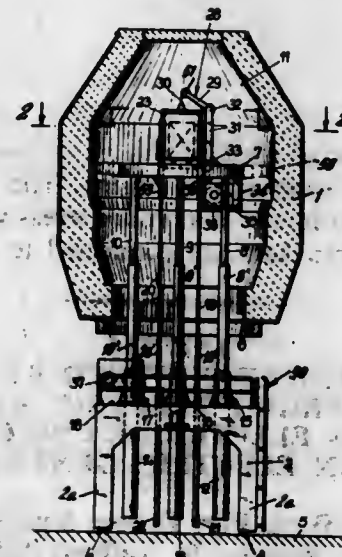
Heinrich-Karl Mähringer, Duisburg, and Karl-Heinz Langlitz, Mulheim (Ruhr), Germany, assignors to Demag Aktiengesellschaft, Duisburg, Germany

Filed Dec. 28, 1967, Ser. No. 694,334
Claims priority, application Germany, Feb. 10, 1967,
D 52,244

U.S. Cl. 182-141

Int. Cl. E04g 1/18, 1/36

14 Claims



A device for relining a steel mill converter with bricks includes a wheeled travel frame which may be rolled into position beneath a furnace and which carries a working platform which is supported by means of extendable lifting rods which are retractable into cylinders carried on the travel frame in a manner such that the platform may be shifted from the top of the travel frame to a position far above the top. The guide lifting rods for the platform are attached to the upper edge of the travel frame so that a greater part of their length extends from the upper edge downwardly to the lower edge of the travel frame. Associated with the platform are a plurality of telescopic rods which may be extended upwardly to the whole height of the platform and which form guides for travel basket such as an elevator cage.

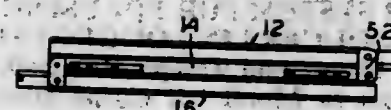
3,517,772 FOLDING LADDER

Albert Weis, 4825 Meredith Ave., Lincoln, Nebr. 68506,
and Baldwin E. Petry, Rte. 1, Box 1, Hockley, Tex. 77447

Filed Apr. 28, 1969, Ser. No. 819,693
Int. Cl. E06c 1/383

U.S. Cl. 182-163

8 Claims



A folding ladder comprising a plurality of sections at least two of which are hingedly connected and in which lock means is provided for maintaining the hinged sections in alignment, the lock means releasable for folding, the ladder being extensible.

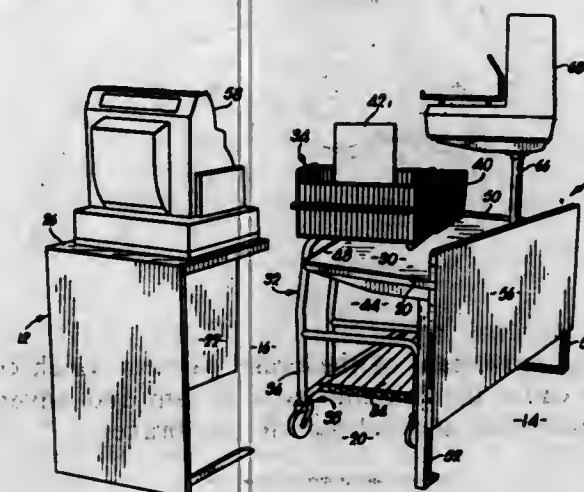
3,517,773 CHECK-OUT SYSTEM AND COUNTER FOR USE WITH CANTILEVER SHOPPING CART

Russell K. Swanson, 3212 Coleman Road,
Kansas City, Mo. 64111

Filed June 18, 1968, Ser. No. 738,012
Int. Cl. E04 3/04

U.S. Cl. 186-1

10 Claims



A check-out system and counter for use with a cantilever shopping cart, the counter having an overhanging top and at least one open end to present an unobstructed stretch beneath the top, which stretch receives the wheeled frame of a shopping cart having a cantilevered basket whereby, as the frame passes along said open stretch, the basket is moved over the counter top. The counter is positioned in such a manner as to define a customer's aisle on one side thereof, there being a checker's area on the opposite side of the counter, and a cash register stand in the checker's area, the stand and the top of the counter cooperating to define a path into the checker's area, the open end of the counter being adjacent the path and the path being of a width less than that of the basket but greater than that of the standard which supports the basket whereby the standard may pass along the said path into the checker's area with the basket in overlying relationship to the top of the counter.

3,517,774 TOWER ELEVATOR

Roy E. Meyer, 1124 Oak St., Red Wing, Minn. 55066
Filed Jan. 17, 1968, Ser. No. 698,548

Int. Cl. B66b 7/04

U.S. Cl. 187-6

4 Claims



Hoist apparatus comprising a tubular track affixed to a vertical wall and made up of a plurality of reinforced,

polygonal-shaped sections, the side walls of the tubular track intersecting in vertical corners within which the wheels of a carriage permanently installed inside of the track are rotatably supported. An elevator car is removably attached to the carriage through a slot extending the length of the tubular track, and a safety, brake mechanism is mounted on the carriage. The brake mechanism includes spring-loaded brake shoes which are urged outwardly into frictional engagement with the inside walls of the tubular track in response to the severing of the lift cable for the carriage. The carriage wheels are rotatably supported on pivotal brackets and are biased outwardly against the inside of the tubular track by shock absorbing springs.

3,517,775 ELEVATOR

Roy E. Meyer, 1124 Oak St., Red Wing, Minn. 55066
Filed Jan. 17, 1968, Ser. No. 698,549

Int. Cl. B66b 7/04

U.S. Cl. 187-12

12 Claims



An elevator traveling along a course with a bend therein and carrying a detachable sheave mounting carriage downwardly to the bend where the carriage and cable guiding sheaves are detached and locked in stationary position to guide the cable to the car in the lower reaches of the course; a tiltable floor in the car and a rail gripping locking mechanism to stop the car in the event either of the support cables is ruptured.

3,517,776 WHEEL BLOCKING SAFETY MECHANISM

Gianfranco Corti, 4337 Masterson St., Oakland, Calif. 94619, and Roy G. San Martino, 1532 Greenwood Road, Pleasanton, Calif. 94566

Filed Oct. 21, 1968, Ser. No. 769,256

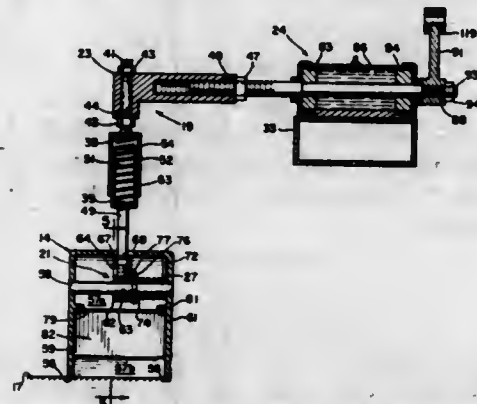
Int. Cl. B60t 1/04

U.S. Cl. 188-4

4 Claims

In a vehicle carried, remote controlled, wheel blocking mechanism means are provided for articulating a wedge-shaped chock between retracted and blocking positions with respect to the wheel such that the toe end of the chock remains elevated from the ground during most of its movement toward a blocking position. In this manner ground protrusions and road debris are effectively traversed prior to entry of the chock into wedging or blocking orientation between the wheel and ground. Particularly, this is achieved by spring biasing the chock to a pre-set rotated position relative to a vehicle mounted pivot arm, such that as the pivot arm rotates the chock toward the wheel blocking position, the heel edge of the

chock initially engages the ground with further such movement of the arm sliding the chock heel thereover toward the wheel and concurrently rotating the chock toe into wedging position. The reliable operation provided by this arrangement of parts is further enhanced by forming the chock with a generally open bottom for



spanning loose road debris and ground protrusions as the chock is moved into wheel blocking position thereby insuring a safe and secure wheel-ground contact. Additionally, means are provided for rendering the pivot arm self-adjusting to varying distances between the vehicle and ground to assure proper positioning of the chock under all operating conditions.

3,517,777

SPOT-TYPE DISK BRAKE

Hans Albert Beller, Bad Vilbel, Germany, assignor to Alfred Teves G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany

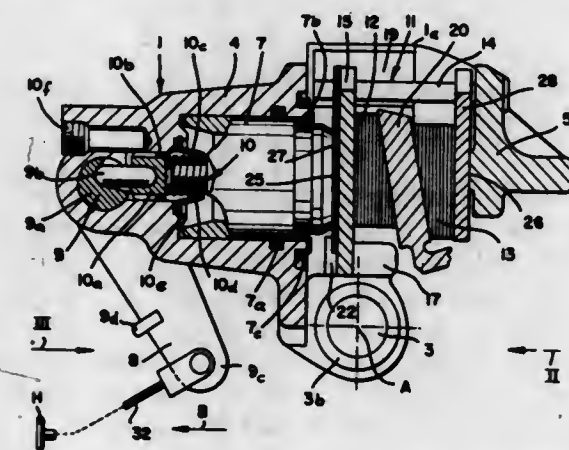
Filed Aug. 20, 1968, Ser. No. 754,086

Claims priority, application Germany, Sept. 15, 1967, T 34,790

Int. Cl. F16d 55/224

U.S. Cl. 188—73.1

10 Claims



A spot-like disk brake has a pivotal two-part housing or caliper with a radial opening for removing and replacing the brakeshoes. These brakeshoes are held laterally between guide flanks to keep them from twisting and are pushed inward by narrow strips parallel to the pivot axis to permit limited rocking of them. Bent back tab corners on the backing plates of the brakeshoes also hold them parallel to the brake disk.

3,517,778

DISC BRAKES AND FRICTION PAD MOUNTING THEREFOR

Wilhelm Knapp, Bad Homburg, Germany, assignor to The Dunlop Company Limited, London, England, a corporation of Great Britain

Filed July 3, 1968, Ser. No. 742,256

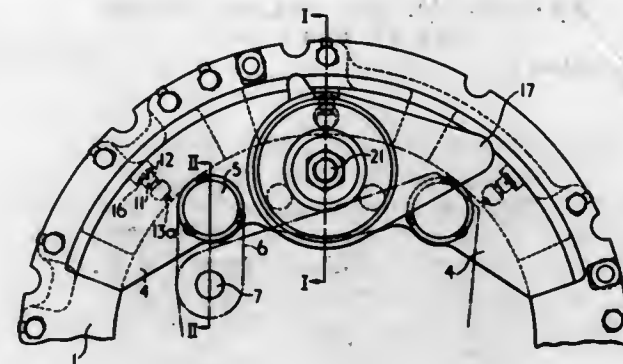
Int. Cl. F16d 55/224

U.S. Cl. 188—73.3

12 Claims

A disc brake in which the friction elements are mounted on friction element carriers that are disposed on guide

pins supported by pivotally mounted link members so that during braking the braking heat will not affect the



free sliding movement of the brake carriers which could otherwise cause the braking parts to jam and adversely affect application and release of the brakes.

3,517,779

PARKING BRAKE LEVER

Daniel L. Bolenbaugh, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Oct. 15, 1968, Ser. No. 767,757

Int. Cl. F16d 51/22; F16c 1/12

U.S. Cl. 188—78

4 Claims



The invention relates to a parking brake lever means comprised of an arcuate body portion which on one end is operatively connected to friction members to move them into contact with a rotating member to accomplish a braking application. Said arcuate body has formed on its other end pincer-like arms having a gap therebetween which in cooperation with a guide means, retain a force transmitting means.

3,517,780

BRAKING MECHANISM FOR LINEAR MEASURING INSTRUMENTS

André Quenot, Besancon, France, assignor to Quenot & Cie s.a.r.l., Besancon, France, a company of France

Filed May 21, 1968, Ser. No. 730,808

Claims priority, application France, Jan. 19, 1968, 136,603

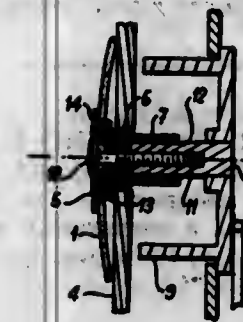
Int. Cl. F16d 63/00; B60c 13/04

U.S. Cl. 188—83

4 Claims

This invention relates to an improved braking mechanism for linear measuring instruments which have a wound measuring tape, the element transmitting the brak-

ing force of a spring bears on the tape measure casing against a winding drum and is made of a self-lubricating



3,517,783

FLOATING-YOKE DISK BRAKE WITH WEAR-COMPENSATING MECHANISM

Juan Belart, Waldorf, Germany, assignor to Alfred Teves G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany

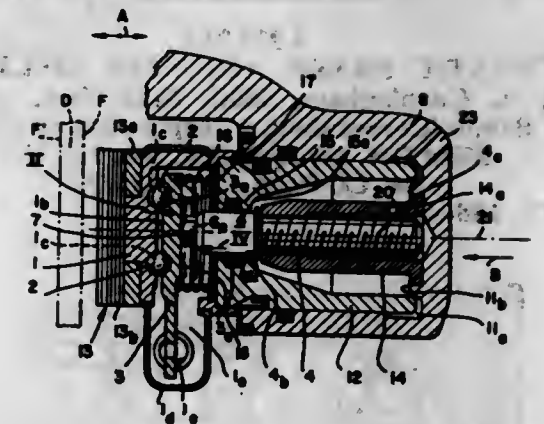
Filed Jan. 25, 1968, Ser. No. 700,504

Claims priority, application Germany, Jan. 27, 1967, T 33,090

Int. Cl. F16d 55/16, 65/66

U.S. Cl. 188—196

10 Claims

**DASHPOT WITH APERTURED PISTON, CYLINDER AND ROLLING, FLEXIBLE SEAL THEREBETWEEN**

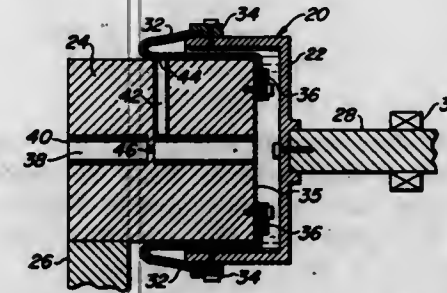
Herman de Weerd, Arlington, Mass., assignor to Block Engineering, Inc., Cambridge, Mass., a corporation of Delaware

Filed Mar. 6, 1969, Ser. No. 804,926

Int. Cl. F16f 9/16

U.S. Cl. 188—94

3 Claims



An improved system for braking a reciprocable element toward the end of its travel and comprising a dashpot having two exit passageways for its working fluid. The dashpot also includes a rolling, everted flexible seal between the cylinder and piston, one of the exit passageways terminating in a port that is coverable by the seal at some position in the rolling travel of the seal.

3,517,782

DUAL BRAKING SYSTEM INCLUDING A DISC BRAKE PISTON AND CYLINDER CONSTRUCTION

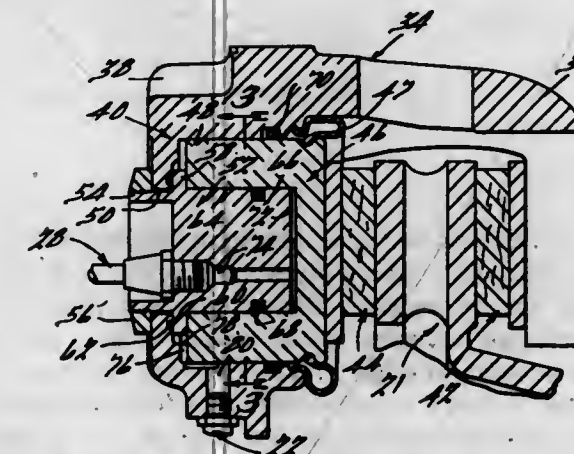
Edward James Hayes, Ann Arbor, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed Aug. 26, 1968, Ser. No. 755,332

Int. Cl. B60t 11/24

U.S. Cl. 188—152

13 Claims



A dual braking system in which each system can provide 50% of the braking effect and including a disc brake having a piston mounted for reciprocation in a single

cylinder dual chamber assembly whereby the piston can be separately actuated by fluid pressure in either chamber of the cylinder.

3,517,784

PNEUMATIC-HYDRAULIC TREAD BRAKE UNIT FOR RAILWAY CAR TRUCKS

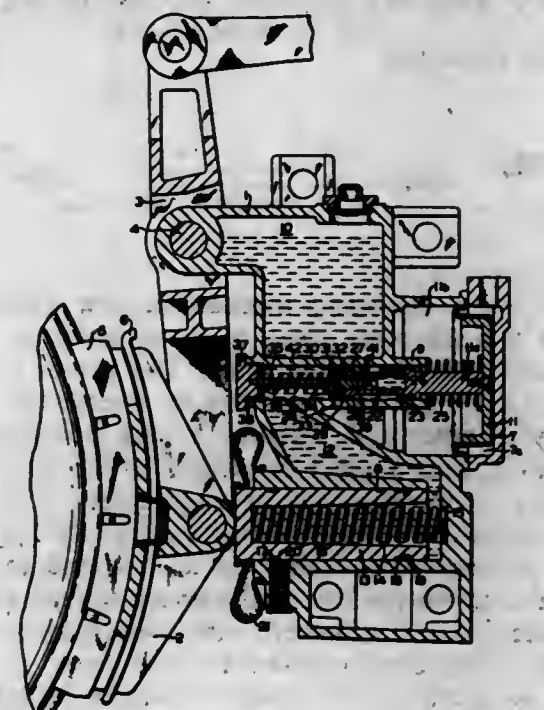
Quentin T. Clemmons, North Versailles, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed May 10, 1968, Ser. No. 728,133

Int. Cl. F16d 65/74

U.S. Cl. 188—196

10 Claims

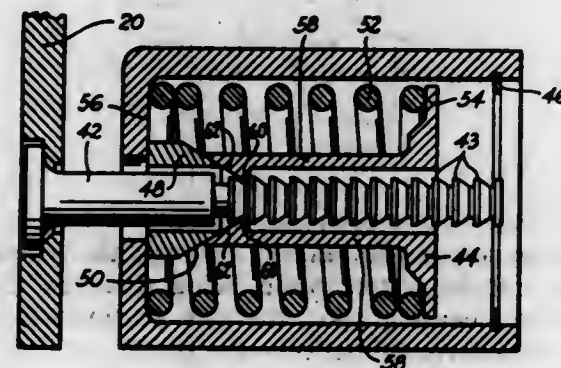


A pneumatically controlled hydraulically actuated tread brake unit to be utilized on each wheel of a railroad car; the unit being of the "snow brake" type in which

a brake shoe of the unit remains in light pressure contact with the tread of the wheel at all times to produce heat on the tread of the wheel and the brake shoe which heat keeps ice from forming on the tread of the wheel. A hydraulic type slack adjuster automatically compensates for wear of the brake shoe. Out-of-roundness of the car wheel while the brakes are applied is automatically compensated for through absorption of hydraulic pressure variations by the pneumatic portion of the tread brake unit. A novel valve means within the hydraulic portion of the tread brake unit facilitates slack adjustment and easy manual separation of the brake shoe from the tread of the wheel for easy maintenance operation.

3,517,785

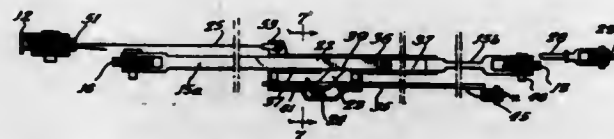
AUTOMATIC BRAKE ADJUSTER MECHANISM
Joseph A. Cunningham, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 15, 1968, Ser. No. 767,758
Int. Cl. F16d 65/52, 55/14
U.S. Cl. 188—196 7 Claims



The following relates to an automatic brake adjuster mechanism for use with an aircraft disc brake wherein a clamping mechanism is utilized to incrementally determine the released position of the pressure plate. The clamping mechanism is of the ratcheting type wherein the ratchet teeth are formed on the adjuster pin and the detents for engaging the ratchet teeth are formed on the spring follower.

3,517,786

SLACK ADJUSTER FOR RAILWAY CAR BRAKES
Franklin P. Adler, 105 Boyd Circle,
Michigan City, Ind. 46360
Filed Feb. 23, 1968, Ser. No. 707,542
Int. Cl. F16d 65/54
U.S. Cl. 188—200 13 Claims

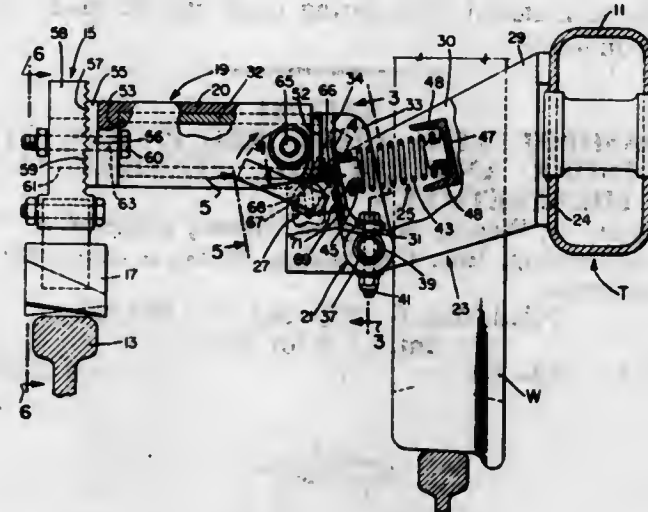


The brake actuating mechanism and slack adjuster include a dead body lever, a piston actuated live body lever and a dead take-up lever. The piston is also connected to the take-up lever by an overthrow device. A telescopic center rod includes a rack connected to the dead lever, and a pawl connected to the live lever and normally maintained out of engagement with the rack by a control rod connected to a sensing lever. A cable and pulley arrangement, connected at one end to the take-up lever, draws the two body levers toward each other, when the piston is extended, with a mechanical advantage less than that developed by the live lever system. This causes as much as 60 inches of slack to be taken up by less than 7½ inches of piston movement. The sensing lever, pivoted at one end to the live lever, senses extension of the piston beyond 7½ inches and causes engagement of the pawl with the rack. Further movement of

the piston develops a braking force of high mechanical advantage through the locked telescopic center rod. The overthrow device absorbs piston movement after all slack is taken up.

3,517,787

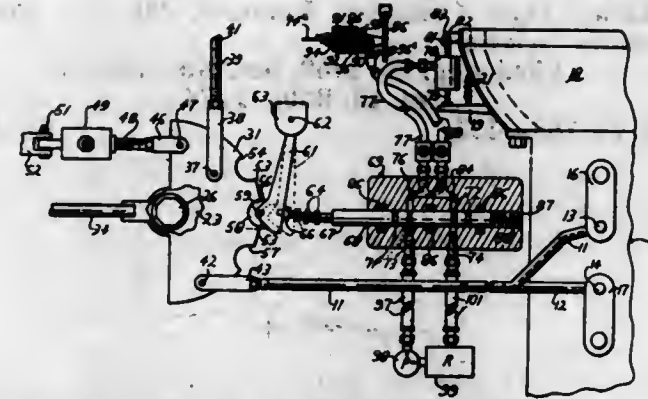
SLEET SCRAPER FOR THIRD RAIL ASSEMBLY
Henry W. Wessells III, Paoli, and Walter B. Dean,
Narberth, Pa., assignors to The Budd Company,
Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 19, 1968, Ser. No. 722,754
Int. Cl. B601 5/02
U.S. Cl. 191—62 4 Claims



Third rail sleet scraper assembly for a truck of a railway vehicle. A sleet scraper head is connected to one end of a tube for resisting torsion induced by sliding contact of the head with the rail. The other end of the tube is connected to a spring loaded arm mounted for pivotal movement in a manner to accommodate for vertical height adjustment of the scraper head. Electrically non-conductive sleeve means in the form of a torque tube precludes electrical arcing between the third rail and the truck structure of the railway vehicle.

3,517,788

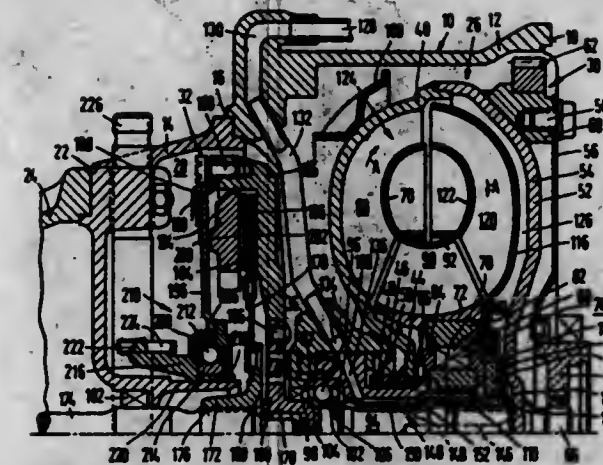
CLUTCH RELEASE AND GEAR CHANGE MECHANISM FOR TRANSMISSION
Malan R. Miller, Rte. 2, Box 57, Parrish, Ala. 35580
Filed June 20, 1968, Ser. No. 738,589
Int. Cl. F16d 67/00
U.S. Cl. 192—3.5 2 Claims



Clutch releasing and gear actuating mechanism embodying a pivoted plate having an arcuate peripheral edge with angularly spaced recesses therein. A cam moves inward within selected recesses to an outer position in contact with the peripheral edge. Inward and outward movement of the cam moves a control valve to a first position and to a second position to release and engage the clutch upon movement of the control valve to the second and first positions, respectively. The plate moves gear changing mechanism upon continued rotation of the plate after the cam moves outward.

3,517,789

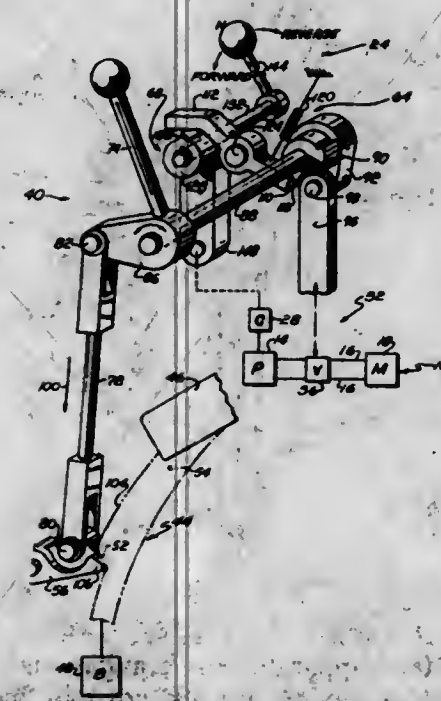
TORQUE CONVERTER AND CLUTCH
Joachim Gimmier and Winfried Glock, Schweinfurt,
Germany, assignors to Fichtel & Sachs Aktien-
gesellschaft, Schweinfurt, Germany
Filed Mar. 5, 1968, Ser. No. 710,686
Claims priority, application Germany, Mar. 7, 1967,
F 51,743
Int. Cl. F16d 67/00
U.S. Cl. 192—3.21 8 Claims



A hydraulic torque converter and a coaxial clutch closely coupled in a common outer casing have a small axial length because the front bearing for the output shaft of the converter is radially aligned with the doughnut-shaped assembly formed by vanes on the impeller, stator and turbine. The front bearing is mounted on a bracket extending axially from the partition wall between the torque converter and the clutch into the central recess in the deeply dished impeller. The vane assembly is of oval shape in radial section, the minor axis of the oval being parallel to the converter axis.

3,517,790

HYDROSTATIC TRANSMISSION AND BRAKE WITH CONTROLS
Gerald D. Damon, Plymouth, Mich., assignor to Eaton
Yale & Towne Inc., Cleveland, Ohio, a corporation
of Ohio
Filed Mar. 25, 1968, Ser. No. 715,655
Int. Cl. F16d 67/00
U.S. Cl. 192—4 10 Claims



Disclosed herein is an actuator means for use in a vehicle having a support surface engaging drive means, an engine, and hydrostatic transmission means for transmitting power from the engine to the drive means. The

3,517,791
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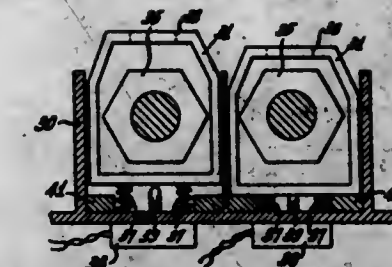
Ray P. Miles, 8575 W. Melody Lane,
Macedonia, Ohio 44056
Filed Sept. 27, 1968, Ser. No. 763,318
Int. Cl. B65g 11/02; E01d 15/12
U.S. Cl. 193—41 2 Claims



The invention relates to ramps useful for loading and unloading cargo from trucks and the like. A pair of ramps are provided which may be used separately to provide flexibility of use. The pair may be used in a parallel engaged position to provide a wider ramp surface for handling wider cargo. Interlock means are provided on each ramp for purposes of engaging the ramp together.

3,517,792

MULTIPLE FONT KEYBOARD
Thomas C. Abrahamson, Haddonfield, N.J., assignor to RCA Corporation, a corporation of Delaware
Filed Dec. 19, 1967, Ser. No. 691,816
Int. Cl. B41j 5/12
U.S. Cl. 197—98 5 Claims



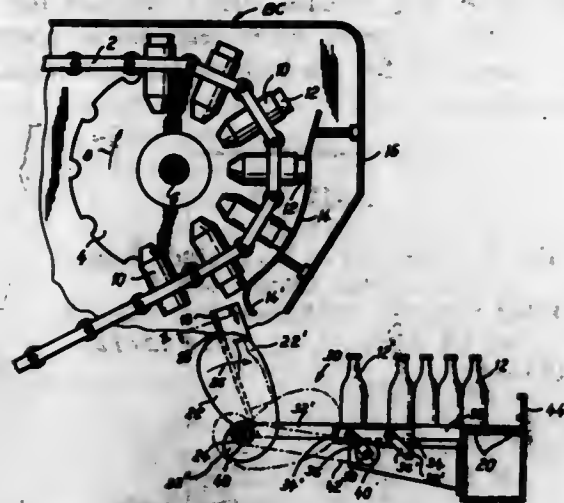
A keyboard having a plurality of font sets on respective sides of multi-sided rods which are concurrently rotated to expose a selected font with the font symbols being associated with respective keyboard keys.

3,517,793

TRANSPORTING ARRANGEMENT FOR TRANSPORTING BOTTLES OR THE LIKE AWAY FROM A BOTTLE-CLEANING MACHINE
Friedrich Böcker, Marzen, Germany, assignor to Holstein & Kappert Maschinenfabrik Phoenix G.m.b.H., Dortmund, Germany
Filed Jan. 2, 1968, Ser. No. 695,090
Claims priority, application Germany, Dec. 30, 1966,
H 61,440
Int. Cl. B65g 47/00
U.S. Cl. 198—25 6 Claims

A transporting arrangement for transporting bottles or the like from the discharge end of a bottle-cleaning machine away from the latter in direction of the longitudinal

axis of the machine, in which the bottles leaving the discharge end are guided in downward direction onto a combined receiving and transfer means which receives



the bottles and automatically transfers the latter onto an elongated conveyor extending in direction of said axis laterally and downwardly spaced from the discharge end of the machine.

3,517,794

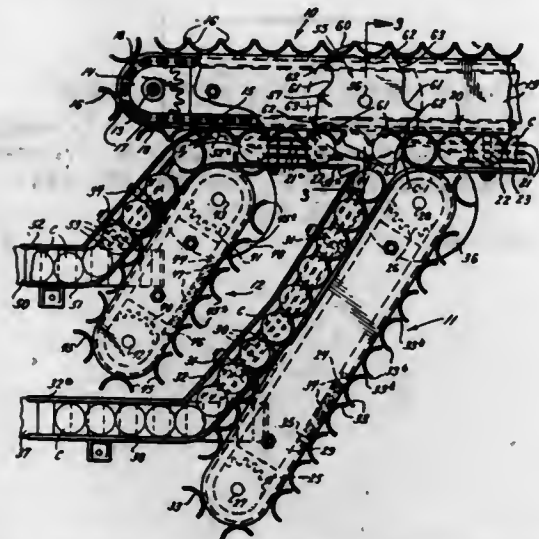
REVERSIBLE CONTAINER HANDLING APPARATUS

Momir Babunovic, Des Peres, Mo., assignor to Barry-Wehmiller Company, St. Louis, Mo., a corporation of Missouri

Filed Feb. 19, 1968, Ser. No. 706,556
Int. Cl. B65g 47/26

U.S. Cl. 198—31

12 Claims



Conveyor apparatus for handling containers at high speeds and arranged to move the containers in directions that will accomplish combining a plurality of lines of flow into one line or will accomplish dividing a single line of flow into a plurality of lines, the combining or dividing being selected by reversing the prime mover for the apparatus. The apparatus also includes means to stabilize the upright attitude of the containers so that toppling of the containers may be avoided.

3,517,795

MACHINE FOR ORIENTING WORKPIECES

Paul H. Dixon, Belvidere, Ill., assignor to Dixon Automatic Tool, Inc., Rockford, Ill., a corporation of Illinois

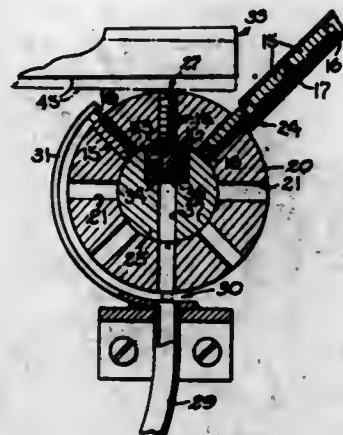
Filed July 31, 1968, Ser. No. 749,168
Int. Cl. B65g 47/24

U.S. Cl. 198—33

9 Claims

Randomly disposed screws having dissimilar opposite ends are oriented with their identical ends facing in the same direction by a circular ring adapted to be indexed

step-by-step and formed with a series of radially extending and angularly spaced passages for receiving the screws. At a detecting station, a sensor swings toward the ring to detect whether each screw is properly or improperly oriented in its passage and produces a signal indicative of the orientation of the screw. A gate responds to the presence or absence of the signal and either opens



the passage of the detected screw to allow the latter to drop directly into a delivery tube or keeps the passage closed to retain the screw in the passage so that the screw will be turned end-for-end as the ring is indexed and before the screw is dropped into the delivery tube. A single hydraulic actuator is used for both indexing the ring and swinging the sensor.

3,517,796

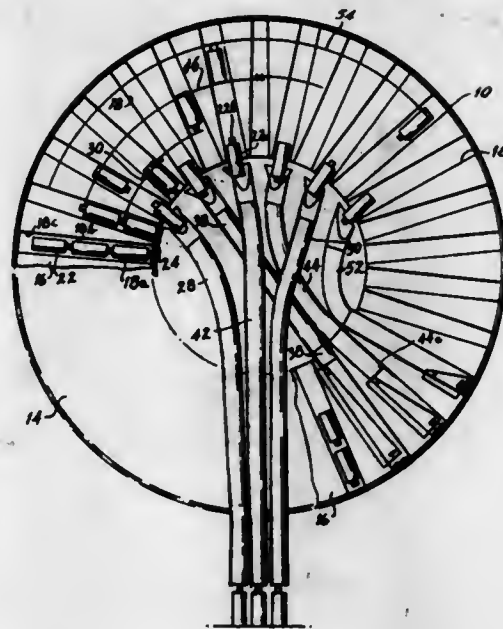
AUTOMATIC APPARATUS FOR ORIENTING AND FEEDING BOTTLES AND THE LIKE

Samuel S. Aldlin, New York, N.Y. (214 Beaumont St., Brooklyn, N.Y. 11235), and Stephen H. Aldlin, New York, N.Y. (3855 Shore Parkway, Brooklyn, N.Y. 11235)

Filed Aug. 14, 1968, Ser. No. 752,581
Int. Cl. B65g 47/24

U.S. Cl. 198—33

12 Claims



In a hopper feed apparatus for gravitationally feeding bottles or the like having a neck portion, including a grooved feed ring, a chute for receiving and conveying properly oriented bottles discharged from the grooves of the ring at the upper portion of the hopper and fraction means preventing misoriented bottles from being discharged from said grooves into the chute, a second chute

for receiving said misoriented bottles and discharging them back into the grooves of said ring at the lower portion of the hopper, whereby said misoriented bottles are presented in oriented position when the grooves receiving them reach the upper portion of the hopper. In one form of the invention, each groove is capable of receiving one or more bottles, end to end, and the hopper is provided with a corresponding number of sets of conveying and returning chutes.

3,517,797

THREAD BOBBIN TUBE ALIGNER

Giovanni Dalella, 52 Via Curtatone, and Angelo Rappo, 52 Via Opificio Debba, both of Vicenza, Italy

Filed Sept. 6, 1968, Ser. No. 757,937

Claims priority, application Italy, Sept. 19, 1967, 7,306/67

Int. Cl. B65g 47/24; B23g 7/17

U.S. Cl. 198—33

9 Claims



A machine for automatically aligning thread bobbin tubes which are wider at one end than the other and inserting the bobbin tubes in transport cases comprises a receiver for the tubes to be aligned, the receiver having an inclined bottom, at least one correspondingly inclined elevator having drivers following one another in the longitudinal direction, the drivers spaced apart and running in a channel formed in the receiver bottom, each driver being intended for one tube, and following the top end of said elevator there is disposed a substantially horizontal double track conveyor comprising two conveyor tracks which are parallel to one another and are rotationally driven synchronously and the distance between which is shorter than the diameter of the wider tube end, so that the tubes driven by the elevator and fed centrally to the double track conveyor are supported on the conveyor tracks of the double track conveyor only by their wider ends, hanging between said conveyor tracks, there being disposed at the delivery end of the double track conveyor a device for swinging up the tube end in the opposite direction to the direction of transport and, following the said device, there being provided guide means for introducing the falling tubes, which are directed in the same direction with their wider ends forwards, into a transport case.

3,517,798

DUMP SCRAPERS

Günter Strücker, Holzwickede, Germany, assignor to Gustav Schade, Maschinenfabrik

Filed Feb. 3, 1969, Ser. No. 795,908

Claims priority, application Germany, Feb. 12, 1968, 1,284,899

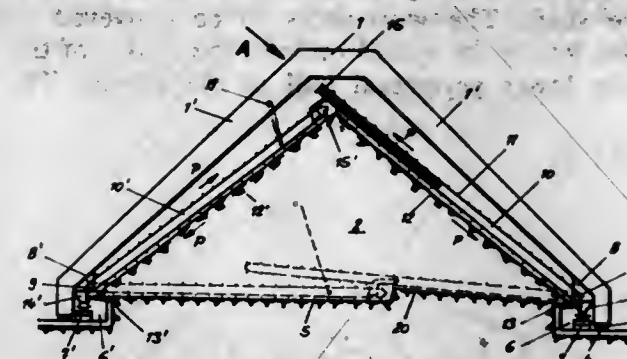
Int. Cl. B65g 65/28

U.S. Cl. 198—36

8 Claims

A dump scraper includes a frame having spaced-apart base portions and legs extending upwardly toward one another from the base portions, scraper booms are pivotally attached to each of the base portions. The booms may be interconnected and movable in a common plane between raised and lowered positions. The connection may permit limited relative angular movement be-

tween the two booms and may be quick-detachable. One boom may be laterally movable at its pivot for placing



the booms in side-by-side relation in their lowered position.

3,517,799

CHAIN AND INDEXING DRIVING MECHANISM

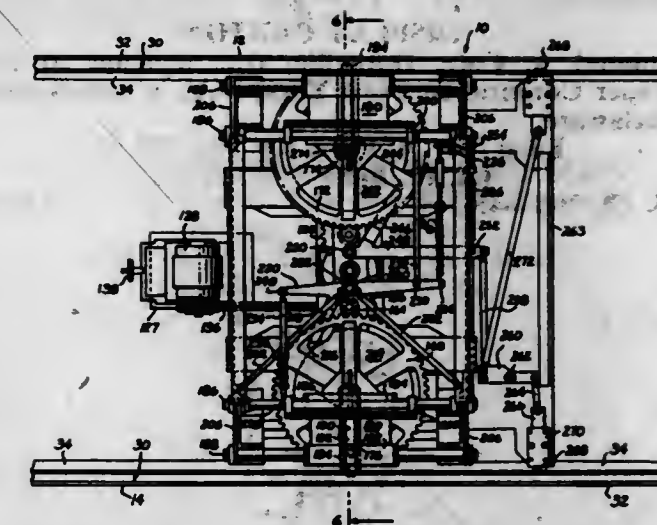
Stanley J. Gartner and John J. Regoc, Emporium, Pa., Henry W. Roeder, Waterloo, N.Y., and James M. Smith, Emporium, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Original application June 14, 1967, Ser. No. 646,009. Divided and this application Mar. 26, 1969, Ser. No. 810,728

Int. Cl. B65g 15/00

U.S. Cl. 198—135

17 Claims



An endless chain of articulated frames is driven intermittently by a drive mechanism operating in a very general sense like the four motion cloth feed bar of a sewing machine. The runs of the chain are in a horizontal plane while the frames themselves are arranged vertically. The frames are at such an elevation as to support carts carried thereby off the floor level, these carts supporting mechanisms to perform various operations on articles, such as cathode ray tubes supported on the carts and while the tubes are transported through processing areas. The carts themselves are detachably hung on the frames and supplied with casters so that when removed from the frames they may be rolled away, as for servicing them.

3,517,800

ROTARY CONVEYOR FOR ROLLED PRODUCTS

Otto Mödder, Dahlbruch, and Arno Schmidt, Kreuztal, Germany, assignors to Stegener Maschinenbau G.m.b.H., a corporation of Germany

Filed July 9, 1968, Ser. No. 743,407

Claims priority, application Germany, July 21, 1967, 1,602,149; Mar. 5, 1968, 1,632,558

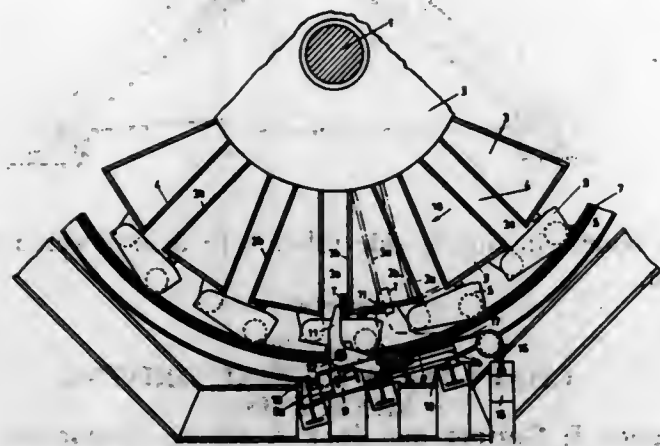
Int. Cl. B65g 29/00

U.S. Cl. 198—210

10 Claims

Disclosed is an apparatus used to transversely convey through a coolant tank round or flat elongated workpieces delivered from a rolling mill. The apparatus com-

prises a plurality of wheels each having spokes. The wheels are carried in a spaced-apart relation on a horizontal drive shaft. The workpieces to be conveyed are positioned within the spaces between the spokes of the wheels in the lower peripheral half of the wheels. The work-



pieces are held captive in the spaces by pivotally mounted slide bars which engage peripherally located skids submerged in a cooling tank. Counter-balanced support dogs restrain and stabilize the workpieces against one side of the spokes.

3,517,801

DISPLAY CARTON

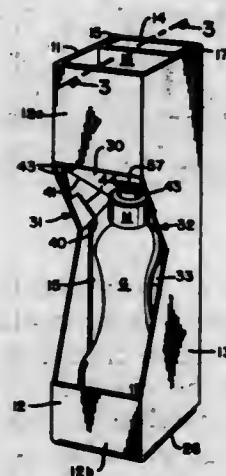
Raymond A. Cote, Doraville, Ga., assignor to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware.

Filed Nov. 4, 1968, Ser. No. 772,921

Int. Cl. B65d 5/50, 25/10

U.S. Cl. 206—45.14

2 Claims



A bottom fillable carton for bottles and the like having a wrap-around display window and a canted, resiliently suspended, article-support platform derived from three contiguous wall panels is disclosed herein. The carton is reinforced and stiffened by a structural member which extends across the carton and engages the platform to limit the extent of its inward and upward displacement and to facilitate bottom loading of the carton.

3,517,802

WATCH BAND CALENDAR AND DISPENSER

Patrick Petrie, 12210 Malone St., Los Angeles, Calif. 90066

Filed July 16, 1968, Ser. No. 745,317

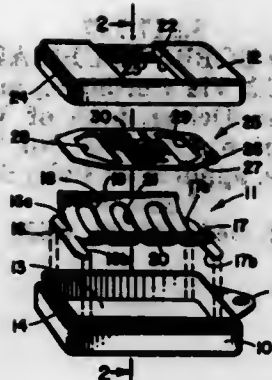
Int. Cl. A45c 11/18

U.S. Cl. 206—39

2 Claims

A watch band calendar dispenser in the form of a container having a top open window and end slot incorporates a unique spring geometry for urging a stack of

calendar elements in the form of thin sheets of metal in an upward direction for successive dispensing from the container. The biasing spring is in the form of a flat rectangular metal member dimensioned to fit in the container and having transverse cuts extending inwardly from opposite sides adjacent to the ends. The side portions between these cuts are biased upwardly to define a semi cylindrical sec-



tion, the top edges of the side portions being parallel to each other and serving as engaging guides for the underside of the stack of the calendar elements. With this configuration, when the container is completely filled with elements, the spring structure is held in a substantially flat configuration so that a maximum number of elements may be incorporated within the container.

3,517,803

ELECTRICAL CONTACT CARRIER STRIP

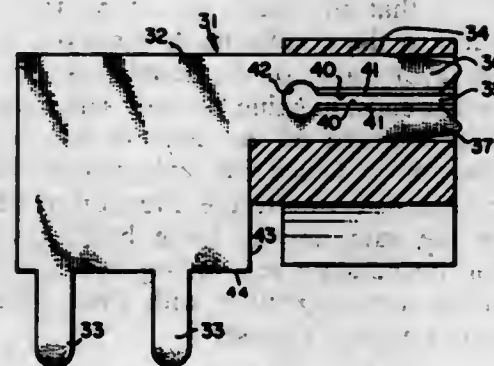
Frank John Frompovitz, deceased, late of Cornwells Heights, Pa., by Mary Frompovitz, executrix, Cornwells Heights, and William Richard Knapp, Huntingdon, Pa., assignors to Elco Corporation, Willow Grove, Pa., a corporation of Delaware

Filed Nov. 7, 1967, Ser. No. 681,312

Int. Cl. B65d 83/00; H01r 13/28

U.S. Cl. 206—56

12 Claims



An elongated, flexible, thermoplastic carrier strip is comprised of a plurality of openings arranged in a predetermined pattern for frictionally receiving and supporting the nose sections of a plurality of electrical contacts, each nose section having surface means, at least a portion of which constitutes contact engaging surface means, and each opening comprising means for engaging with at least part of said surface means of a nose section to aid in the proper alignment and engagement of said nose section within its respective opening, said strip further comprising recess means for relieving a concentration of compressive forces which are created within said strip by the frictional engagement between the nose sections of the contacts and the openings in the strip.

3,517,804

JOINTING CLIPS FOR INSULATED ELECTRIC WIRES AND METHOD OF MAKING SAME

Arthur Manthorp Faulkner, Ilford, England, assignor to The Pliessey Company Limited, Ilford, England, a British company

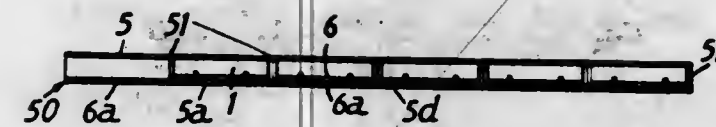
Filed May 28, 1968, Ser. No. 732,602

Claims priority, application Great Britain, June 7, 1967, 26,267/67; June 8, 1967, 26,492/67

Int. Cl. H02g 15/08; B65d 83/00

U.S. Cl. 206—56

12 Claims



U-profiled insulation-piercing wire-jointing clips for use in quick action applicators are externally insulated and at the same time longitudinally joined to each other by being inserted end to end into a continuous extruded channel of rigid polyvinylchloride of which the two flanges have inwardly projecting secondary flanges for retention of the clips, longitudinal spacing of the clips in the channel being ensured by alignment of location holes in the web of each clip with suitably spaced location holes in the insulation channel. Flexibility of the composite strip is achieved by pre-separating the flanges of adjacent lengths of the insulating channel, leaving only its web coherent. Automatic trimming of the free wire ends is effected by an anvil which is formed at the end of the channel by bending over a strip of the sidewall, and which co-operates in guillotine fashion with the edge-like end of the remainder of the sidewall. The channel bottom has windows co-operating with ridges of the channel sidewalls and the sidewalls are placed under high compressive stress during the folding-over operation.

3,517,805

MOLDABLE RESIN-BONDED LAMINATE

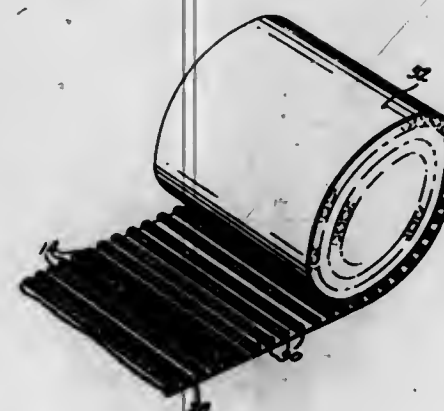
James P. Gould, deceased, late of New York, N.Y., by Emma Gould, administrator, Allerton House, 130 E. 57th St., New York, N.Y. 10022

Filed Feb. 7, 1968, Ser. No. 703,796

Int. Cl. B65h 75/00

U.S. Cl. 206—59

7 Claims



For use in the production of resin-bonded laminates, an elongated body consists of particles of thermosetting resin, preferably in B-stage, and bonded by a thermoplastic resin which melts at temperature below that at which the polymerization of the thermosetting resin will be completed, whereby application of pressure and heat first permits the adhesive to spread under pressure and then complete polymerization of the thermosetting component sufficiently to provide permanent union between upper and lower plies, one of which may comprise a carrier designed to become a part of the laminate.

3,517,806

GLOVE PACKAGE

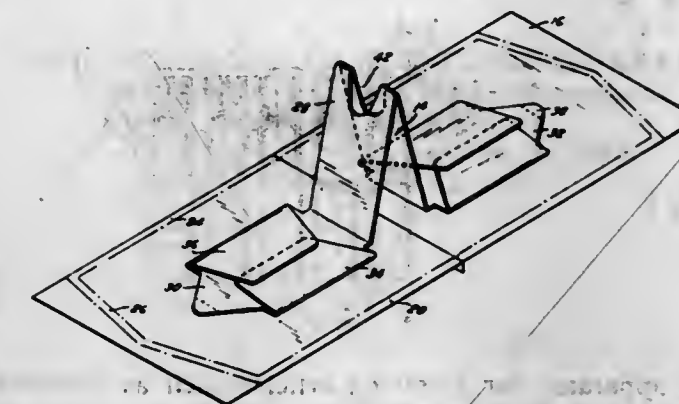
Frank Wittland, Wyckoff, N.J., assignor to Dickinson Becton and Company, East Rutherford, N.J., a corporation of New Jersey

Filed Feb. 20, 1969, Ser. No. 885,954

Int. Cl. B65d 85/18; A61b 19/02

U.S. Cl. 206—63.2

12 Claims



A glove package of the peel apart variety confining under sterile conditions a pair of gloves. The gloves are supported by a post construction which, upon opening of the package, causes the gloves to be disposed in an upstanding position for ease in donning.

3,517,807

APPARATUS FOR SORTING FISH EGGS

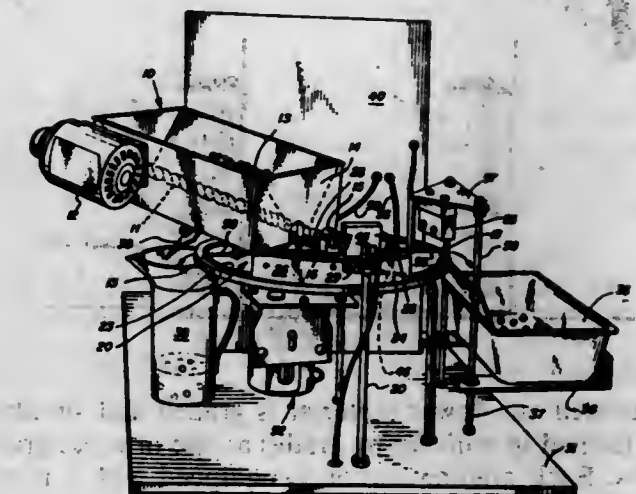
Neil Van Gaalen, P.O. Box 578, Glenwood Springs, Colo. 81601

Filed July 11, 1968, Ser. No. 744,230

Int. Cl. B07c 1/04, 5/342

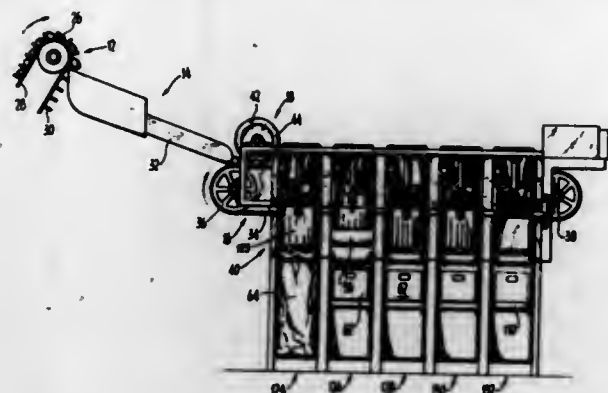
U.S. Cl. 209—73

10 Claims



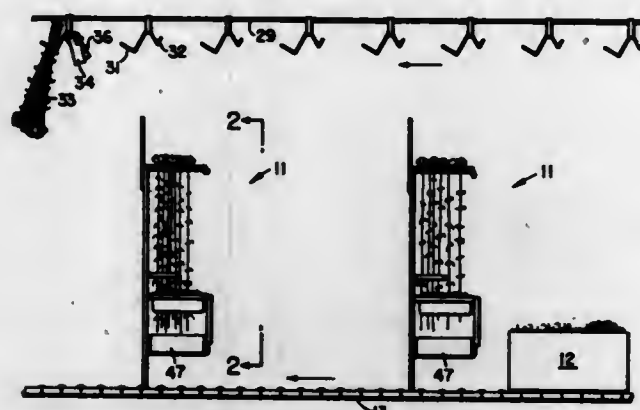
Apparatus for sorting fish eggs to separate dead eggs from live eggs without injury to the eggs, comprising an egg supporting turntable rotatable on a vertical axis, means for moving eggs in a single file from a supply tray to a non-compacting groove in the turntable, means for preventing jamming of the eggs, photo electric means for detecting dead eggs, means for blowing them off the turntable into a receiver, and blower means for moving the live eggs off the turntable into a receiver. The photo electric means comprises a light source and photo cell located above the egg supporting surface of the turntable to have their axes intersect adjacent said surface and avoid location of components at opposite sides of the egg supporting surface.

3,517,808
ARTICLE SORTING AND CONVEYING SYSTEM
 George E. Lauer, 2960 Chapman St.,
 Oakland, Calif. 94601
 Filed Mar. 27, 1968, Ser. No. 716,385
 Int. Cl. B07c 1/02
 U.S. Cl. 209—73 11 Claims



An apparatus for receiving articles such as potatoes, in which a device is provided for spacing the articles in alignment on a conveyor, a knock-off mechanism is utilized to direct articles of different sizes into a plurality of article receiving members, and means are provided to intercept the flow of articles into the respective receiving members when a predetermined weight of such articles has been delivered.

3,517,809
CENTRAL GRADING SYSTEM FOR CUT FLOWERS
 Gerald L. Gregoire, San Francisco, Calif., assignor to Gregoire Flowers, Inc., San Francisco, Calif., a corporation of California
 Filed Dec. 3, 1968, Ser. No. 788,113
 Int. Cl. B07c 7/00
 U.S. Cl. 209—122 18 Claims

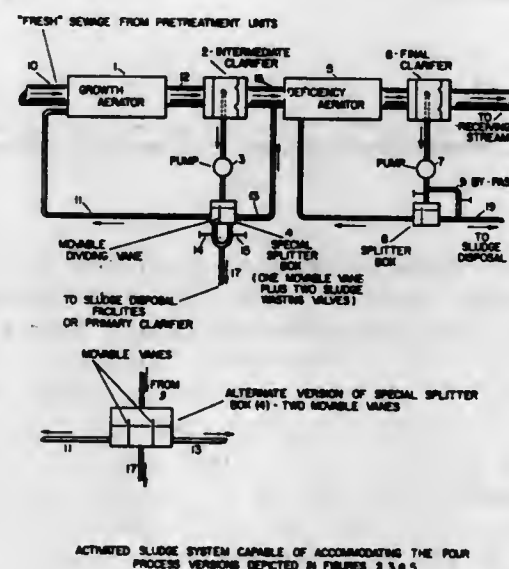


Ungraded cut flower material is graded and simultaneously formed in bunches by grades at one or more grading stations. Each grading station is equipped with a number of decision limiting racks and each rack corresponds to a different grade of flower.

3,517,810
LIQUID WASTE TREATMENT PROCESS
 Carl Beer, Taborton Road, Sand Lake, N.Y. 12153
 Filed May 23, 1968, Ser. No. 731,393
 Int. Cl. C02c 1/06
 U.S. Cl. 210—7 1 Claim

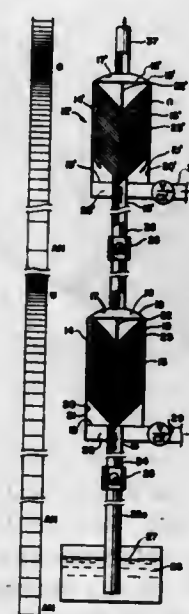
In an activated sludge process for treatment of liquid wastes wherein, in sequence, waste is treated with heterogeneous microorganisms employing a first aeration step to form a mixed liquor of liquid treated waste and activated sludge particles in a growth aerator, the mixed liquor is settled to form an underflow of activated sludge slurry and an overflow of a second mixed liquor comprising

liquid treated waste and a negligible quantity of activated sludge particles, the second mixed liquor overflow is aerated employing a second aeration step in a deficiency aerator to form a third mixed liquor of treated waste and sludge particles, and the third liquor is settled to form an overflow of treated waste and an underflow of substantially deactivated sludge slurry, the improvement by means of which removal of phosphates and other un-



desirable moieties from the second liquor overflow in the second aeration step is enhanced which comprises recirculating a first portion of said activated sludge slurry underflow to said first aerating step in a growth aerator, and introducing a second portion of said activated sludge slurry underflow to said aeration step in the deficiency aerator whereby only excess activated sludge contacts said mixed liquor in the deficiency aerator.

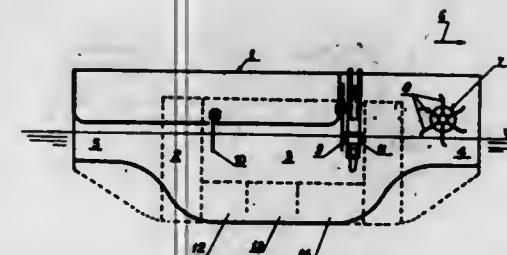
3,517,811
METHOD AND APPARATUS FOR FILTERING SUBMICROSCOPIC SOLID PARTICLES FROM A FLUID CARRIER
 Leo R. Newfarmer, La Jolla, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
 Filed Jan. 21, 1969, Ser. No. 792,679
 Int. Cl. B01d 13/00, 35/20
 U.S. Cl. 210—19 11 Claims



A method for filtering submicroscopic dissociated ions of a dissolved solid from a fluid carrier solvent by flowing the fluid carrier solvent through a plurality of vibrating membranes, the membranes having special properties

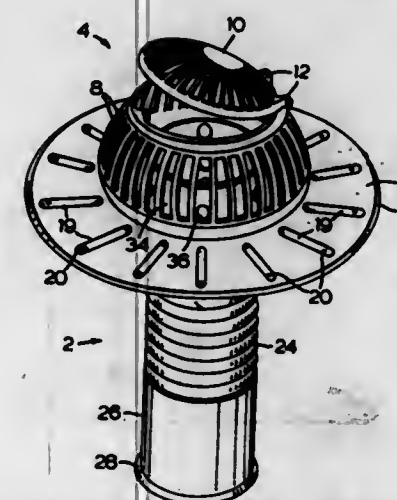
and being oriented so as to deflect the dissociated ions of the dissolved solids in the fluid carrier solvent away from the main flow of the fluid carrier solvent.

3,517,812
PROCESS AND APPARATUS FOR REMOVING FLOATING WASTES FROM WATER SURFACES
 Dario Bucchioni, Via Bengasi 19, and Mirella Forgiare De Toffoli, Viale Nazario Sauro 35, both of Leghorn, Italy
 Filed Sept. 28, 1967, Ser. No. 671,405
 Claims priority, application Italy, Oct. 4, 1966, 28,252/66; Jan. 12, 1967, 1,080/67
 Int. Cl. B01d 17/02
 U.S. Cl. 210—73 8 Claims



A process for removing oily and other floating wastes from water surfaces comprises flowing at least the upper water layer through a canal and under at least one floodgate immersed a selected distance in the water and extending transversely of the direction of flow. The cross section of the canal is markedly increased under the floodgate, for example by increasing the depth of the canal, in order to decrease the velocity of the water and promote decantation. Wastes collecting in front of the floodgate are led off with a portion of the water to at least one decantation tank where the wastes are separated from the water. Apparatus for carrying out the process comprises a canal and at least one floodgate extending transversely of the canal and immersed to a selected depth in the water. Under the floodgate the depth of the canal is markedly increased to decrease the speed of the water. Means is provided for removing and decanting wastes collected in front of the floodgate.

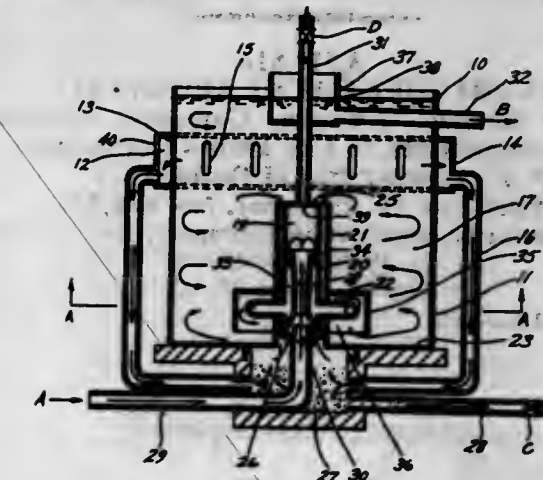
3,517,813
ROOF DRAIN
 Kunibert Thaler, 53 Morningdew Road, Westhill, Ontario, Canada
 Filed Sept. 16, 1968, Ser. No. 759,987
 Int. Cl. E03f 1/00
 U.S. Cl. 210—166 4 Claims



A roof drain having a spherical body with a hinged top permitting access to the body interior, a wide flange extending radially from the middle of the body to anchor the drain to a roof, and a corrugated metal expansion

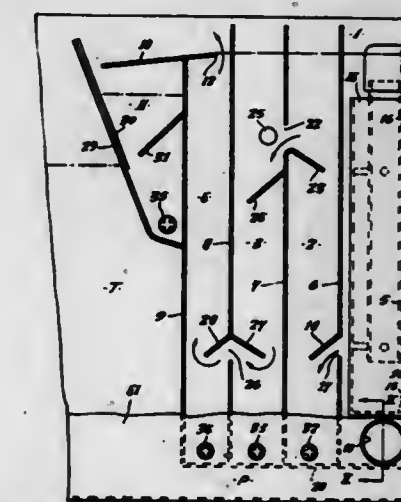
sleeve extending from a drain aperture at the bottom of the body for connection to a downpipe. Two concentric conical flow control sleeves, one fixed to the body and the other rotatable on the one, encircle the drain aperture. The fixed sleeve carries at its top a threaded bushing on which is screwed a nut which presses the rotatable sleeve against the fixed sleeve, to prevent unwanted rotation and to prevent water flow between the sleeves.

3,517,814
HIGH SPEED WATER PURIFYING APPARATUS
 Toyomasa Minagishi, 4-31-8 Honkomagome, Bunkyo-ku, Tokyo, Japan
 Filed June 17, 1968, Ser. No. 737,693
 Int. Cl. B01d 21/26, 21/24
 U.S. Cl. 210—197 8 Claims



A process and apparatus for treating liquids by developing rotating rising currents without the use of any mechanical agitator. The rotating and rising currents are developed within a coagulating reaction chamber whereby the coagulating flocks float upwardly. At the same time the flocks are separated and removed from the center region and the periphery of the coagulating reaction chamber by the action of centripetal and centrifugal force, respectively.

3,517,815
REPLENISHMENT TANKS
 Robert Benjamin Bolton, Ponteland, Northumberland, and Thomas Gray, Castleide, Consett, England, assignors to R. B. Bolton (Mining Engineers) Limited, Consett, England, a company of Great Britain and Northern Ireland
 Filed July 15, 1968, Ser. No. 744,970
 Claims priority, application Great Britain, July 19, 1967, 33,211/67
 Int. Cl. B01d 21/24
 U.S. Cl. 210—256 10 Claims



A replenishment tank for instance for hydraulic power systems, has a reservoir for cleaned liquid and an entry portion between the inlet and the reservoir.

The entry portion comprises a plurality of compartments through which the incoming contaminated liquid has to pass successively. The aperture in the or each partition between the compartments is arranged so that the fluid has to follow a tortuous path through the entry portion thus giving the contaminants time to settle or rise to the surface according to their density. At least one, and preferably all, the apertures are below the surface of the liquid in the compartments and above the floor of the compartments; thus forming in each compartment a settling chamber below the apertures and a flotation chamber above the apertures in which the contaminants may collect. The liquid is received into the entry portion from the inlet with small turbulence over a submerged weir, and it is discharged from the entry portion to the reservoir over an exposed weir.

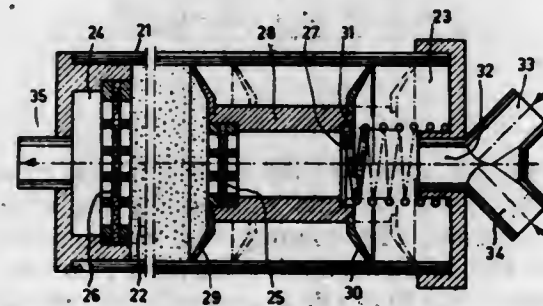
3,517,816

FLUID TREATMENT APPARATUS

Johannes Hoppen, Schwelm, Germany, assignor, by mesne assignments, to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 16, 1968, Ser. No. 698,227
Claims priority, application Germany, Jan. 21, 1967, G 49,049, G 49,050
Int. Cl. B01d 27/02

U.S. Cl. 210-266

3 Claims



A water softener having a cylindrical variable volume conversion tank for containing ion exchange conversion material. The softener is operative in any orientation and particularly adaptable for use within domestic appliances.

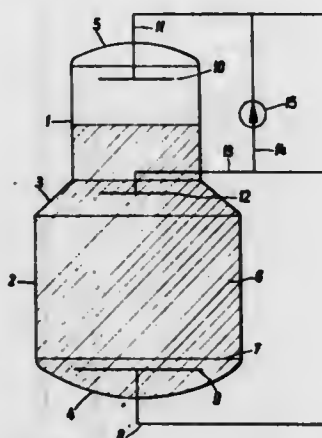
3,517,817

LIQUID TREATING APPARATUS

Hans Hitzel, Frankfurt am Main, Germany, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Aug. 7, 1967, Ser. No. 658,776
Claims priority, application Germany, Feb. 2, 1967, M 72,635; Feb. 18, 1967, M 72,813
Int. Cl. B01d 23/10

U.S. Cl. 210-279

12 Claims



A liquid treating apparatus is composed of a lower cylindrical portion, an upper cylindrical portion of less diameter than said lower portion, and a conically shaped

intermediate portion. Adsorption or ion exchange material fills the lower and intermediate portions and not more than half the upper portion. Liquid is fed both through the bottom portion and on top of the material in the upper portion, and drained from the intermediate portion.

3,517,818

ROTARY DRUM FILTER

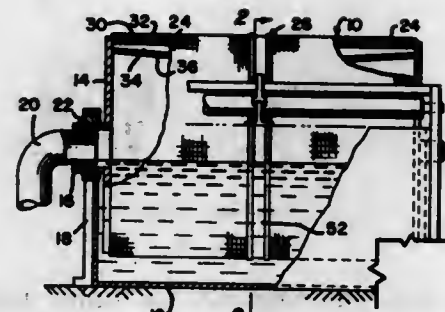
Oscar Luthi, Nashua, N.H., assignor to Improved Machinery Inc., Nashua, N.H., a corporation of Delaware

Filed Mar. 7, 1969, Ser. No. 805,136

Int. Cl. B01d 35/12

U.S. Cl. 210-392

14 Claims



A rotary drum filter having a rotary filter cycle including an arcuate portion during which subatmospheric pressure is applied to filtrate compartments, located around the periphery of the filter drum, for drying stock and also an arcuate portion during which the subatmospheric pressure is cut off from such compartments. The filter is provided with means for adjusting the communication between the compartments and the means applying the subatmospheric pressure whereby such communication can be varied to control the air flow from the compartments to the subatmospheric pressure applying means during the first mentioned portion of the filter cycle.

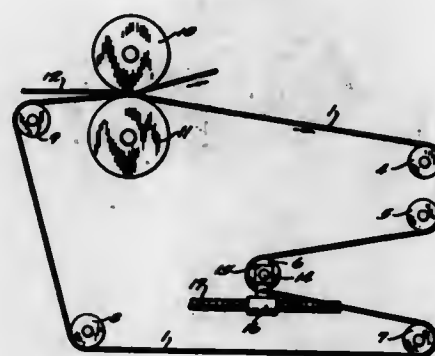
3,517,819

ADJUSTABLE WOVEN FABRIC

Howard M. Holland, Appleton, Wis., assignor to Appleton Mills, Appleton, Wis., a corporation of Wisconsin
Continuation-in-part of application Ser. No. 676,370, Sept. 27, 1967, which is a continuation-in-part of application Ser. No. 631,381, Apr. 17, 1967. This application Mar. 20, 1968, Ser. No. 714,693
The portion of the term of the patent subsequent to May 14, 1985, has been disclaimed
Int. Cl. B01d 33/04

U.S. Cl. 210-400

5 Claims



An endless fabric, such as a papermaker's felt, composed of a series of generally parallel warp yarns and having cross machine yarns or fibers located at an acute angle up to 80° with respect to a line normal to the warp yarns. The cross machine fibers are freely adjustable with

respect to the warp yarns and by adjusting the angularity of the cross fibers, when the felt is on the papermaking machine, the porosity and drainage rate of the felt, as well as the finish characteristics of the paper being made, can be varied; thereby extending the useful life of the fabric.

3,517,820

COALESCER CARTRIDGE

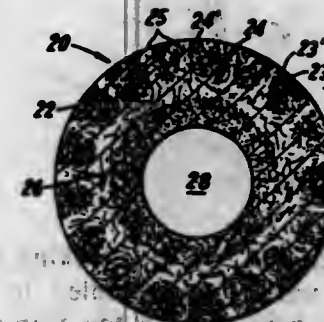
Michael D. Mintz, Edison, N.J., assignor to Puroator Products, Inc., Rahway, N.J., a corporation of Delaware

Filed Mar. 15, 1968, Ser. No. 713,486

Int. Cl. B01d 39/06

U.S. Cl. 210-491

8 Claims



The invention relates to a coalescer adapted to remove the minor phase liquid from an emulsion of minor phase-major phase liquid. The discharge section of the coalescer is immediately downstream of the primary coalescing section and is structured to emit droplets of minor phase liquid of predictable uniform size. Basically, the structure of the discharge section is formed of a maze of material wettable by the major phase liquid but not the minor phase liquid, having interlaced therebetween, a multiplicity of passages of material which are wettable by the minor phase liquid but not the major phase liquid. Specifically, each of the passages of material wettable by the minor phase liquid extend from the primary coalescing section and diminish in diameter as they approach the downstream wall of the coalescer where they terminate in their smallest diameter.

3,517,821

DEFLECTING ELEMENT FOR CENTRIFUGAL SEPARATORS

Donald R. Monson, West St. Paul, Darryl E. Keller, Mound, and James C. Rothman, Rosemount, Minn., assignors to Donaldson Company, Inc., Minneapolis, Minn., a corporation of Delaware
Filed Nov. 29, 1968, Ser. No. 779,759
Int. Cl. B04c 5/103

U.S. Cl. 210-512

6 Claims



A deflecting element for a centrifugal separator having a centrally located axially extending hub with a plurality

of generally helical type vanes extending radially outwardly therefrom, each vane having a camber in the high pressure surface thereof positioned so that a short portion thereof adjacent the radially extending leading edge is generally parallel with the axis of the hub and the low pressure surface of each vane has a relatively sharp break adjacent the leading edge. Further, each of the vanes includes a trailing edge formed so that the radially outermost edge of said vane has a substantially shorter length than the edge attached to the hub.

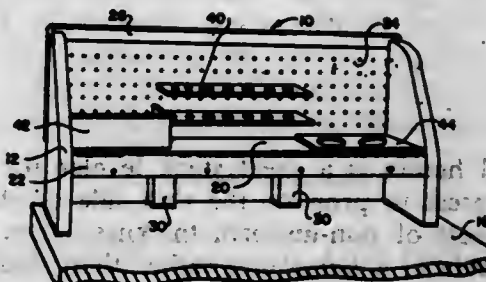
3,517,822

SUPPLY HOLDER

George J. Wagner, 297 Lincoln Drive, Bridgeville, Pa. 15017
Filed Apr. 26, 1968, Ser. No. 724,364
Int. Cl. A47f 5/00

U.S. Cl. 211-11

2 Claims



A supply holder for use with a horizontal surface such as a table top. The holder includes a horizontal tray raised above the table and extending between two vertical end members which engage the table top. A vertical rack extends upwardly from the tray and serves to support supplies or auxiliary supply holders such as test tube racks. The supply holder is fixed to a table top by clamps or the like.

3,517,823

HANGER FOR SKINDIVER'S EQUIPMENT

Donald G. Papineau, 26 Willow Road, Greenville, R.I. 02828
Filed Apr. 29, 1968, Ser. No. 724,796
Int. Cl. A47f 7/00

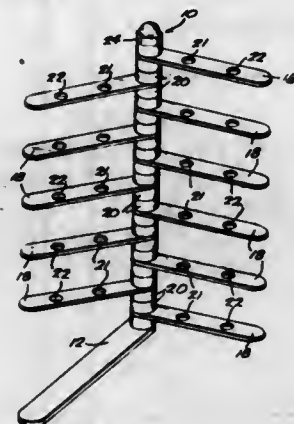
U.S. Cl. 211-13

6 Claims



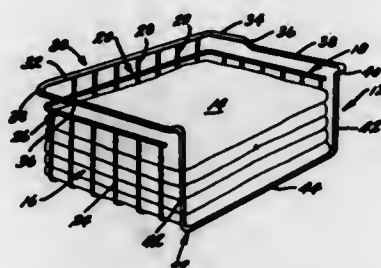
A hanger for skindiver's equipment having portions formed thereon that are provided for supporting special accessory articles such as snorkel, face mask and flippers when these articles are not in use.

3,517,824
SHEET STACK LEVELER FOR PRINTING PRESS
 Francis H. Paque, 538 N. 51st St.,
 Milwaukee, Wis. 53208
 Filed Apr. 30, 1968, Ser. No. 725,391
 Int. Cl. A47f 7/00
 U.S. Cl. 211—50



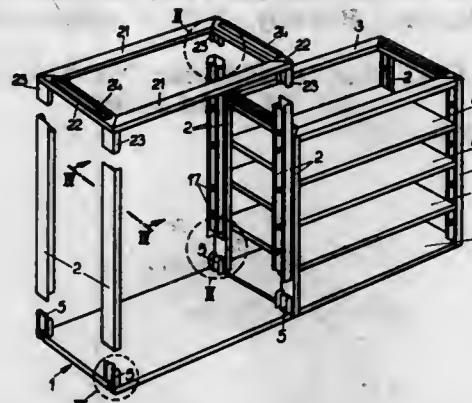
Disclosed herein is a sheet stack leveler for use with a printing press to prop up the thin side of sheets in a stack of sheets of non-uniform thickness, thus to maintain the sheets in a horizontal rather than slanted plane and facilitate operation of a printing press sheet feed mechanism. The leveler comprises a base having an up-standing post with a series of vertically spaced swingably mounted prop blades. Only as many prop blades as are necessary are swung into the stack of sheets in successively spaced vertical intervals to obtain the desired leveling.

3,517,825
ARTICLE HANDLING TRAY
 Robert L. Propet, Ann Arbor, Mich., assignor to Herman Miller Inc., Zeeland, Mich., a corporation of Michigan
 Filed June 10, 1968, Ser. No. 735,801
 Int. Cl. B65d 21/00
 U.S. Cl. 211—126



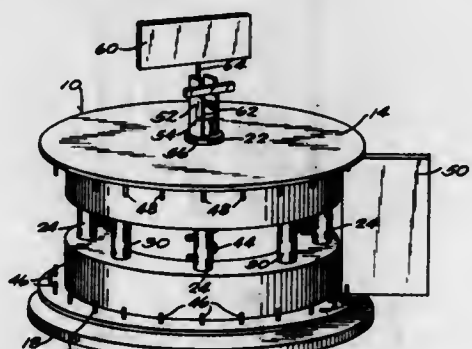
The disclosure relates to an article handling tray with an open top and an open front for top loading and front dispensing. The tray is formed of a back wall, two oppositely disposed side walls, and a bottom. A stiffening and gripping rim extends around the top of the back and side walls, downwardly along the front of the side walls, and across the front edge of the bottom. In one embodiment, the tray is an open mesh structure and the rim is attached to the top of the back and the front of the bottom thereby leaving a free gripping area at the top and front of the sides. In another embodiment, the tray is integrally formed from a plastic material. Preferably, the stiffening and gripping rim has an outwardly extending portion at the back of the side wall to permit the trays to be used as drawers with the gripping rim engaging rails in a cabinet or the like.

3,517,826
SHELF UNIT
 Manfred Schafer, Salchendorf, near Neunkirchen, Germany, assignor to Fritz Schafer K.G., Neunkirchen, Kreis Siegen, Germany, a corporation of Germany
 Filed Jan. 12, 1968, Ser. No. 697,493
 Claims priority, application Germany, Oct. 19, 1967, Sch 43,568
 Int. Cl. A47f 5/00
 U.S. Cl. 211—134



A shelf unit which can, by the stacking of a selected number of similar units, be assembled to any desired height by utilizing a base plate, a top frame, corner uprights arranged at selected corners of the base plate with each corner upright having an outer portion comprising a generally C-shaped cross section having an elongated slot therein. The lower end of the corner uprights are notched and arranged to permit same to rest generally on the base plate with the web and one flange of each of the C-shaped sections extending past the upper surface of the base plate and closely embracing the edge surfaces of the base plate adjacent the corner and the upper ends of the corner uprights similarly notched and resting against and embracing the corners of the upper frame. The shelf unit further comprises an inner portion having a U-shaped cross section arranged within the outer portion with its web extending across the slot and rigidly affixed to the portion of the outer portion adjacent the slot. The web of the inner portion is provided with projections extending through the slot. Posts are rigidly affixed to the base plate and to the top frame and extend into the respective ends of the outer portion and are of a size and shape to fit snugly therewithin. The area of bonding of the post to the base plate and top frame is located within the inside contour of the outer portion of the upright when same is placed on the post.

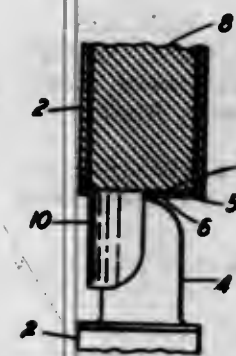
3,517,827
THEFTPROOF MERCHANDISE DISPLAY
 Louis John Crosslen, Grafton, and Elio Vicenzi, Milwaukee, Wis., assignors to Frank Mayer & Associates, Inc., Grafton, Wis., a corporation of Wisconsin
 Filed May 20, 1968, Ser. No. 730,454
 Int. Cl. A47f 5/02
 U.S. Cl. 211—163



A display device having a plurality of relatively movable support members provided with cooperable merchandise receiving and display spindle elements and

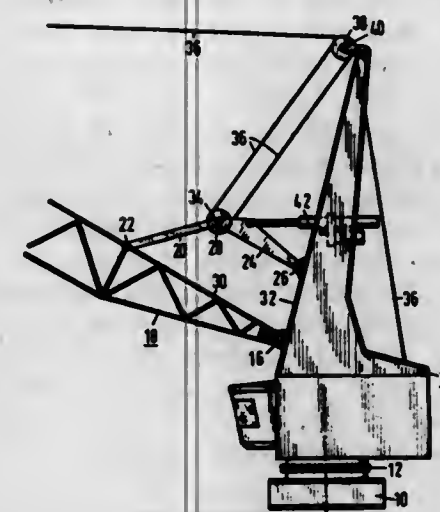
adapted to be simultaneously locked against displacement by a common locking mechanism to prevent unauthorized removal of the merchandise from the spindles while being readily releasable for removal of the displayed merchandise by authorized personnel.

3,517,828
RACK STACKING GUIDE
 Ralph E. Hunter, P.O. Box 82, Irmo, S.C. 29063
 Filed Aug. 13, 1968, Ser. No. 752,224
 Int. Cl. B65g 1/14
 U.S. Cl. 211—177



A rack with hollow legs in which a plunger having a scoop on the end thereof is inserted to be activated by a nipple on the upper end of each of said legs to permit alignment of the racks for stacking.

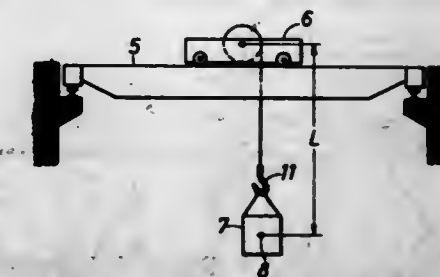
3,517,829
LUFFING CRANE
 Hans Tax, 3 Potsdamer Strasse, 8 Munich 23, Germany
 Filed Aug. 8, 1967, Ser. No. 659,102
 Claims priority, application Germany, Aug. 12, 1966, T 31,826
 Int. Cl. B66c 23/10
 U.S. Cl. 212—8



The jib and post of a crane are connected by a pivot and by two hingedly connected links with which they form a four-bar linkage. The load rope passes in sequence from a winch over three guide pulleys located at the top of the post, the hinged connection of the links, and the post top to the free end of the jib. A jack is interposed between the post and the link attached thereto. A counterweight may be attached to the other link by a pull rope passing over the top of the post.

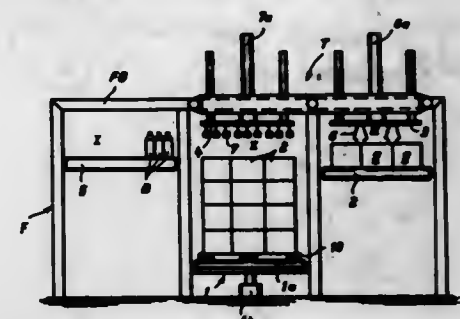
875 O.G.—33

3,517,830
CRANES
 Vilko Antero Virkkala, Parjetvalenkuja 11, Helsinki, Finland
 Filed Oct. 10, 1967, Ser. No. 674,154
 Int. Cl. B66c 19/00
 U.S. Cl. 212—132



An arrangement for reducing the oscillations of a load pendulating from a crane, which load is moved horizontally. A moving mechanism is provided with a synchronizing device, automatically functioning so that each change of acceleration as controlled by the driver is automatically succeeded by another equally great and similarly directed change of acceleration after a time, which is half the length of the oscillation period of the load.

3,517,831
MACHINE FOR LOADING AND UNLOADING OF PALLETS
 Winfried Hahn, Dortmund-Brackel, Germany, assignor to Holstein & Kappert Maschinenfabrik Phoenix G.m.b.H., Dortmund, Germany
 Filed June 6, 1968, Ser. No. 734,992
 Claims priority, application Germany, June 24, 1967, 1,506,925
 Int. Cl. B65g 60/00, 57/10
 U.S. Cl. 214—6

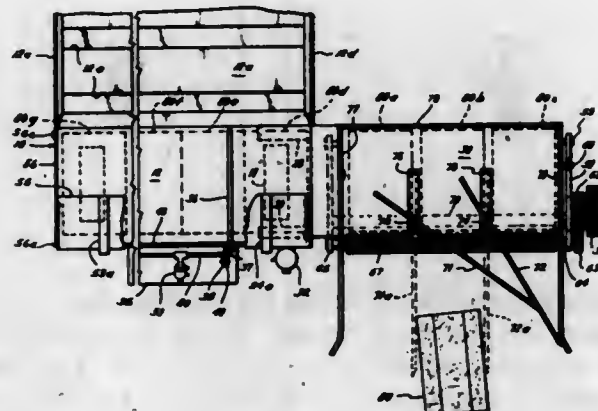


A machine for loading or unloading of pallets comprises a first conveyor which advances empty or filled bottles, a second conveyor which advances empty or loaded crates for bottles, a third conveyor which is disposed between the first and second conveyors and comprises a table which is movable up and down and supports one or more pallets at a time, and a transfer unit which is reciprocable at a level above the three conveyors and has first and second transfer devices which are respectively provided with grippers for bottles and crates. In one end position of the transfer unit, the first transfer device accepts bottles from or delivers bottles to the first conveyor while the second transfer device delivers crates to or accepts crates from the third conveyor. In the other end position of the transfer unit, the first transfer device delivers bottles to or accepts bottles from crates on the third conveyor and the second transfer device accepts crates from or delivers crates to the second conveyor. In this way, one of the transfer devices invariably carries goods when the transfer unit moves between its end positions.

3,517,832
APPARATUS FOR LOADING HAY
 Edwin C. Zieschang, Jr., Rte. 1,
 Chappel Hill, Tex. 77426
 Filed July 15, 1968, Ser. No. 744,943
 Int. Cl. B65g 57/32; B60p 1/48

U.S. Cl. 214-6

8 Claims

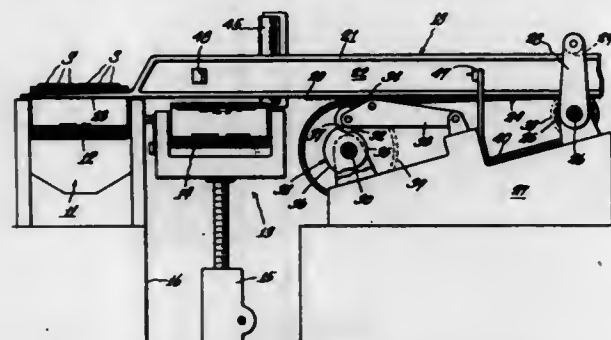


Apparatus for loading hay onto a moving vehicle. The hay is picked up by the moving vehicle at ground level and elevated to a platform or bed upon which the bales of hay are uniformly stacked.

3,517,833
MEANS FOR TRANSFERRING AND STACKING ELONGATED MEMBERS
 James O. Shaffer, Canfield, Ohio, assignor to Youngstown Foundry & Machine Company, Youngstown, Ohio
 Filed July 5, 1968, Ser. No. 742,846
 Int. Cl. B65g 57/10

U.S. Cl. 214-6

4 Claims



Apparatus in which a run-out table successively received longitudinally moving lengths of material for subsequent deposit in stacked relation on a stacking table which is in side-by-side relation with the run-out table. A transfer device lifts successive lengths of material from the run-out table, carries them transversely to position above the stacking table, and subsequently deposits them successively on the stacking table when transverse movement of the material lengths is interrupted during continuance of such transfer device movement.

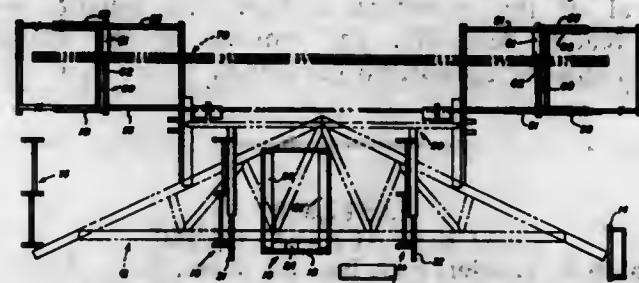
3,517,834
BUILDING COMPONENT STACKING SYSTEM
 James D. Adams, Colorado Springs, Colo., assignor to J. D. Adams Co., Colorado Springs, Colo., a corporation of Colorado
 Filed June 17, 1968, Ser. No. 737,604
 Int. Cl. B65g 57/28

U.S. Cl. 214-7

4 Claims

A stacking system for such building components as roof trusses, wall panels, and the like includes a conveyor for moving finished components from a fabrication jig to an elevating hoist which raises such component

to a stacking rack. The components are handled horizontally on the conveyor to decrease handling stresses,

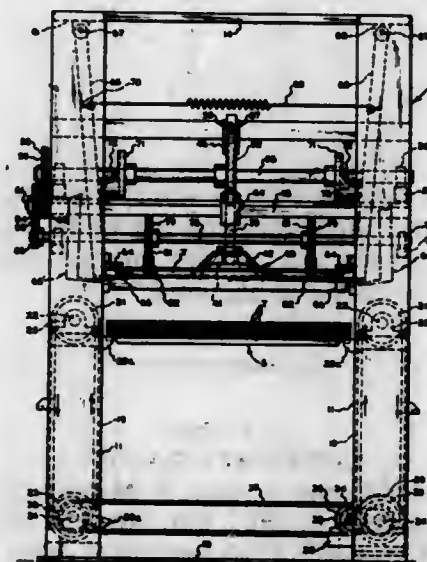


are elevated and then stacked in vertical alignment for subsequent handling and shipping.

3,517,835
UNSTACKING MECHANISM
 Hiram E. Temple, Rosemead, Calif., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
 Filed May 6, 1968, Ser. No. 726,680
 Int. Cl. B65g 59/04

U.S. Cl. 214-8.5

12 Claims



Unstacking mechanism for removing plastic and/or metal trays from vertically indexed stacks of trays, presented in vertically stacked groups to an unstacking station; a vertically moving lift plunger reciprocable downwardly to the stack and upwardly from the uppermost tray in the stack to a raised position above the stack; a magnetizable lift cup having a lost motion connection with the plunger; a resilient suction cup on the plunger within the magnetizable cup, a motor driven, cam actuated arm swingable in a vertical plane to move the plunger upwardly and downwardly; motor driven cam actuated pivoted levers having support pads thereon, swingable inwardly and outwardly in timed relation with the movement of the arm to support an unstacked tray above the stack; stripper members above the pads for removing a tray raised by the plunger from the magnetizable cup or suction cup; and a transfer sweep member for moving the tray along the support pads to a take-away conveyor.

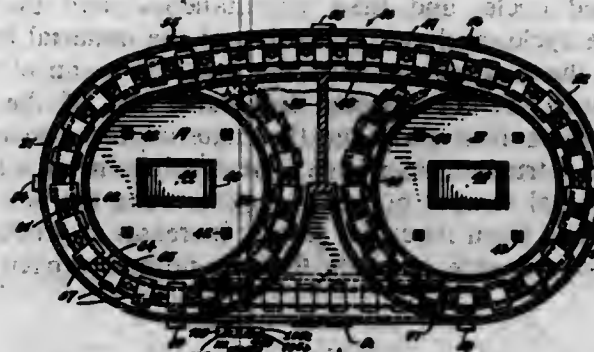
3,517,836
CAR TOWER—AND MEANS FOR STORING AUTOMOBILES IN A SPIRAL-SHAPED GARAGE
 Joseph Bosco, Everett, Mass., assignor to Eltop Corp., Orange, Calif., a corporation of California
 Substituted for abandoned application Ser. No. 607,493, Jan. 5, 1967. This application June 27, 1968, Ser. No. 742,122
 Int. Cl. E04h 6/06

U.S. Cl. 214-16.1

4 Claims

A parking garage comprising an endless chain system with support means thereon to support vehicles, the chain

and support means are movably mounted in a twin tower structure with interconnecting corridors, control means

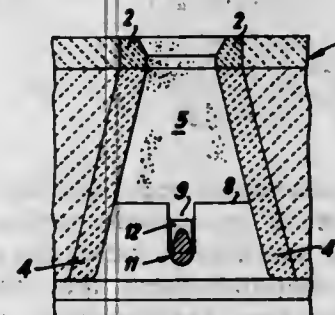


are provided to selectively transport a preselected vehicle and/or vehicle support means to a predetermined exit and entrance position.

3,517,837
COKING COAL HOPPER CONSTRUCTION WITH PARTITION
 Friedrich Thiersch and Manfred Morgenstern, Recklinghausen, Germany, assignors to Firma Carl Still, Recklinghausen, Westphalia, Germany
 Filed July 3, 1968, Ser. No. 742,395
 Int. Cl. C10b 31/02

U.S. Cl. 214-35

6 Claims



A coal hopper for horizontal coking furnaces comprises a furnace roof structure having an opening for receiving a charge of the coal that includes divergent downwardly extending side walls and flat end walls. The upper end of the refractory bricks which form the apex of the chamber vault extend inwardly adjacent the lower end of the roof hopper to define a ledge on each end wall which has a vertically extending recess. A partition web includes flat end pieces which are inserted into the vertical recesses and which engage over the respective ledges. The partition web includes a rounded top edge and downwardly divergent lateral faces. The coal which enters the hopper from the top is deflected by the rounded top edge against the lateral faces and outwardly to each other.

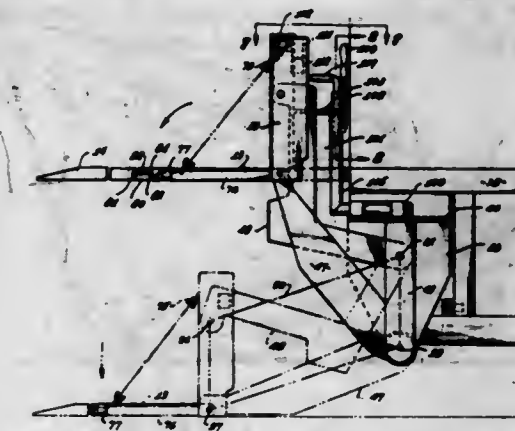
3,517,838
POWER LOADER FOR VEHICLES WITH TRANSFER PLATE
 Max J. Lugash, Los Angeles, Calif., assignor to Maxon Industries, Inc., Los Angeles, Calif.
 Filed May 24, 1968, Ser. No. 731,829
 Int. Cl. B60p 1/48

U.S. Cl. 214-77

17 Claims

A power loader attachment for trucks having a load platform that is made up of a pair of articulated sections and a transfer plate, the latter being alternately connectable to the articulated platform sections or stationarily positionable adjacent the truck bed to comprise an extension of the truck bed with the articulated sections folded

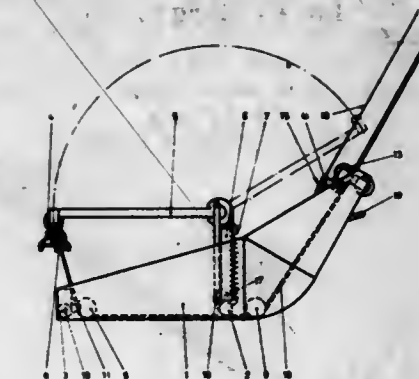
over the lifting arms and raised to a concealed position beneath the truck. The supporting framework and lifting arms incorporate camming elements engageable with the articulated sections of the platform for folding and unfolding the platform sections during raising and lowering of the inverted platform sections by the power means. The lifting arms for the load platform comprise a pair of parallelogram linkage systems and the articulated plat-



3,517,839
TIMBER SLEDGE
 Karl-Gunnar Jörgensen, Solna, Sweden, assignor to Logma Aktiebolag, Svednarvagen, Solna, Sweden
 Filed June 25, 1968, Ser. No. 739,821
 Int. Cl. B66c 1/44

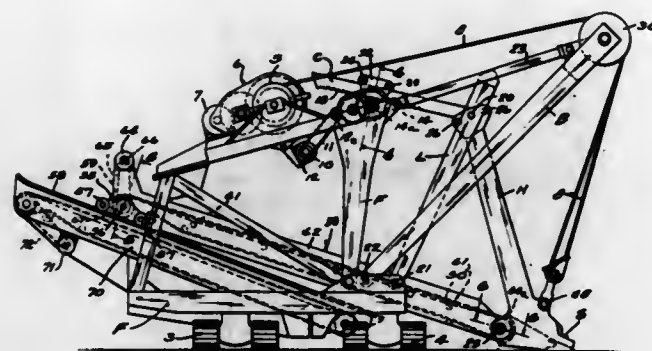
U.S. Cl. 214-85.5

8 Claims



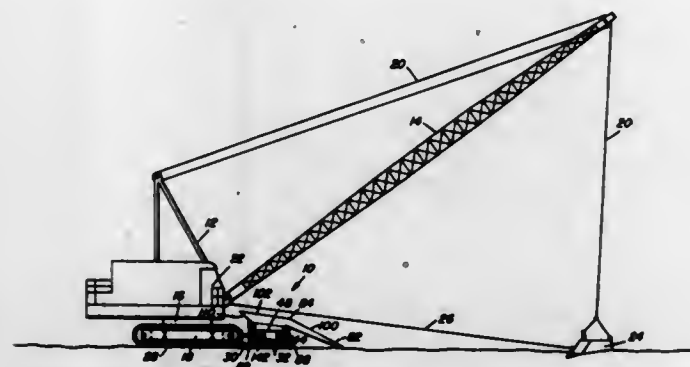
A log skidding device of the type including a skid pan provided with a clamping device for securing the fore ends of logs to be transported on the pan and intended to be towed by a self-propelled vehicle, as for instance a forest tractor, provided with a winch and a rope trestle or similar device for the winch rope at the rear end of the vehicle. The clamping device on the skid pan is movable between a closed position and an open position and the free end of the winch rope from the towing vehicle is connected to the skid pan by way of the clamping device in such a way that the clamping device is closed and kept closed by the traction in the winch rope. Preferably, the skid pan is also provided with rope locking means for locking the winch rope to the skid pan at a point along the rope which is closer to the vehicle than the part of the rope cooperating with the clamping device, whereby the clamping device can be kept closed even if the winch rope is slackened.

3,517,840
CONVEYOR EXCAVATOR HAVING PLURAL CONVEYORS FOR CONTINUOUS UNLOADING
 Karl Schneider, Milwaukee, Wis., assignor to Harnischfeger Corporation, West Milwaukee, Wis., a corporation of Wisconsin
 Filed Jan. 2, 1968, Ser. No. 695,095
 Int. Cl. E02f 3/30, 3/74
 U.S. Cl. 214—91 7 Claims



An excavating machine having a digger which is vertically swingable on the end of a handle. A plurality of conveyors are provided, one of which has a rigid frame attached directly to the digger for receiving the material from the digger and conveying it onto the second conveyor. The second conveyor is of the fixed type and is located adjacent the lower part of the machine with its front end close to the ground so that the first conveyor which is connected to the digger is always at an efficient conveying angle for positively controlling the material being continuously and uniformly unloaded, regardless of the vertical position of the cutter.

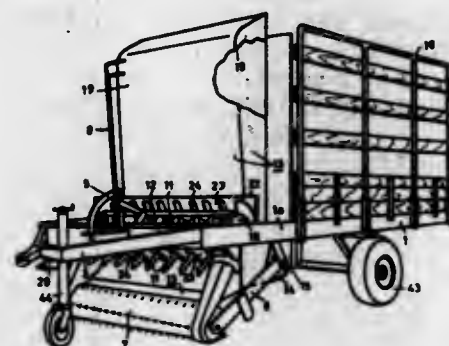
3,517,841
COMBINATION DRAGLINE AND MATERIAL FEEDER AND LOADING UNIT
 Jay S. Eaton, % Dixie Asphalt Company, P.O. Box 6308, West Palm Beach, Fla. 33405
 Filed Feb. 14, 1968, Ser. No. 705,454
 Int. Cl. B65g 67/08
 U.S. Cl. 214—93 15 Claims



This invention is a combination dragline and material feeder and loading unit and method and reversible vibrating feeder wherein the dragline collects material from the cut by using a scraper bucket whose loaded weight is greater than the lifting capacity of the dragline, but whose empty weight is liftable by the dragline, to collect the material from the cut and then drag it over the intervening area to deposit it on a material feeder platform without having lifted the material, then returning the bucket to the cut to repeat the cycle, and then, simultaneous with the next dragline cycle, vibrating the feeder platform to feed the material deposited thereon to an elevating mechanism at a selected transverse end of the platform to elevate it for gravity delivery to a truck. The

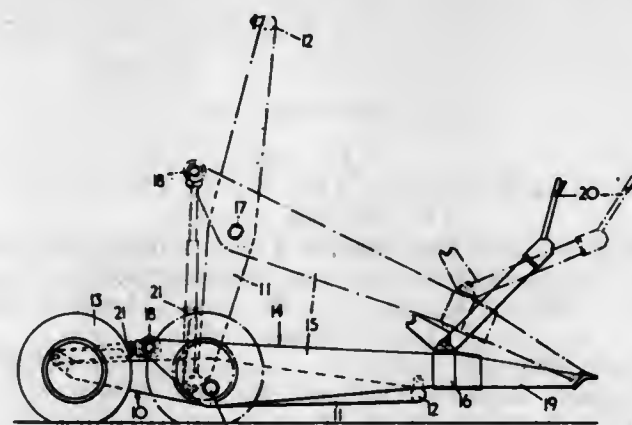
conventional dragline cycle of "hoist, swing, dump and return to the cut" is eliminated in favor of a dragline cycle of merely scraping the cut and drag it to the feeder and then bring it back to the cut to quickly repeat the shortened cycle, and then, simultaneous with the next dragline cycle, cycling the loading of the material by operating the platform to feed the material to an elevator mechanism, at one selected transverse end of the platform, which then positions the material for gravity delivery to a truck or spoil area. The dragline, using a larger than normal scraper bucket and eliminating the hoist and dump steps from its cycle, greatly increases its production to possibly double or more than its normal capacity.

3,517,842
METHOD FOR LOADING, TRANSPORTING AND UNLOADING BULK MATERIALS
 Ernst Weichel, Heimsingen, near Goppingen, Germany
 Continuation of application Ser. No. 516,343, Nov. 29, 1965. This application July 24, 1968, Ser. No. 753,830
 Claims priority, application Germany, Nov. 15, 1960, W 28,917
 Int. Cl. B65g 19/04; A01d 91/00
 U.S. Cl. 214—152 5 Claims



A method for loading, transporting and unloading bulk agricultural material in various forms, for example, blades, stalks and the like, including the steps of picking up the various materials from the ground, delivering them to a loading area, applying force to the materials to move them in an upward and a longitudinal direction, with respect to the loading area, thus compressing the material within this area, and finally, carrying off the material in a substantially longitudinal direction.

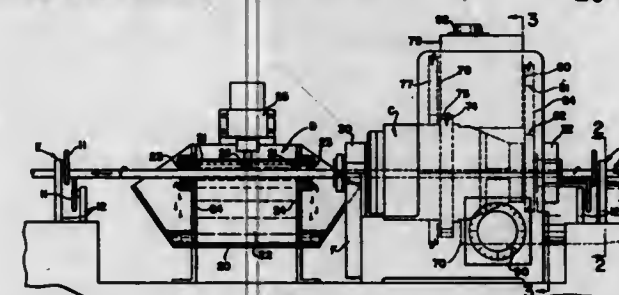
3,517,843
CONTAINER HANDLING APPARATUS
 David Gwynfryn John, Rhymney, Wales, assignor to Steelfab Limited, a British company
 Filed Sept. 23, 1968, Ser. No. 761,544
 Int. Cl. B65g 65/34
 U.S. Cl. 214—314 9 Claims



Container handling apparatus comprising, first and second frames each having spaced side members interconnected at their forward end by a single transverse

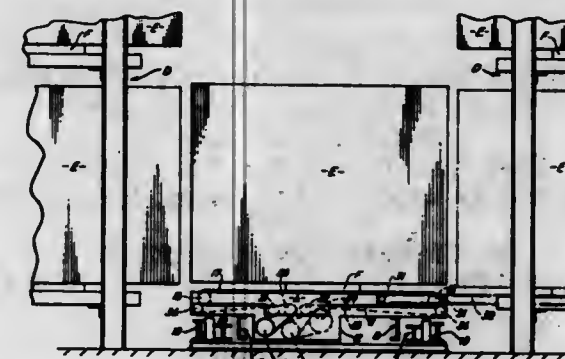
member, said second frame being pivotally connected to said first frame with the rearward extremities of its side members positioned above the side members of the first frame and extensible means positioned between said first and second frames so that actuation of the extensible means results in a scissor-like movement taking place between the two frames which causes the transverse member of the first frame and the rearward extremities of the second frame to lift and/or tip a container when such is positioned between said side members.

3,517,844
FEEDER FOR ELONGATED BARS OR TUBES
 Joseph T. Wloszek, Cuyahoga, Ohio (% Custom Machine, Inc., 9200 George Ave., Cleveland, Ohio 44105)
 Continuation-in-part of application Ser. No. 488,649, Sept. 20, 1965. This application Oct. 26, 1967, Ser. No. 691,078
 Int. Cl. B65h 5/06
 U.S. Cl. 214—338 10 Claims



A machine for simultaneously rotating and advancing an elongated workpiece through an ultrasonic inspection station. A head has rollers mounted thereon which acts to move the workpiece in a longitudinal direction. This head rotates to rotate the workpiece. A first, manually adjustable, continuously variable speed power transmission rotates the head and a second manually adjustable variable speed power transmission driven by the first enables the workpiece to be advanced or held stationary at any desired pitch while the speed of rotation is varied.

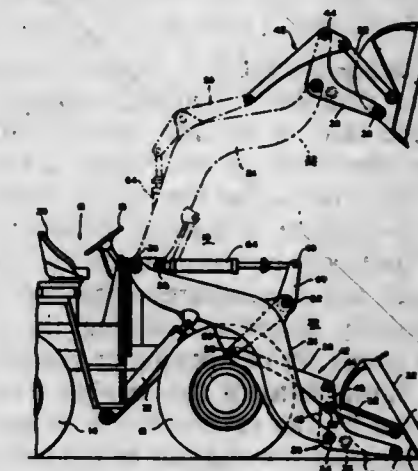
3,517,845
LATERAL LOADING APPARATUS FOR STORAGE AND RETRIEVAL OF STACKED GOODS
 Leonard M. Martin, Somerville, Mass., assignor to The Colson Corporation, Chicago, Ill.
 Filed Nov. 1, 1968, Ser. No. 772,725
 Int. Cl. B65g 65/02
 U.S. Cl. 214—730 8 Claims



A lateral loading apparatus for transferring goods between a transporting position on a carriage in an aisle and a lateral storage position on either side of the carriage in rows of vertical stacks. The apparatus utilizes a pair of roller chains with spaced parallel upper runs defining a conveyor bed, and a pair of spaced parallel booms which travel endwise on the carriage in the same directions as the runs between a centered position and an extended cantilevered position. The booms are at approximately the same level as the conveyor bed and the parallel runs are adapted to carry the goods laterally to

the ends of the centered booms. When the goods reach a position over the ends of the booms the booms begin moving simultaneously with the parallel runs to carry the goods beyond the conveyor bed and laterally to a storage position in the adjacent row of vertical stacks.

3,517,846
HIGH LIFT BUCKET
 James F. King, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan
 Filed Apr. 1, 1968, Ser. No. 717,875
 Int. Cl. E02f 3/70
 U.S. Cl. 214—774 7 Claims



A loader apparatus for a tractor shovel or loader. At the outer end of an elevatable boom arm is a cradle structure which supports a bucket. A linkage mechanism is interconnected with the bucket, the cradle structure and with the bucket dumping actuator, and causes the bucket to be dumped at a higher position and farther out from the body of the vehicle than the conventional apparatus of similar type.

3,517,847
FRANGIBLE BOTTLE CLOSURE
 Piergiacomo Guala, Alessandria, Italy, assignor to Angelo Guala di Piergiacomo e Roberto Guala & C. S.A.S., Alessandria, Italy, an Italian body corporate
 Filed Nov. 25, 1968, Ser. No. 778,493
 Claims priority, application Italy, Dec. 6, 1967, 54,011/67
 Int. Cl. B65d 41/20
 U.S. Cl. 215—42 14 Claims



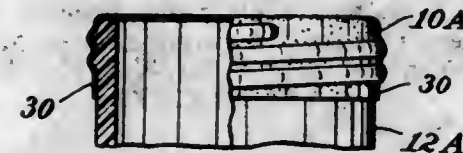
A bottle closure device has a flexible plastics stopper for closing the bottle neck. A flexible plastics ring is retained on the bottle neck by a rigid plastics sleeve and is connected to the bottle neck by a tear-off sealing strip. Removal of the strip permits removal of the stopper, a cap preferably fitting over the stopper to facilitate its removal.

3,517,848
FOIL CLOSURE FOR PLASTIC CONTAINERS
 William C. Keeler, Baltimore, and Joseph W. Ermer, Jr.,
 Lutherville, Md., assignors to Crown Cork & Seal Com-
 pany, Inc., Philadelphia, Pa., a corporation of New
 York

Filed Apr. 17, 1968, Ser. No. 722,112
 Int. Cl. B65d 41/04, 41/10

U.S. Cl. 215—43

2 Claims



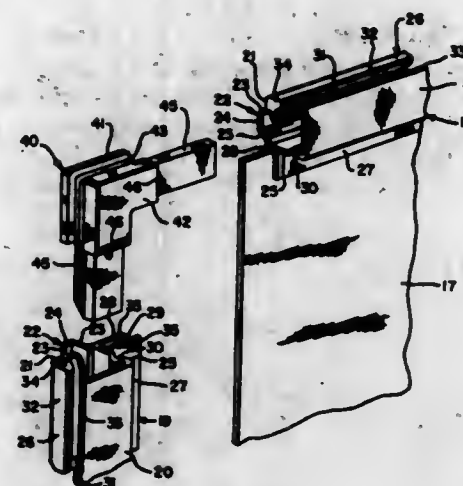
A screw-off tamper-proof foil closure for plastic milk bottles and like containers. During sealing or capping of the bottle, the skirt of the foil closure cap is pressed against the threaded neck of the bottle to form internal threads and to form below the lowermost thread a locking ring or band precluding accidental dislodgment of the closure during transport or handling of the closed bottle. For initial access, the user unscrews the cap; the locking ring is progressively flared out during the unscrewing, and is removed intact. Prior opening or tampering is indicated by such flared state of the locking band. The foil cap can be reused by the rescrowing or snapping it onto the neck; in either case, the cap can be tightened by screwing action.

3,517,849
LIGHTWEIGHT COLLAPSIBLE SHIPPING CONTAINER
 Michael C. Presnick, New York, N.Y. (% Metatronics Manufacturing Corp., 111 Bloomingdale Road, Hicksville, N.Y. 11801)

Filed Nov. 29, 1968, Ser. No. 779,750
 Int. Cl. B65d 7/30

U.S. Cl. 220—4

18 Claims



A lightweight, collapsible or knock-down container, having a high strength-weight ratio, erected without tools from a series of standardized wall sections is disclosed herein. Each wall section of the container comprises a plurality of framing rails which define a closed frame, which supports a rigid sheet of lightweight, durable paneling. The cross section of the framing rails is especially configured to mate with itself, i.e., it is hermaphroditic. The appropriate mating of two of the framing members is the first step in forming a unique edge joint of the container without the use of tools. The edge joint is rigidly established by swinging toggle clamp members which firmly lock together the hermaphroditic mating framing members of adjacent wall sections. When desired, the new container may be disassembled or knocked down, also without tools, for storage in minimum space, by releasing the toggle clamp members by a simple pivoting

movement. Spring keeper elements hold the toggle clamps in predetermined relation to the wall sections in both the operative and inoperative positions of the toggle clamps.

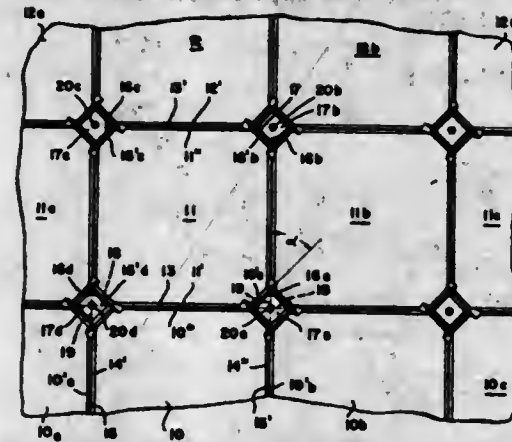
3,517,850
YIELDABLE WALL ASSEMBLY FOR CONTAINERS FOR THE TRANSPORTATION OF LOW-TEMPERATURE FLUIDS
 Rüdiger von Seldern, Buchenholz, and Hermann Ehms, Munich, Germany, and Johann Weigert, deceased, late of Balerbrunn, Germany, by Anna Weigert, heir, Balerbrunn, Germany, assignors to Linde Aktiengesellschaft, Holzkirchen, Germany, a corporation of Germany

Filed May 14, 1968, Ser. No. 747,851
 Claims priority, application Germany, May 24, 1967, L 56,582

Int. Cl. B65d 25/18

U.S. Cl. 220—9

10 Claims



A yieldable wall assembly adapted to be mounted via load-supporting insulation and thermally insulating bolt constructions upon the rigid wall of a tankship in which the wall is formed by laterally and longitudinally contiguous coplanar sheet-metal main plates of relatively large area whose corners are cut at a bias of 45° to accommodate relatively small-area square corner plates, all of the plates having upwardly turned flanges welded together to form flanged seams with gussets being provided in the flanged seams of the main plates at the junctions of these flanged seams with the corners of the auxiliary or corner plates. The gussets are formed by bending the flanges of the welded seam alternately inwardly and outwardly so that the upper edge of an outer fold of the flange of one main plate bears upon and is welded to the inwardly bent flange portion of a laterally or longitudinally contiguous main plate.

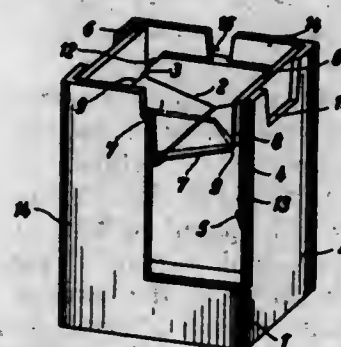
3,517,851
ASHTRAY HAVING RESILIENT CLOSURES
 Walter Koller, Hagenbockstrasse 9, Hamburg, Germany

Filed Nov. 7, 1968, Ser. No. 774,128
 Claims priority, application Germany, Nov. 24, 1967 K 63,997

Int. Cl. B65d 1/24, 1/36, 57/00

U.S. Cl. 220—20.5

5 Claims



An ashtray comprises swivelling closing flaps mounted on top of the opening of the ashtray receptacle. The flaps

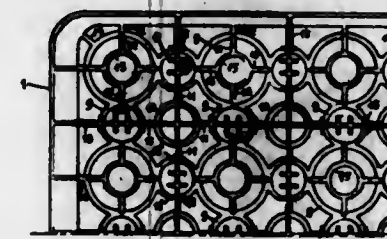
are made of a resilient material and are biased towards the closed position of the ashtray. The flaps may be swivelled into the opened position by applying fingerpressure onto their upper extensions, and may be easily removed from the receptacle.

3,517,852
LOW BOTTLE CRATES OF SYNTHETIC MATERIAL
 Alexander Schoeller, 10 Karl-Marx-Strasse, Munich-Solln, Germany

Filed Sept. 20, 1968, Ser. No. 761,871
 Int. Cl. B65d 1/36, 25/04

U.S. Cl. 220—21

12 Claims



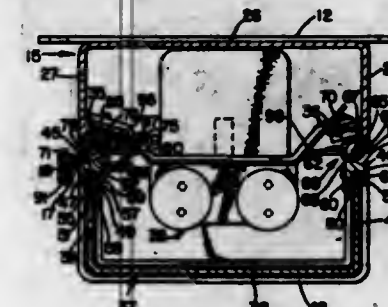
A low bottle crate of synthetic material with a framework having walls extending parallel to the outer walls of the crate forming partitions, which includes a bottom comprising web formations connected with the framework walls and symmetrically disposed in the partitions. The open distance of the framework walls is smaller than the diameter of the heads of the bottles received in the crate. The web formations constitute a limit for the passage of the head of a bottle standing therebelow in a pile and its position is chosen such that the framework walls are free from passing bottom rails within the range of their crossings and in their center. First web rings are disposed in the bottom of each partition symmetrically about the center thereof. Second web rings connect the first web rings of adjacent partitions, and the center point of the second web rings are disposed below the center of the corresponding of the framework walls. Third web rings are disposed with their centers below the crossings of the framework walls and are connected with the adjacent of the second web rings, and fourth web rings are arranged concentrically to the first web rings, to constitute limiting means for the passage of the heads of the bottles and are connected with the first web rings.

3,517,853
LIGHT FIXTURE FASTENING MEANS
 Wallace R. Aikens, Plano, Tex., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of Delaware

Filed Feb. 10, 1969, Ser. No. 797,886
 Int. Cl. B65d 43/16, 51/10

U.S. Cl. 220—31

9 Claims



A light fixture including an elongated housing having edge portions defining an opening, a lens door for covering the opening, and a locking assembly for opening the door to provide access to the lamp, for closing the door, and for retaining the door in a closed position.

The locking assembly includes a locking bar, which extends along one of the edge portions and which is mounted for movement between open and closed positions, the lens door includes a latch extending along one edge thereof which is engaged and supported by the locking bar, and the locking bar is held in the closed position by one or two fasteners.

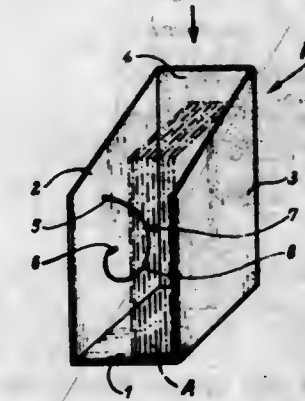
3,517,854
SPRING BIASED FOLLOWER
 Gerhard Sitt, Scheffhausen, and Eugen Ziegler, Stuttgart-Feuerbach, Germany, assignors to Louis Lohr, Stuttgart-Feuerbach, Germany

Filed Jan. 10, 1968, Ser. No. 696,753
 Claims priority, application Germany, Jan. 13, 1967, L 55,495

U.S. Cl. 220—93

Int. Cl. B65d 25/10

10 Claims

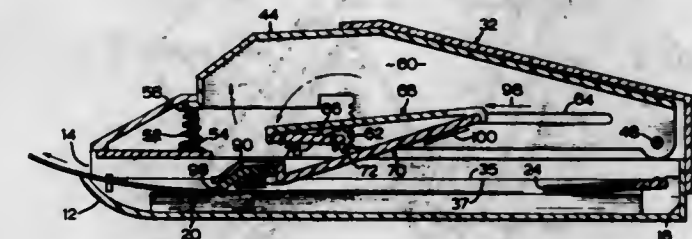


A storing device for file cards which are to be stored in upright position. A receptacle defines an inner space which is bounded by two substantially parallel inner surfaces. An elongated spring wire has two end portions secured to one of the surfaces, and an intermediate portion which defines a convolution projecting from this one towards the other of the surfaces so as to be progressively elastically deflected towards the one surface as file cards are introduced into the inner space.

3,517,855
DESK PAPER DISPENSER
 Donald A. Hills, Willowdale, Ontario, Canada, assignor to Man-Mark Projects Limited, Toronto, Ontario, Canada

Filed June 17, 1968, Ser. No. 737,673
 Int. Cl. B65g 59/00; B65h 3/02, G071 11/16
 U.S. Cl. 221—259

5 Claims



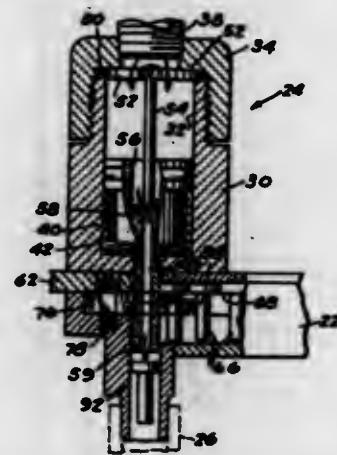
The present invention relates to a paper dispenser which is particularly suitable for use as a desk top dispenser for dispensing a single sheet of note paper or the like from a stack of sheets arranged one upon the other. The dispenser includes a storage tray for paper, a cover enclosing the storage tray and a dispenser mechanism adapted to dispense a single sheet of paper from the storage tray. The dispenser mechanism is actuated by manually depressing a single lever and then releasing the

manual pressure. Depression of the manually operable lever indicates a reciprocating action of a pushing arm which is disposed above the paper in the storage tray and removal of the manual force from the lever completes the reciprocating action and causes a single sheet of paper to be dispensed from the dispenser.

3,517,856

APPARATUS FOR FEEDING ARTICLES ONE AT A TIME INTO A TUBE

Gary D. Gintner, Leonard, Mich., assignor to The Clyde Corporation, Troy, Mich., a corporation of Michigan
Filed July 11, 1968, Ser. No. 744,022
Int. Cl. B65g 59/00; B65h 3/08
U.S. Cl. 221-278 31 Claims

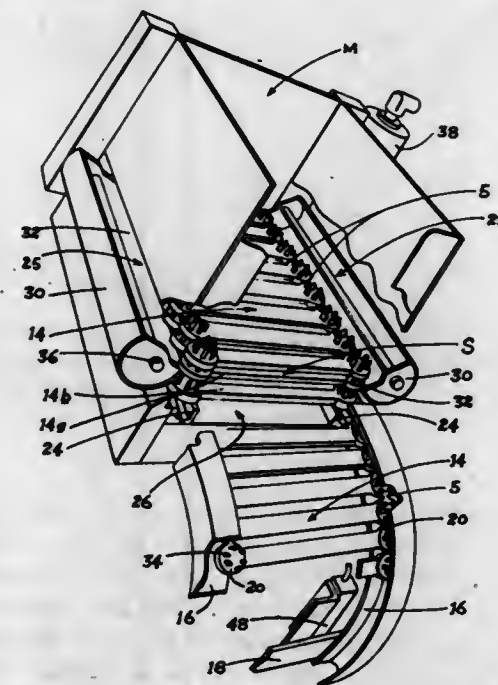


Jaws or a detent are spring biased to a position for receiving articles one at a time from a succession of articles in a track and for holding the received article in alignment with a tube. A probe is advanced by an air motor to force the jaws or detent aside for releasing the article into the tube. The probe has a passageway through which compressed air from the air motor passes into the tube behind the article to propel the article through the tube.

3,517,857

MATRESS HANDLE DELIVERING MACHINERY

Milton Zysman, Toronto, Ontario, Canada, assignor to Convex Limited, Nassau, Bahamas, a Bahamian company
Filed Oct. 7, 1968, Ser. No. 765,561
Int. Cl. B65g 59/00
U.S. Cl. 221-289 10 Claims



Delivery apparatus having a magazine for containing stacked mattress handles and including a pair of release

cams engageable at opposite sides of the stack to lift it off the lowermost handle in the stack to release said handle, whereby it can slide under gravity for delivery to a handle attaching mechanism.

3,517,858

RECLOSABLE DISPENSING CARTON

Melville T. Farquhar, Bon Air, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Aug. 8, 1968, Ser. No. 751,295
Int. Cl. A47f 1/04
U.S. Cl. 221-305 11 Claims

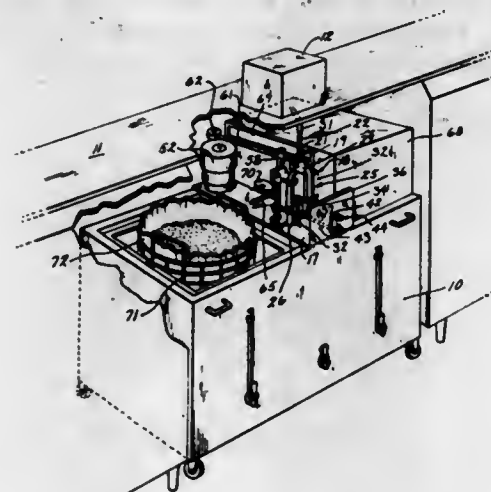


A reclosable carton for dispensing cylindrical objects in which a tear open flap spans a portion of two main panels of the carton. In one embodiment, a pair of score lines, which define the tear open flap, are made shorter than the diameter of the cylindrical objects thereby preventing axial removal of the objects with the tear open flap open. However, a side panel flap is shaped to enlarge the dispensing opening so that the cylindrical objects may be swung out. In another embodiment, a tab is struck from the tear open flap to provide a flexible obstruction to direct axial removal of the cylindrical objects.

3,517,859

BEVERAGE DISPENSING DEVICE

Alton B. Miller, 2367 Yankee St., Niles, Mich. 49120
Filed May 28, 1968, Ser. No. 732,592
Int. Cl. B67d 5/08
U.S. Cl. 222-52 12 Claims



A dispensing device of a type for dispensing a beverage such as coffee having two urns, having a dispensing head connected by dispensing tubes with both urns, and having a spray head swingable over one urn or the other, there

being mechanism responsive to swinging movement of the spray head for automatically pinching off the delivery tube for the urn toward which the spray head has been swung for switching on the motor for a pump which delivers liquid to the spray head.

3,517,860

ICE DISPENSER HAVING POLYGONAL WALLS

James M. Whalen, Glenview, Ill., assignor to Remcor Products Company, Chicago, Ill., a corporation of Illinois
Filed July 15, 1968, Ser. No. 744,838
Int. Cl. B65g 3/12
U.S. Cl. 222-202 5 Claims

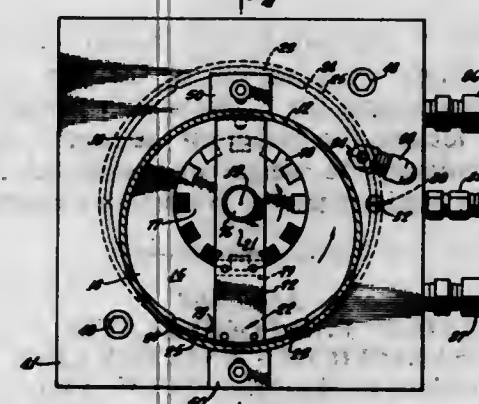


An ice dispenser comprising a non-circular hopper portion for reception of a mass of small particles of ice, such as crushed, cracked, and flake ice, an impeller rotatable in the hopper for rotating the ice therein as a substantially unitary mass, and means for dispensing the ice from the lower portion of the hopper; the non-circular portion of the hopper alternately squeezing the rotating mass of ice inwardly and releasing it outwardly whereby the ice has tremor-like movements imparted to it both radially of and generally parallel to its axis of rotation to maintain it as a mass of free flowing discrete particles.

3,517,861

POSITIVE-FEED POWDER HOPPER AND METHOD

Robert P. De La Vega, Costa Mesa, Calif., assignor to Geotell, Inc., Amityville, N.Y., a corporation of Delaware
Continuation of application Ser. No. 593,836, Nov. 14, 1966. This application Sept. 19, 1968, Ser. No. 766,668
Int. Cl. B67d 5/54
U.S. Cl. 222-194 38 Claims



The present disclosure relates to a hopper wherein, and method whereby, powder is introduced into a moving mechanical element and thus transported to a predetermined discharge point at which gas is passed through

the element to remove the powder therefrom and to conduct the powder to a desired point of use. The powder-receiving portions of the mechanical element are not discrete openings or recesses, but instead are elongated slots or a continuous, endless slot. This causes the powder feed to be continuous instead of intermittent. The side walls of the slots are serrated, scalloped, or otherwise shaped in such manner that many powders will move with the wheel despite the absence of discrete cylindrical or other openings, and despite the fact that the wheel is inclined. A self-cleaning, reciprocating tamping element is provided to insure that the powder fills the slots completely and uniformly. The hopper is adapted to be dumped without moving the base or the motor which drives the powder-feed element. Furthermore, the various seals in the apparatus, and auxiliary air-openings, are so arranged and constructed that auxiliary air may be introduced into the hopper and into the regions around the powder-feed element in order to effectively clean the apparatus.

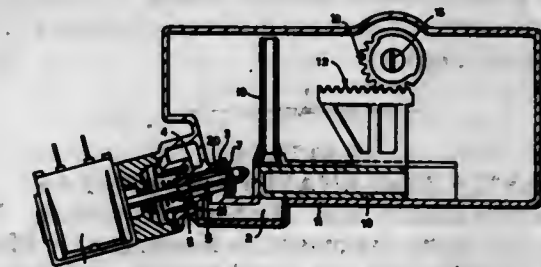
ERRATUM

For Class 222-399 see:
Patent No. 3,517,932

3,517,862

LIQUID DETERGENT METERING DEVICE

Carlo Bianco, Turin, Italy, assignor to Ebi S.a.s. dei Fratelli Bianco, Turin, Italy, an Italian body corporate
Filed Mar. 18, 1968, Ser. No. 713,697
Claims priority, application Italy, Mar. 31, 1967, 122,959/67
Int. Cl. G01f 11/28
U.S. Cl. 222-440 2 Claims

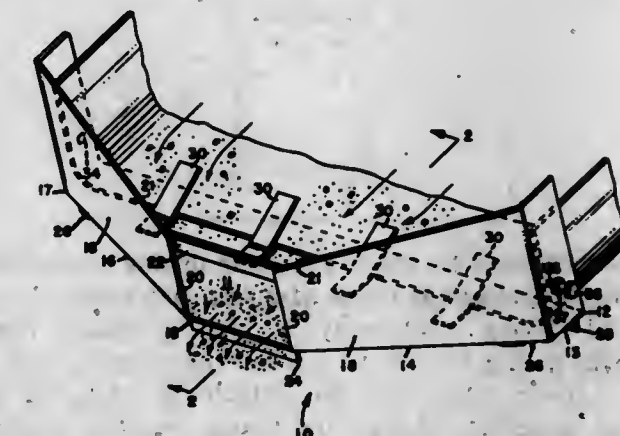


A device for metering detergent has a detergent inlet and outlet in standard positions and includes a variable-volume metering chamber, adjustment of which is effected by means accessible through the detergent inlet.

3,517,863

ATTACHMENT FOR MOUNTING TO THE BUCKET OF A LOADING APPARATUS

John Graham, Box 19, South Cairo, N.Y. 12482
Filed Jan. 2, 1968, Ser. No. 695,030
Int. Cl. B67c 11/00
U.S. Cl. 222-460 2 Claims



An attachment for mounting to the bucket of a loading apparatus for facilitating dispensing or pouring of

flowable materials, the attachment having a base portion or plate and upstanding wall portions so that the forward end of the attachment is provided with a dispensing opening, and the attachment having means for removably mounting to the bucket of a loading device.

3,517,864

GARMENT CURING APPARATUS

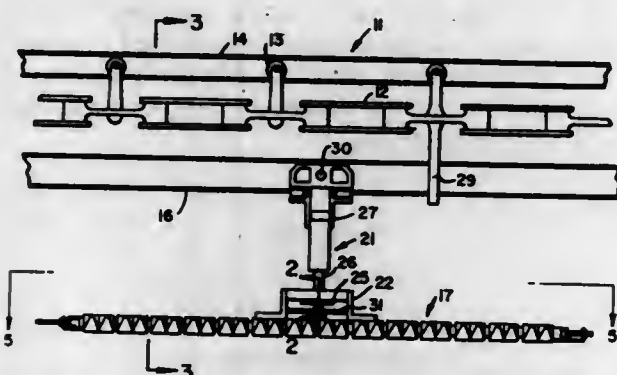
Sidney Michaels, Novato, Calif., assignor to Levi Strauss & Co., San Francisco, Calif., a corporation of California

Filed Feb. 28, 1966, Ser. No. 530,549

Int. Cl. D06c 15/00

U.S. Cl. 223-57

3 Claims



A garment curing apparatus for suspending pants or other garments which have been treated with a synthetic resin in such a manner that permanent marking of the garment does not occur during curing of the synthetic resin. Each trouser leg is independently suspended between a pair of rigid prongs and the spacing between the prongs of each pair is adjustable to accommodate varying fabric thicknesses. A plurality of pairs of prongs are affixed to a common assembly which is rotatably attached to a conveyor means to carry garments through the processing steps.

3,517,865

DEVICE FOR SHAPING KNITWEAR

Herbert Kanneglesser and Richard Juraschek, Vlotho (Weser), Germany, assignors to Kanneglesser Maschinenfabrik Gesellschaft mit beschränkter Haftung, Hollwies, Vlotho (Weser), Germany

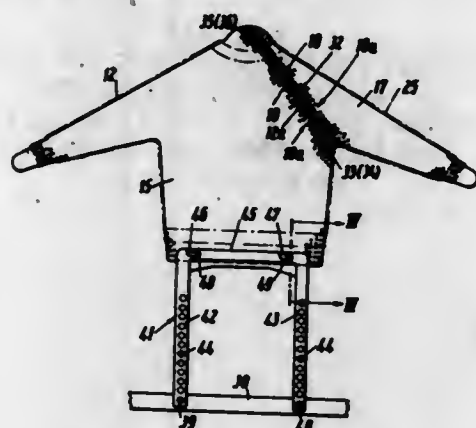
Filed May 27, 1968, Ser. No. 732,272

Claims priority, application Germany, Sept. 27, 1967, K 63,456

Int. Cl. A41h 5/00

U.S. Cl. 223-69

11 Claims



A device used to shape knitwear during steaming and pressing operations is made of a thin flat section of sheet material having a plurality of closely spaced rows of openings giving the form a screen-like appearance. The form is made of at least two detachable parts which are secured together along continuous narrow contacting edges. The contacting edges of the two parts are disposed in parallel relationship with the rows of openings through

the form. Clips are disposed along the edge for securing the parts together. The clips are also perforated in a manner similar to the form.

3,517,866
MEANS FOR PUTTING ON A SHOE CONSTRUCTION

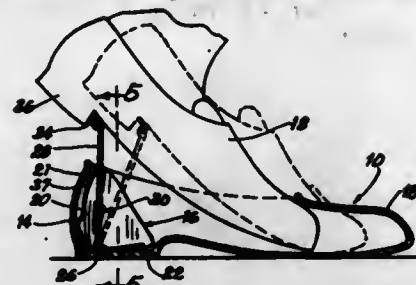
George S. Damerel, 486 S. Main St., Crown Point, Ind. 46307

Filed Mar. 17, 1969, Ser. No. 807,648

Int. Cl. A47j 51/02

U.S. Cl. 223-111

9 Claims



A mechanism for putting on a shoe construction such as overshoes comprising an upstanding arm situated at the rear of the construction. The arm includes an upper end engageable by the heel of a shoe or foot as it moves into the construction. Upon engagement by the heel, the arm pivots in response to forward movement of the heel and a component of lateral force is developed. This force provides for smooth but noticeably forcible entry of the toe into the shoe construction and allows correspondingly easy entry of the heel.

3,517,867

DETACHABLE BASKET

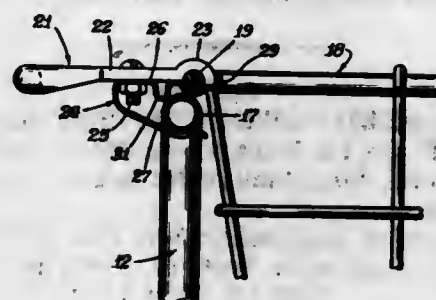
Albert J. Fritz, Wilmette, and Rudolph G. Blaho, Franklin Park, Ill., assignors to Schwinn Bicycle Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 26, 1968, Ser. No. 716,095

Int. Cl. B62j 9/00

U.S. Cl. 224-31

7 Claims



Detachable vinyl-coated wire basket mounted on a supporting frame on a tricycle, or the like, with handles attached for carrying the basket and including means for latching or locking the basket on the supporting frame in traveling position, the weight of the basket assisting to maintain the latching means in operative position.

3,517,868

CARRIERS FOR FOOD PLATES, CUPS, SANDWICHES AND THE LIKE

Wallace B. Daughtry, 715 W. Elm St., Arlington Heights, Ill. 60004

Filed Oct. 9, 1967, Ser. No. 673,712

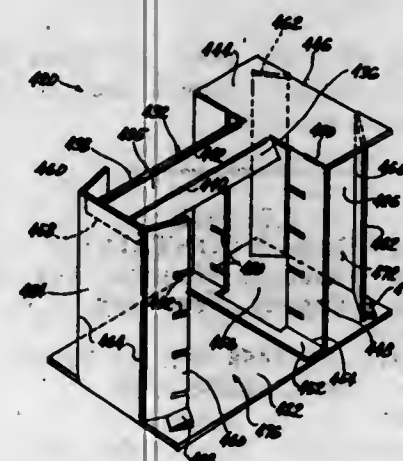
Int. Cl. B65d 5/46, 5/48

U.S. Cl. 224-45

24 Claims

A carrier made of foldable material, such as corrugated cardboard, solid fiberboard, paperboard, molded pulp, or various solid or foamed plastics, or laminates of these or

other materials, for example, comprising a bottom wall, first and second end walls extending upwardly from said bottom wall, and a handle extending between said first and second end walls, said handle having a horizontal panel and downwardly folded stiffening flanges thereon. In certain embodiment, the handle is folded from one end wall and is adapted to extend through an opening in the other end wall. The handle and the opening are preferably triangular in shape. Locking means are preferably provided to retain the handle in the opening. Each of the end walls may be provided with vertical retaining flanges folded toward the opposite end wall. The end walls and the retaining flanges may be formed with a series of slots to hold plates. In certain embodiments, the carrier comprises a top panel folded from said second end wall, a vertical panel folded downwardly from said top panel, a lower panel folded horizontally from said vertical panel, and means for connecting said lower panel to the bottom



wall, the second end wall and the vertical panel forming a compartment for holding cups or the like. The vertical panel may be formed with a second opening for receiving the handle. Retaining flanges may be folded from said vertical panel toward said second end wall. Locking tabs are preferably provided to hold the various retaining flanges in their folded positions. In one embodiment, the handle is formed integrally with said top panel and is secured to said first end wall. In another embodiment, the carrier comprises one or more intermediate panels folded from said first end wall and secured to said second end wall, the intermediate panels preferably being formed with openings to receive cups or the like. Vertical flanges are preferably folded downwardly from said intermediate panels to provide rigidity. Locking tabs are preferably provided between vertical flanges and the bottom wall. A space for sandwiches or the like is preferably provided between the intermediate panels.

3,517,869

PROCESS AND ARRANGEMENT FOR BREAKING A SHEET OF GLASS

Jacques Max Charles Dryon, Auvelais, Belgium, assignor to Ateliers Heuze, Malevez et Simon Reunis Societe Anonyme, Auvelais, Belgium, a company of Belgium

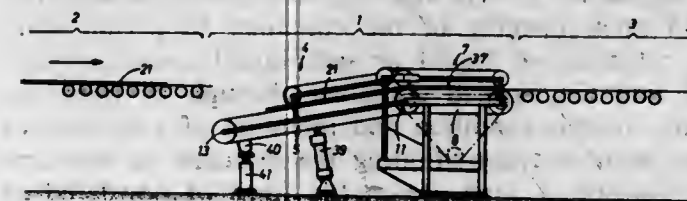
Filed Feb. 26, 1968, Ser. No. 708,210

Claims priority, application Belgium, Apr. 13, 1967, 42,341

Int. Cl. B26f 3/00

U.S. Cl. 225-2

15 Claims



A glass sheet is advanced in its own plane between a pair of conveyor members initially aligned in a common

plane with a second pair of conveyor members, whereafter the first pair of conveyor members is tilted and the sheet is advanced over a breaking roller and into its original plane of advancement in the second pair of conveyor members, whereby the sheet can be broken by the roller along score lines initially provided in the sheet. The broken segments of the sheet are conveyed beyond the breaking roller by the second pair of conveyor members and the first pair of conveyor members is tilted back to its original position to receive the next successive sheet.

3,517,870

TWO-ROLL SHIPPING AND DISPENSING CONTAINER

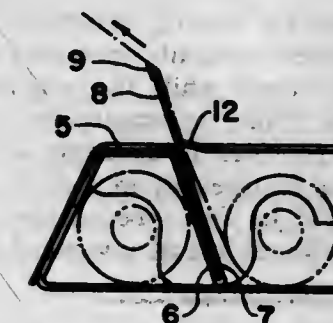
Joseph Voytko, Lakewood, Ohio, assignor to Westvaco Corporation, New York, N.Y., a corporation of Delaware

Filed July 20, 1967, Ser. No. 654,788

Int. Cl. B26f 3/02

U.S. Cl. 225-34

5 Claims



A one piece container for two rolls of flexible wrapping material such as, saran, paper, foil, etc., which is assembled without the use of staples or adhesive and which may be converted from a shipping package to a dispenser for severing sheets of material from the roll. In its dispensing configuration, the cutting edge of the container is positioned intermediate the front and back edges of the top of the container and the bottom of the container is made larger than the top to prevent tipping of the container when a sheet of material is severed. Additionally, a resilient flap engages the sheet material to prevent recoil of the material into the container when a sheet is severed.

3,517,871

TABLET CUTTER

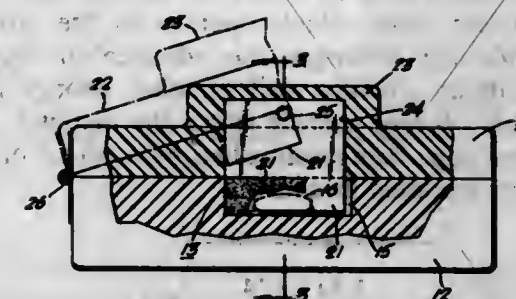
James P. Gaffney, Pennsauken, N.J. (21 Lexington Ave., Merchantville, N.J. 08109), and John J. Gaffney, 309 3rd Ave., Newtown Square, Pa. 19073

Filed Nov. 15, 1968, Ser. No. 776,057

Int. Cl. B26f 3/00

U.S. Cl. 225-103

12 Claims



Devices for cutting tablets and the like having a triangular receptacle in which the tablet may be centered by pressing the tablet toward the apex, and a blade operable to bisect the apex angle to sever the tablet into two equal halves. During the cutting operation the tablet is held by a resilient holder carried by the blade to engage the tablet just prior to engagement by the blade.

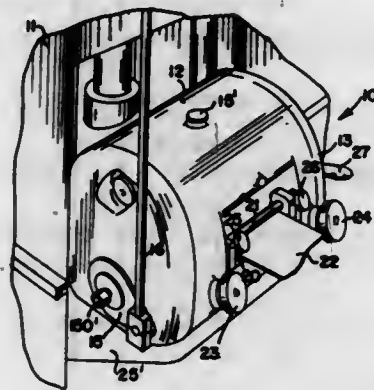
3,517,872

ROLL FEED

Stephen M. Chmela, 1514 Mark Drive,
Mount Prospect, Ill. 60056
Filed Apr. 17, 1968, Ser. No. 722,056
Int. Cl. B65h 17/22

U.S. Cl. 226—90

14 Claims



A unitary roll feed for feeding web material to a machine having a simplified manually operable means to permit feed length adjustment while the machine is in operation. A pulsating brake, automatic and manual roll lifter, and oiler are provided in the same compact housing. Since all of these features are in a single unit, it may be universally applied to any type of press, punch or analogous machine without loss of any one of the features.

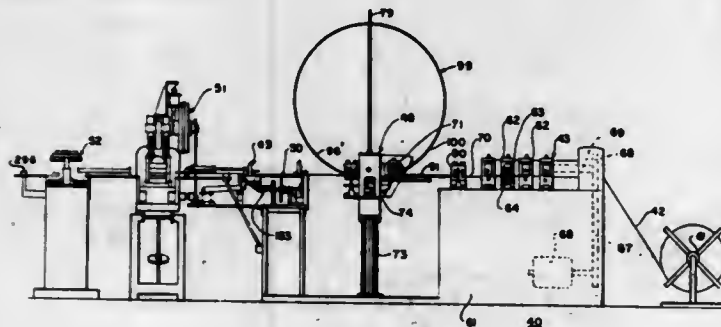
3,517,873

MACHINE FOR FORMING A TRIM STRIP

Ralph W. Hall, Colerain Township, Hamilton County, Ohio, assignor to Textron, Inc., Providence, R.I., a corporation of Rhode Island
Original application Oct. 19, 1967, Ser. No. 676,518, now Patent No. 3,485,127, dated Dec. 23, 1969. Divided and this application June 12, 1969, Ser. No. 832,598
Int. Cl. B65h 23/22

U.S. Cl. 226—113

6 Claims



A machine for fabricating lengths of trim which receives a continuous strip of metal or the like and shapes the strip between rolls which operate as the strip advances continuously, changes the advance of the strip to an intermittent advance and punches prongs in the strip each time advance thereof stops, the distance of advance between stops being controlled by a set of distance measuring pins mounted in a turret.

3,517,874

FASTENER ATTACHMENT

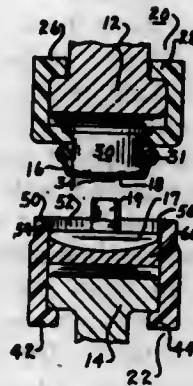
Clifford E. Cressy, 9145 Grace Place,
Highland, Ind. 46322
Filed Jan. 18, 1968, Ser. No. 698,744
Int. Cl. B25c 7/00

U.S. Cl. 227—144

8 Claims

A pliers attachment for fasteners having a button element and an eyelet element, in which one part of a resilient plastic material is mounted on one jaw of the pliers

and the other part of a resilient plastic material is mounted on the other jaw of the pliers. An annular rib is provided on each of the parts for retaining the respective fastener



element in place while the pliers are being moved into position with the fastener element therein for securing fabric or other sheet material.

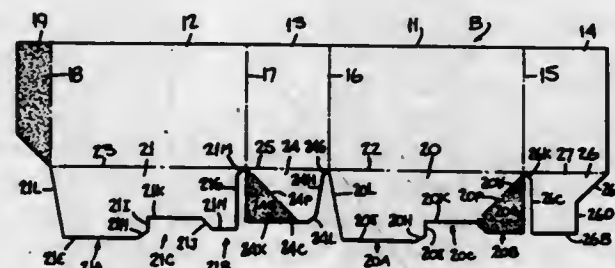
3,517,875

FOLDABLE CONTAINER

Harold Donavon Wakefield, Houston, Tex., assignor to The Coca-Cola Company, New York, N.Y., a corporation of Delaware
Filed May 21, 1968, Ser. No. 730,757
Int. Cl. B65d 5/08

U.S. Cl. 229—39

3 Claims



A foldable and unfoldable container for dispensing liquid, powdered, solid or semi-solid products to a user capable of flat storage in folded state with consequent space saving prior to use and including generally parallel side and end panels all joined together end to end with transverse scoring between adjacent panels to facilitate ready manipulative movement of the panels into an unfolded open container forming condition for reception of dispensed products. The respective panels along their bottom edges are also provided with depending flaps likewise with scoring along said bottom edges, the flaps being interleaved to be normally between the folded together panels and unfold automatically to a transverse position when the panels are manipulated to open container forming position to form a closed bottom for the opened container and being so shaped as to interlock at such time to retain the container in open condition. A collapsible leakproof liner also may be included which in the folded condition of the panels will be in collapsed state that will expand upon opening of the container to permit leak-proof retention of liquid or semi-liquid contents introduced into the opened container through its open top and also permit condition and retention of additives for mixing with and conditioning the contents of the container for use if such are in the form of powdered or liquid concentrates to condition the latter directly for use without requiring transfer of such concentrates to a second container.

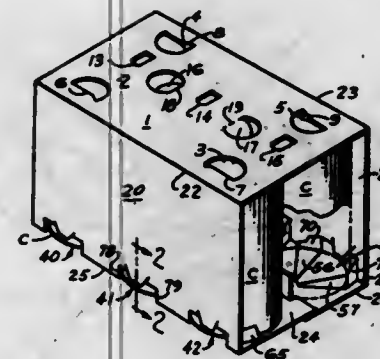
3,517,876

ARTICLE CARRIER

James T. Stout, Doraville, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed Sept. 13, 1968, Ser. No. 759,583
Int. Cl. B65d 5/04

U.S. Cl. 229—40

15 Claims



An article carrier of the wrap-around type is provided with spaced top and bottom walls interconnected by spaced side walls, the bottom wall being a composite panel formed of a pair of bottom panels secured together. For holding the packaged articles such as cans within the wrapper, a plurality of chime engaging tabs are formed in the top wall and are foldable out of the plane thereof inwardly approximately 180° to form abutment ledges for engaging the recessed can ends and for securing the cans against dislodgment through the open ends of the wrapper. At the bottom of the carrier, reinforcing and retaining flaps are struck from the bottom panels and from the lower portions of the side walls to define article retaining apertures which together with the associated flaps constitute article gripping means. For use with bottles a similar wrapper incorporates apertures for receiving portions of the caps of the packaged bottles.

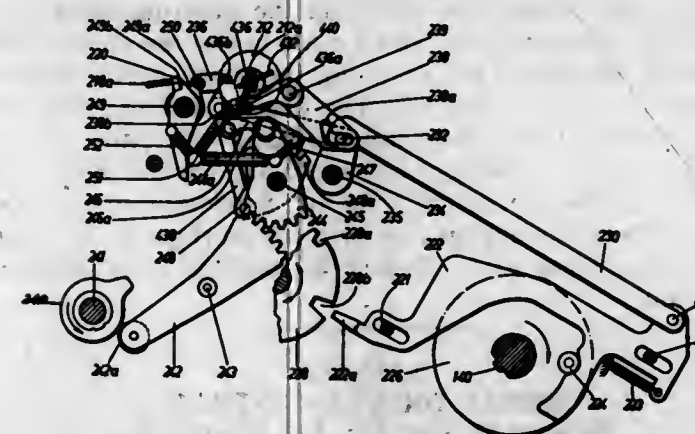
3,517,877

CONTROL DEVICE

Roland Gosta Englund, Stockholm, Mats Erik Mattsson, Sollentuna, and Claes-Goran Lindelow, Taby, Sweden, assignors to Svenska Dataregister AB, Solna, Sweden, a corporation of Sweden
Filed Feb. 5, 1969, Ser. No. 796,790
Int. Cl. G06c 25/00

U.S. Cl. 235—3

11 Claims



A control device for a cash register which requires actuation of keys before an audit strip can be used in a machine or removed therefrom. Actuation of the keys prints the number of the machine and the number of the audit strip on each audit strip.

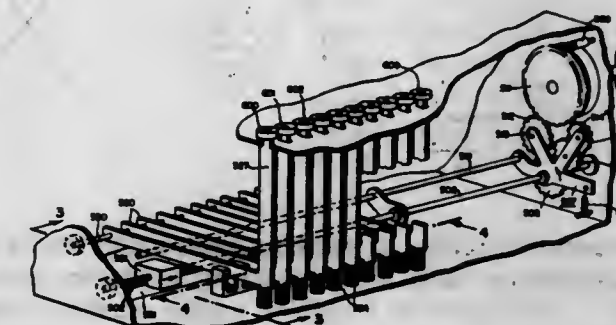
3,517,878

POWERED SCORER FOR BOWLING

Harry A. McClister, deceased, late of Morrisville, Pa., by Ruth W. McClister, executrix, 81 N. Delmar Ave., Morrisville, Pa. 19067, and the Fidelity Bank, executor, 123 S. Broad St., Philadelphia, Pa. 19109
Continuation-in-part of application Ser. No. 557,293, June 13, 1966. This application Aug. 23, 1968, Ser. No. 755,011

U.S. Cl. 235—114

3 Claims



Power means such as a wind up spring are employed to the unit dial of a McClister-type instant scoring device for bowling according to the rules of the American Bowling Congress. The individual playing the game can actuate any of a set of ten buttons, identified as 0 through 9, and thus initiate movement of a reciprocable member, the extent of linear movement being controlled by the number selected. Upon reaching such selected distance, the reciprocable member is automatically returned to its rest position and the key is returned to its rest position. The reciprocable member may be driven from a rest position to the selected advance by the wind up spring and then gears are automatically reversed so that the spring drives the reciprocable member back to its rest position, the selected advance being controlled by the selected button. The unit dial is advanced by such controlled linear movement of the reciprocable member.

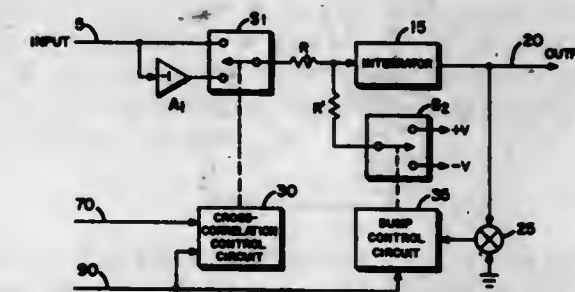
3,517,879

DIGITAL SIGNAL CROSS-CORRELATOR

Patrick H. Conway, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 3, 1967, Ser. No. 606,904
Int. Cl. G06f 15/34

U.S. Cl. 235—181

4 Claims



A digital signal cross-correlator for split-phase pulse code modulation (PCM) signals that multiplies a reference signal times a digital signal and integrates the result of the multiplication. Further, the output of the integrator is compared with a fixed potential to produce a signal that is coupled to a dump control circuit which couples a positive or negative voltage to the input of the integrator at the proper time in order to drive the output of the integrator to a fixed value representing the desired dumped condition of the integrator.

3,517,880

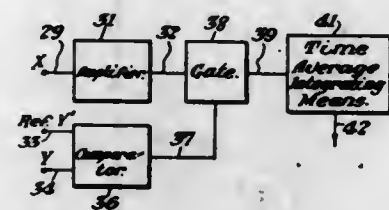
ANALOG MULTIPLIER INCLUDING A TIME AVERAGE INTEGRATING UNIT

Thomas J. Hutton, Swissvale, Pa., assignor to Westinghouse Air Brake Company, Swissvale, Pa., a corporation of Pennsylvania

Filed Aug. 1, 1968, Ser. No. 749,407
Int. Cl. G06g 7/16

U.S. Cl. 235-194

10 Claims



This invention relates to an improved analog multiplier for multiplying at least first and second variables and includes in combination an amplifier, a gate, a time average integrating means, and a comparator. The amplifier has an input which is the first variable, as well as an output. The time average integrating means is electrically connected to the amplifier by way of the above-noted gate. The comparator has first and second inputs. The first input is a reference signal and the second input is equal to the second variable. The comparator also has an output which controls the aforementioned gate, the output from the comparator appearing only when the absolute value of the second variable is greater than the absolute value of the reference signal. Accordingly, the time average integrating means integrates the amplifier's output to provide multiplication of the first and second variables.

3,517,881

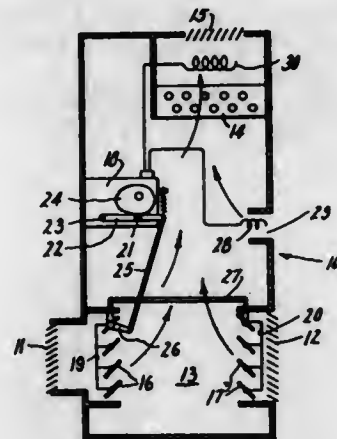
TEMPERATURE CONTROLLER

Orin J. Kohlbeck and Russell P. Sweger, Rockford, Ill., assignors to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Filed Jan. 19, 1968, Ser. No. 699,236
Int. Cl. G05d 23/19

U.S. Cl. 236-13

1 Claim



A unit apparatus for conditioning air, either by heating or cooling, when the air to be conditioned is a combination of outside air and recirculated room air. The inlets for the outside air and the room air are controlled by individual dampers which, in turn, are under the joint control of two temperature sensors, one responsive to room air temperature and the other responsive to the temperature of the conditioned air leaving the unit. A material which solidifies at a predetermined temperature and which has a substantial change in dimension when it changes between liquid and solid states is placed in the outlet of the unit and is effective to override the sensors and close the outside air damper when the material solidifies.

3,517,882

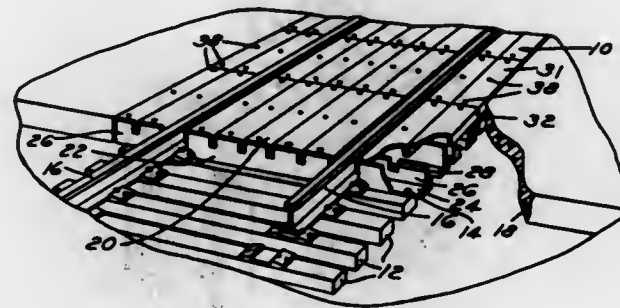
RAILROAD CROSSING STRUCTURE

Thomas G. Hooper, 2246 3rd St., Wyandotte, Mich. 48192

Filed Jan. 18, 1968, Ser. No. 698,844
Int. Cl. E01b 2/00

U.S. Cl. 238-8

10 Claims



This invention relates to improvements in railway road grade crossing structures and more particularly to an improved steel plank structure. The crossing structural unit of this invention is formed from a plurality of structural elements each of which comprises a series of under-supports and steel planks having a top plate coated with an adherent epoxy impregnated with an abrasive grit to provide a surface with a high coefficient of friction.

3,517,883

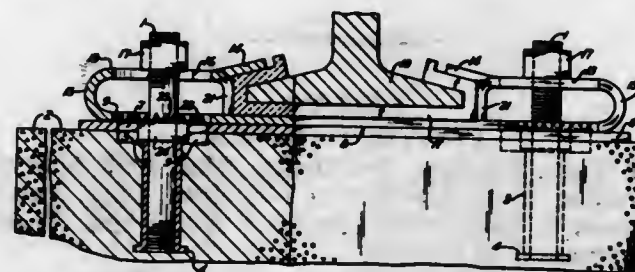
ONE PIECE DOUBLE RAIL ANCHOR

Frederick William Holstein, Verona, Pa., assignor to Woodings-Verona Tool Works, Verona, Pa., a corporation of Pennsylvania

Filed Oct. 16, 1968, Ser. No. 767,957
Int. Cl. E01b 9/48

U.S. Cl. 238-346

5 Claims



A rail anchor for a concrete tie has a pair of laterally spaced rail clamps for overlying the opposite sides of a rail base between them, and a plate below the clamps and integral with them for spanning the space between them to form a seat for the rail. The clamps and the underlying portions of the plate are provided with pairs of vertically aligned openings for receiving anchor bolts embedded in the supporting cross tie. Serrations on the bottom of the plate engageable by teeth on rings on the bolts allow the plate to be locked in longitudinally adjusted positions.

3,517,884

SPIRAL DRINKING STRAW

Stephen D. Horvath, 127 Warner St., Oceanside, Calif. 92054

Filed Aug. 5, 1968, Ser. No. 750,051
Int. Cl. B67d

U.S. Cl. 239-33

4 Claims

This is a tube for drinking fluids, particularly for use by children or others wherein it is desirable to provide a form of entertainment by the use of the drinking tube commonly referred to as a drinking straw.

The device is based upon a plastic or similar tube having a series of spiral-like loops such that the fluid being



used may be caused to pass through a series of vertical or horizontal loops and other gyrations in reaching the user.

3,517,885

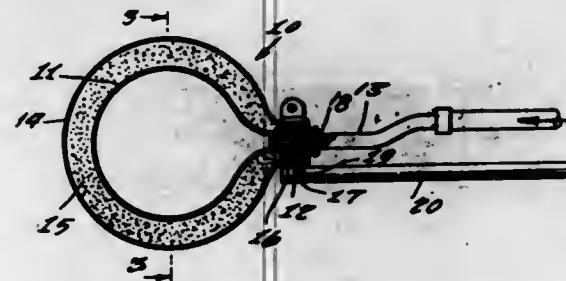
POWDER SPREADING DEVICE

Wallace Blake, 63 2nd St., Hallowell, Maine 04347

Filed Apr. 1, 1968, Ser. No. 717,742
Int. Cl. A62c 13/40

U.S. Cl. 239-309

3 Claims



A device for dispersing powder such as insecticide, fertilizer, and the like in a relatively small area not suitable for receiving powder spreading machinery, the device comprising an explodable container enclosing the powder together with an explosive charge, which, upon exploding, will spread the powder in all directions.

3,517,886

LAWN SPRINKLER NOZZLES

Gerhard J. Dyck, 1306 13th St. E., Saskatoon, Saskatchewan, Canada

Continuation-in-part of application Ser. No. 630,634, Apr. 13, 1967. This application Mar. 25, 1969, Ser. No. 810,298

Claims priority, application Canada, Mar. 26, 1968, 15,884

The portion of the term of the patent subsequent to Nov. 4, 1986, has been disclaimed

U.S. Cl. 239-518

Int. Cl. B05b 1/26

4 Claims



A lawn sprinkler nozzle comprising a casing having a full clover-leaf or a partial clover-leaf shaped orifice and a deflection head integral with a valve stem which is mounted in the casing and extends through the orifice, the deflection head overlies the orifice and co-operates with the orifice to deflect the water coming through the orifice.

3,517,887

LINEAR SLOT BURNER

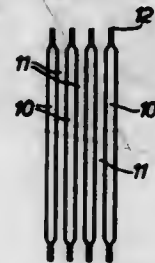
Denis Henry Desty, Walton-on-Thames, England, assignor to The British Petroleum Company Limited, London, England

Filed June 6, 1968, Ser. No. 735,082
Claims priority, application Great Britain, June 19, 1967, 28,062/67

Int. Cl. B05b 1/14

U.S. Cl. 239-568

6 Claims



A burner for fluid, preferably gaseous, fuels comprises one or more elongated fuel ducts each with an elongated fuel exit slit.

The ducts may be corrugated so that their juxtaposition forms air tubes.

The exit slit may be packed to increase its exit resistance.

3,517,888

ELBOW COCK WITH SPRAY OUTLET NOZZLE FOR AGRICULTURAL SPRAYING MACHINES

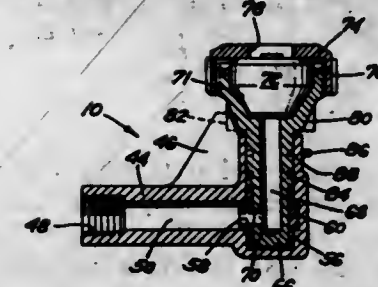
Ernesto Mitterer, Via Novale 14, Terzano, Bolzano, Italy

Filed Apr. 26, 1968, Ser. No. 724,580
Claims priority, application Italy, Apr. 26, 1967, 2,011/67; Feb. 2, 1968, 2,509/68

Int. Cl. B05b 1/30

U.S. Cl. 239-579

2 Claims



An elbow cock having a rotatable valve cock in the outlet arm thereof, in which a nebulizer nozzle is mounted. The cock can be rotated in the tap body to adjust the volume of fluid discharged through the nozzle, and to this end is provided with a lateral opening near the bottom end thereof which can be turned with respect to a corresponding opening in the intake arm of the tap body between an open position, in full alignment therewith, and an offset, closed position. Intermediate positions give intermediate rates of flow.

3,517,889

FLOUR MILLING METHOD AND APPARATUS

Samuel D. Farmer, 341 The Riviera, Mount Vernon, Ind. 47620

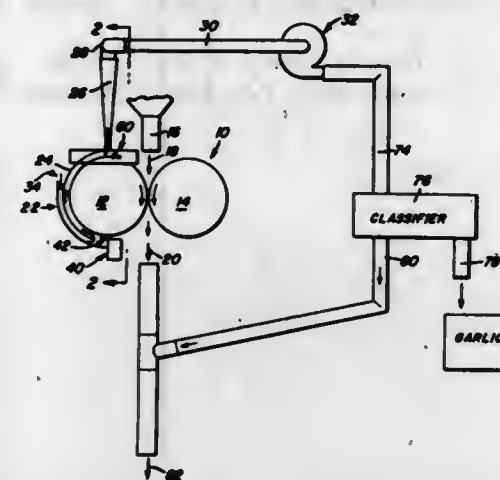
Filed Jan. 30, 1967, Ser. No. 612,424
Int. Cl. B02b 3/04; B07b 13/00

U.S. Cl. 241-9

6 Claims

An apparatus and a method for doffing weed seed from a surface of one of a pair of cooperative crushing rollers acting upon weed seed-containing cereal grain being milled. The cereal grain is fed to the nip of a pair of fluted crushing rolls where it is crushed. The weed seeds contained in the cereal become tacky and adhere to at least one of the rolls. An adjustable suction manifold extends about the periphery of the roll at a point spaced from the roll nip and acts to draw off the adhered weed

seeds and feed them to a scalper classifier where the seed is separated from any roll runaround admixed therewith.



The roll runaround is then permitted to return to the flow of the milled cereal.

3,517,890

DISK SHEAR

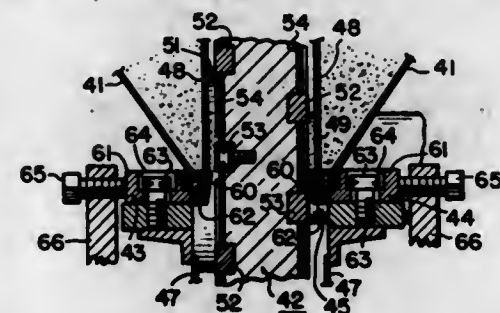
John C. Frisco, 918 E. Essex St.,
Las Vegas, Nev. 89107

Filed July 11, 1967, Ser. No. 652,491

Int. Cl. B02c 18/06

U.S. Cl. 241-141

8 Claims



A shear having rotating and stationary shear members and a material feed hopper for supplying material to be sheared to the shear members. The rotary shear member comprises a vertical disk having a plurality of radial cutting blades on its cutting face and spacing segments removably attached to the cutting face between the blades to define the distance between the cutting edge and the base of each blade and thereby determine the maximum size of the sheared material.

3,517,891

INFLATABLE TEXTILE WINDER

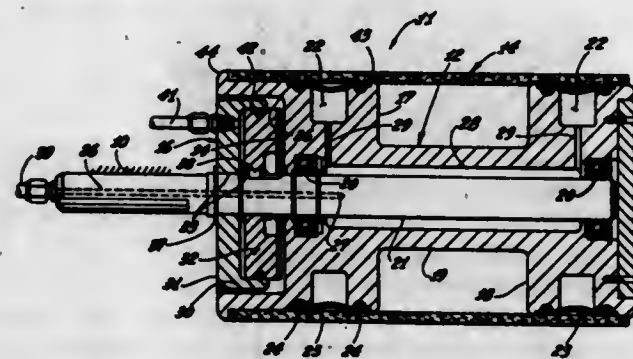
Steve E. Zels and Ralph A. Caneer, Asheville, N.C., assignors to Northrop Carolina, Inc., Swannanoa, N.C., a corporation of North Carolina

Filed Aug. 5, 1968, Ser. No. 750,284

Int. Cl. B65h 75/30

U.S. Cl. 242-46.4

4 Claims



An expandable self-contained chuck member facilitating the winding of yarns, filaments etc. on receiving

members and including means precluding rotation of the latter before, after and during an initial or final winding operation.

3,517,892

UNWINDING DEVICE FOR A BALL WARP PACKAGE

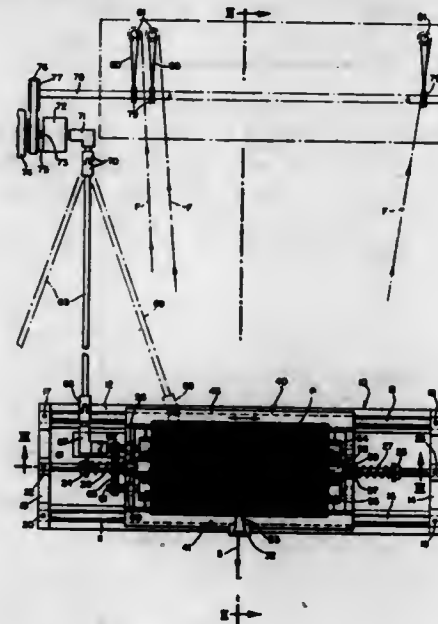
William F. Laird, Unionville, and Nathan Rosenstein, West Hartford, Conn., assignors, by mesne assignments, to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 15, 1968, Ser. No. 713,423

Int. Cl. B65h 49/20, 49/34

U.S. Cl. 242-54

18 Claims



A freely reciprocating support is provided for generally cylindrically shaped packages of continuous strands of textile materials. A pair of spaced rotatable rolls are mounted in a parallel fashion upon the support, and a textile package is cradled on these rolls with its axis parallel to the axes of the rolls. A free end of the textile strand is drawn off through a trumpet guide which is mounted in fixed relationship to a frame with respect to which the package support reciprocates. The parallel rolls are positively driven at a speed compatible with the speed at which the textile strand is drawn off by conventional textile wind-up machinery.

3,517,893

CARTRIDGE AND TAPE STORAGE BIN

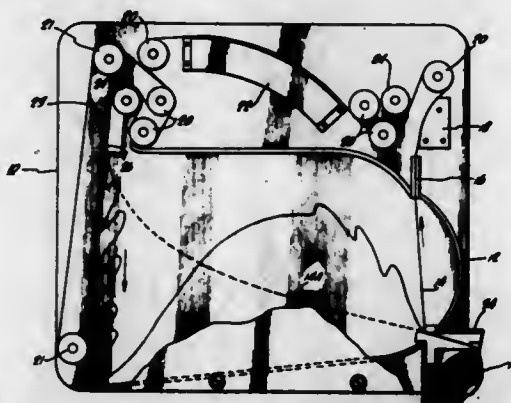
Gordon R. Schulz, Tujunga, Calif., assignor, by mesne assignments, to Subscription Television, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 16, 1968, Ser. No. 759,984

Int. Cl. B65h 75/02

U.S. Cl. 242-55.16

17 Claims



The present apparatus and method supply a tape from a readily portable cartridge to the storage bin of a tape recorder. The tape is endless and by gripping it along its length and rotating, it is wound into the form of a

double spiral coil. The coil is mounted on a rotatable hub which is slidable in a slot in the cartridge housing. By resting the tape coil on spring means carried in the cartridge, the tape coil is lightly tensioned and also urged to maintain a constant relative position with an associated stripper blade which insures direction of the tape from the coil through an adjacent aperture during loading the storage bin with the tape. The recorder is of the type having a bin for storing a tape in random, serpentine folds or loops. A loop of the tape is manually withdrawn from the exit slit, threaded around suitable drive and transducer means and back to the bin through an entrance slit. By attaching the cartridge with its opening adjacent a loading aperture in the recorder bin, the tape can be unwound from the cartridge into the bin.

3,517,894

DEVICE FOR CREATING TENSION IN A TRAVELLING STRIP

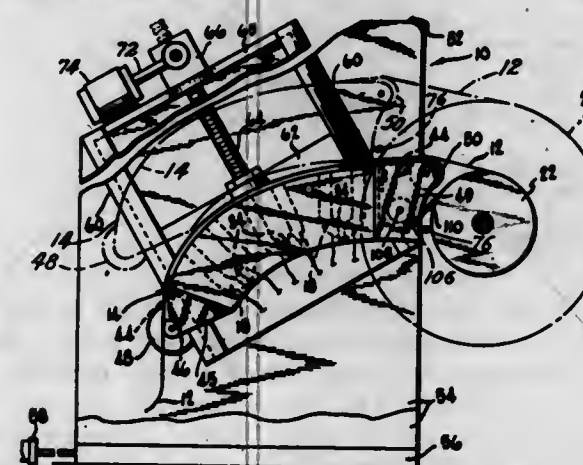
Edwin A. Pauls, 541 S. Ashland,
La Grange, Ill. 60525

Filed Oct. 9, 1967, Ser. No. 673,859

Int. Cl. B65h 77/00

U.S. Cl. 242-75.2

14 Claims



A device for creating tension in a travelling strip, including a platen defining a surface positioned in contact with the strip and an electromagnet mounted on the platen for causing a force to be applied to the strip urging the strip against the surface of the platen so as to create a frictional drag on the strip.

3,517,895

TAPE REELING DEVICE

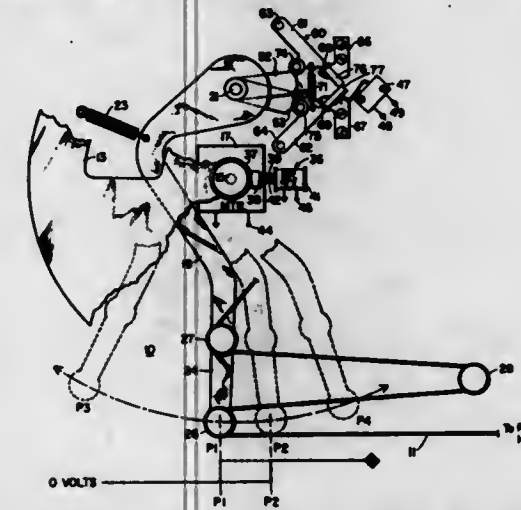
William A. Kraft, Fairport, N.Y., assignor to The Singer Company, a corporation of New Jersey

Filed Nov. 4, 1968, Ser. No. 772,984

Int. Cl. B65h 59/38, 63/02

U.S. Cl. 242-190

9 Claims



A tape reeling device wherein tape is transported between two reels under substantially constant tension with-

in an operating range under control of a buffer arm which is responsive to a mechanical flip-flop means which coacts with a single power switch for switching power to a brake and motor during reeling and unreeling operations.

3,517,896

MAGAZINE WITH READILY REMOVABLE CARTRIDGES

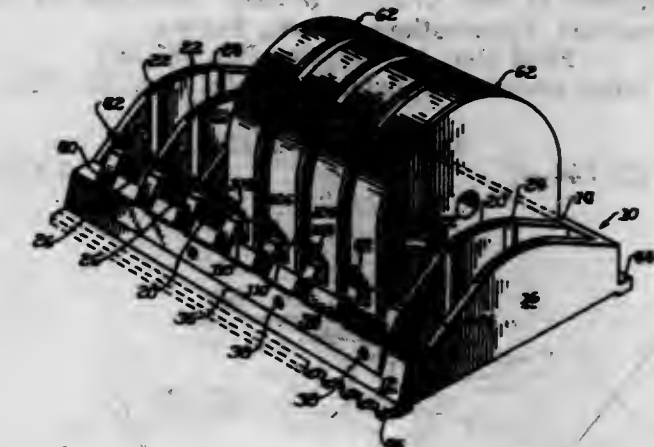
Fred G. Kral, Berwyn, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Filed Apr. 24, 1967, Ser. No. 633,243

Int. Cl. G11b 23/08; B65h 75/00

U.S. Cl. 242-197

9 Claims



An indexable succession of chambers are defined by walls which are conditioned for splined retention and alignment of reel mounted film strip cartridges to permit location of successive film strips into projection position. A cartridge holding spring finger, which yields under manual force, is associated with each chamber and enables selective cartridge removal from, and replacement in, a magazine comprised of said chambers.

3,517,897

MULTI-MODULE THRUST MOUNT

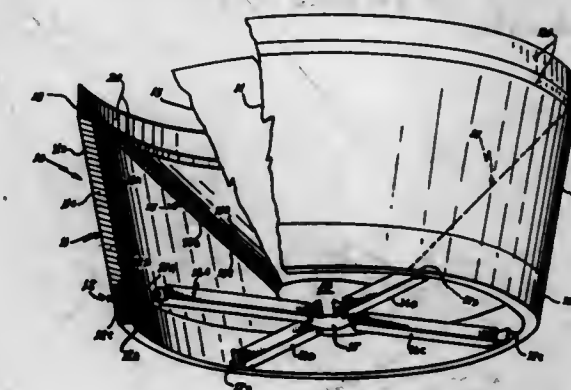
Jimmie D. Wells, Canoga Park, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Sept. 11, 1968, Ser. No. 758,943

Int. Cl. B64g 1/20

U.S. Cl. 244-1

6 Claims



A thrust absorbing mount assembly, for use with space vehicles, which can accept a plurality of propulsion unit modules. The assembly includes: an outer truncated cone of slight taper in an inverted position, having a ring at its bottom periphery; an inner truncated cone of sharp taper in an inverted position, abutting with, internal of, and concentric with the outer truncated cone, and having a central mounting ring at its bottom periphery; and

stabilizing struts extending radially from the central mounting ring of the inner truncated cone to equally spaced positions on the inner surface of the ring at the bottom periphery of the outer truncated cone. The inverted, concentric cones are joined along the periphery of their wide openings, at the top where they abut, to a ring by which the trust absorbing mount is attached to the bottom of the space vehicle which is to be propelled.

3,517,898

LIFT AND PROPULSION DEVICE FOR A JET AIRCRAFT OF THE HYBRID HELICOPTER-AUTOGYRO TYPE

Andre Henri Laville, Enghien-les-Bains, and Francis Henri Marie Joseph Maillard, Courbevoie, France, assignors to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France

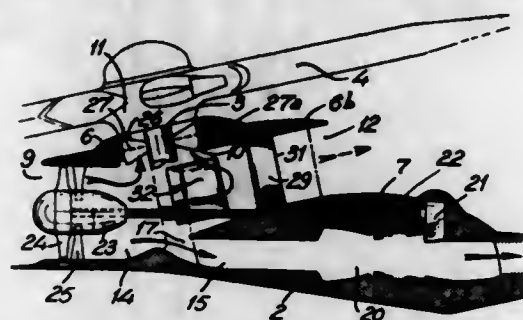
Filed Dec. 1, 1967, Ser. No. 687,262

Claims priority, application France, Dec. 30, 1966, 89,485

Int. Cl. B24c 27/22

U.S. Cl. 244-7

6 Claims



A propulsion and lift system using compressed air reaction for a hybrid helicopter-autogyro type aircraft, in which a high-mass-flow/medium pressure air compressor is disposed ahead of a large repartition chamber from which extend ducts for a turbine engine, externally disposed with respect to said chamber, for a rotor driving means and for a propulsive air exit, the ducts being associated with distribution means the actuation of which is such that the total section of the passages for the compressed air remains nearly constant.

3,517,899

UNITIZED AIRCRAFT FOOD AND BEVERAGE SERVICE

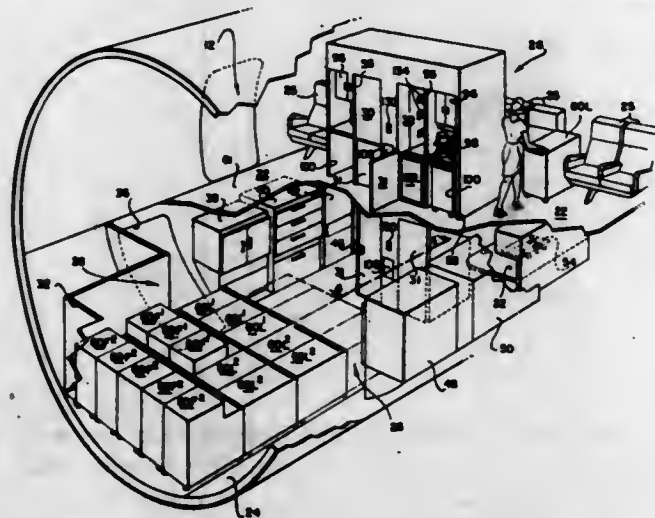
Richard I. Vernon, Glendale, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Apr. 4, 1968, Ser. No. 718,691

Int. Cl. B64d 11/04

U.S. Cl. 244-118

12 Claims



Food and beverage service can be provided in a comparatively short period to all of the passengers in a large aircraft through the utilization of a plurality of wheeled

food and beverages service units. These serving units are separately loaded to contain some food and beverage items and then are stored in a kitchen area of an aircraft. Other items to be served to the passengers are stored loaded within ovens, cold storage units and an ice source in the aircraft. As the aircraft is in flight those items to be given to passengers not already on or in the individual serving units are transferred to these units. Then these serving units are transported to passenger areas of the aircraft and the individual passengers are served. After such service the separate serving units are used to store items remaining after the passenger needs have been satisfied and are returned to the kitchen area for storage until the aircraft is landed.

3,517,900

PROCESS AND APPARATUS FOR DETECTING ICE FORMATION

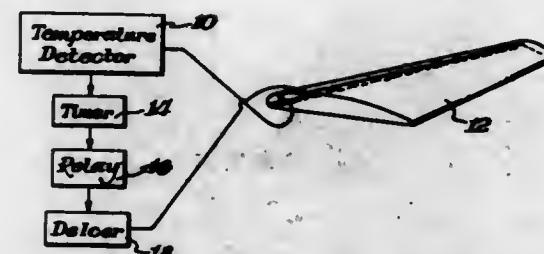
Philip A. Roussel, 111 Canterbury Drive, Windsor Hills, Wilmington, Del. 19803

Filed June 11, 1968, Ser. No. 736,152

Int. Cl. B64d 15/22; G01a 25/04; G08b 19/02

U.S. Cl. 244-134

10 Claims



Ice formation on the surface of an aircraft is detected and combated by sensing when the surface is in a predetermined temperature range which range includes the freezing point of water and then measuring the time that the surface remains in the range. After a predetermined amount of time has passed, the presence of ice formation conditions is indicated as by sounding an alarm and/or actuating deicing devices.

3,517,901

PIPE HANGER

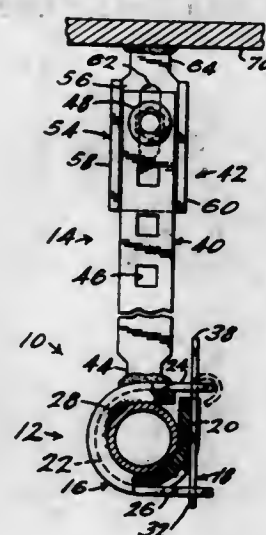
John C. Jenkins, Lorain, Ohio, assignor, by mesne assignments, to TRW Inc., Cleveland, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 680,911, Nov. 6, 1967. This application Jan. 27, 1969, Ser. No. 794,338

Int. Cl. F16l 3/10

U.S. Cl. 248-59

7 Claims



A pipe hanger designed particularly for use on ships has an improved support for affixing the pipe hanger to

a supporting surface, particularly an overhead. The support is preferably of a two-part configuration, one of which is welded directly to the overhead and the other of which is connected to the one part by a single fastener yet held rigidly with respect thereto. The support also is easily adjustable to position the pipe at any predetermined distance from the supporting surface.

3,517,902

REFUSE CONTAINER

Richard L. Daniels, 208 E. 7th St.,

Del Rio, Tex. 78840

Filed Apr. 17, 1968, Ser. No. 722,018

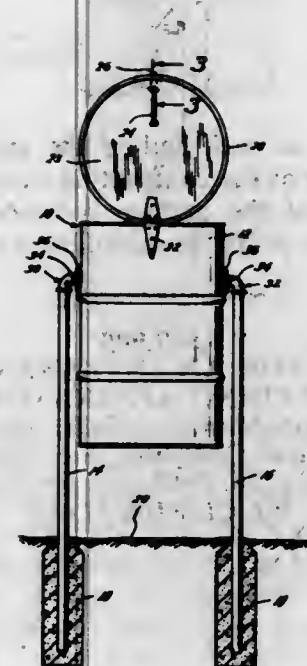
Int. Cl. A47l 5/12

U.S. Cl. 248-137

2 Claims

U.S. Cl. 248-324

1 Claim



The present invention relates to an invertably dischargeable refuse container having a receptacle pivotally secured between two vertical supports. Pivotal attachment is by means of a threaded coupling securing each vertical support member to the receptacle, the threaded couplings on either side of the receptacle having the same directional threading to limit pivotal movement of the receptacle.

3,517,903

HANGER ASSEMBLY

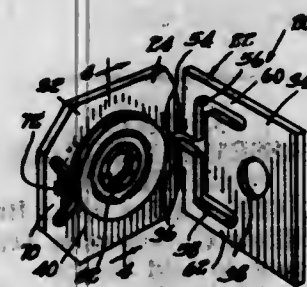
Charles Edward Gutshall, Roselle, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed May 31, 1968, Ser. No. 733,450

Int. Cl. H02g 3/02

U.S. Cl. 248-291

9 Claims



There is disclosed a hanger assembly for items such as electrical outlet boxes, conduit and the like, which assembly comprises a sheet material bracket having a base portion with an aperture therethrough, a dish

washer overlying the base portion and extending into the aperture, and a screw or fastener extending through the washer. The washer rotatably retains the base portion.

3,517,904

OBJECT POSITIONING SUPPORT ALLOWING FOR MULTIPLE DISPLACEMENTS

Jacques Verchain, La Celle-Saint-Cloud, France, assignor to Compagnie Generale d'Electricite, Paris, France, a French corporation

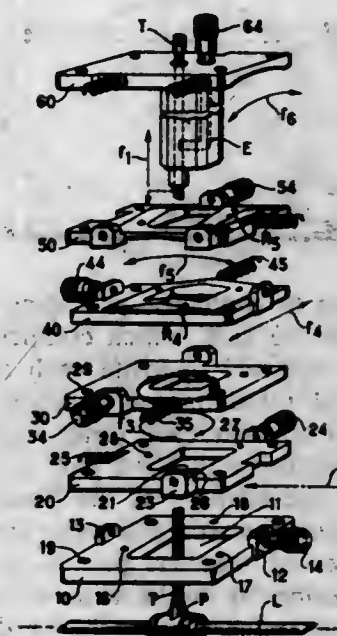
Filed June 28, 1968, Ser. No. 740,958

Claims priority, application France, June 30, 1967, 112,757

Int. Cl. F16m 13/00

2 Claims

1 Claim



An object positioning support permitting small elementary and independent rectilinear and rotational displacements by employing a stack of relatively movable plates wherein two opposite plate surfaces are planar for achieving rectilinear horizontal displacement and two other opposite plate surfaces are curved for achieving rotational displacement in a horizontal pivot.

3,517,905

SIGN HOLDER

Sander Charles Nestagard, 403 Karen Place,

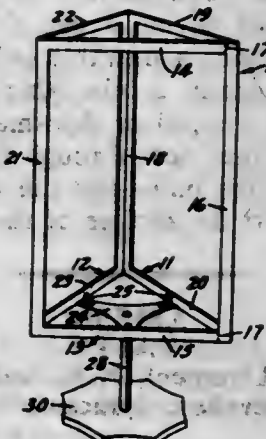
White Bear Lake, Minn. 55110

Filed Sept. 11, 1967, Ser. No. 666,790

Int. Cl. G09f 7/18

U.S. Cl. 248-469

4 Claims



A sign holder having a triangular shape in plan for displaying three equal sized rectangular cards to make the holder multidirectional.

3,517,906

CASTING FRAMES OR MOLDS

Guy Blonde, La Frette-sur-Seine, France, assignor to Societe Anonyme Outinord, Saint Amand les Eaux, Nord, France, a corporation of France

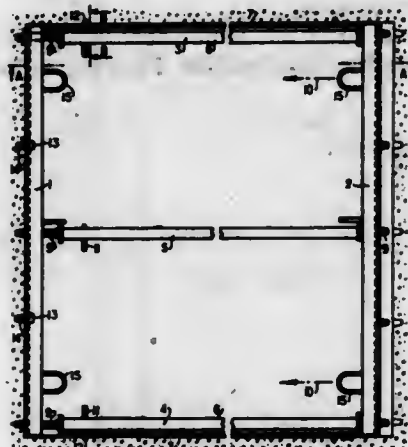
Filed Dec. 9, 1966, Ser. No. 600,525

Claims priority, application France, July 12, 1966, 18,745

Int. Cl. B28b 7/30, 7/18, 7/20

U.S. Cl. 249—184

7 Claims



A casting frame or mold for providing an opening in a concrete floor to be cast, which comprises a first pair of side members disposed opposite each other in a relatively fixed spaced relation, and a second pair of side members disposed opposite each other across the ends of the members constituting the first pair and slidably connected thereto at the corners of the frame or mold for transverse movement towards and away from each other. Each side member of the first pair is provided on the outside of the frame or mold with a shield member, adapted to facilitate release from the hardened concrete.

3,517,907

TUBE CLOSURE DEVICE

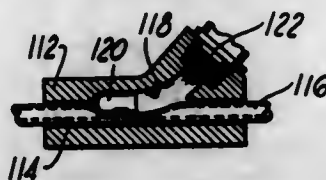
Lloyd G. Bach, Mishawaka, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 25, 1967, Ser. No. 670,185

Int. Cl. F16k 7/07

U.S. Cl. 251—5

5 Claims



The following relates to a tube crimping device which functions as a "one shot" valve to completely and permanently stop the flow of fluid through a tube. The device includes a fixed die having a pair of intersecting bores, one of which contains a movable bullet-like die and the other of which contains a tube which at some predetermined moment is crimped or deformed by the bullet-like die to prevent further flow through the tube. A squib is utilized to propel the bullet-like die with sufficient force to deform or invert the surface of the tube upon impact.

3,517,908

VALVE

Leon J. Nowak, Liverpool, N.Y., assignor to Schroeder Machines Corporation, Syracuse, N.Y., a corporation of New York

Filed Mar. 20, 1968, Ser. No. 722,515

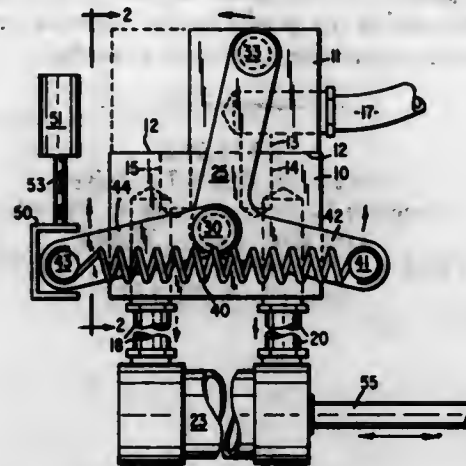
Int. Cl. F16k 25/00

U.S. Cl. 251—158

8 Claims

Two blocks are formed with confronting mating surfaces, each of which is provided with at least one port. Operating means is provided for imparting reciprocation

to one block relative to the other. The arrangement is such that the confronting surface of the reciprocated block moves in an arcuate path over the confronting surface of the other block, and the surfaces are drawn in



tight engagement at each end of the arcuate movement. During separation of the confronting surfaces at the intermediate portion of the arcuate movement, fluid is discharged from the ports, maintaining the surfaces clean.

3,517,909

VALVE UNIT FOR AN INTRAVENOUS LIQUID FEEDING APPARATUS

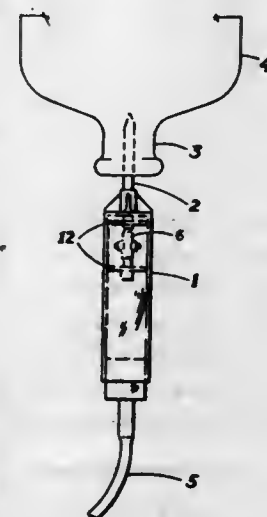
Louis S. Santomieri, Martinez, Calif., assignor to Deseret Pharmaceutical Company, Inc., Sandy, Utah

Filed Apr. 26, 1968, Ser. No. 724,335

Int. Cl. F16k 51/00

U.S. Cl. 251—342

4 Claims



A flow-control valve unit—for an intravenous liquid feeding apparatus which includes a drip chamber having a supply tube depending thereinto—disposed in the drip chamber in communication with the supply tube; the valve unit being maintained sterile by virtue of its disposition in the drip chamber but arranged so that opening and closing of such valve unit can be accomplished readily and manually from exteriorly of said drip chamber.

3,517,910

ELEVATING ASSEMBLY FOR AN OFFSHORE PLATFORM

John R. Sutton, 1189 Calder Ave., Beaumont, Tex. 77701, and William G. Newman, Troy, Mich.; said Newman assignor to said Sutton

Filed Aug. 25, 1967, Ser. No. 663,330

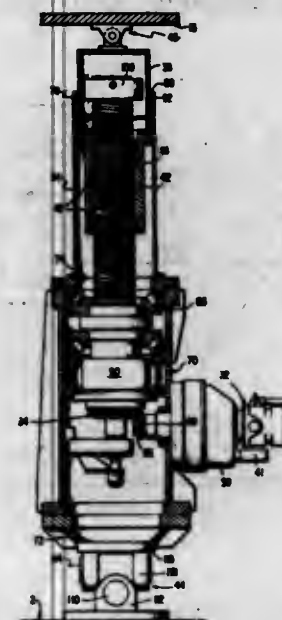
Int. Cl. B66f 7/14

U.S. Cl. 254—92

12 Claims

In the environment of an offshore platform of the type including a generally horizontal deck supported on a plurality of ground engaging, generally vertical legs extending slidably through the deck, a plurality of elevat-

ing assemblies for elevating the deck relative to each separate one leg. Each assembly includes a yoke spaced from the deck slidably mounted upon the leg. Engaging means on the yoke and the deck may be separately, selectively engaged with other engaging means spaced vertically along the one leg to secure the yoke and deck independently against vertical motion. At least one extensible jack positioned between the yoke and the deck includes a protective outer tube telescopically receiving

3,517,912
NON-LETHAL PROTECTIVE DEVICE

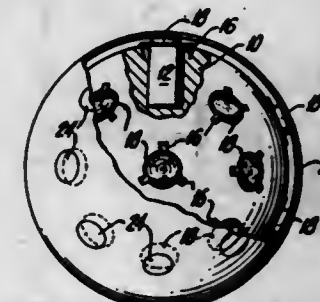
Thomas P. Foley, 12 James Lane, Huntington, N.Y. 11743

Filed Nov. 4, 1968, Ser. No. 773,040

Int. Cl. E01f 13/00

U.S. Cl. 256—1

5 Claims



The specification and drawings disclose a compact, easily stored and carried, non-lethal protective device which prevents attacks by persons and animals. In a preferred embodiment when the device is thrown, a number of arms instantly extend and form a mechanical barrier between a person and a would-be attacker.

3,517,913

VIBRATING TABLE CONSTRUCTION

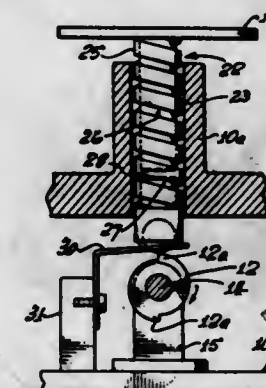
Walter J. van Rossem, 1917 Thayer Ave., Los Angeles, Calif. 90025

Filed Oct. 23, 1968, Ser. No. 769,976

Int. Cl. B01f 11/00

U.S. Cl. 259—91

9 Claims



A vibrating table is supported on an elastic column, motion for vibrating the table being imparted to the base of the column by a rotating cam. A cantilever type leaf spring supports the column and table out of contact with the cam, when at rest. Downward pressure on the table brings the column into contact with the rotating cam. Anti-friction means in the form of a captive ball bearing are located at the base of the column to reduce friction and improve the life of moving parts.

3,517,911

CAR JACK

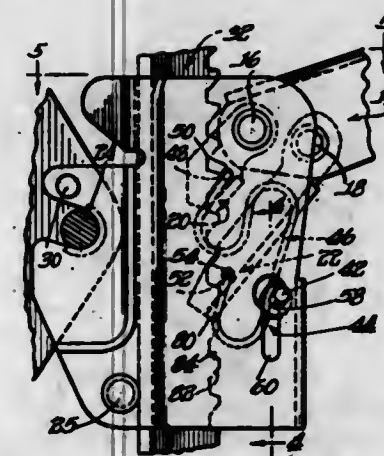
Ronald Lynn Grams, St. Joseph, Mich., assignor to Auto Specialties Manufacturing Company, St. Joseph, Mich., a corporation of Michigan

Filed Nov. 13, 1967, Ser. No. 682,090

Int. Cl. B66f 1/06

U.S. Cl. 254—111

10 Claims



A direction setting mechanism for use in an automobile jack assembly or the like, comprising a rod-like pin element having a pair of flange portions each being located a predetermined distance from a respective end of the pin element. Each end of the pin element is received in a respective aperture, one being in the shape of a keyhole in the walls of the jack assembly body member and the pin element is held between the walls by the flange por-

3,517,914

VIBRATING FURNACE FOR PELLET MATERIAL

Russell B. Smith, Stamford, Conn., assignor to Pellite Corporation, Stamford, Conn., a corporation of Connecticut

Filed Feb. 6, 1968, Ser. No. 703,312

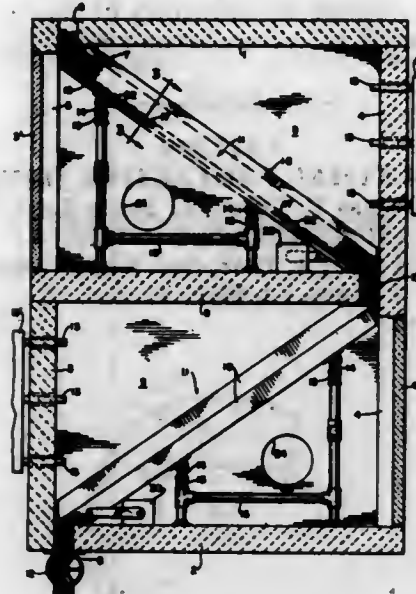
Int. Cl. F27b 3/04

U.S. Cl. 263—21

20 Claims

A compact furnace for heating pellet material comprising a closed housing, a plurality of inclined support means extending in a zig-zag fashion from the top of the

furnace to the bottom thereof for conveying a layer of pellet material through the furnace, and heating means



for directing heat against the exposed surface of the layer of material as it passes through the furnace.

3,517,915

SELF-ALIGNING CARRYING ROLLERS FOR HEAVY ROTARY BODIES, SUCH AS ROTARY KILNS

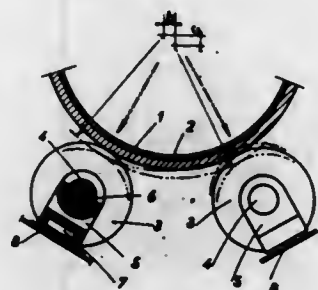
René Bovagne and Gérard Deynat, Chalon-sur-Saône, France, assignors to Société des Forges et Ateliers du Creusot, Paris, France, a company of France
Filed Aug. 6, 1968, Ser. No. 750,646

Claims priority, application France, Dec. 7, 1967, 131,312

Int. Cl. F27b 7/00

U.S. Cl. 263-33

3 Claims



This invention provides a rotary body, a hoop of which rests on two rollers, each supported on two bearings each carried by a deformable volume of liquid fed from a common source.

3,517,916

ALUMINUM ANNEALING FURNACE

Robert H. Ross, Willard Roth, Robert C. Larko, and Walter G. Swartzfager, Meadville, Pa., assignors to Sunbeam Equipment Corporation, Meadville, Pa., a corporation of Delaware

Original application Nov. 14, 1966, Ser. No. 594,126, now Patent No. 3,447,790, dated June 3, 1969. Divided and this application Feb. 26, 1969, Ser. No. 802,476

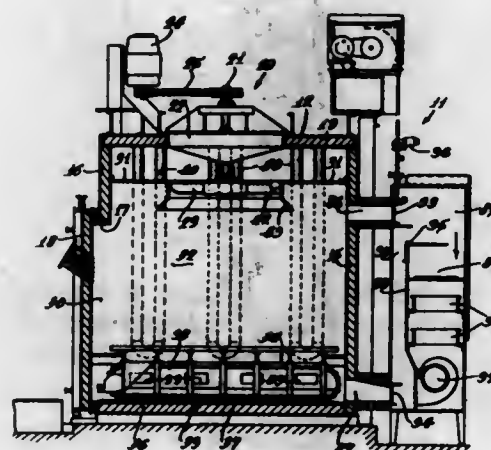
Int. Cl. F27b 9/00

U.S. Cl. 263-40

9 Claims

An aluminum coil annealing furnace having a work chamber, within the furnace enclosure, formed by a horizontal baffle with an opening for a fan and verticle baffles spaced from the sidewalls and floor of the furnace. Radiant tubes are positioned in the space between the enclosure and the work chamber. A fan draws heating and cooling

gases upwardly through and across the aluminum coils at high velocities. A gas cooling chamber is positioned adjacent to and connected to the furnace by means of ducts for rapidly cooling the aluminum coils. Thermocouples for sensing the temperature of the gas and aluminum coils are mounted in the gas stream near the fan and in the aluminum coils, respectively. Electrical signals proportional to the temperatures sensed by the gas and work thermocouples are compared to an electrical signal proportional to a set annealing temperature and the signals



resulting from the difference between the gas and set anneal temperature and the difference between the work and set anneal temperature are compared after the electrical signal resulting from the difference between the gas and set anneal temperature has been reduced, by the introduction of a resistance value, by a preselected ratio. Signals from the comparison of the differences of the gas and work temperature from the set anneal temperature control the increase or decrease of the temperature of the heating or cooling gas.

3,517,917

ANNEALING FORM AND METHODS

David F. Winter, Kirkwood, Mo., assignor to Central Transformer Corporation, Pine Bluff, Ark., a corporation of Arkansas

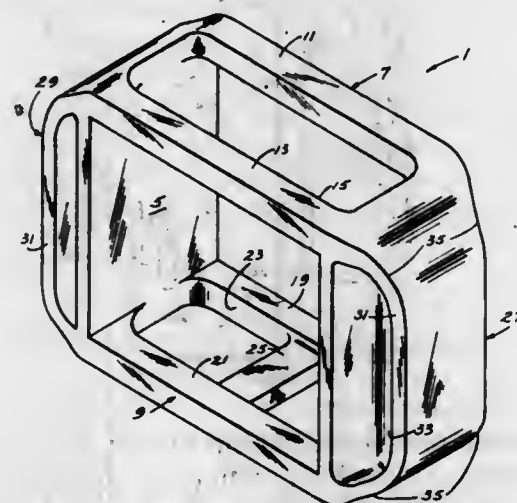
Filed June 12, 1967, Ser. No. 645,335

Int. Cl. F27b 21/04

U.S. Cl. 263-47

6 Claims

An outer form for use in annealing wound type transformer cores. The form is an integral one-piece open rectangular frame adapted to receive a core such that the



core yokes or shorter core legs are restrained against outward movement by the frame during annealing and the longer core legs are restrained by stacking of the core and form assemblies in an annealing oven.

3,517,918

METAL RECOVERY DEVICE

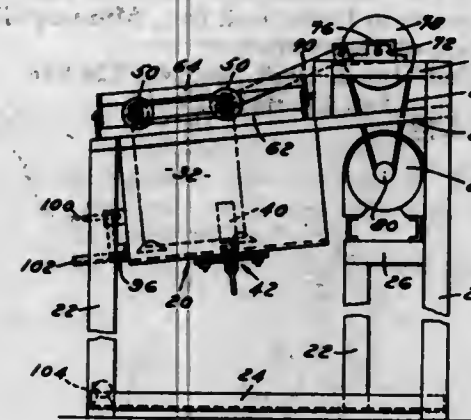
George A. Cenker, 18470 George Washington Drive, Southfield, Mich. 48075

Filed Dec. 21, 1967, Ser. No. 692,493

Int. Cl. B01d 17/02

U.S. Cl. 266-37

8 Claims



An apparatus for separating molten non-ferrous metals and/or alloys, such as zinc, aluminum, etc., from hot dross which has been skimmed from the surface of molten baths, which apparatus includes an essentially V-shaped container into which the hot dross is introduced directly from the surface of a melt in a refining furnace or the like. The bottom of the bin or container is disposed at a slight angle to horizontal, and at the lower end thereof exhibits an outlet provided with a quick-clamp closure member, permitting easy manipulation for withdrawing the molten metal from the device. A reciprocable blade suspended within the bin is driven through the dross to impart vertical and lateral movement to the dross and thereby cause the pure metal to separate from the ashes and gravitate toward the bottom of the bin.

3,517,919

SHEET FOLDING MACHINE

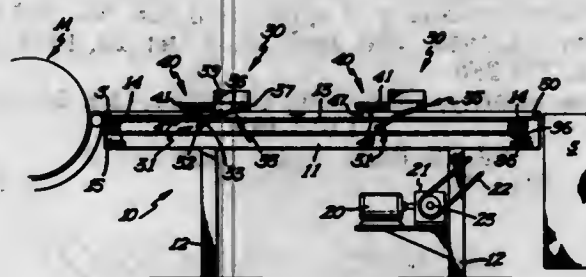
Melvin E. Flygare, Kenmare, N. Dak., assignor to Maintenance-Free Machines, Inc., Kenmare, N. Dak., a corporation of North Dakota

Filed Sept. 11, 1967, Ser. No. 666,616

Int. Cl. B65h 45/14

U.S. Cl. 270-68

4 Claims



The invention relates to a machine for automatically folding textile sheet material both transversely and longitudinally. Means is provided for conveying the sheet and lifting the leading edge thereof to thereby form a bight as the trailing portion of the sheet passes beneath the leading edge. The leading edge is subsequently released in registration with the trailing edge of the sheet to thereby fold the sheet transversely to its direction of travel. The invention includes a cantilevered elongate member extending beyond the discharge end of the conveyor for receiving and supporting the transversely folded sheet material in draped fashion to thereby form a longitudinal

fold in the sheet. Means is also provided for adjusting the speed of operation of the means for lifting and holding the leading edge of the sheet to thereby insure a secure hold on the leading edge of the sheet and to also insure that the leading edge is released in registration with the trailing edge to thereby produce a neatly folded sheet.

3,517,920

FOLDING BLADE SILENCING MECHANISM

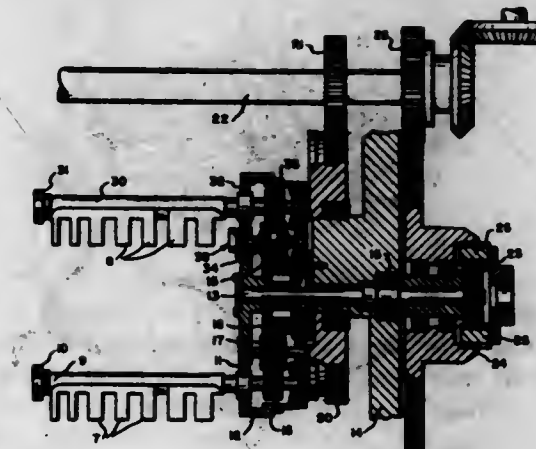
Robert A. Snyder, Gillette, N.J., assignor to Wood Newspaper Machinery Corporation

Filed Apr. 13, 1967, Ser. No. 630,749

Int. Cl. B65h 45/16; F16h 3/22

U.S. Cl. 270-77

4 Claims



Folding blade silencing mechanism for use with a folding cylinder of a newspaper folder utilizing means for axially moving an intermediate gear which is in continual meshing engagement with a collect tucking blade shaft into and out of meshing engagement with a tucking blade drive means. Means for locking the intermediate gear from rotation when it is disengaged from the tucking blade shaft drive means.

3,517,921

COMBINED COPY PAPER PRE-FEED AND TIMING MECHANISM FOR COPYING MACHINES

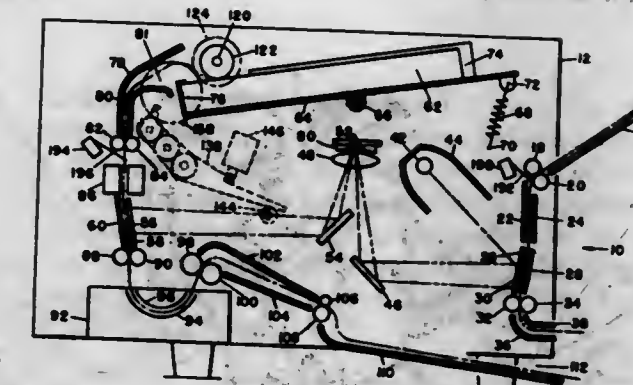
Joseph F. Miculikiewicz, Trumbull, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Filed May 21, 1968, Ser. No. 730,765

Int. Cl. G03b 27/48

U.S. Cl. 271-8

22 Claims



A mechanism for use in a copying machine of the type utilizing pre-cut sheets of copy paper in which the copy paper sheets are stored in a supply tray and a sheet is normally maintained in an advanced or pre-fed position. The mechanism pre-feeds the topmost sheet from the supply tray to the advanced position preparatory to a subsequent copying cycle of operation, correlates the operation of feeding components for the copy paper according to varying length of copy paper and document

for shortest possible copying time, and controls the operation of a lamp and charger during a current cycle of operation all under the control of switches actuated by the moving document and sheet of copy paper.

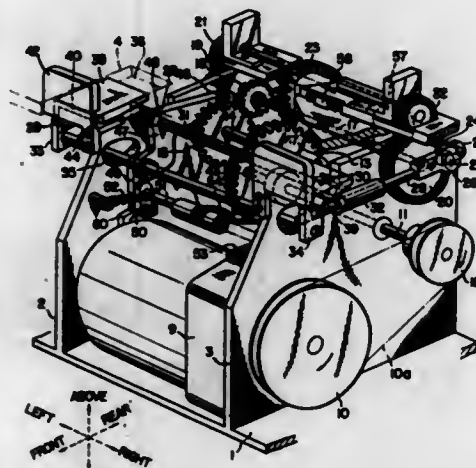
3,517,922

PAPER SHEET FEEDING DEVICE

Yasuo Murakami, Tokorozawa-shi, Japan, assignor to Sanko Shihai Keisanki Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company of Japan
Filed July 8, 1968, Ser. No. 743,215
Claims priority, application Japan, July 10, 1967, 42/44,343, 42/59,689
Int. Cl. B65h 1/06

U.S. Cl. 271-44

6 Claims



Picking or engagement edges on feed plates of a card or sheet feeding device are moved in an oval path, one circuit through which covers one cycle of feed and return strokes respectively above and below a platform plate supporting stacked sheets. Each edge thus feeds a lowermost sheet in the feed stroke but is free of any contact during the return stroke. The feed plates and their engagement edges can be lowered by a feed stopping and starting device so that the movement in the oval path takes place below the platform plate and clear of the sheets thereby to cause instantaneous stopping of the feeding operation.

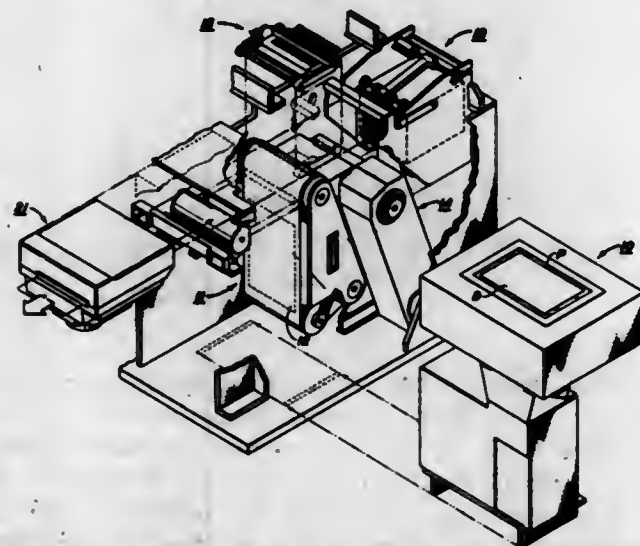
3,517,923

SHEET REGISTRATION APPARATUS

Daniel S. Hoffman and Hugh L. Jones, Rochester, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed May 24, 1968, Ser. No. 740,406
Int. Cl. B65h 9/06

U.S. Cl. 271-53

4 Claims



A paper registration arrangement having two slightly spaced apart rollers and sheet edge engaging fingers arranged to cooperate with the rollers. Devices are provided

which will actuate the fingers out of the path of movement of a sheet and will cause the rollers to move toward each other to engage the sheet therebetween.

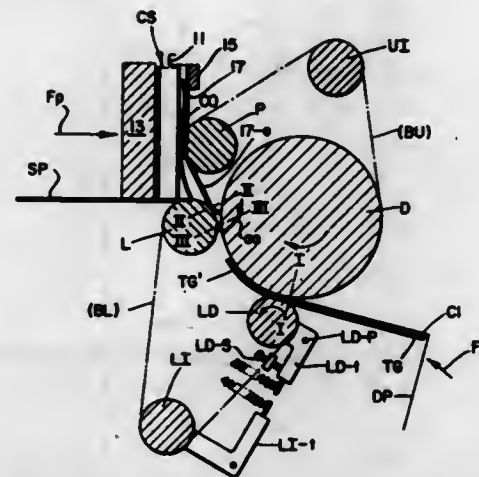
3,517,924

DOCUMENT STACKING ARRANGEMENT

Frank A. Digillo, Medfield, and John L. Rae, Roxbury, Mass., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed May 2, 1968, Ser. No. 726,076
Int. Cl. B65h 29/16

U.S. Cl. 271-75

14 Claims



An improved stacking arrangement for reliably translating computer record documents from a prescribed inject station into a prescribed "pack" in a stacking hopper, successively; this arrangement exhibiting the features of: a "centered" pulley "paired belt" transport; associated roller and guide means adapted to direct documents smoothly along a stacking path; a common transport drive whereby a single roller is rotatably driven to, in turn, drive an associated belt and to also synchronously drive a second belt and roller system, with a document trapped therebetween; also a "bumper roll" arrangement driven by this belt system and adapted to thrust records into the stacking hopper and keep them aligned there, spaced away somewhat from the point of entry into the hopper.

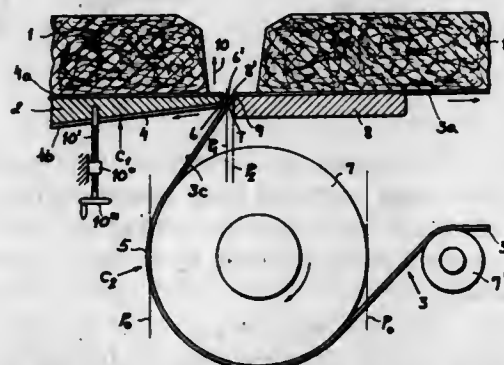
3,517,925

CONVEYOR SYSTEM FOR FIBER MATS

Gerhard Hütz, Suchteln, Germany, assignor to G. Siempelkamp & Co., Krefeld, Germany, a corporation of Germany
Continuation-in-part of application Ser. No. 712,687, Mar. 13, 1968. This application Oct. 24, 1968, Ser. No. 770,256
Claims priority, application Germany, Oct. 25, 1967, 1,653,308
Int. Cl. B65g 37/00; B65h 29/12

U.S. Cl. 271-76

5 Claims



A twin-conveyor system for fiber mats of the type in which a first conveyor belt passes a succession of fiber mats (e.g. to be made into pressed board) onto a second conveyor in order to space the fiber mats apart, to stack the mats preparatory to charging a multiplaten press,

etc. To prevent deterioration at the leading edges of the mat, the stepless transition region of the conveyor system is provided at the junction of the conveyors, with a table of the take up conveyor above the deflecting roller or drum thereof which holds the upper stretch of the deflecting conveyor in contact with the downwardly deflected pass of the preceding conveyor at its discharge side.

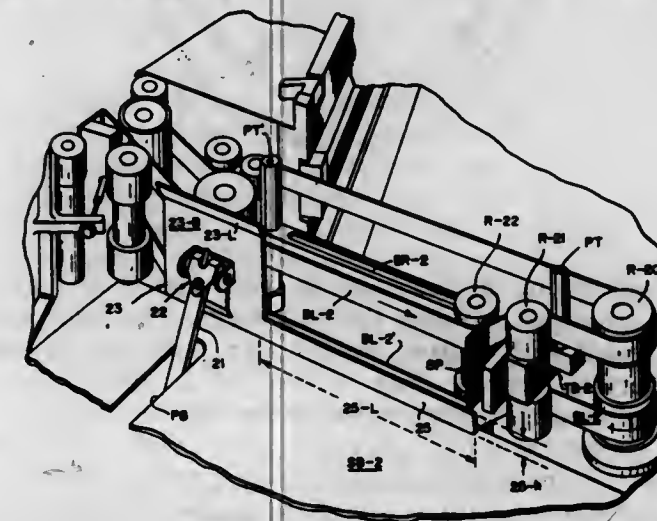
3,517,926

VARIABLE-LENGTH SORT-DOCKETING WITH OUTRIGGER PUSHER

Derek O. Oram, Sudbury, and Richard W. Carman, Foxboro, Mass., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Jan. 2, 1968, Ser. No. 700,662
Int. Cl. B65h 31/00

U.S. Cl. 271-86

13 Claims



An improved variable-length sort pocketing, or like document-stacking, arrangement for machines which handle and sort documents of widely-varying lengths, the arrangement including an adjustable-length stack transport/stop assembly in each stack area, together with a document stack pusher adapted to accommodate these various lengths and the corresponding adjustment positions of the transport/stop assembly, a pusher comprising, in one embodiment, a pusher plate having an "outrigger" extension, spanning the maximum document-length differential.

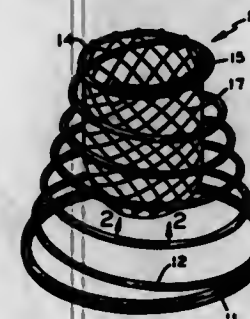
3,517,927

HELICAL SPRING BOUNCING DEVICE

William Kennel, 50-23 60th St., Woodside, N.Y. 11377
Filed July 24, 1968, Ser. No. 747,352
Int. Cl. A63b 5/00

U.S. Cl. 272-57

7 Claims



An exercising and amusement device for young persons comprising a tapered helical structure formed of spring material and having at least three convolutions, a circular base section formed with about two parallel convolutions and a circular top section with at least one convolution which is generally parallel with the base section. A basket or receptacle to receive the person is secured to the top section and depending into the tapered helical structure.

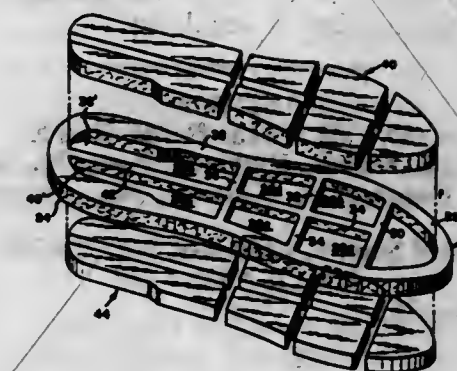
3,517,928

WEIGHTED SHOE

Gerard F. Shanahan, 11729 Devilwood Drive, Potomac, Md. 20854
Continuation-in-part of application Ser. No. 519,353, Jan. 7, 1966, which is a continuation-in-part of application, Ser. No. 320,837, Oct. 30, 1963. This application July 25, 1969, Ser. No. 844,951
Int. Cl. A63b 23/04

U.S. Cl. 272-57

1 Claim



A shoe providing therapeutic advantages to the wearer, having a flat weight-receiving member inside the shoe and coextensive with the sole and having a plurality of vertical openings spaced over its area and being open to the interior of the shoe whereby they may selectively receive light-weight plugs or heavy weights. The openings are positioned on the opposite sides of the longitudinal center line of the weight receiving member so that certain medical and therapeutic effects may be produced by selective and relative positioning of the plugs and weights.

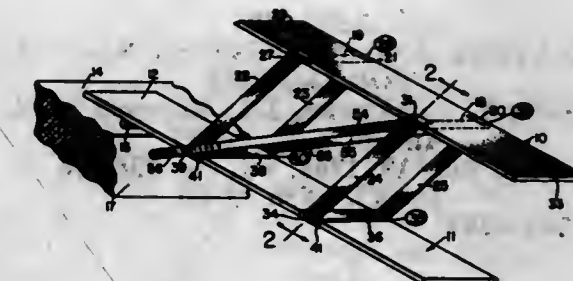
3,517,929

DIVING BOARD EXTENDER

Harvey W. Sampson, Jr., 100 Grand Canal Drive, Miami, Fla. 33133
Filed Aug. 1, 1968, Ser. No. 749,537
Int. Cl. A63b 5/10

U.S. Cl. 272-66

8 Claims



An auxiliary horizontally disposed adjustable board, which may be mounted above the conventional fulcrum mounted diving board and may be readily adjusted by a parallelogram linkage to various positions lengthwise of the conventional board and to various vertical positions relative to the conventional board. This adjustment in effect produces a variation in the length or height of the conventional diving board.

3,517,930

VARIABLE RESISTANCE SWIMMER TRAINING DEVICE

Allen I. Jacobsen, Lawrence, N.Y. (% Mrs. Sol Cohen, Millstone Circle, Stamford, Conn. 06903)
Filed Feb. 6, 1967, Ser. No. 614,346
Int. Cl. A63b 31/04

U.S. Cl. 272-71

5 Claims

A training device for competitive swimmers which can easily be adjustably mounted on the swimmer's body to provide predetermined resistances of varying degrees to

the forward movement of the swimmer causing the swimmer to exert greater effort, wherein the resistance



is caused by members of varying shape and curvature mounted removably on the device and extending from the body at various degrees of angularity.

3,517,931

CONVERTIBLE JUMP ROPE

Jerome Barton Kalish, Highland Park, Ill., assignor to Chemtoy Corporation, Chicago, Ill., a corporation of Illinois

Filed Sept. 9, 1968, Ser. No. 758,297
Int. Cl. A63b 5/20

U.S. Cl. 272-75

10 Claims



A convertible jump rope capable, when arranged in one way, of use by a single person holding a handle in each hand and, when arranged in another way, capable of use by two persons, each holding a handle to swing the rope for a third person. There are two lengths of rope, each length having an elongated, tapered hollow member connected to each end. When used by one person, the rope lengths are coextensive and the two adjacent hollow members at corresponding ends of the rope lengths telescope together. When used by two persons, the rope lengths are positioned end to end.

3,517,932

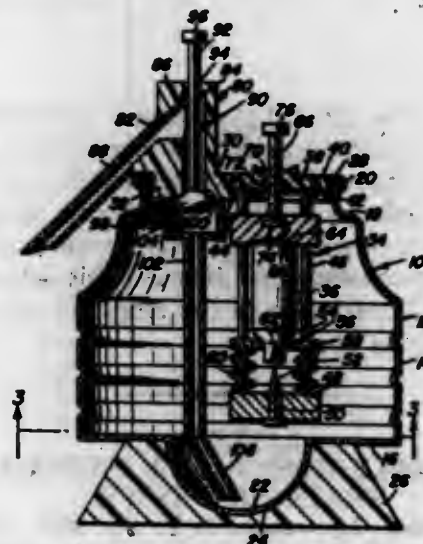
CARBONATING AND DISPENSING RECEPTACLE FOR LIQUIDS

Dorothy G. Clinkscales, 3315 Roswell Road, Atlanta, Ga. 30305

Filed June 19, 1968, Ser. No. 738,230
Int. Cl. B65d 83/00

U.S. Cl. 222-399

9 Claims



A liquid carbonating and dispensing device provided with a capsule of compressed gas and a piercing device movably associated therewith. The device is mounted directly within a liquid containing receptacle provided with a manually controlled discharge nozzle.

3,517,933

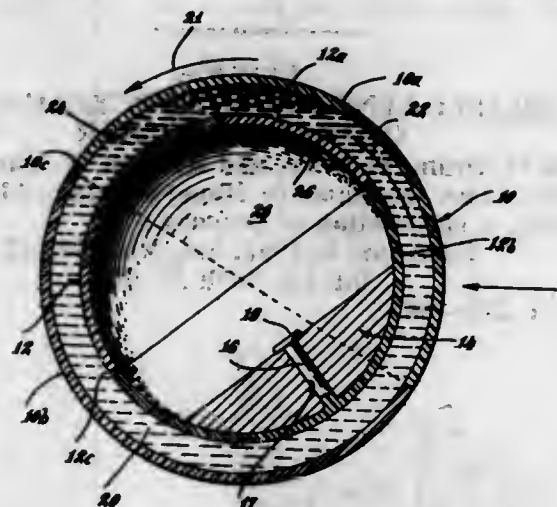
GAME BALL

Edwin Steele Malkin, 253 Rivergate Drive, Wilton, Conn. 06897

Continuation of application Ser. No. 633,513, Apr. 25, 1967. This application June 26, 1969, Ser. No. 841,678
Int. Cl. A63b 43/04, 37/10

U.S. Cl. 273-63

6 Claims



A ball having an outer and an inner shell with a liquid filling the space between the two shells. The inner shell is provided with a fixed weight at a point on its inner periphery to provide drag as the ball is rolled. This is accomplished by friction between the exterior of the inner shell against the liquid and the interior of the outer shell against the liquid as the weight of the inner shell tends to resist rotation of the inner shell against the rotational movement of the liquid when the ball is rolled. The liquid preferably has a substantially constant viscosity over a wide range of temperature so that the braking action is fairly uniform under indoor or outdoor conditions for games such as lawn bowling or "bocce" in which such a ball may be employed. The ball will roll on hard surfaces distances comparable to those of conventional lawn bowling balls rolled on grass at the same bowling force.

3,517,934

BALLOON KICKING GAME APPARATUS

Jeffrey D. Breslow, Evanston, Ill., assignor to Marvin Glass & Associates, Chicago, Ill., a partnership

Filed Feb. 14, 1968, Ser. No. 705,355
Int. Cl. A63b 67/00

U.S. Cl. 273-95

1 Claim



Game apparatus which includes a balloon, a pair of goals to be placed on the floor, and a plurality of loop elements for loosely shackling the ankles of each player together. After the opposing players have each placed one of the loop elements around their ankles to thereby hamper their movement, the balloon is dropped midway between the goals and the players attempt to kick the balloon through the opponent's goal.

3,517,935

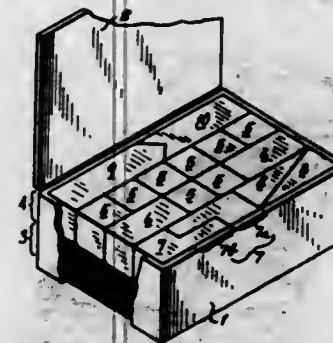
CHESSMEN AND PACKAGE CONTAINING SAME

Floyd Lanier Graham, 20 W. 76th St., New York, N.Y. 10023

Filed June 27, 1967, Ser. No. 649,171
Int. Cl. A63f 3/00

U.S. Cl. 273-137

5 Claims



Set of chessmen having individual pieces so formed that a double set fits neatly and tightly into a box of simple shape such as a rectangular parallelepiped. The chessmen are constructed in pairs having complementary surfaces such that each assembled pair is a rectangular parallelepiped. The transverse area of each assembled pair is the same; the length of each assembled pair is a submultiple of the length of the box into which the double set is to fit. The relative heights of the chessmen are indicative of their value in the game; the top portion of at least some pieces is suggestive of their allowed moves.

3,517,936

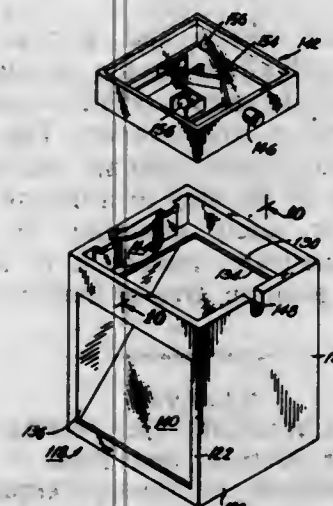
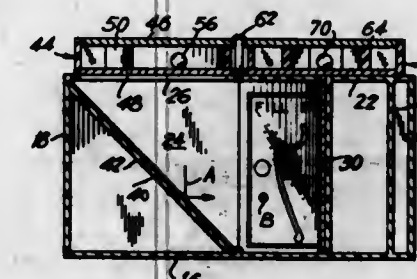
OPTICAL ILLUSION DEVICE

Alan A. Hicks, Weston, Conn., and Ernest J. Swimmer, New York, N.Y., assignors to Kohner Bros., Inc., East Paterson, N.J., a corporation of New York

Filed May 20, 1968, Ser. No. 730,317
Int. Cl. A63f 7/04

U.S. Cl. 273-115

22 Claims



An optical illusion device in a game of skill where a singly or multiply reflected vertical image of a body movable under the influence of gravity by tilting of the device while the body is located on a generally horizontal supporting game surface, moves in one or more directions other than would normally be expected upon tilting of the device and, therefore, of the supporting surface.

3,517,937

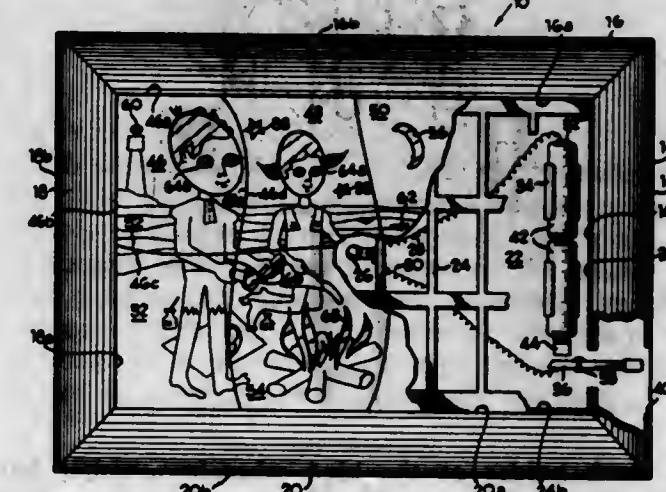
LIGHTED JIG SAW PUZZLE

Marvin I. Glass, Chicago, and Harry Disko, Park Ridge, Ill., assignors to Marvin Glass & Associates, a partnership

Filed Aug. 19, 1968, Ser. No. 753,424
Int. Cl. A63f 9/10

U.S. Cl. 273-157

1 Claim



A jigsaw puzzle of the type having a frame including a puzzle supporting surface characterized by a light transmitting portion on said puzzle supporting surface and a source of light positioned therebelow with the puzzle pieces having light transmitting forces therein. Supported under the puzzle pieces are pieces of variously colored translucent material so that the light transmitted through the openings in the puzzle pieces are appropriate to the illustrations on the puzzle pieces.

3,517,938

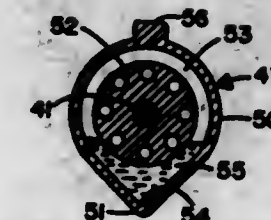
SELF POSITIONING ROTATABLY MOUNTED SIMULATED GOLF BALL

Anthony Peter Anello, 3101 San Isidro, Tampa, Fla. 33609

Original application Oct. 24, 1966, Ser. No. 588,948, now Patent No. 3,453,889, dated July 8, 1969. Divided and this application Aug. 7, 1968, Ser. No. 763,999
Int. Cl. A63b 69/36

U.S. Cl. 273-197

2 Claims



Upstanding deflectable quills are positioned on each side of a rotatably mounted simulated golf ball to which

is connected apparatus for measuring the force imparted to the ball by a golf club. The simulated golf ball is rotatable about a horizontal shaft which includes a circular chamber containing mercury. A portion of the chamber is eccentric to the shaft so that when stationary the mercury drops into the eccentric and maintains the simulated golf ball in an upright position. When the simulated golf ball is rotating, centrifugal force moves the mercury to opposite sides of the shaft for counterbalancing purposes.

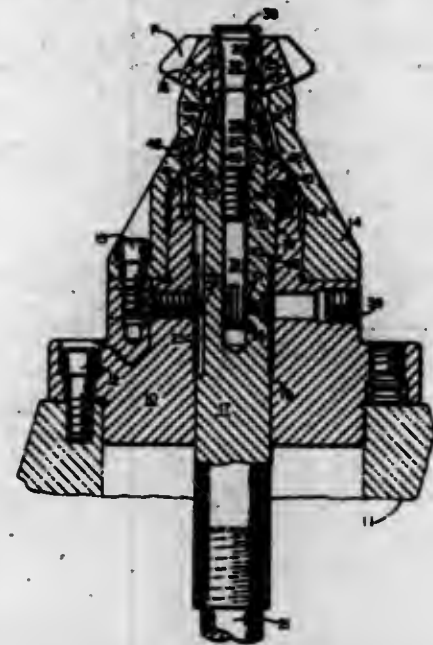
3,517,939 WORK HOLDER AND RADIALLY EXPANSIBLE COLLET THEREFOR

Edwin C. Jaehn, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York

Filed Mar. 5, 1968, Ser. No. 710,513
Int. Cl. B23b 31/40

U.S. Cl. 279-2

5 Claims



A work holder of the kind wherein a collet has a radially expansible axially slitted section for gripping the bore of a workpiece, the expansion being effected by a conical expander moving axially within a conical bore in the expansible section. Rearwardly of its work gripping section the collet has an outwardly tapering section, which is also slitted axially and receives the tapered nose of an arbor part to provide support for the expander close to workpiece.

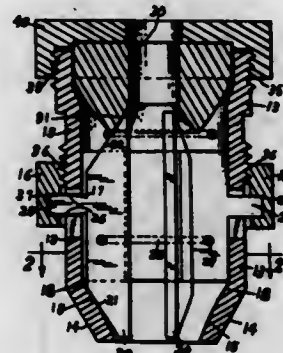
3,517,940 CHUCKS

Guy H. Tripp, 209 N. Columbian Road, Bay City, Mich. 48706

Filed Oct. 21, 1966, Ser. No. 597,827
Int. Cl. B23b 5/22

U.S. Cl. 279-55

3 Claims



This invention is to a chuck of the self-centering type which can be employed with tools having both tapered and cylindrical shanks.

3,517,941 COUNTER-WEIGHT ATTACHMENT FOR A TRACTOR

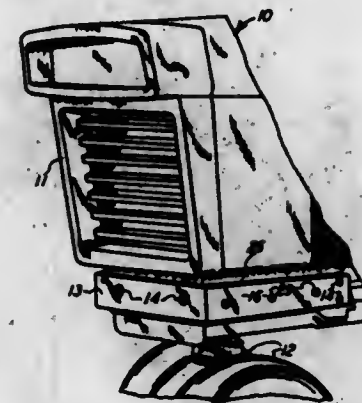
Edward J. Lazzeroni, Racine, Wis., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Filed Sept. 17, 1968, Ser. No. 760,331

Int. Cl. B60r 27/00

U.S. Cl. 280-150

3 Claims



A counter-weight attachment for a tractor and including a support member for receiving one or more weights at the front end of the tractor. Attachment means exist between the support member and the tractor, and the means renders the support member movable in the fore-and-aft direction of the tractor in accordance with the number of weights held by the support member.

3,517,942 HIDE-AWAY STEP-UP DEVICE

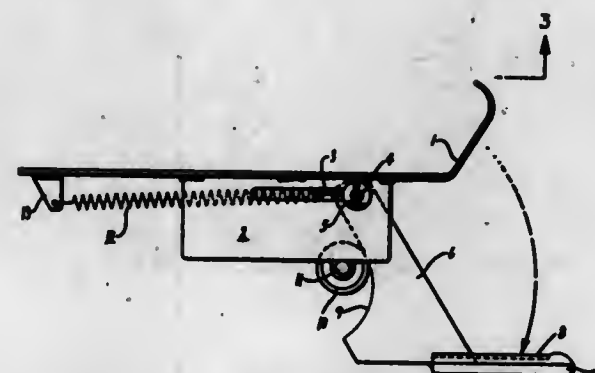
Moses L. Cuffe, 715 Arastradero Road 94306, and Ralph L. Frese, 3109 Ross Road 94303, both of Palo Alto, Calif.

Filed Aug. 1, 1968, Ser. No. 749,330

Int. Cl. B60r 3/02

U.S. Cl. 280-166

2 Claims



An automatically rising and disappearing step-up device is permanently fixed to the running board rear end or other parts of motor vehicles such as trucks, station wagons, trailers, and campers. The combined action of pivot, slide guides, spring and cam provides positive movement of the step to a downward and horizontal position for safely mounting or boarding the vehicle and automatically returns it to an upward or vertical concealed position, free of interference when not in use.

3,517,943 UNIVERSAL WEIGHT TRANSFER HITCH

Ernest V. Bunting, Detroit, and Hans V. Lind, Royal Oak, Mich., assignors to Massey-Ferguson Inc., Des Moines, Iowa, a corporation of Maryland

Filed July 1, 1968, Ser. No. 741,770

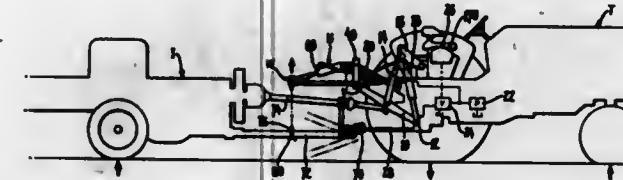
Int. Cl. B62d 53/00

U.S. Cl. 280-405

14 Claims

A hitch for transferring weight from an implement pulled by a vehicle by means of a drawbar and tongue. The hitch includes a swinging and elevating boom assembly attached to the rear of the vehicle. A weight transfer

connection such as one or more chains connects the end of the boom assembly with the drawbar-implement to transfer weight. The boom assembly includes an expansible and retractable controllable load element such as a hydraulic cylinder supplied from a controllable variable pressure source, the controllable load element permits



fore and aft pitching between the implement and tractor while maintaining a variable predetermined lifting force. The weight transfer can be controlled by pressure sensing or load sensing. Means can be provided for relieving the load on turning. Break-away means for disconnecting the weight transfer connection can also be provided.

3,517,944 HYDRAULIC MECHANISM FOR RAISING AND LOWERING FLAT BED TRAILERS

Otto Hage, 2704 Wood Drive, Sioux Falls, S. Dak. 57105

Filed June 3, 1968, Ser. No. 733,972

Int. Cl. B60d 1/00

U.S. Cl. 280-414.5

1 Claim



A trailer for carrying road machinery or the like which is hinged to a dolly at one end and to the tongue at the other end so that the trailer bed can be dropped to a position lying on the ground. In this position the machine to be carried can be driven onto the trailer bed, then raised into a carrying position by hydraulic means.

3,517,945 TRAILER INCLUDING DETACHABLE GOOSENECK

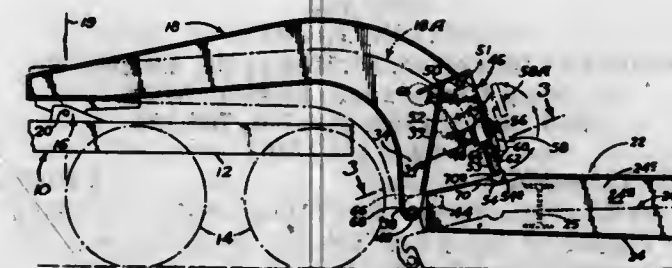
Tyman H. Fikse, Eumclaw, Wash., assignor to Page & Page, a division of Dura Corporation, Oak Park, Mich., a corporation of New York

Filed Apr. 3, 1968, Ser. No. 718,548

Int. Cl. B62d 53/06

U.S. Cl. 280-425

5 Claims



Apparatus for detachably connecting the forward end of a trailer frame and a gooseneck including a pair of opposed pins on the gooseneck, a pair of opposed hooks on

the trailer frame adapted releasably to seat on and rotate about the pins, to accommodate relative rocking of the gooseneck, and a pair of opposed rams with cylinders secured to the gooseneck and disposed so that upon extension their rod ends bear downwardly on the trailer frame whereby the gooseneck is swung forwardly with respect to the frame and the mass of the frame is effective to hold the gooseneck and frame together.

3,517,946 FIFTH WHEEL VISCOUS DAMPER CONSTRUCTION

Rollin Douglas Rumsey and Gordon W. Kamman, Buffalo, and Robert L. Hughes, Tonawanda, N.Y., assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan

Filed Nov. 28, 1967, Ser. No. 686,011

Int. Cl. B62d 53/08

U.S. Cl. 280-432

10 Claims



A fifth wheel assembly for a tractor and a trailer comprising a viscous damper mounted on the trailer, a kingpin removably secured in the damper, a fifth wheel plate having a kingpin receiving slot mounted on the tractor, the viscous damper including a rotor assembly, an upper and lower housing, and a hub concentric with the portion of the king pin in the viscous damper, and the hub being connected by a spline joint to the rotor assembly.

3,517,947 GIFT CATALOG

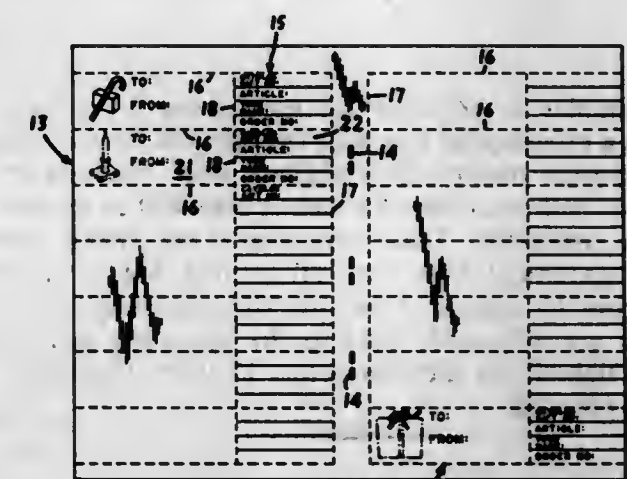
Gail Bennett, Winnetka, Ill., assignor to Bennett Brothers, Inc., Chicago, Ill., a corporation of Illinois

Continuation of application Ser. No. 630,711, Apr. 13, 1967. This application June 26, 1969, Ser. No. 836,757

Int. Cl. G09f 7/12; B42d 15/04

U.S. Cl. 283-56

5 Claims



A gift catalog including a page which includes at least one removable composite tag having indicia thereon for identification of a gift ordered and a separable space portion for insertion of a personal message from the sender to the receiver.

3,517,948

DRAGLINE TOY

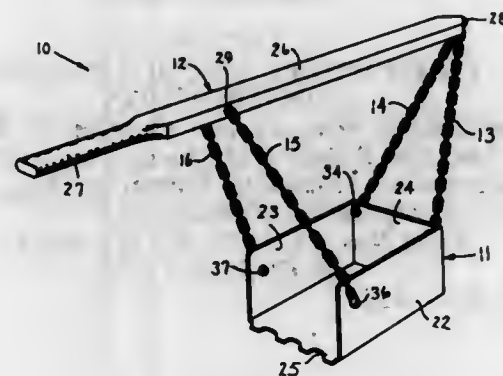
Thomas E. Miller, Watson Township, Allegan County, Mich. (1466 120th Ave., R.R. 2, Hopkins, Mich. 49328)

Filed Aug. 2, 1968, Ser. No. 749,730

Int. Cl. A01b 1/04

U.S. Cl. 294—55

4 Claims



A dragline toy comprising a scoop which is suspended from a beam by a plurality of elongated flexible elements.

3,517,949

COUPLER CONSTRUCTION

Toshio Hirai, Tokyo, Seichi Okada, Toyonaka-shi, and Makoto Kaneko and Hiromu Nakazawa, Mihara-shi, Japan, assignors to Mitsubishi Jukogyo Kabushiki Kaisha and Osaka Shosen Mitsui Senpaku Kabushiki Kaisha, Chuyoda-ku, Tokyo and Osaka-shi, Japan, respectively

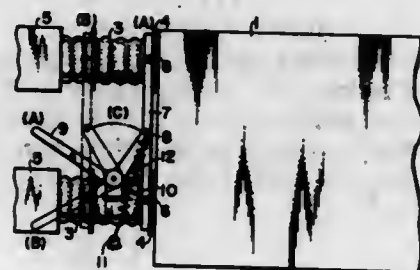
Filed Nov. 12, 1968, Ser. No. 774,631

Claims priority, application Japan, Nov. 13, 1967, 42/95,614

Int. Cl. F16I 25/00, 27/10

U.S. Cl. 285—9

6 Claims



A coupler is provided for connecting a refrigeration unit to a refrigerated box. The coupler has flexible ventilation passage members, or coolant flow conduits in the shape of bellows, each of which is provided at its one end with a connector. These connectors are either brought into engagement with the refrigerated box or released therefrom by means of an operating member. The connectors are adjustably held to the operating member so that a tight fit of the connectors in the refrigerated box can be ensured.

3,517,950

INSULATING PIPE UNION

Gerald L. Anderson, Bradford, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Apr. 26, 1968, Ser. No. 724,369

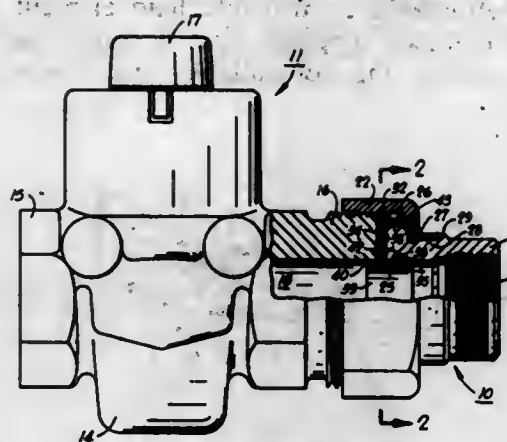
Int. Cl. F16I 19/02

U.S. Cl. 285—52

4 Claims

An insulating pipe union for maintaining electrical insulation between coupled pipe fittings or sections. The

union utilizes a metal-to-gasket-to-metal seal which pressure seals against line content leakage without overstress.



ing the electrical insulator contained between the separated component elements.

3,517,951

PIPE COUPLING

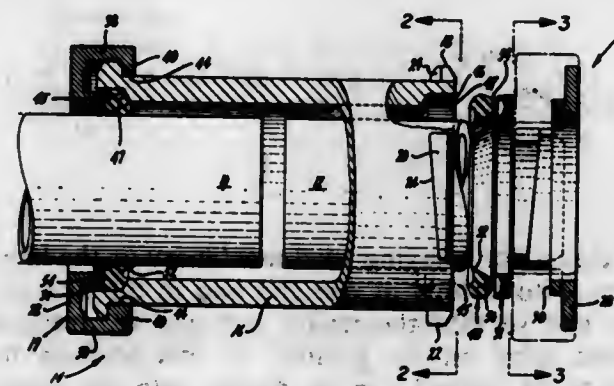
Paul G. Dunmire, Oakland, Calif., assignor to Christy Metal Products Inc., Emeryville, Calif., a corporation of California

Continuation of application Ser. No. 685,160, Nov. 22, 1967. This application Jan. 9, 1969, Ser. No. 791,873

Int. Cl. F16I 17/02, 21/04, 37/00

U.S. Cl. 285—110

3 Claims



A pipe coupling for connecting two adjacent aligned ends of pipes having sealing means at each end thereof. The sealing means include a resilient ring of generally circular cross-section and a tapered lip portion which sealingly engages the pipe section. A rigid compression ring having a semi-circular recess is positioned between the resilient ring and a rigid collar. Locking means are provided on the coupling sleeve and the collar for securing the collar on the sleeve.

3,517,952

SWIVEL JOINT

Donald G. McCracken, McHenry, Ill., assignor to Aeroquip Corporation, Jackson, Mich.

Filed Jan. 3, 1969, Ser. No. 788,733

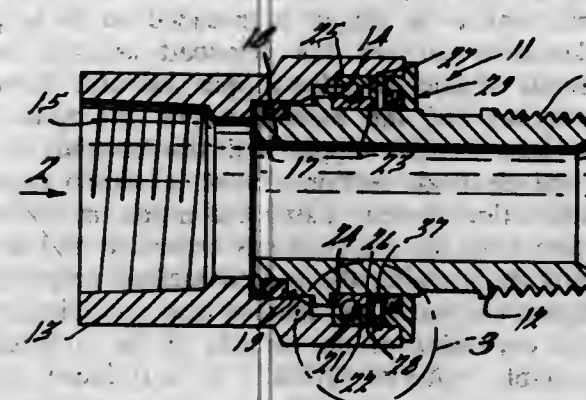
Int. Cl. F16I 27/08

U.S. Cl. 285—276

5 Claims

A swivel joint having interfitting male and female bodies connected by a ball bearing which permits relative coaxial rotation of the bodies, a seal between the bodies preventing leakage of the fluid. A snap ring retains the ball bearing in place. A dust seal for the bearing is disposed in a cavity formed in an end cap. This cap is preferably thermoplastic, gives additional support to the bodies under extreme transverse load conditions,

and seals and protects the snap ring. The end cap is held in place by a raised bead which snaps into a groove in



the female body, and also serves to retain bearing lubrication.

3,517,953

SOCKET RETAINER FOR ROTARY POWER TOOLS

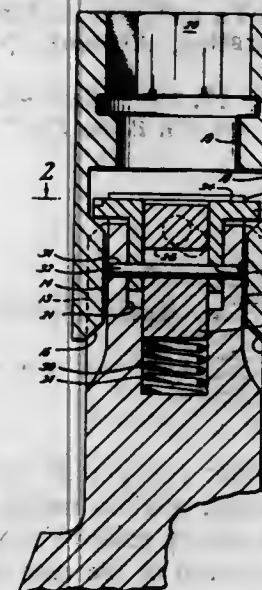
Robert R. Wright, John P. Barbee, and Clement M. Kucera, Houston, Tex., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed July 18, 1963, Ser. No. 295,894

Int. Cl. B60F 27/06

U.S. Cl. 287—53

11 Claims



6. A socket retainer mechanism for a shank and socket having a splined connection with each other when the shank is received in the socket comprising a retainer element across the outer end of said shank, a rock shaft on which said retainer element is mounted, said shank having a bore receiving said rock shaft, said retainer element having teeth at its outer ends aligned with the teeth of said splined connection in one position of said rock shaft and out of alignment therewith in another position thereof, and means operable to rock said rock shaft.

3,517,954

ELECTRODE SECTION-CONNECTING NIPPLE PRE-ASSEMBLY AND PROCESS OF ASSEMBLING AN ELECTRODE JOINT

Joseph T. Snyder, West Nyack, N.Y., Charles C. Maxfield, Chippawa, Ontario, Canada, and Francis H. Skinner and James A. Whitwell, Lockport, N.Y., assignors to Great Lakes Carbon Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 23, 1967, Ser. No. 677,366

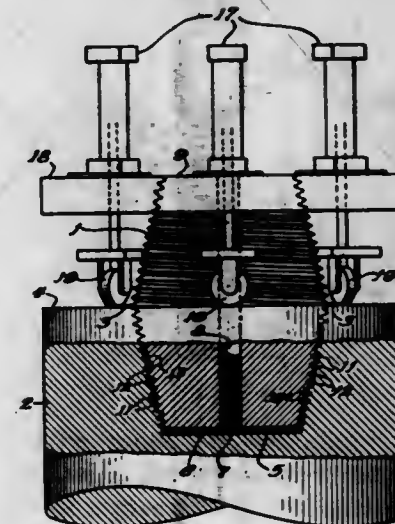
Int. Cl. E04g 7/00

U.S. Cl. 287—127

7 Claims

An electrode section-connecting nipple pre-assembly is made. The pre-assembly is used in assembling an electrode joint which comprises the pre-assembly and another

electrode section. The pre-assembly is made prior to shipment to the user of the joint. It is made in such a manner as to provide a clearance between the non-load bearing flanks of the threads of the connecting nipple and the threads of the socket of the electrode section of the pre-assembly. Also, prior to shipment of the pre-assembly to the user of the joint, a means is employed to maintain the connecting nipple in a fixed position in the socket of the electrode section of the pre-assembly thereby insur-



ing that the connection of the pre-assembly will not become loose during shipment and thereby also maintaining the aforesaid thread clearance. After the pre-assembly is shipped to the user and is connected to the other electrode section of the final joint assembly, to complete the making of the electrode joint, there is substantially even distribution of clearance between the threads of the nipple and the threads of both electrode sections of the final joint.

3,517,955

INSTRUMENT LINKAGE WITH DISENGAGEABLE PIVOTAL COUPLING

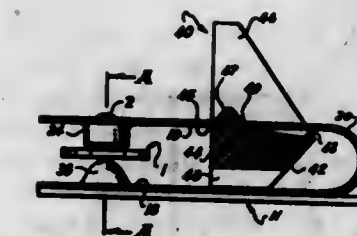
Hugh Jean Tyler, Scottsville, N.Y., assignor to Sybron Corporation, a corporation of New York

Filed June 7, 1968, Ser. No. 735,349

Int. Cl. B25g 3/38

U.S. Cl. 287—101

6 Claims



A socket in one arm of U-shaped spring clip on a lever receives a ball on the end of another lever, the other arm of the clip holding the ball in place. The ball is released by turning an eccentric-like operator held between the clip arms. The operator has a polygonal cross-section, one side of which normally lies flat on one arm of the clip. A teat on the other side of the operator projects into a hole in the other clip arm to retain the operator in place and a pair of arms on the operator straddle the other clip arm. When tipped by pressure on its arms, the operator spreads the clip arms enough to allow the ball to be lifted out of the socket.

3,517,956

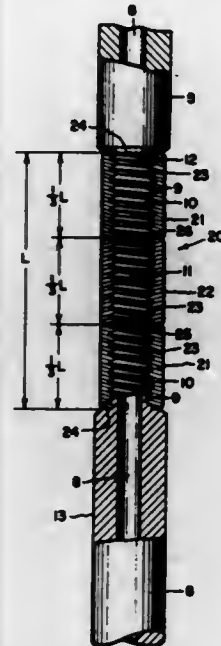
DRILL ROD COUPLING ARRANGEMENT

Greger B. Terjesen, Murray Hill, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 12, 1969, Ser. No. 798,583
Int. Cl. F16d 1/02

U.S. Cl. 287—117

7 Claims



A coupling for drill rods in which the drill rods have a threaded portion at one end. The coupling includes a pair of spacer elements. One of the spacer elements is threaded onto the threaded portion of each drill rod until it contacts a stop formed at the end of the threaded portion. A coupling member similar to the spacer elements is then threadably secured to the threaded portion of each drill rod to join the two drill rods in coaxial alignment. The coupling member is internally threaded throughout its length and no mismatch is needed.

3,517,957

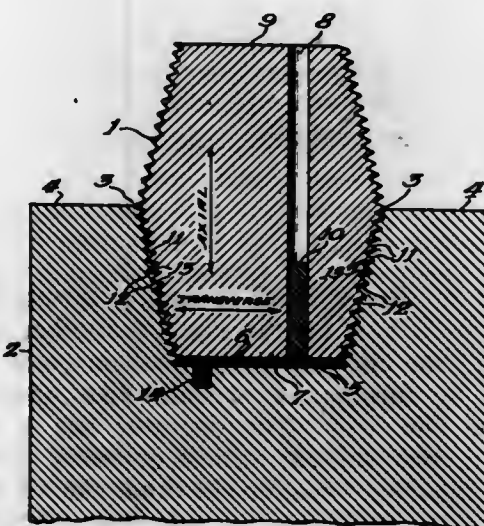
NIPPLE-ELECTRODE ASSEMBLY AND JOINT AND METHOD OF MAKING SAME

Jack J. Vail, Sanborn, and Raymond G. Millette, Niagara Falls, N.Y., assignors to Great Lakes Carbon Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 23, 1967, Ser. No. 677,367
Int. Cl. E04g 7/00

U.S. Cl. 287—127

10 Claims



The invention relates to nipple-electrode assemblies and joints, such as those used in electric furnaces, and to a means of distributing thread clearance throughout

the assembly and/or joint. These means include the prepositioning of the nipple in the socket of the electrode section into which the nipple is threaded so as to provide a clearance between the non-load bearing flanks of the threads of said threaded nipple and said threaded electrode socket and the placing within the space between the base of the nipple and the bottom of the socket of the electrode section a material which expands upon solidification thereby fixing the nipple in the electrode section after the material has expanded and solidified, thereby maintaining the aforescribed prepositioning and thread clearance and thereby also providing room for thermal expansion of the threads of the connection. The expandable material typically is introduced within the space between the base of the nipple and the bottom of the socket through a lengthwise hole in the nipple after the nipple has been threaded into the electrode socket.

ERRATUM

For Class 294—55 see:
Patent No. 3,517,948

3,517,958

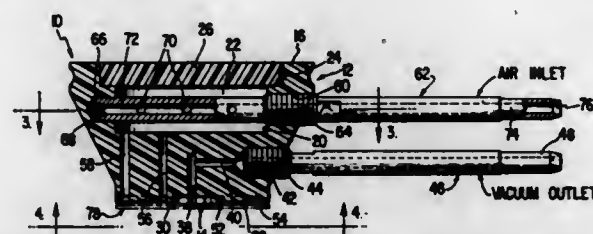
VACUUM PICK-UP WITH AIR SHIELD

Paul D. Boucher, Brookfield, Conn., and Joseph C. Miller, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 17, 1968, Ser. No. 737,680
Int. Cl. B66c 1/02

U.S. Cl. 294—64

6 Claims



A workpiece holder for planar substrates having on its face central vacuum pickup means and a rearwardly offset concentric array of positive pressure air ports for preventing contamination of the rear surface of the work piece carried thereby.

3,517,959

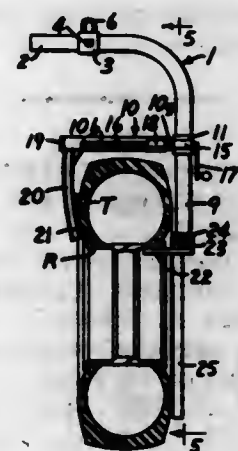
WHEEL LIFTER

Ronald Ferguson, Rte. 2, Box 87, Dayton, Wash. 99328

Filed June 21, 1968, Ser. No. 739,003
Int. Cl. B66c 1/00

U.S. Cl. 294—67

6 Claims



A device to engage and support a heavy wheel of the type embodying a rubber tire and a rim inside it and has an L-shaped bar with a top horizontally extending

portion with a sleeve thereon provided with an eye for attachment to the lift hook of a hoist. The bar has an integral depending portion on which an upper horizontal extensible arm is secured. This arm has a finger rotatable about its free end so it can be passed over the wheel and let fall behind the wheel on the vehicle, then drawn toward the depending portion of the L-shaped bar. At the lower end of the depending portion there is a horizontally extending support extending in the same direction as the arm to reach into the space within the tire rim. The support has two downwardly diverging fingers that serve to engage the lower part of the tire and keep the wheel upright.

3,517,960

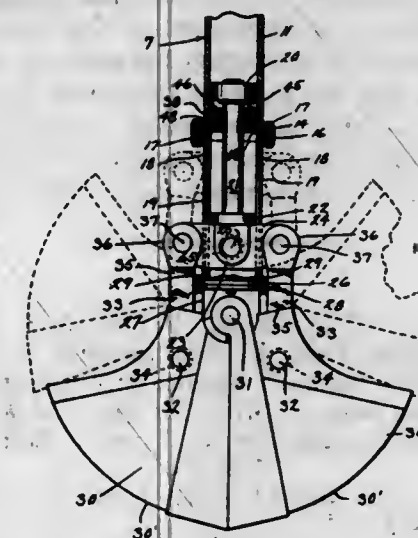
HYDRAULIC ACTUATED CLAMSHELL BUCKET ATTACHMENT FOR STICK CLAM EXCAVATORS OR THE LIKE

George W. Mork, South Milwaukee, and Carl F. Novotny, Milwaukee, Wis., assignors to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Filed Feb. 2, 1968, Ser. No. 702,728
Int. Cl. B66c 3/02

U.S. Cl. 294—70

3 Claims



A hydraulic clamshell bucket attachment includes a hydraulic cylinder with a tubular cross head housing attached to its rod end and a rod with its outer end operating in the housing. Bucket halves with curved bottom walls are pivotal on a common axis at the outer end of the housing, and a cross head attached to the end of the rod and extending outwardly through slots in the housing has thrust links connecting its ends to respective bucket halves. The rod has an enlarged flange near the cross head which engages the housing to help take side loads. There is a floating seal between the rod and the cylinder casing; and the seal includes an outer ring fixed to the casing that is spaced from the rod and defines a groove facing the rod, and an inner ring sealed around the rod and received in the groove. There is a seal between the bottom surface of the inner ring and the bottom wall of the groove, and the inner ring is of smaller diameter than the groove to allow limited relative lateral movement. A tubular housing extension and a rod extension which can readily be connected between, respectively, the cylinder casing and housing and the rod and cross head are provided to allow the bucket attachment to be lengthened.

3,517,961

HYDRAULIC PIPE CLAMP

Glenn D. Johnson, Downey, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

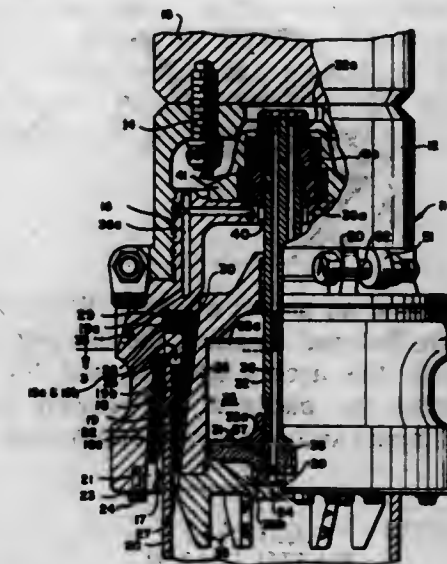
Filed Dec. 18, 1967, Ser. No. 691,519
Int. Cl. E21c 19/00

U.S. Cl. 244—86,12

8 Claims

A pipe clamp adapted to accommodate out-of-round pipes and pipes of different wall thicknesses comprises

outer and inner concentrically arranged gripping means which are movably mounted in the open end of a housing



and adapted to be moved substantially simultaneously into engagement with the outer and the inner surfaces of the open end of a pipe or conduit member.

3,517,962

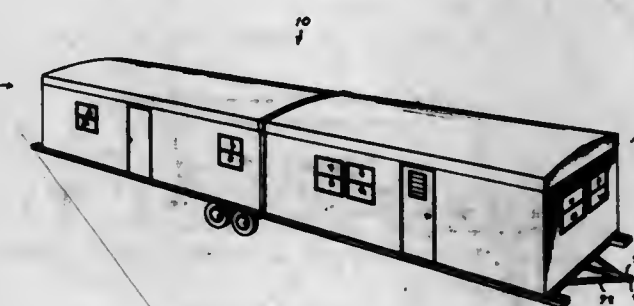
KNOCK-DOWN MOBILE HOME ASSEMBLY

Raymond F. Bassett, Elkhart, Ind., assignor to Parkwood Homes, Inc., Elkhart, Ind.

Filed Mar. 1, 1968, Ser. No. 709,564
Int. Cl. B60p 3/34

U.S. Cl. 296—23

5 Claims



A knock-down mobile home assembly in which the mobile home has collapsible walls which fold over onto its floor structure. A roof mountable upon the walls in their erected position overlies the walls when collapsed to a folded and overlapped position. The collapsed unit with floor structure, folded and overlapped walls, and overlying roof may be assembled upon a similar collapsed unit in inverted relation to enclose components of both units. The pair of collapsed units so assembled may then be stacked with a single collapsed unit or with similar pairs of assembled collapsed units for shipment.

3,517,963

CHAIR INSERT WITH UPHOLSTERED APPEARANCE

John Thomas Woods and Margaret Hlake Woods, both of 513 Howie Court, Santa Paula, Calif. 93060

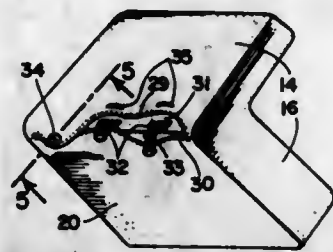
Filed Aug. 20, 1968, Ser. No. 753,976
Int. Cl. A47c 31/10

U.S. Cl. 297—228

6 Claims

A chair insert has backrest, seating and opposing side sections constructed of resilient spongy material such as polyurethane foam that are enclosed within a form-fitting slipcover arranged to present a near upholstered appearance. Adjacent the junction where the backrest and seating sections join together the slipcover secures the ends

of plural cords that extend through plural slots in the base portion of the backrest section. The cords are formed with fastening elements shaped for attachment with mating fastening elements secured to one of two slipcover



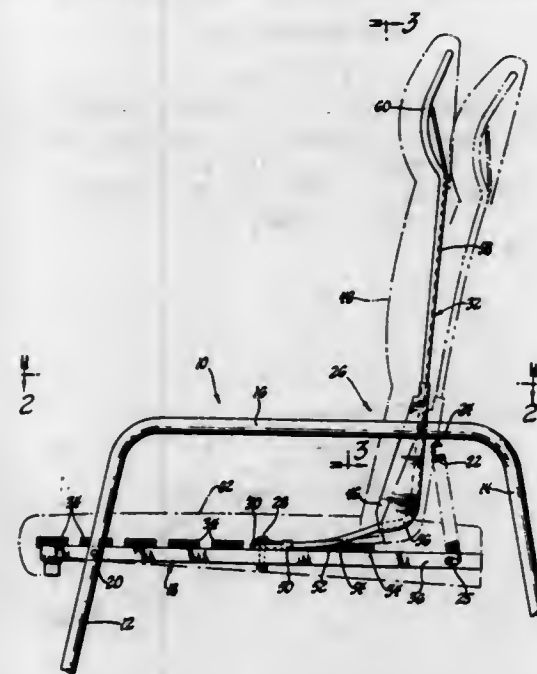
margins that define an access opening. When the fastening elements are fastened together, the margins overlap to completely close the access opening and the slipcover material adjacent the backrest and seating junction is pulled taut to impart an upholstered appearance.

3,517,964 PATIO CHAIR

Hyland C. Flint, 3551 Walnut Lake Road,
Orchard Lake, Mich. 48033
Filed May 29, 1968, Ser. No. 732,925
Int. Cl. A47d 3/025

U.S. Cl. 297-309

8 Claims



The present invention relates to a seating structure having a seat and a backrest resiliently pivotally movable, in unison, relative to the seat support and having a backrest structure which includes a lower, relatively rigid portion which is resiliently connected to the seat and an upper, relatively resilient portion such that the upper backrest portion is resiliently pivotal relative to the lower portion, and the entire backrest is resiliently pivotal relative to the seat. The resilient connection between the backrest and the seat is such that with increased pivotal movement of the backrest relative to the seat, the resistance to further pivotal movement increases.

3,517,965 SEAT BACK POSITION CONTROL MECHANISM

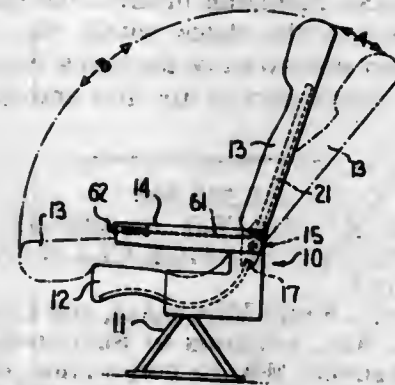
John H. Cowles, Forestville, and Roger G. Massey, Litchfield, Conn., assignors to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Nov. 4, 1968, Ser. No. 773,225
Int. Cl. B60n 1/04

U.S. Cl. 297-374

17 Claims

This disclosure relates to a seat back position control mechanism which is incorporated in one of the pivots for

the seat back. The control mechanism includes a pivot shaft, an intermediate race member and a housing, the pivot shaft being secured to the support for the seat and the housing being secured to the seat back with the intermediate race member being free floating. A two way clutch is positioned between the pivot shaft and the inter-

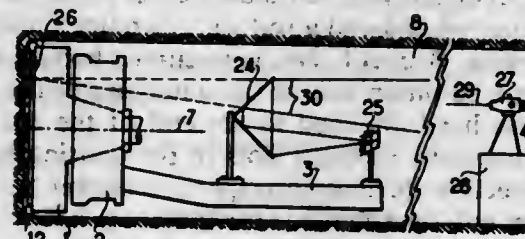


mediate race member to facilitate the manual releasing of the seat back and adjustment of the position thereof. A one way clutch is positioned between the intermediate race member and the housing to permit forward movement of the seat back in the case of an accident. Suitable brake means are associated with each of the clutches to provide for resisted movement of the seat back.

3,517,966
GUIDING SYSTEM FOR A BORING MACHINE
Marcel Montacie, Paris, France, assignor to Les Travaux Souterrains, a French corporation
Filed June 6, 1968, Ser. No. 734,999
Claims priority, application France, June 6, 1967, 109,354
Int. Cl. E01g 3/04

U.S. Cl. 299-1

7 Claims

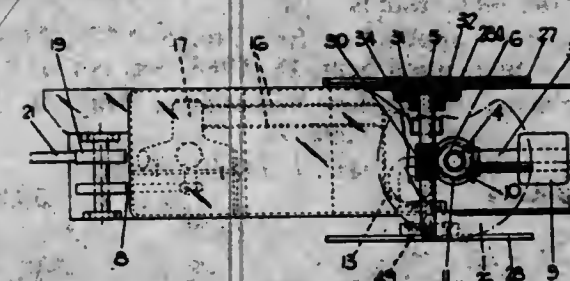


A guiding system for a continuous tunnel-boring machine, comprising a rotatable boring head supported by sliding shoes fixed to the head carrier forming the front part of the frame and on which is exerted the advancing thrust from anchoring shoes on the wall, disposed at the two ends of a transverse element carrying a steering cabin connected resiliently to a sliding caisson, on which are displaced the sliding faces parallel to the axis of rotation of the head and presented by bearers forming the rear part of the said frame, characterized in that at least two sliding shoes are disposed on either side of the vertical plane of symmetry of the machine and insuring its stable steering with the help of an optical system associated with a sighting device, both of which being fixed toward the rear end of the frame and disposed in such a manner that the cutting front is approximately the optical image of the said sighting device in the said optical system and has an optical connection with an optical apparatus placed toward the entrance to the tunnel and participating in the control.

3,517,967
MINERAL CUTTING MACHINES
Trevor G. Clarke, Rye, England, Ernest R. L. Bowden, Leigh-on-Sea, and Oliver A. Tustin, London, England, assignors to Modern Mining Machinery Limited
Filed Dec. 24, 1967, Ser. No. 693,669
Int. Cl. E21c 25/16

U.S. Cl. 299-51

5 Claims



Apparatus for cutting mineral comprising a horizontally mounted shaft, a vertically mounted shaft, means for rotating said shaft, a first circular cutting means mounted at each end of said vertically mounted shaft, a second circular cutting means mounted at one end of said horizontally mounted shaft, hardened cutting teeth provided on said first and second circular cutting means being in juxtaposition so as to cut two horizontal and one vertical cut of mineral, milling means provided on said horizontal shaft along at least that portion of said shaft which in use, enters a mineral face so as to cut therethrough during movement of the apparatus relative to the mineral face to afford a passage through such mineral for the said shaft during cutting.

3,517,968
WHEEL RIM TRIM RING
Frank R. Tully and Warren L. Meyer, Ingham County, Mich., assignors to Motor Wheel Corporation, Lansing, Mich., a corporation of Ohio
Filed Oct. 9, 1968, Ser. No. 766,191
Int. Cl. B60b 7/00

U.S. Cl. 301-37

9 Claims



A decorative trim ring comprising an annular continuous strip of stainless steel adapted to be attached to the outboard face of the rim of an automotive passenger vehicle wheel. The inner edge of the trim ring has an external circumferentially extending groove which carries a bead of resilient material, preferably in the form of a rubber O-ring, which has a squeeze fit between the inboard edge of the trim ring and the inner surface of the wheel well. The outboard edge of the trim ring is both mechanically captured by a reentrant radius on the outboard bead flange of the wheel and is adherently secured thereto by another continuous ring of resilient material, preferably in the form of an adhesive. The trim ring provides a decorative cover over the outboard face of the wheel rim, and the space between the trim ring and rim face are sealed by the aforementioned connections between the trim ring and rim face.

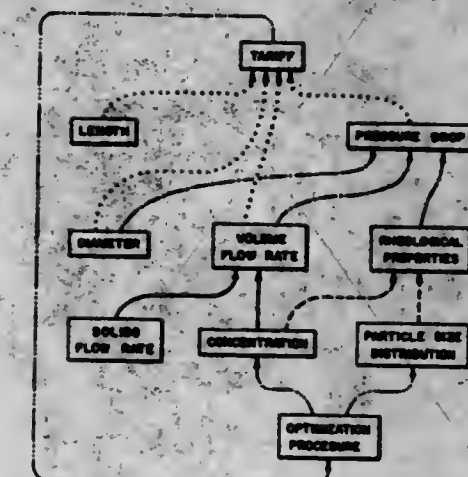
3,517,969
TRANSPORTATION OF PARTICLES BY PIPELINE
Moye Wicks III, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 10, 1968, Ser. No. 720,268
Int. Cl. B65g 53/04

U.S. Cl. 302-66

3 Claims

A method of transporting solids to a remote place through a pipeline as a solid particle-liquid slurry. A con-

centration and particle size distribution is selected and a slurry made up therefrom and flowed within a pipeline. The composition of this slurry which is necessary to obtain a specific rate of return is determined depending upon the pipeline diameter, length, volume flow rate and the pressure drop within the pipeline. The pressure drop of the slurry flowing within the pipeline is determined depending upon the pipeline diameter, the volume flow rate and the rheological properties of the slurry. The volume

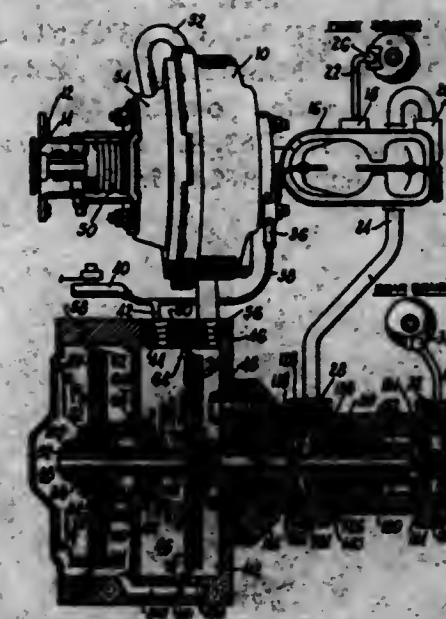


flow rate is determined from both the solids flow rate and the concentration of the slurry flowing within the pipeline. The rheological properties of the slurry are determined both from the concentration, shape, density, and particle size distribution of the solids and the density and viscosity of the liquid flowing within the pipeline. Finally, the concentration and particle size distribution which would optimize substantially the rate of return is determined and a slurry is made up therefrom and flowed within the pipeline.

3,517,970
BRAKE PROPORTIONING MEANS
Maxwell L. Cripe, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 4, 1968, Ser. No. 773,074
Int. Cl. B60t 8/26

U.S. Cl. 303-6

2 Claims



A proportioning means for a dual hydraulic brake system that will regulate the brake pressure in one portion of that system in two steps by utilizing a device responsive to a control pressure for proportioning the brake pressure in steps.

3,517,971

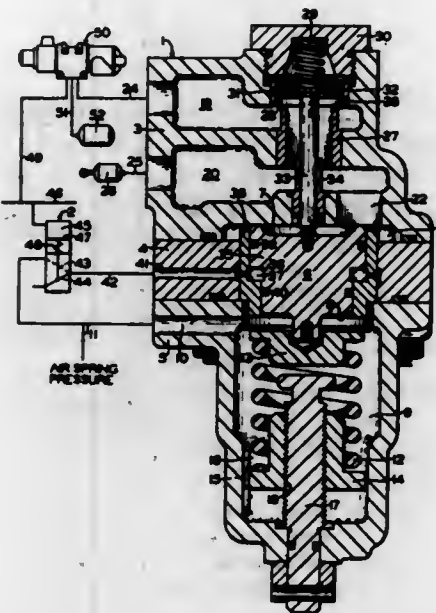
VARIABLE LOAD BRAKE CONTROL APPARATUS
Daniel G. Scott, Apollo, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Sept. 6, 1968, Ser. No. 758,081

Int. Cl. B60t 8/26, 8/18

U.S. Cl. 303—22

6 Claims



Variable load brake control apparatus for effecting delivery of actuating fluid to a vehicle brake cylinder at a pressure according to a control pressure established by the vehicle operator for effecting a brake application at a degree corresponding to the established control pressure, said variable load brake control apparatus including means for restricting to a maximum pressure limit commensurate with the load condition of the vehicle the pressure of control fluid, and being further characterized by means automatically responsive to an emergency brake application for effecting an increase in said maximum pressure limit and a corresponding increase in the degree of brake application effective during an emergency situation.

3,517,972

HYDRAULIC TRACK ADJUSTER

James Curtis Williams, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed May 31, 1968, Ser. No. 733,715

Int. Cl. B62d 55/30

U.S. Cl. 305—10

10 Claims



A hydraulic track adjuster for taking up the slack and providing the proper tension on the endless track for a crawler tractor.

3,517,973

DEVICE FOR SUPPORTING TWO ELEMENTS MOVABLY WITH RESPECT TO EACH OTHER

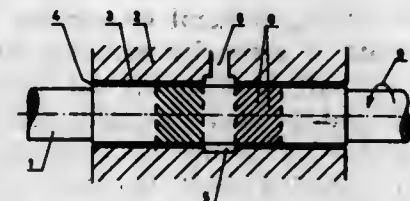
Gilles Gerardus Hirs, Beemwijk, Netherlands, assignor to Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek ten behoeve van Nijverheid, Handel en Verkeer, The Hague, Netherlands, a corporation of the Netherlands

Continuation of application Ser. No. 550,779, May 17, 1966. This application Sept. 18, 1968, Ser. No. 768,592
Claims priority, application Netherlands, May 21, 1965, 6506474

Int. Cl. F16c 1/24, 17/16

U.S. Cl. 308—9

3 Claims



A device for supporting two elements movably with respect to each other, comprising a bearing surface on each of the two elements and means for the local supply of a pressurized medium for transmitting the carrying load, to the slit-shaped space which is present during the normal operation of the device and which is open at least as to part of its periphery, the said slit-shaped space comprising a first region and a second region, the first region separating the second region from the open periphery of the slit-shaped space and the second region, which is in some degree less resistant to the flow of the medium, separating the first region from the place where the medium is supplied.

3,517,974

METHOD OF HEAT TREATING TO PRODUCE A WEAR-RESISTANT AND LOW FRICTION SURFACE

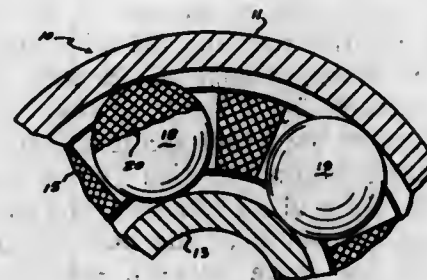
Phillip R. Eklund, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 6, 1968, Ser. No. 773,836

Int. Cl. F16c 1/24; B21d 53/12

U.S. Cl. 308—187

9 Claims



A self-lubricating surface structure of low wear and friction characteristics resulting from subjecting bearing rolling contact and/or other rolling or sliding contact elements to a fluoridizing atmosphere of dissociated nitrogen tetrafluoride gas. A unique complex of nitrides, carbonitrides, and fluorides is formed in, and the surface structure is further impregnated with a series of nitride needles to produce a high load, low friction and increased wear capability therein.

3,517,975

ROLLER BEARING CONSTRUCTION

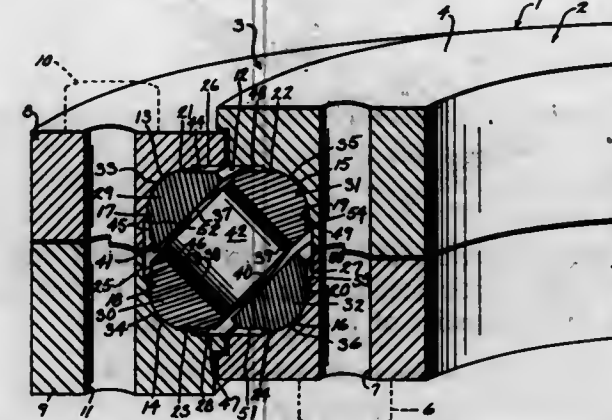
Bruno L. Lonngren, South Milwaukee, and Trevor O. Davidson, Milwaukee, Wis., assignors to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Filed May 10, 1968, Ser. No. 728,245

Int. Cl. F16c 19/10

U.S. Cl. 308—227

14 Claims



The swing circle bearing embodiment has a hollow retainer ring assembly with rounded interior corners supporting roller rings, the interior surfaces of which define an enclosed race for crossed rollers separated by individual spacers. The exterior surfaces of the roller rings are fitted to the interior corners of the retainer ring assembly to adjust to irregularities in the system. The spacers have bearing surfaces that form two lines of contact with each roller. The other embodiments have aligned rollers separated by individual spacers between roller rings that seat adjustably in concavities in annular retainers.

3,517,976

BEARING LOCKING DEVICE

William D. McAllister, Poughkeepsie, N.Y., assignor to The Federal Bearings Co., Inc., Poughkeepsie, N.Y., a corporation of New York

Filed Aug. 21, 1968, Ser. No. 754,430

Int. Cl. F16c 35/06

U.S. Cl. 308—236

8 Claims



An anti-friction bearing is disclosed having an inner ring for mounting on a shaft and a locking collar for securing the inner ring to the shaft. The inner ring has an axially extending arcuate portion which is adapted to project along the shaft, the locking collar being dimensioned to slip over the extending arcuate portion and the shaft, locking means being provided to fasten the collar to the extending arcuate portion and to bind said collar tightly against the shaft.

3,517,977

LOCKING MEMBER FOR INTERCONNECTING HOUSEHOLD APPLIANCES

Fredy Wenger, 14 Avenue du Tir Fed, 1024 Ecublens, Switzerland

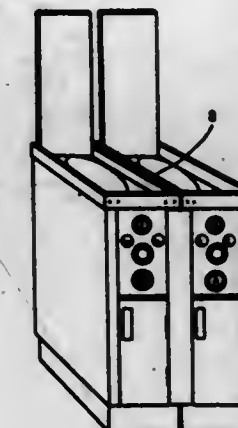
Filed Apr. 12, 1968, Ser. No. 720,768

Claims priority, application Switzerland, Apr. 18, 1967, 5,481/67

Int. Cl. A47b 47/00, 87/02; F16b 12/00

U.S. Cl. 312—111

2 Claims



Two adjacent household appliances having laterally projecting border strips along adjacent upper edges are assembled with the border strips facing one another and with connecting bolts extending through holes in the border strips. The joint between the appliances is covered by a profiled locking member having an inverted V-shaped longitudinally extending upper portion overlying the upper edges of the border strips and a vertical plate portion received between the border strips and having at its lower edge laterally projecting ribs which lock under the border strips to secure the locking member in place and lock the two appliances against vertical movement relative to one another. The vertical plate portion has downwardly opening slots which accommodate the connecting bolts.

3,517,978

VEHICLE FILE CABINET

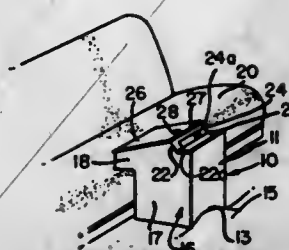
Kenneth E. Hudson, P.O. Box 4900, Sacramento, Calif. 95825

Filed June 17, 1968, Ser. No. 737,474

Int. Cl. A47b 27/00, 94/04

U.S. Cl. 312—235

1 Claim



A portable file cabinet for use in an automobile consisting of a receptacle removably seating partially on the floor over the drive shaft and partially on the front seat, having an inclined hinged top surface for use as a desk and removable interior dividers and/or shelves arranged as desired.

3,517,979

LENS SYSTEM FOR USE IN THE NEAR ULTRAVIOLET LIGHT RANGE

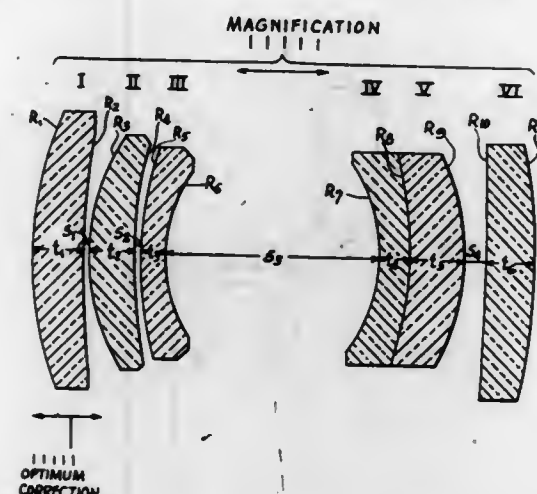
Herman Lowenthal, Chicago, Ill., assignor, by mesne assignments, to R. A. Morgan Co., Inc., Palo Alto, Calif., a corporation of California

Filed June 17, 1968, Ser. No. 737,468

Int. Cl. G02b 13/14, 9/60

U.S. Cl. 350—2

2 Claims



A lens system for use in the near ultraviolet range has a variable magnification ratio ranging from about 4 to 1 down to 1 to 1. The system is a six element double Gauss type lens system, and is fully corrected. The magnification ratio variation is accomplished by moving the lens system as a whole axially with respect to the image plane. For each magnification ratio, optimum correction is accomplished by changing the separation in air between the first and second lens elements.

3,517,980

METHOD AND ARRANGEMENT FOR IMPROVING THE RESOLVING POWER AND CONTRAST

Mojmir Petran and Milan Hadravsky, Pizen, Czechoslovakia, assignors to Ceskoslovenska akademie ved, Prague, Czechoslovakia

Filed Dec. 4, 1967, Ser. No. 687,638

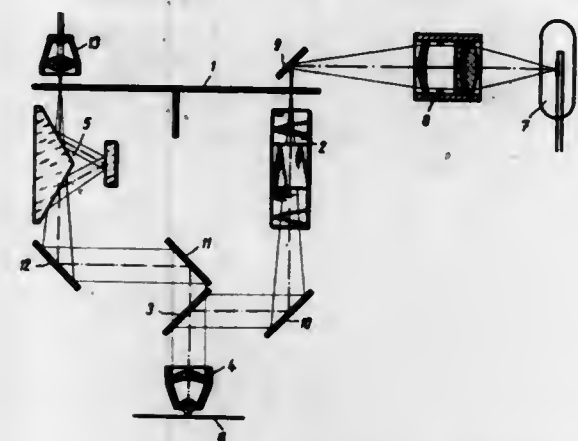
Claims priority, application Czechoslovakia,

Dec. 5, 1966, 7,720/66, 7,721/66

Int. Cl. G02b 21/06, 17/00, 27/02

U.S. Cl. 350—17

5 Claims



The observed object is illuminated by light spots scanning subsequently the whole area of the observed object, and only a part of the light coming from the observed object due to illumination by said light spots of an area which corresponds to the area of the original light spots is allowed to enter the image plane of the microscope objective. The resolving power is thus substantially improved and observation of objects covered by translucent material such as living cells and nerves below the skin is enabled.

3,517,981

TERMINATION MEMBERS FOR FIBER OPTIC MEANS

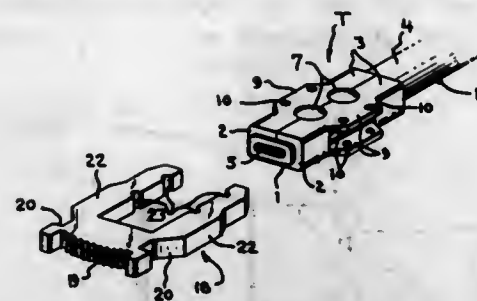
Herman Rueger, Lancaster, and Joseph Richard Keller, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Filed June 15, 1966, Ser. No. 557,797

Int. Cl. G02b 5/14

U.S. Cl. 350—96

15 Claims



A terminal member is adapted to be secured onto the end of a fiber optic means at a minimum loss of transmission characteristics of the fiber optic means.

3,517,982

COHERENT LIGHT MODULATING SYSTEM

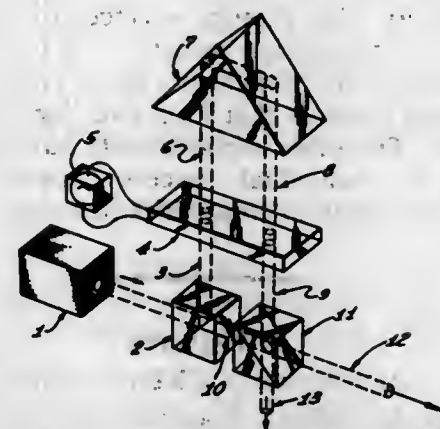
Giusto Fonda-Bonardi, Los Angeles, Calif., assignor to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland

Filed Sept. 6, 1966, Ser. No. 577,299

Int. Cl. G02f 1/28

U.S. Cl. 350—160

4 Claims



A system for modulating a coherent light beam wherein the beam is divided into two portions, and the time-space relationship of one or both portions of the divided beam is varied in response to an input signal. The two portions are then recombined in a manner such that the interaction of the two portions of the beam results in a composite beam whose magnitude has an ascertainable relationship with the magnitude of the input signal.

3,517,983

LIGHT CONTROL AND IMAGE TRANSLATING SYSTEM

Michael E. Fein, Champaign, and Joseph Markin and Alan Sobel, Evanston, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 6, 1966, Ser. No. 599,469

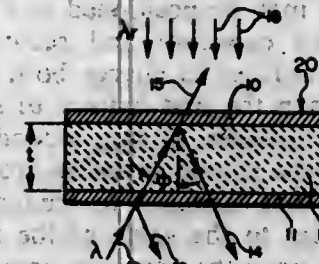
Int. Cl. G02f 1/28; H01s 3/00

U.S. Cl. 350—160

10 Claims

Actinic energy of a predetermined wavelength region controls a beam of light of a second predetermined wavelength by means of a system in which a refractive layer of material responding to the incidence of the actinic energy by local variations in its index of refraction is enclosed by a pair of at least partially reflective layers, thereby forming an interference filter. This filter is tuned to exhibit selective transmissivity of reflectivity for incident light of the second wavelength. As localized index

of refraction changes and consequent optical path length changes occur in the refractive layer in response to the actinic control energy, the tuning of the filter is spatially affected and corresponding localized variations in transmissivity and reflectivity of the filter for second



wavelength light occur. The actinic energy directed to the filter may be in the form of an infrared beam carrying image information and the second wavelength light may be visible light which is thereby directly impressed with the image information of such infrared beam.

3,517,984

ANAMORPHOTIC OBJECTIVE

Kurt Lindstedt, Göttingen-Weende, and Kurt Kirchhoff, Hamburg-Lurup, Germany, assignors to Isco Optische Werke G.m.b.H., Göttingen, Germany, a corporation of Germany

Filed Mar. 15, 1968, Ser. No. 713,468

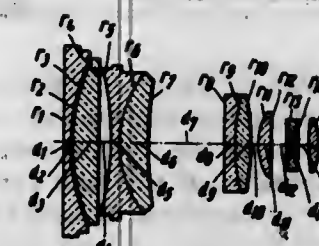
Claims priority, application Germany, Mar. 30, 1967,

J 33,334

Int. Cl. G02b 13/08

U.S. Cl. 350—181

8 Claims



An anamorphic component with a pair of oppositely refractive cylindrical doublets, i.e. an object-side negative doublet having a weakly collective cemented surface and an image-side positive doublet having a weakly dispersive cemented surface, is disposed between a three-member spherically effective basic objective and a front component which includes two closely spaced, substantially conjugate focusing lenses and which may also include a spherically effective member of positive refractivity ahead of these conjugated lenses.

3,517,985

SIX ELEMENT PETZVAL-TYPE PROJECTION LENS

Paul L. Ruben, Penfield, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 23, 1968, Ser. No. 699,836

Int. Cl. G02b 9/62, 9/34

U.S. Cl. 350—215

8 Claims



A modified Petzval lens is disclosed comprising two widely separated airspaced doublets, a biconvex element located between the doublets, and a field flattening negative element behind the rearmost doublet.

3,517,986

WIDE ANGLE OBJECTIVE SYSTEM

Franz Schlegel, Munich, Germany, assignor to Optische Werke G. Rodenstock, Munich, Germany

Filed June 4, 1968, Ser. No. 734,290

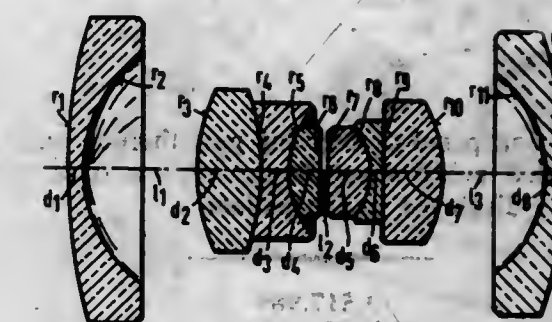
Claims priority, application Germany, Nov. 28, 1967,

O 12,910

Int. Cl. G02b 9/34

U.S. Cl. 350—220

1 Claim



A wide angle objective system covering an angular field of at least 90° and having a relative aperture of at least 1:5.6 which is basically symmetrical and has outer, meniscus-shaped, negative elements air-spaced from cemented triplets on either side on the diaphragm. Zonal aberration can be held to as little as 4 parts per thousand.

3,517,987

FOUR ELEMENT TRIPLET PHOTOGRAPHIC OBJECTIVE

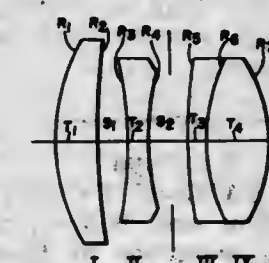
Ralph E. Guenther, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed June 10, 1968, Ser. No. 735,869

Int. Cl. G02b 9/20

U.S. Cl. 350—227

1 Claim



A triplet objective with a diaphragm between the rear two components is disclosed in which the front component is a simple positive meniscus element concave toward the diaphragm, the middle component is a simple negative biconcave element, and the rear component is a compound biconvex positive component consisting of two cemented elements of opposite refractive power with the cemented surface convex toward the diaphragm.

3,517,988

PRACTITIONER-PATIENT DIRECT VIEWING OPHTHALMOLOGICAL TESTING APPARATUS

Herbert Schwind, 7 Schwarzenbergstr.,

875 Aschaffenburg, Germany

Filed Jan. 26, 1968, Ser. No. 700,798

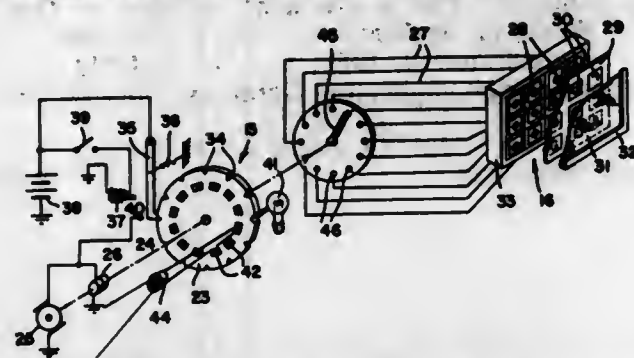
Int. Cl. A61b 3/02

U.S. Cl. 351—30

4 Claims

A patient, seated in a chair, views a display of projected or transilluminated symbols while the ophthalmologist, seated nearby and facing the patient, observes the same symbols on a panel directly in front of him; for this purpose the display apparatus is coupled with a stepping

switch which successively energizes a series of lamps disposed behind an array of stationary slides lying behind



the observation panel or forming part thereof, each slide so illuminated being a substantial replica of a symbol concurrently displayed to the patient.

3,517,989 SPECTACLES

Carl H. Wilson, Waban, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware

Filed Oct. 30, 1968, Ser. No. 771,799
Int. Cl. G02c 1/00

U.S. Cl. 351-43

3 Claims



A pair of spectacles having particular relationships in terms of size and specific gravity which provide sufficient buoyancy to float in water.

3,517,990

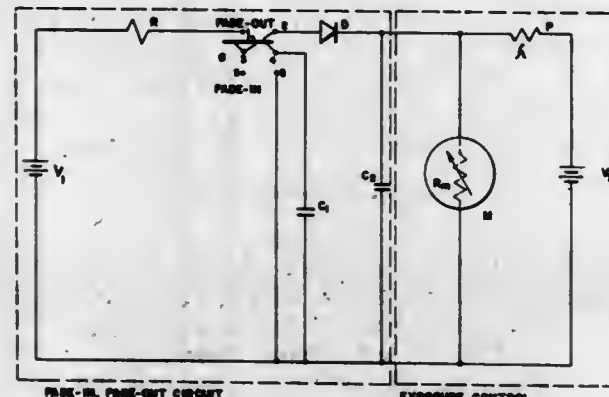
FADE-IN, FADE-OUT CONTROL

Robert W. McGillion and William S. Owen, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation of application Ser. No. 641,869, May 29, 1967. This application Oct. 2, 1969, Ser. No. 863,773
Int. Cl. G03b 21/36

U.S. Cl. 352-91

4 Claims



A fade-in, fade-out control for a motion picture camera in which the rate of charge or discharge of a capacitor determines the rate at which the diaphragm opens and closes. A photoelectric element is coupled in series with a battery and a transducer for operating the aperture

control diaphragm in response to light striking the photoelectric element. A first capacitor is connected in parallel with the transducer; a second capacitor is selectively connected in parallel with the first capacitor; and a second battery is selectively connected in parallel with the two capacitors. A switch may be positioned in a first position to couple the second capacitor and second battery in parallel with the transducer to charge both capacitors to a potential higher than the first battery to gradually decrease the exposure aperture, or in a second position the switch will uncouple the second capacitor from the second battery to allow the first capacitor to gradually discharge through the transducer to the value of the first potential to thereby gradually open the exposure aperture.

3,517,991

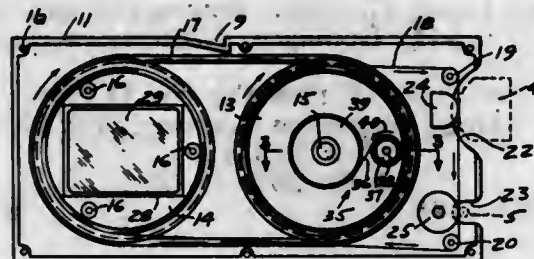
CARTRIDGE FOR STORING VISUAL AND AUDIO INFORMATION

Werner K. Bender, Hartford County, Conn., assignor to The Kalart Company Inc., Plainville, Conn., a corporation of New York

Filed Sept. 5, 1961, Ser. No. 135,923
Int. Cl. G03b 31/06

U.S. Cl. 353-19

15 Claims



A sound-slide holder cartridge containing a transparency and supply reel and a take-up reel for magnetic recording tape. Insertion of the cartridge into a projector presses an exposed portion of the tape against a sound head and a capstan. A spring motor mounted on the supply reel maintains constant torque on both reels and causes rewinding of the tape when the cartridge is withdrawn from the capstan.

3,517,992

AUTOMATIC FOCUSING SLIDE PROJECTOR

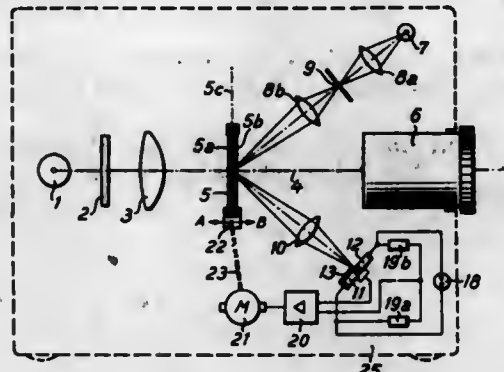
Werner Holle, Wetzlar, Germany, assignor to Ernst Leitz G.m.b.H., Wetzlar, Germany

Continuation-in-part of application Ser. No. 680,179, Nov. 2, 1967. This application Apr. 21, 1969, Ser. No. 817,913

Claims priority, application Germany, Apr. 24, 1968, 1,772,276; Aug. 9, 1968, 1,797,070, 1,797,061
Int. Cl. G03b 3/00

U.S. Cl. 353-101

15 Claims



In a slide projector, means are provided for automatically maintaining a focus distance between the projection lens and the transparency. Said means comprise means adapted to produce an auxiliary light beam, a slit diaphragm, means adapted to project an image of said slit on the transparency and means for guiding those slit

image forming beams which are reflected from the transparency and/or from the cover glasses onto two photoelectric transducers. Motive means are arranged, said means having an input controlled by the current from said photoelectric transducers and having an output for controlling means adapted to vary the relative distance between the transparency and the projection lens. Light attenuation means are disposed in front of one of said photoelectric transducers whereon primarily those light rays are incident which are reflected by the front cover glass of the transparency. The term front cover glass being used to designate this cover glass onto which the slit image forming rays impinge first on their way from the light source to the transparency and onto the photoelectric transducers. In a further embodiment of the invention the light attenuation means are replaced by a specific design of the electric control circuit.

3,517,993

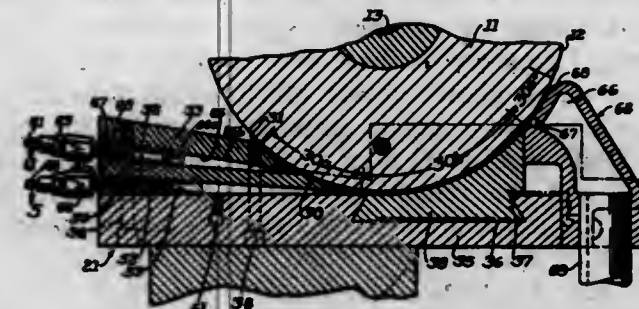
DEVELOPMENT APPARATUS FOR CONTINUOUS ROTARY ELECTROSTATOGRAPHIC APPARATUS

Len A. Tyler, Evanston, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 23, 1965, Ser. No. 504,037
Int. Cl. G03g 15/08, 15/22

U.S. Cl. 355-15

5 Claims



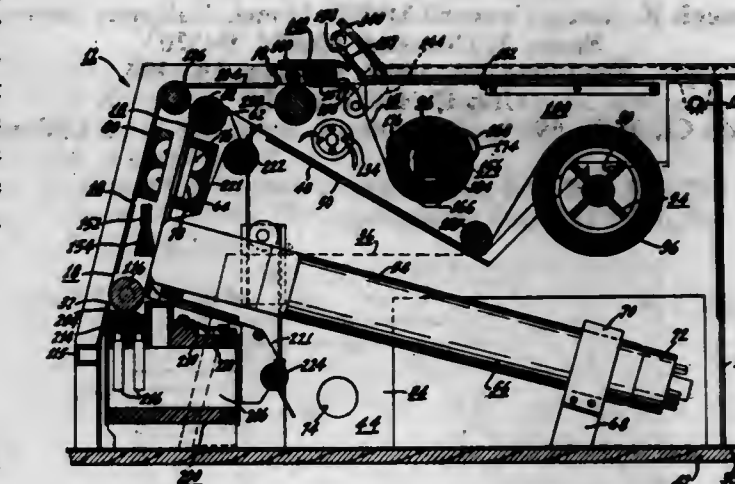
1. In a xerographic apparatus having a rotatable drum, a photoconductive peripheral surface formed thereon, drive means for rotating said drum, means forming charging and exposing stations adjacent said drum for forming an electrostatic image as a charge pattern on said photoconductive surface, and development means adjacent said drum to form a visible image corresponding to said charge pattern, said development means comprising

a development electrode having a curved surface spaced in closely confronting relation to said peripheral surface to modify the development field, the improvement comprising: closed passage means for interposing two independent layers of fluid in said field, means for conducting air from a source at increased pressure into said passage means, and tubular means for dispersing developer powder in a first of said layers, said first layer being introduced into said field downstream from a second of said layers, said second layer operating to prevent developer powder from leaving said field, each said passage means further characterized as having an inlet substantially symmetrical in geometric configuration, a transition zone gradually tapering divergently in width dimension and convergently in thickness dimension and an outlet which is at least as thin as and at least as wide as the development zone between the photoconductive surface and the electrode area, thereby to deposit the developer powder on the surface in the configuration of the charge pattern and insure laminar flow of the combined layers through the development field.

3,517,994
ELECTROPHOTOGRAPHIC APPARATUS
Marvin A. Leedom, Warrimour, Pa., assignor to RCA Corporation, a corporation of Delaware
Filed Apr. 25, 1968, Ser. No. 724,148
Int. Cl. G03g 15/00

U.S. Cl. 355-16

16 Claims



Electrophotographic apparatus, adapted to expose an electrostatically charged web of a recording element with images derived from the face of a cathode ray tube, comprises upper and lower component compartments pivotally hinged together so that the compartments may be either moved apart into a web-loading position or telescoped together into a closed operating position. Rollers on the compartments, which are disengaged from the web of the recording element when the compartments are in the web-loading position, engage and guide the web along a path adjacent electrostatic charging, exposure, and developing stations when the compartments are in the closed operating position.

3,517,995

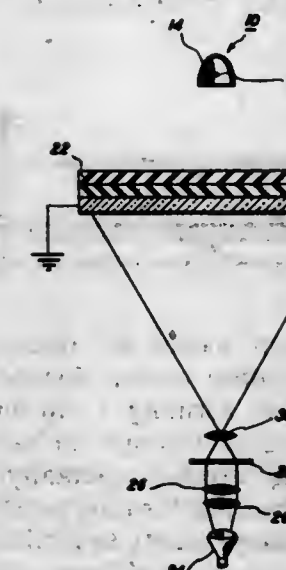
METHOD AND APPARATUS FOR INCREASING THE EFFICIENCY OF CORONA CHARGING

Charles F. Gallo, Penfield, and Alford G. Lelga, Pittsford, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Oct. 2, 1967, Ser. No. 672,336
Int. Cl. G03g 13/00

U.S. Cl. 355-17

6 Claims



The deleterious effect of optical radiation from a corona charging unit is minimized by the use of a special photoconductor comprising a photoconductive layer

which has been doped so as to render it insensitive to optical radiation from one side but which nevertheless remains sensitive to imagewise radiation from the other side through a transparent substrate supporting the photoconductive material.

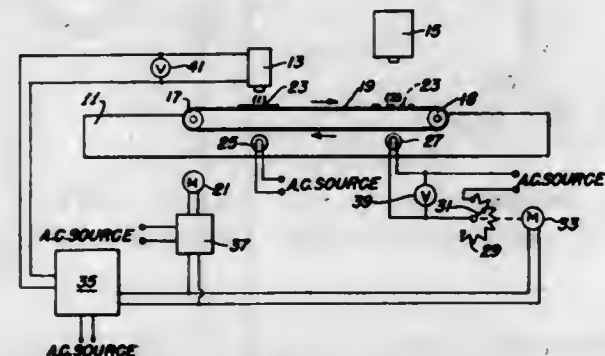
3,517,996

MICROFILMING SYSTEM

Joseph R. Jones, Concord Mobile Home, Galloway Drive, Space 5, Concord, Calif. 94520
Filed Dec. 26, 1967, Ser. No. 693,394
Int. Cl. G03b 27/76

U.S. Cl. 355—69

2 Claims



A technique for converting radiographic film having a predetermined density range to microfilm having a predetermined density range comprising the transmitting of light from a constant output light source through the radiographic film and using a photodetector to detect the amount of transmitted light. The detected light output is then used to control the light output of a variable light source. The controlled light output from the variable light source is determined by that light required to be passed through the radiographic film to the microfilm so that the microfilm will be within the predetermined density range. After the light output of the variable light source is determined then that controlled amount of light is passed through the radiographic film and onto the microfilm.

3,517,997

DOCUMENT FEEDING AND EXPOSURE MEANS FOR AN OFFICE COPIER

William A. Ghiselli, Jr., Des Plaines, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 16, 1967, Ser. No. 675,459
Int. Cl. G03b 27/76

U.S. Cl. 355—71

1 Claim



Feeding and transport means for feeding an original document through an office copier wherein plural pairs of transport rollers each forming a nip and prescribing a transport path extending through an exposure station are carried in a frame which is pivotally mounted for movement between a first nip forming position and a second open clearing position thereby to facilitate clearing of any paper jams. An arcuate shield extending circumferentially at least 180° surrounds the lamp and reflector and provides a confined zone for translating cooling air there-through to remove heat from the lamp and reflector and prevent transmission of heat to the remainder of the machine.

3,517,998
OPTICAL DOPPLER RADAR DEVICE

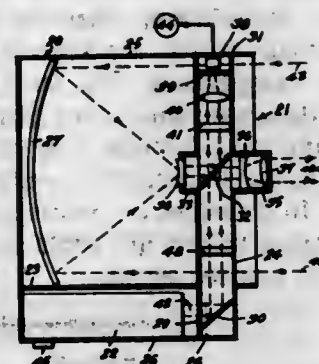
Timothy R. Pryor, 5423 York Lane,
Bethesda, Md. 20014

Filed Dec. 18, 1968, Ser. No. 784,680

Int. Cl. G01p 3/36

U.S. Cl. 356—28

3 Claims



An optical Doppler radar, operating in the spectrum range including and bounded by the infrared and ultraviolet, wherein a laser beam is split so that one part thereof is directed to a target and another part directed to a photodetector. The radiation reflected by the target is reflected by a concave mirror onto collimating means and superimposed on that part of the laser beam directed to the photodetector whereby a signal modulated at the difference frequency of these two beams is obtained at the output of the photodetector which is indicative of the target velocity. In a second embodiment of the invention an amplitude modulated laser beam is projected towards the target and the reflections therefrom containing shifted amplitude modulation frequencies are superimposed on a portion of the projected beam whereby modulation difference beat frequency signals are obtained at the output of the photodetector. In a third embodiment, a pulsed laser generates two fixed time spaced pulses which are projected to a target which reflects them, but due to target motion the time spacing of the reflected pulses is changed. This change in time spacing of the reflected pulses, available at the output of photodetector in signal form, is fed into computer means which calculates the target velocity in terms of the fixed time spacing of the projected pulses with reference to the change in time spacing of the reflected pulses. A telescope aligned with the longitudinal axis of the transmitted radiation is provided in each of the aforementioned embodiments for the purpose of sighting-in the target vehicle prior to illumination of the target vehicle by the optical radar.

3,517,999

OPTICAL STRAIN GAUGE

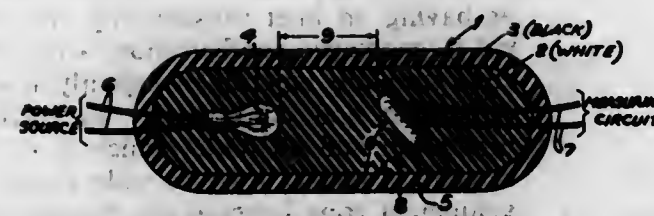
David P. Weaver, Mission Hills, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Jan. 7, 1966, Ser. No. 519,225

Int. Cl. G01b 11/18; A61b 5/08

U.S. Cl. 356—32

4 Claims



The invention relates to an optical strain gauge comprising a flexible body which is deformable according to the sense of an external force. A source of light and a photocell in spaced relationship to the source of light

are embedded in the body. The photocell is responsive to light transmission through the material of the body and produces a signal according to the deformation produced in the body by the external force.

3,518,000

DEFOLIATION EVALUATION METHOD

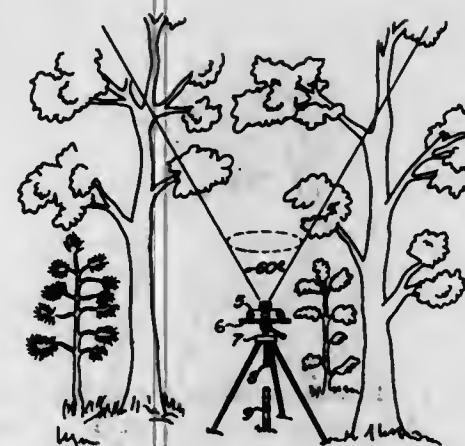
George B. Truchelut, Frederick, Md., and Charles M. Bartlett, Fort McClellan, Ala., assignors to the United States of America as represented by the Secretary of the Army

Filed Feb. 3, 1967, Ser. No. 614,532

Int. Cl. G01n 21/06, 21/22, 21/20

U.S. Cl. 356—72

1 Claim



A method of selecting a plot of forest, photographing the forest canopy, treating the forest with a chemical, photographing the forest canopy at the same location, comparing the photographic images of the forest canopies by the impingement of a collimated beam of light through the photographic images upon a photoelectric cell and measuring the generated current.

An apparatus having a light source with reflector, condensing lenses, and heat absorbing glass such that a uniform beam of parallel light rays is produced. The beam passes through the photographic image of the forest canopy being evaluated. The transmitted light then impinges on a photoelectric cell to produce a current. The current is measured by any suitable device.

3,518,001

RADIANT ENERGY ANALYZER

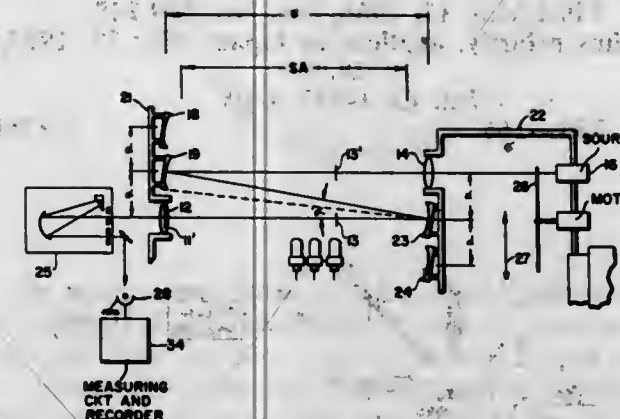
August Hell, Whittier, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Mar. 1, 1965, Ser. No. 435,911

Int. Cl. G01j 3/30

U.S. Cl. 356—87

13 Claims



There is disclosed a radiant energy analyzer particularly adapted for use in atomic absorption or flame emission measurements in which the number of radiation passes through a sampling area may be changed rapidly

without the necessity of optical realignment. Two arrays of mirrors are located optically on opposite sides of the sampling area, one of the arrays being movable between discrete positions such that additional reflections across the sampling area are provided by the interposition of additional mirrors in each position. The movable array may also carry the source or detector for the system.

3,518,002

SPECTROMETER

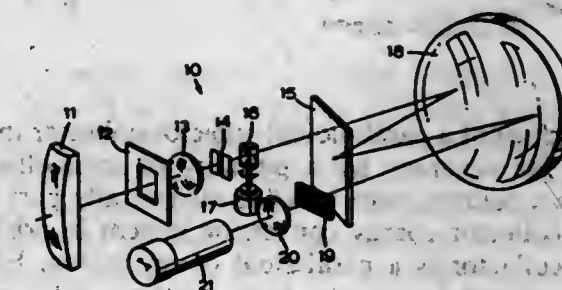
Anthony Rene Barringer, Willowdale, Ontario, Canada, and Josef Pep Schock, Cambridge, Mass., assignors to Barringer Research Limited, Rexdale, Ontario, Canada, a corporation

Continuation-in-part of application Ser. No. 559,792, June 23, 1966. This application July 18, 1967, Ser. No. 654,202

U.S. Cl. 356—97

Int. Cl. G01j 3/42

20 Claims



A direct reading remote sensing spectrometer having a mask containing lines corresponding to the characteristic spectrum of a particular gas or vapour. The mask is positioned in a plane where spectra are formed, and the light beam passing through the spectrometer is vibrated in the direction of the dispersion of the light so that the spectra sweep across the lines of the mask. The intensity of the light passing through the mask is varied only when the spectra correlate with the lines of the mask, and the intensity variations are analyzed to indicate the concentration of the gas or vapour giving rise to the spectra.

3,518,003

PROCEDURE FOR CONTINUOUS REGISTRATION OF THE CONCENTRATION OF FIBRE SUSPENSIONS

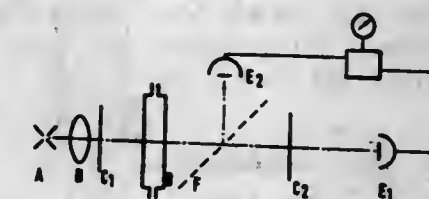
Fredrik W. Meyn, Bygdoy Terrasse 22, Oslo, Norway
Filed July 22, 1966, Ser. No. 567,113

Claims priority, application Norway, July 23, 1965, 159,075

Int. Cl. G01n 21/44, 11/00; D21c 7/12

U.S. Cl. 356—116

4 Claims



A method for the continuous measurement in the pulp and paper production of the concentration of fibre suspensions in the region 0%—3% includes the steps of directing a plane polarized light in a known way through the suspension and thereafter passing the transmitted light through a polarization filter device; the direction of which is rotated and preferably is at right angles to the direction of polarization of the incident light; and measuring the light intensity.

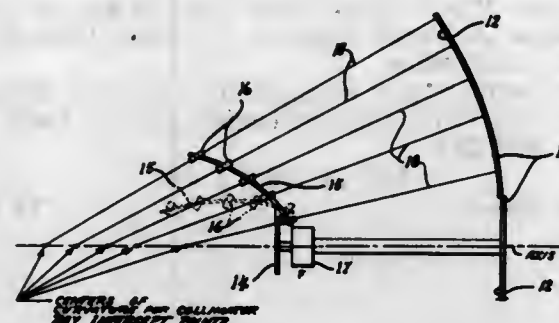
3,518,004 **METHOD AND APPARATUS FOR DETERMINING THE ACCURACY OF THE REFLECTING SURFACE OF A PARABOLOIDAL REFLECTOR IN SPACE**

Silas H. Brewer, Los Angeles, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 13, 1968, Ser. No. 705,042
 Int. Cl. G01b 9/00

U.S. Cl. 356-124

6 Claims



The surface of a paraboloidal reflector-collector in space is tested for accuracy by a plurality of autocollimators affixed to a rotating arm which is structurally part of the reflector-collector energy conversion system in orbit. The reflector-collector is a paraboloid of revolution. Each of the autocollimators includes light emitting, light sensing, and other related associated components integrated into a single unit. The autocollimators are arranged with their optical axes along the respective normals to the reflector surface. The axis of rotation of the rotating arm is common with the optical axis of the paraboloidal segment. The autocollimators scan the surface of the reflector in azimuth. The deviation and reflectance of the reflector surface is ascertainable from the reflected radiation.

3,518,005

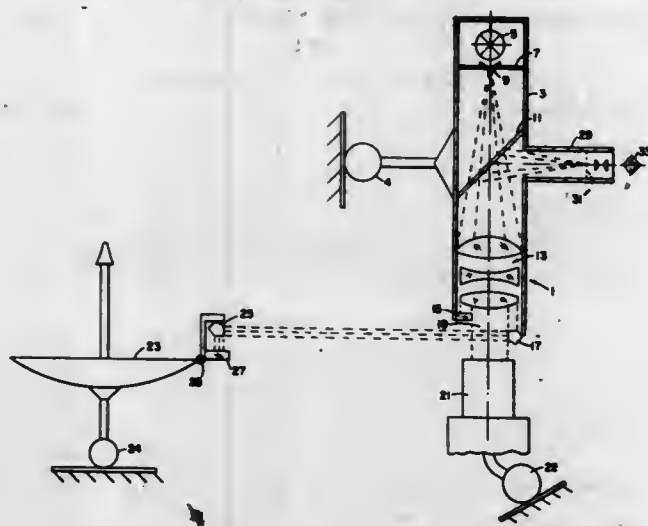
OPTICAL BORESIGHT DEVICE

Paul E. Weber, Wheeling, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Jan. 4, 1967, Ser. No. 609,268
 Int. Cl. G01b 11/26

U.S. Cl. 356-138

5 Claims



An optical boresighting device in which light from a common source is passed through an objective lens system and is then transmitted to three locations. Each of the three locations has means which reflects the light in a return path onto a reticle. When each of the three light

parts are superimposed at the reticle, the axes of the devices that contain the three means are in parallel and boresighted. The devices in this case are an optical instrument and a radar antenna that are adjustable to enable one to cause the reflected light parts to be superimposed at the reticle.

3,518,006

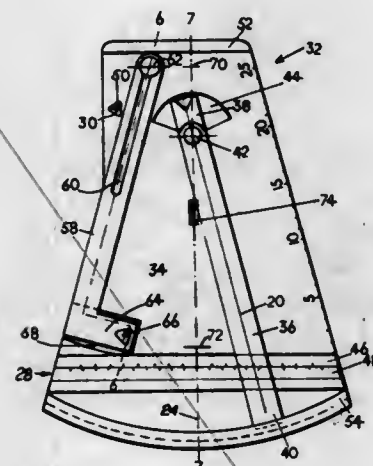
PENDULUM HEIGHT FINDER FOR USE WITH STEREOSCOPIC AERIAL PHOTOGRAPHS

Victor Zeilinszky, 154 Keele St. N., King City, Ontario, Canada

Filed Apr. 27, 1967, Ser. No. 634,153
 Int. Cl. G01b 3/14; G01c 11/06

U.S. Cl. 356-138

5 Claims



An instrument for measuring the parallax of an object on a stereoscopic pair of aerial photographs formed of a plate having a pendulum pivoted intermediate of its ends, the pendulum having a line passing through the pivot point, with one end of the line moving over a scale on the plate. An index mark formed of an arrow is positioned on the plate adjacent the other end of the line, the approximate distance away of the human eye base. The parallax of the object is determined by rotating the pendulum when viewed by a lens stereoscope to the position where the line fuses with the arrow, the parallax being then measured by the reading on the scale where it is intersected by the line.

3,518,007

MEASURING DEVICE UTILIZING THE DIFFRACTION OF LIGHT

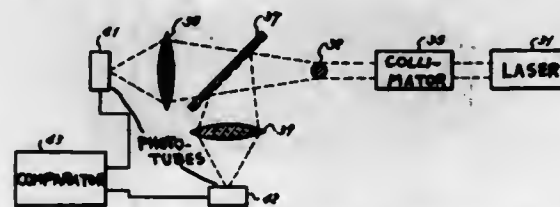
Michiaki Ito, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed May 11, 1966, Ser. No. 549,245
 Claims priority, application Japan, May 17, 1965, 40/28,953

Int. Cl. G01b 9/08

U.S. Cl. 356-166

1 Claim



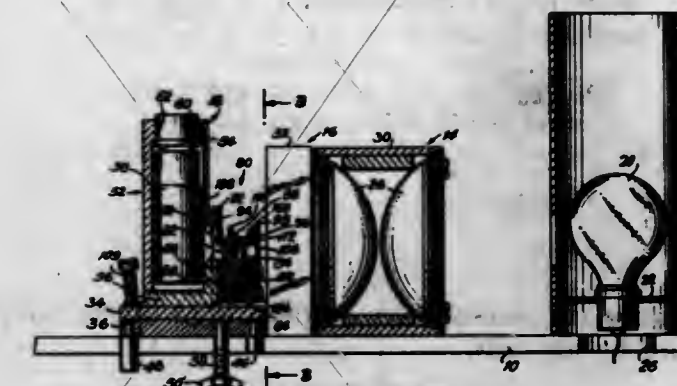
A dimension measuring device includes a laser for producing coherent light beams having an ellipsoidal wave

3,518,010
COLORIMETER

William J. Smythe, Rye, N.Y., assignor to Technicon Corporation, a corporation of New York
 Filed Mar. 3, 1967, Ser. No. 620,484
 Int. Cl. G01j 3/46; G01n 1/10, 21/06

U.S. Cl. 356-181

3 Claims



A colorimeter comprises a light source, a light detector, and a flow cell having an elongated sight passageway; and for the purpose of precluding the passage of stray light from the source to the detector does not have an entrance aperture between the light source and the light inlet end of the sight passageway, but has a light baffle means encircling the sight passageway intermediate its light inlet and outlet ends.

3,518,011

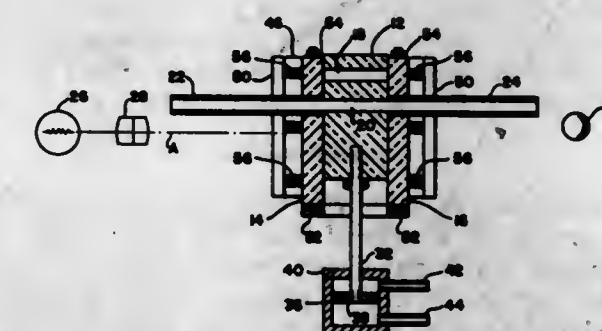
MICRO-VOLUME FLOW CELL

Jerry E. Rochte, Seal Beach, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Jan. 22, 1968, Ser. No. 699,521
 Int. Cl. G01j 3/46; G01n 21/26

U.S. Cl. 356-181

10 Claims



A flow cell having a passageway movable into and out of alignment with a fluid flow line for trapping a section or column of fluid in the passageway for sampling, moving the passageway and sample into alignment with a sensing system for measuring the characteristics of the sample and then moving it back for return of the sample to the flow line.

3,518,012

CELL IDENTIFICATION AND SELECTION SYSTEM FOR CENTRIFUGE APPARATUS

Robert C. Franklin, San Jose, and William E. Boyd, Oakland, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Continuation of application Ser. No. 542,031, Apr. 12, 1966. This application Feb. 7, 1969, Ser. No. 860,346
 Int. Cl. G01n 21/24

U.S. Cl. 356-197

19 Claims

A system is disclosed for selectively monitoring the contents of one or more cells from among a plurality of cells carried by a centrifuge rotor. The system includes

front. The object to be measured is supported in the path of the light beam and a collimator including a plurality of lenses arranged in telescopic tandem is interposed between the laser and the object for adjusting the shape of the wave front. Means are also included for identifying the pattern of the diffracted light.

3,518,008

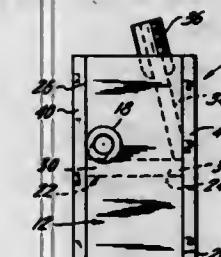
FLOW CELL DEVICE

Leonard T. Skeggs, Kirtland, Ohio, assignor to Technicon Corporation, a corporation of New York

Filed June 10, 1966, Ser. No. 556,749
 Int. Cl. G01j 3/46; G01n 21/06, 1/10

U.S. Cl. 356-181

15 Claims



A colorimeter flow cell device includes a viewing chamber in close fluid-flow communication with a passage along which a stream of liquid samples to be analyzed is directed. The liquid samples in the stream are separated by segments of a fluid having a different specific gravity than the samples. The viewing chamber and passage are formed in a single member and positioned such that only portions of the liquid samples flow through the viewing chamber and the light path through the viewing chamber is remote from the passage.

3,518,009

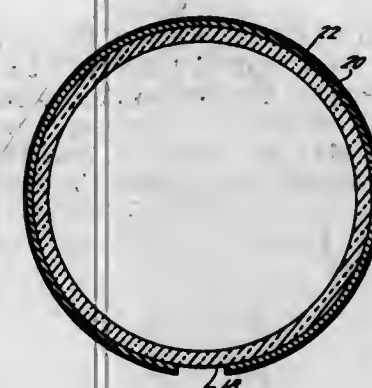
COLORIMETER FLOW CELL

Morris H. Shamos, New York, and William J. Smythe, Rye, N.Y., assignors to Technicon Corporation, a corporation of New York

Filed Aug. 18, 1966, Ser. No. 573,236
 Int. Cl. G01j 3/46; G01n 1/10

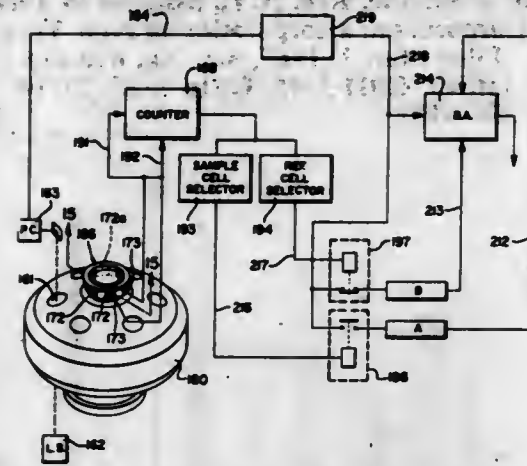
U.S. Cl. 356-181

7 Claims



The colorimeter flow cell for liquid sample analysis comprises a transparent tubular member having a light-reflecting inner surface. Light input and output apertures are defined in nonaligned fashion in the light-reflecting inner surface and in a plane transverse to the longitudinal axis of the tubular member. Accordingly, light directed into the light input aperture is subjected to multiple reflections along such plane before passing through the output aperture whereby the effective length of the flow cell is increased.

means for identifying each cell, means for selecting the cell to be monitored, and a photo responsive device to



determine the transmission characteristics of the sample carried by the cells.

3,518,013

DENSITOMETER

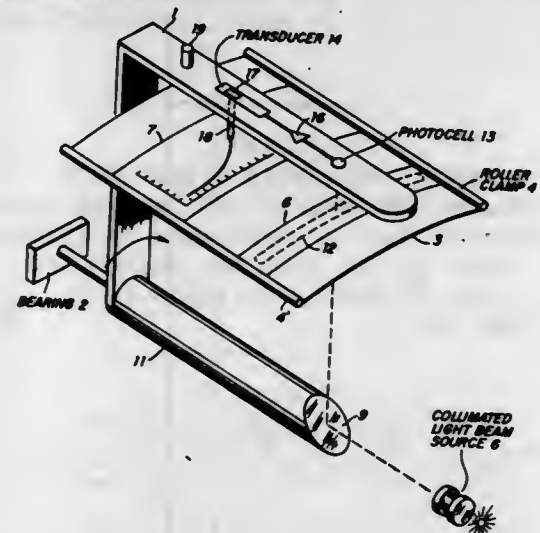
Lloyd Clifford Sanford, Acton, and John A. O'Brien, Reading, Mass., assignors to Itek Corporation, Lexington, Mass., a corporation of Delaware

Filed Sept. 26, 1966, Ser. No. 582,065

Int. Cl. G01n 21/02, 21/22

U.S. Cl. 356-203

5 Claims



A recording densitometer to determine and plot the optical density of a strip of film. The strip of film and the associated graph paper are mounted side by side on a curved support platen. A pivotal arm is mounted above the platen with a photocell above the film strip and a recording arm above the graph paper. A pivotal mirror is mounted below the platen and is attached to the pivotal arm for rotational movement therewith. A collimated light source is directed against the mirror which redirects the light through the film strip onto the photocell. As the mirror and arm are rotated, the density of the film strip is detected by the output of the photocell which in turn controls the recording arm via a servo system to record the density of the film strip on the graph paper as a function of the length of the film strip.

3,518,014

DEVICE FOR OPTICALLY SCANNING THE OBJECT IN A MICROSCOPE

Klaus Weber, Wetzlar, Germany, assignor to Ernst Leitz G.m.b.H., Wetzlar, Germany

Filed Aug. 7, 1967, Ser. No. 658,896

Claims priority, application Germany, Aug. 10, 1966, L 54,285; Jan. 11, 1967, L 55,475

Int. Cl. G01n 21/06, 21/22

U.S. Cl. 356-203

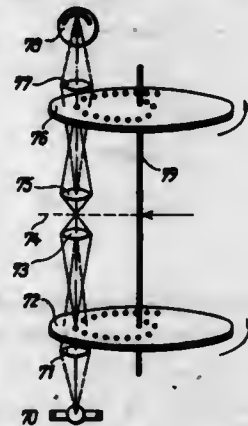
11 Claims

In a microscope means are disclosed for determining the area of a specific object portion relative to the total object area.

Said means comprise a first means adapted to limit the illumination beam of the microscope light source to a small object portion to be measured, a second means adapted to limit the observation beam to the same small object portion to be measured, and, finally, a third means adapted to displace said first and second mentioned means synchronously.

In a first embodiment said first mentioned means and said second mentioned means consist of a Nipkow-disc each in the plane of the illumination field and in the plane of the field of view, both discs being mounted on a common shaft.

Another embodiment is disclosed wherein said first and second means consist of a diaphragm each in the plane of the illumination field and in the plane of the field of view, both diaphragms being provided with at least two corresponding holes and being displaceable with their motion electrically synchronized.



In a third disclosed embodiment said first and second means consist of a stationarily mounted diaphragm each in the plane of the illumination field and in the plane of the field of view. The means adapted to displace said diaphragm synchronously consists of one tilting mirror simultaneously disposed in the path of the illumination beam and in the path of the observation beam. By said mirror not the diaphragms are displaced, rather the images of said diaphragms are moved across the object in a scanning motion.

In connection with the last mentioned embodiment further means are disclosed, said means being adapted to automatically control an evaluation device and/or the tilting movement of said mirror.

3,518,015

INCLINED FLOW CELL INCLUDING A SINK FOR SOLID PARTICLES

Jiří Hrdina, Prague, Czechoslovakia, assignor to Československá akademie věd, Prague, Czechoslovakia

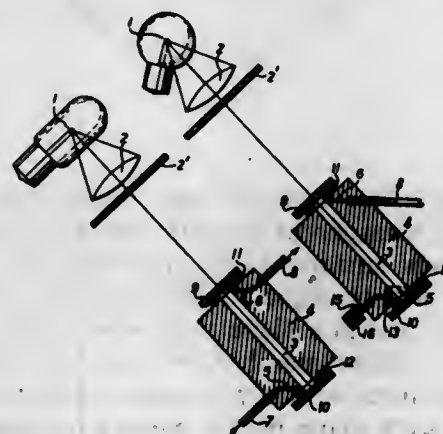
Filed May 24, 1966, Ser. No. 552,517

Claims priority, application Czechoslovakia, May 28, 1965, 3,484/65

Int. Cl. G01j 3/46; G01n 1/10, 21/26

U.S. Cl. 356-246

2 Claims



A photometric flow cell for use in photometers having an inclined passageway for the measuring light rays pass-

ing therethrough between its end portions and a sink basin arranged sideways thereof at its lowest portion beyond the action of the light rays to collect heavy particles contained in the fluid to be photometered.

3,518,016

GYROSCOPICALLY CONTROLLED IMAGE STABILIZATION SYSTEM

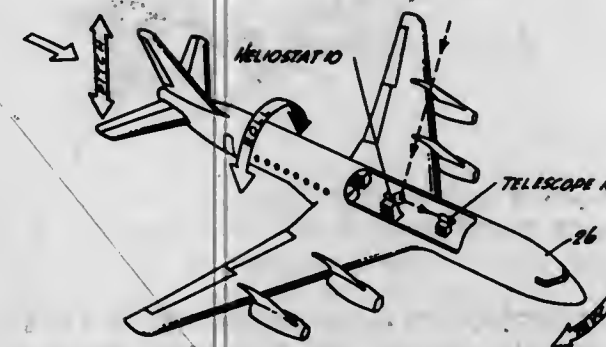
Clifford Burdick, Van Nuys, James D. Clarke, Encino, James D. Gehris, Palos Verdes, and Johannes L. Whittaker, Granada Hills, Calif., assignors, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed May 6, 1966, Ser. No. 548,307

Int. Cl. G01c 9/02, 17/34

U.S. Cl. 356-248

1 Claim



A gyroscopically controlled image stabilization system for stabilizing and maintaining a fixed line of sight of an optical instrument on a movable base.

3,518,017

WRITING INSTRUMENT

Gunther Schmidt, St. Georgen, Black Forest, Germany, assignor to Gebr. Schmidt, St. Georgen, Black Forest, Germany

Filed July 29, 1968, Ser. No. 748,323

Claims priority, application Germany, Aug. 2, 1967, 1,561,861

Int. Cl. B23k 27/00, 27/04, 27/12

U.S. Cl. 401-29

17 Claims



A multi-color ball point pen has an elongated hollow barrel provided with an open front end. A plurality of elongated mines received in the barrel and can each be selectively slidably advanced so as to project from the open end of the barrel. An annulus of elastomeric material, or a sleeve of such material, encircles the mines

within the barrel and urges them inwardly into engagement with one another, preventing them from radial movement with reference to one another and from uncontrolled engagement with one another and with the inner surface of the barrel.

3,518,018

CARPET COLOR RETOUCHING KIT

Raymond A. Woods, 1966 Moreland Road,

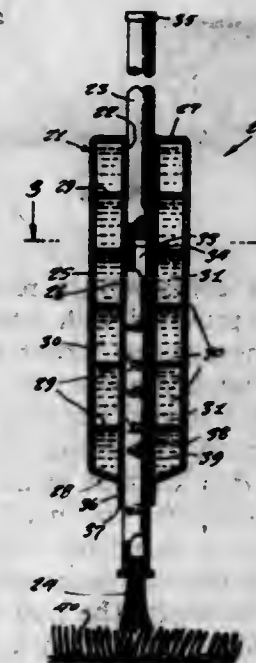
Abington, Pa. 19001

Filed Jan. 29, 1968, Ser. No. 701,462

Int. Cl. A46b 11/04; B67d 5/60

U.S. Cl. 401-46

4 Claims



A device for retouching the color of fabric that has been stained including a longitudinal series of compartments each containing a different color dye and each having an outlet, and a tubular dispenser slidable longitudinally of the compartments to receive a selected dye.

3,518,019

SYNTHETIC RESIN PENPOINT

Kinichi Nakamura, 80 Kanaoka, Higashi-Osaka, Japan

Continuation-in-part of application Ser. No. 626,771,

Mar. 29, 1967. This application Apr. 3, 1969, Ser.

No. 826,746

Int. Cl. B43k 1/06

U.S. Cl. 401-265

4 Claims



A penpoint of synthetic resin and having a tapered pointed tip at one end of a cylindrical body of resin, said body having longitudinally extending radial passages therein extending from the longitudinal central axis radially outwardly to a point short of the peripheral surface thereof and having an increasing width as they extend outwardly. The cylindrical member is made by extruding the resin through an appropriate shaped die having a central member with radially extending parts corresponding to the cross sectional shape of the longitudinally extending holes.

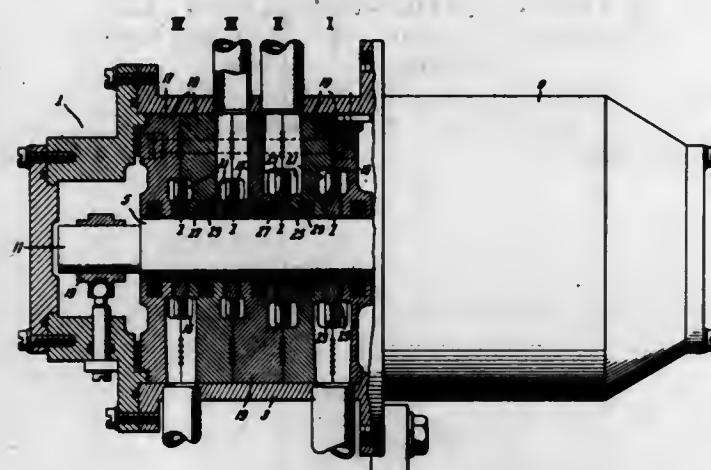
3,518,020 SPLIT SEAL RING ASSEMBLY FOR COMPRESSORS

John E. Lake, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 4, 1968, Ser. No. 718,828

Int. Cl. F04d 17/12

U.S. Cl. 415-111

4 Claims



A gas compressor comprising a plurality of separate compressor stages is provided with interstage seals. Each seal comprises an impregnated carbon ring which is split diametrically for assembly about the compressor rotor shaft between adjacent stages. The ring portions are connected by a frictionally interfitted step joint and are further retained by thin stressed metal band which surrounds the ring periphery. The band has cantilevered spring fingers extending therefrom which act against a fixed surface to hold the ring in position and prevent it from rotating with the shaft. The ring dimensions are so chosen that a gas film is maintained between the ring seals and the rotor shaft.

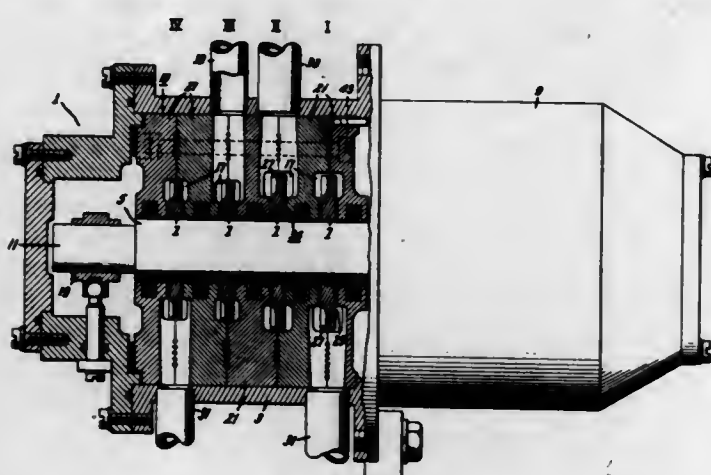
3,518,021 THRUST BEARING FOR COMPRESSOR

John E. Lake and Richard C. Elwell, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Apr. 4, 1968, Ser. No. 718,830
Int. Cl. F04d 17/12, 29/06; F16c 32/00

U.S. Cl. 415-172

5 Claims



A multi-stage, high speed gas compressor of the dynamic type includes an external housing wherein is mounted a motor driven rotor having a plurality of spaced impellers mounted thereon. Each impeller is disposed in a chamber constituting a stator assembly, each stator chamber and associated impeller comprising a separate compressor stage. Inlets and outlets are provided for each stage to interconnect them in a desired manner. A thrust bearing arrangement for the rotor is integrated with one of the compressor stages. The thrust bearing is

formed in a wall of a stator chamber. The sides of the associated impeller between the blade root and the rotor are formed to serve as the thrust runner for the thrust bearing. The thrust bearing arrangement utilizes the working fluid in the compressor as a lubricant.

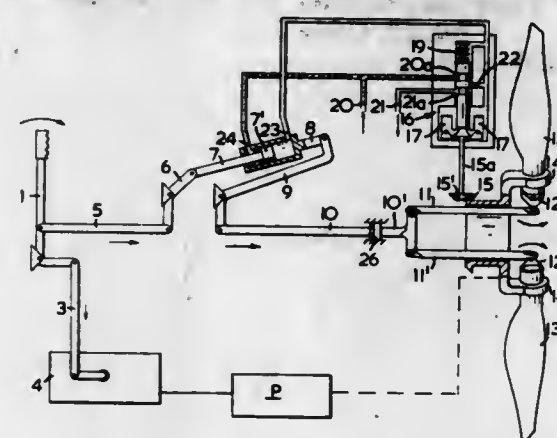
3,518,022 PROPELLER CONTROL MECHANISM

Glenn N. Adams, Montreal, Quebec, Canada, assignor to Canadair Limited, Montreal, Quebec, Canada
Filed Apr. 9, 1968, Ser. No. 719,937

Int. Cl. B63h 3/10

U.S. Cl. 416-27

16 Claims



An improved system for controlling the pitch angle setting of propeller blades. The pitch angle setting of the propeller blades is the result of two contributions. The first contribution is provided by the output of the propeller constant speed unit while the second contribution varies in accordance with the power setting of the engine used to power the propeller. These two contributions are combined in a mechanism constructed and arranged such that the effect on propeller blade pitch setting of said second contribution gradually decreases substantially in conjunction with a progressive increase in propeller translational velocity which results in tentative increase in the propeller rotational speed.

3,518,023 STANDBY CONTROL SYSTEM FOR MULTI-ENGINE POWER PLANTS

Colin G. Britten, Linby, England, and Patrick John Ashmole, Strathaven, Scotland, assignors to Rolls-Royce Limited, Derby, England, a British company

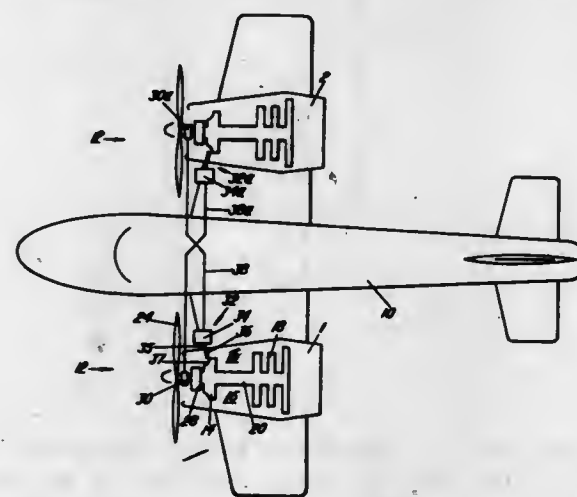
Filed June 17, 1968, Ser. No. 737,439

Claims priority, application Great Britain, July 1, 1967, 30,457/67

Int. Cl. F02c 7/02; F02g 3/00

U.S. Cl. 416-30

6 Claims



The invention relates to a stand-by water/methanol injection system for an aircraft having at least two gas turbine engines, wherein the injection of water/methanol in

each engine is controlled by a hydraulically operated valve the supply of hydraulic fluid to which is controlled by a further valve in response to a signal indicative of engine failure, whereby should one engine fail for example during take-off, the injection of water/methanol is automatically initiated on the other engine.

3,518,024 BOAT SCULLING PADDLE

Phillip M. Wilson, 2310 Avenue F, Birmingham, Ala. 35218

Filed June 20, 1969, Ser. No. 835,179

Int. Cl. B63h 16/04

U.S. Cl. 416-63

4 Claims



A one arm boat sculling paddle having a blade narrowing at its upper end with a short handle extending therefrom that has its upper end widened and flattened. This flattened upper end of the handle carries a hook-shaped brace retainer support on one side through which the wrist of the user can be extended but which retains the full forearm as the hand and arm is extended downwardly over the handle and onto the narrowing portion of the blade. The blade has a hole therethrough adequately contoured to lend comfort to a bent finger extended therethrough whereby the paddle becomes virtually a part of the arm of the user. The brace retainer is adjustable over the top of the handle for use of the paddle either by the right arm or by the left arm. The brace retainer is held either by screws or detent means as shown by the different forms of the invention.

3,518,025 HELICOPTER ROTOR SYSTEM

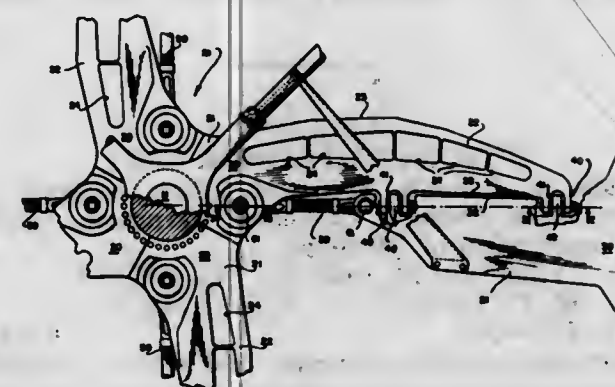
Jacob Schmidt, Van Nuys, Lee Baumstein, Woodland Hills, and Arthur M. James, Granada Hills, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed May 6, 1968, Ser. No. 726,982

Int. Cl. B64c 27/48

U.S. Cl. 416-131

4 Claims



A helicopter rotor system comprising a central hub having a plurality of radially extending arms, each arm extending alongside a lengthwise portion of a blade and being connected thereto by bearing means located on the blade feathering axis. A tension-torsion member is attached directly to the hub and the rotor blade to efficiently transfer the centrifugal load of the blade to the hub and prevent longitudinal separation therebetween.

3,518,026 HYDRODYNAMIC COUPLING

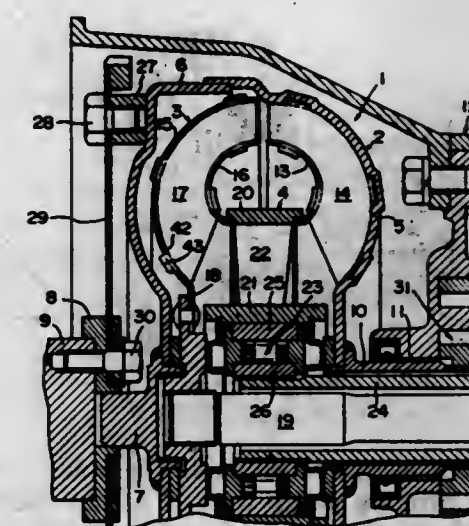
Tetsuya Iijima, Tokyo, Japan, assignor to Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan
Filed Dec. 5, 1968, Ser. No. 781,322

Claims priority, application Japan, Dec. 20, 1967, 42/81,430

Int. Cl. F04d 29/18

U.S. Cl. 416-197

1 Claim



A fabricated hydrodynamic coupling device, in which each vane is connected by tabs to slots of an impeller outer shell and a radially innermost series of slots of the impeller is radially outwardly narrow wedge shaped to clamp the inserted tabs.

3,518,027 GRAVITY VALVE

Kurt Lentwyler, Houston, Tex., and John C. Falanga, Jr., Metairie, La., assignors to Baker Oil Tools, Inc., City of Commerce, Calif., a corporation of California
Filed June 10, 1968, Ser. No. 735,788

Int. Cl. F04f 1/00, 1/08

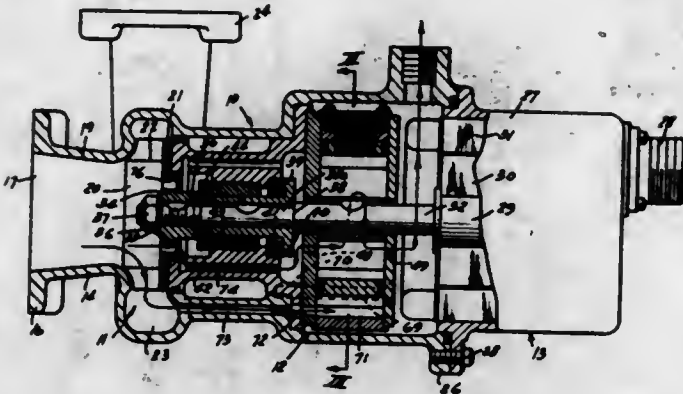
U.S. Cl. 417-65

19 Claims



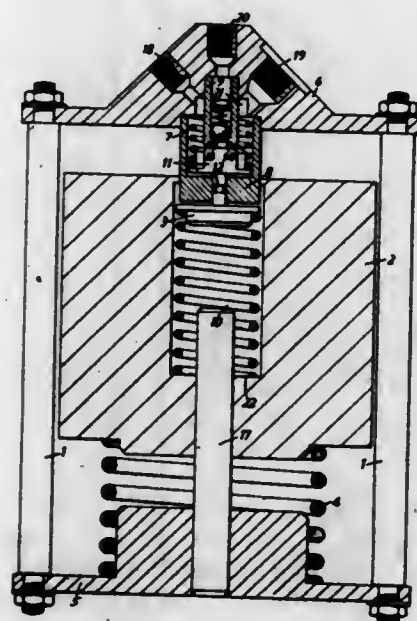
A gravity valve in well production apparatus for intermittently admitting liquid from a productive gas zone of a gas well into a string of tubing for lifting through the tubing liquid which may accumulate in the well to reduce the liquid column in the well and thereby reduce back pressure on the productive formation, the gravity valve having a helical bladder responsive to hydrostatic pressure to operate a helical valve actuator at intermittent intervals dependent upon the liquid level in the well.

3,518,028
POWER REDUCTION OF LIQUID RING PUMPS
 Richard C. Minick, Kirtland, Ohio, assignor to TRW Inc.,
 Cleveland, Ohio, a corporation of Ohio
 Filed Jan. 26, 1968, Ser. No. 700,860
 Int. Cl. F04d 9/00; F04c 15/04
 U.S. Cl. 417-69 6 Claims



A method and means of reducing the power input consumed by the priming pump unit of a fuel booster. The amount of fuel entering into and exiting from the blades of the pumping element of the priming pump when its pumping capability is no longer required is reduced. Specifically, the reduction is accomplished as a function of booster-generated pressure. In a liquid ring pump the pumping element and its pumping chamber ring are relatively moved from a first eccentric position to a second concentric position.

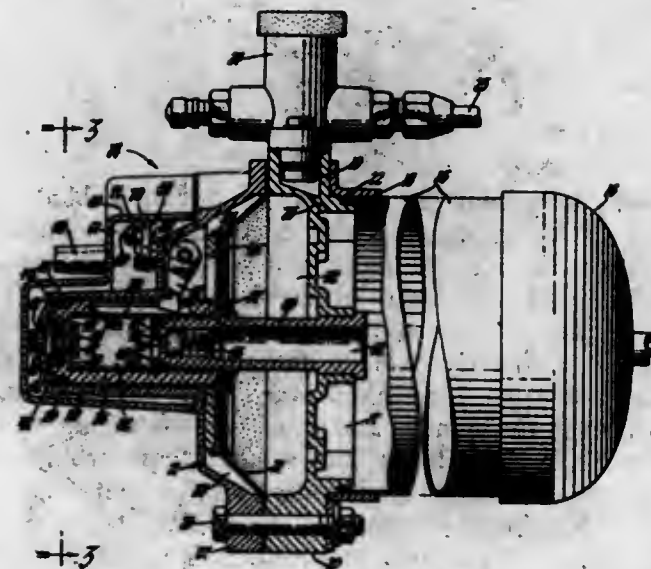
3,518,029
FLUID PUMP
 Max Edward Grantham, Plymouth, Devon, England, assignor to Tecalemit (Engineering) Limited, Plymouth, Devon, England
 Filed July 5, 1968, Ser. No. 742,638
 Claims priority, application Great Britain, July 5, 1967, 30,899/67
 Int. Cl. F04b 17/00, 9/02, 9/06
 U.S. Cl. 417-211 13 Claims



A fluid pump has a freely suspended mass which reciprocates relative to a pump as the object on which it is mounted moves. The pump of the invention is particularly suitable for trailer lubrication. The movement of

the mass will continue under inertia so that lubrication may occur without external power being supplied as the trailer is towed. A pump part is moved to the mass to compress a deformable element and force fluid through a non-return valve. Separation of the part from the element allows fluid to flow into the volume within the element.

3,518,030
FLUID SUPPLY SYSTEM
 Gerard Timothy Klees, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
 Filed Apr. 12, 1968, Ser. No. 720,828
 Int. Cl. F04b 25/00, 35/00, 41/06
 U.S. Cl. 417-259 2 Claims

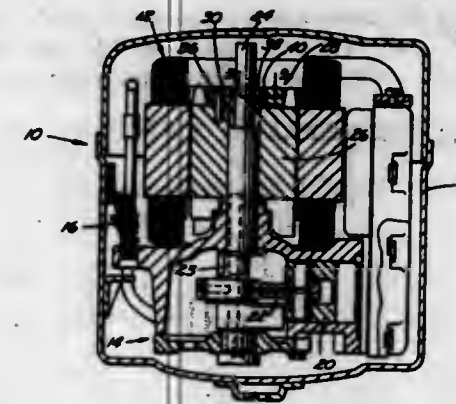


A dual chamber, two-stage compressor operated by a flexible diaphragm moved in alternate directions by an alternating pressure differential, having a movable hollow piston secured to the diaphragm and disposed within a stationary cylinder and constituting a movable cylinder that receives a stationary piston. The volume enclosed by the stationary cylinder and the movable piston forms a first-stage compression chamber and the volume enclosed by the stationary piston and the interior of the hollow movable piston forms a second-stage compression chamber. A thin end wall on the movable piston has a short length port therein for intercommunicating the compression chambers by means of a minimum volume passage-way.

3,518,031
MOTOR-COMPRESSOR UNIT
 Freddie D. Randall, Tecumseh, Mich., assignor to Tecumseh Products Company, Tecumseh, Mich., a corporation of Michigan
 Filed July 18, 1968, Ser. No. 745,797
 Int. Cl. F04b 35/04, 39/00; F16d 35/04
 U.S. Cl. 417-319 9 Claims

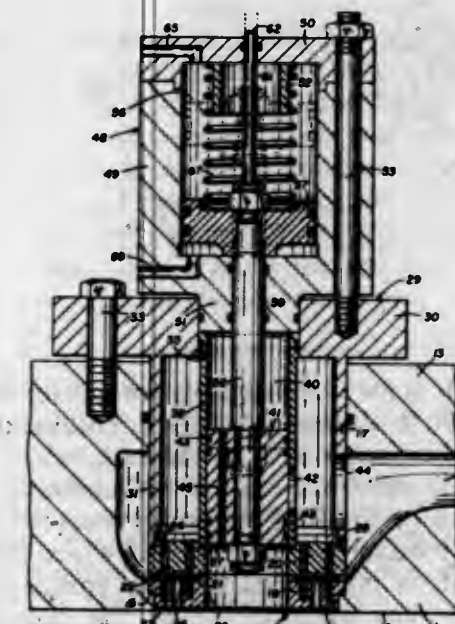
A hermetic motor-compressor unit with an overriding or one-way clutch unidirectionally coupling the motor rotor with a drive shaft of the compressor. The rotor is journaled for free rotation on the compressor crankshaft and the overriding clutch has an apertured plate encircling the shaft and mounted on the rotor. The plate has a plurality of cam pockets adjacent to the shaft each carrying a clutch roller. Relative rotational movement of the plate and shaft in one direction urges the rollers into locking engagement with the shaft so that the shaft and plate rotate as a single unit. Relative rotational

movement of the plate and shaft in the opposite direction disengages or unlocks the rollers so that the plate and shaft can rotate independently of each other. Thus



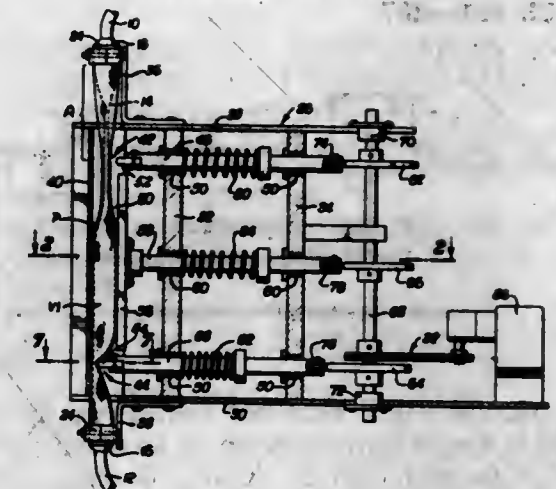
the mass of the moving parts of the motor-compressor unit set into oscillatory, vibration-inducing motion at shutdown is considerably reduced to thereby provide a unit which reduces shutdown vibration and noise.

3,518,032
COMPRESSOR CYLINDER UNLOADER
 Richard C. Degroff, Olean, N.Y., and Thomas L. King, Lake Village, Arkansas, assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
 Filed May 24, 1968, Ser. No. 740,418
 Int. Cl. F04b 21/02, 49/00, 49/02
 U.S. Cl. 417-440 8 Claims



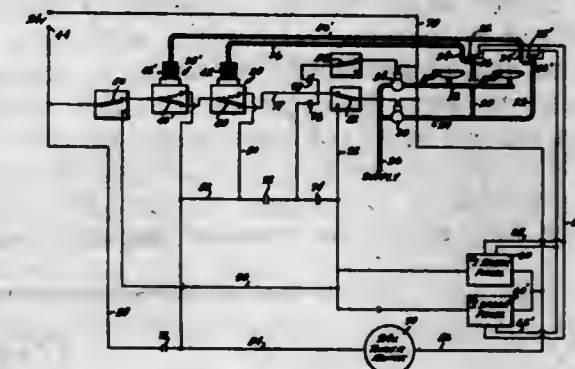
An unloader assembly for a gas compressor cylinder includes an open-throated suction valve and a sleeve having one end abutting the valve and communicating with the valve throat. The sleeve defines a chamber for a reciprocating control piston, and has a port which communicates with the suction chamber of the compressor cylinder. In the unloaded position, the piston uncovers the port to provide a flow path between the suction chamber and the cylinder compression chamber through the valve throat; and in the loaded position the control piston covers the sleeve port to close this flow path. The control piston is vented to equalize the pressure acting across it, and is shifted between the loaded and unloaded positions by a fluid operated actuator piston.

3,518,033
EXTRACORPOREAL HEART
 Robert M. Anderson, 4625 E. San Carlos Place, Tucson, Ariz. 85716
 Continuation-in-part of application Ser. No. 597,330, Nov. 28, 1966. This application Aug. 22, 1969, Ser. No. 860,146
 Int. Cl. A61m 1/03; F04b 43/08
 U.S. Cl. 417-478 15 Claims



A non-sucking pulsatile outflow continuous inflow pump arranged for use with a human body as an artificial ventricle. The pump consists of a first distensible body forming a chamber which is flat in cross-section when the body is in repose. This first body serves as a ventricle chamber. There is means forming an inlet and an outlet to the chamber. The inlet interconnects the ventricle with an atrium. The atrium is comprised of an additional distensible body similar to the first one. Valves, and impellers are associated with the ventricle and atrium chambers arranged for synchronous operation of said valves and impellers to produce a pulsatile discharge from the ventricle outlet and a continuous unrestricted inflow of blood, or liquid, to the atrium.

3,518,034
BURNER SAFETY CONTROL SYSTEM
 Leo Block, Temple City, and Roy Frank Rafenstein, La Canada, Calif., assignors to Raypak Company, Inc., El Monte, Calif., a corporation of California
 Filed June 18, 1968, Ser. No. 744,273
 Int. Cl. F23q 9/10
 U.S. Cl. 431-45 6 Claims



The invention relates to an automatic electrical control system for fuel burners in systems having a pilot burner. In the exemplary form of the invention described herein it is represented as a gas fired system having main burners and pilot burners, the main burners being controlled by a main gas supply valve and the pilot burners being controlled by a pilot fuel control valve. Electrical ignition means are provided for lighting the pilot burners. The invention is adapted particularly in systems employing plural pilot burners and ignition means therefor and plural main burners as well.

3,518,035

DEVICE FOR PRODUCING AN EXHAUST GAS-OIL MIXTURE TO BE SUPPLIED TO A MAIN BURNER OF A NOZZLE-FREE OIL-GASIFYING BURNER INSTALLATION

Hans Karl Leitz, 58b Stegwiesen, 7891 Dangstetten, Germany

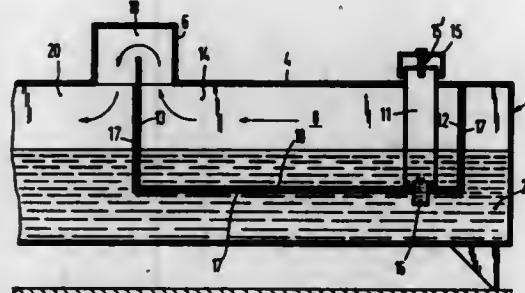
Filed June 14, 1968, Ser. No. 737,205

Claims priority, application Germany, June 16, 1967, 1,551,692

Int. Cl. F23d 11/44

U.S. Cl. 431-207

6 Claims



A precombustion chamber having an upstream end portion is formed by a portion of an elongated gas duct, which is formed with air intake openings only in said upstream end portion. Partitioning means partition an oil container from said precombustion chamber and define a first oil inlet opening between said oil container and said precombustion chamber. Means are provided which define a gas-oil contacting chamber, a gas inlet between said gas-oil contacting chamber and said gas duct downstream of said precombustion chamber, a gas outlet. At least part of the length of said gas duct is free of means adapted to maintain liquid oil in said duct. A flame formed on the surface of the oil at the upstream end of said precombustion chamber will extend into and will be extinguished in the gas duct downstream of said precombustion chamber, and hot exhaust gases from said flame will be enriched with oil vapor from a body of oil in said gas-oil contacting chamber.

3,518,036

ELECTROLYTIC PILOT IGNITER

William R. Staats, Chicago, Robert B. Rosenberg, Evergreen Park, and Esher R. Kweiler, Downers Grove, Ill., assignors to Institute of Gas Technology, Chicago, Ill., a corporation of Illinois

Filed Aug. 13, 1968, Ser. No. 752,335

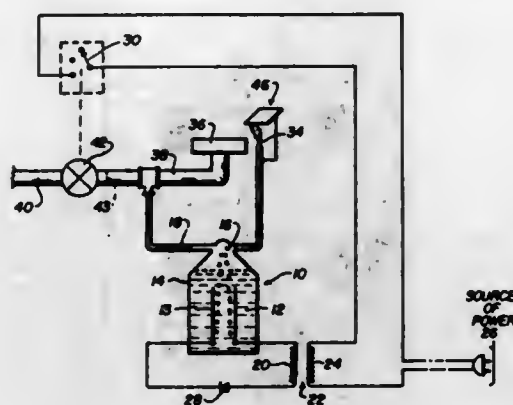
Int. Cl. F23q 11/04

U.S. Cl. 431-268

7 Claims

A pilot igniter which includes, generally, a cold solid catalyst affixed in operative relationship with a gas pilot to be ignited and an electrolytic cell which is adapted to be energized to form hydrogen and oxygen which is mixed with the gas being conveyed to the gas pilot. The hydrogen is reacted by the cold solid catalyst to, in turn, ignite the gas mixture. The oxygen enhances the ignition. Suitable switching means are provided and are operated

to control the flow of gas to the gas pilot, and to energize and de-energize the electrolytic cell to control the flow of



hydrogen, and oxygen, which is mixed with the flow of gas to the pilot.

3,518,037

EDUCER-ATOMIZER COMBUSTOR

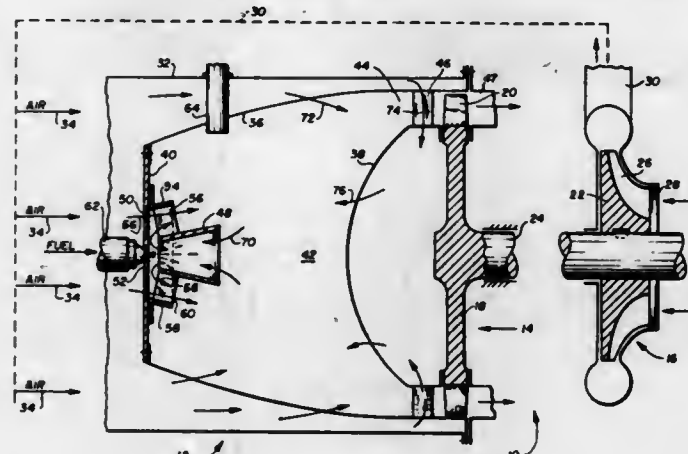
Ralph J. Sneed, Boxford, Mass., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Nov. 27, 1968, Ser. No. 779,463

Int. Cl. F23d 13/24

U.S. Cl. 431-350

7 Claims



Combustion apparatus primarily for gas turbine engines in which fuel is discharged into a hollow open-ended tubular member supported in the combustion chamber adjacent to the upstream end of said chamber so that at least a portion of the fuel preferably wets the inner surface of said tubular member and in which the primary combustion air is introduced into the combustion chamber so as to flow externally over the hollow tubular member in a diverging flow path.

CHEMICAL

3,518,038

ELECTROGRAPHIC RECORDING MIXTURE CONTAINING A MORPHOLINYL DIPHENYL METHANE AND 2 TRIPHENYL METHANE

Sydney M. Spatz, Williamsville, N.Y., and Meyer L. Sugarman, Glencoe, Ill., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 20, 1965, Ser. No. 499,008

Int. Cl. D06p 1/42; G03g 17/00

U.S. Cl. 8-2

2 Claims

Publication of electrosensitive recording media contain-

ing as the color forming agent a substantially colorless organic chromogen substance which develops color by reaction with an electron acceptor material in the absence of an oxidizing medium. The organic chromogenic substance is a leucoauramine which when incorporated in a recording paper base, together with an inorganic salt and/or other conventional components if desired, and subjected to an electric current, produces colored indicia at the positive electrode. The organic chromogenic substances employed provide rapid and deep colorations which are relatively permanent.

3,518,039

PROCESS FOR DYING AND PRINTING POLYMERISATES AND MIXED POLYMERISATES OF ACRYLONITRILE

Reinhard Mohr and Johann Ostermeier, Offenbach (Main), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 21, 1966, Ser. No. 559,097

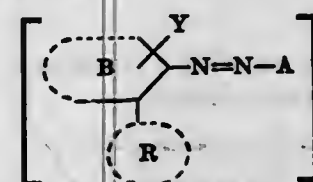
Claims priority, application Germany, June 25, 1965, F 46,432

Int. Cl. C09b 27/00; D06p 3/02, 3/72

U.S. Cl. 8-41

7 Claims

Articles of polyacrylonitrile dyed or printed with dyestuffs of the formula:



wherein B is a benzene or naphthalene radical, R is a cycloammonium radical, A is the radical of a coupling component, X⁻ is an anion and Y is hydrogen, chlorine, lower alkyl, lower alkoxy, —NH—CO—CH₃, —NO₂, —COOH, —CONH₂, —CON(CH₃)₂, —SO₂C₆H₅, —SO₂NH₂ or —SO₂N(CH₃)₂.

3,518,040

FORMATION OF URETHANE UNITS ON THE SURFACE OF POLYCARBONATE STRUCTURES

John R. Caldwell and Winston J. Jackson, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 409,987, Nov. 9, 1964. This application May 1, 1968, Ser. No. 725,893

Int. Cl. D06

U.S. Cl. 8-115.5

28 Claims

Urethane moieties or units are formed on the surface of polycarbonate structures or fibers by contacting the surface with either a primary or a secondary amine (having no amino group attached directly to an aromatic nucleus) at a temperature sufficient to form said moieties by reaction of the carbonate units at the surface with said amine. The urethane moieties reduce the tendency toward static electricity, improve the affinity for textile dyes, and improve the adhesion of printing ink and organic materials such as gelatin and synthetic polymer films.

3,518,041

NONWOVEN FABRICS AND METHODS OF MAKING THE SAME

Arthur H. Drellich, Plainfield, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Continuation of application Ser. No. 178,604, Mar. 9, 1962. This application July 18, 1966, Ser. No. 579,116

Int. Cl. D06m 9/00

U.S. Cl. 8-115.7

2 Claims

A nonwoven bonded textile fabric rendered durable in the presence of water by bonding with polyvinyl alcohol and cross-linking said polyvinyl alcohol binder in situ with a formaldehyde crosslinking agent.

3,518,042

STORABLE POLYMERIC COMPOSITIONS AND PROCESSES

Ildo E. Pensa, Palisades Park, N.J., assignor to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 28, 1966, Ser. No. 545,832

Int. Cl. D06m 13/12, 13/34

U.S. Cl. 8-116.3

15 Claims

This invention relates to a storable, modifiable textile product having a long term shelf life in the unmodified

state. A modifying system is applied to a textile substrate so that a modifying agent is on one side of the textile substrate and an activating agent is on the other side. When the textile product is subjected to an appropriate environment, the modifying agent is activated. In a preferred embodiment, an acid activatable N-methylol crosslinking agent is applied to one side of a cellulosic containing fabric and an acid activating system is applied to the other side.

3,518,043

HEXAHYDROPYRIMIDONE DERIVATIVES AND A METHOD OF FINISHING TEXTILE MATERIAL

Harro Petersen, Mannheim, and Heinz Bille and Wilhelm Ruemens, Limburgerhof, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Original application Aug. 5, 1966, Ser. No. 570,425. Divided and this application May 21, 1969, Ser. No. 842,060

Claims priority, application Germany, Aug. 17, 1965, 1,545,610; Aug. 18, 1965, 1,469,269; May 18, 1966, 1,594,907

Int. Cl. D06m 15/54, 15/38, 13/38

U.S. Cl. 8-116.3

3 Claims

The use of N,N'-dihydroxymethyl and N,N'-dialkoxy-methyl derivatives of hexahydropyrimidones which bear in the 4-position a hydroxyl or alkoxy group as finishing agents for textile materials consisting of or containing natural or regenerated cellulose.

3,518,044

PROCESS FOR PRODUCING WRINKLE RESISTANT CARBAMATE-MODIFIED CELLULOSIC TEXTILE MATERIALS BY CATALYSIS WITH HYDROGEN HALIDE GAS

Robert M. Reinhardt, New Orleans, and Joseph S. Bruno, Chalmette, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application Sept. 19, 1967, Ser. No. 668,973, now Patent No. 3,450,485, dated June 17, 1969, which is a continuation-in-part of application Ser. No. 395,627, Sept. 10, 1964. Divided and this application Mar. 25, 1969, Ser. No. 810,388

Int. Cl. D06m 1/16, 15/12

U.S. Cl. 8-129

4 Claims

Cotton cellulosic materials are impregnated with N-methylol type crosslinking agents, dried to normal regain at about 60° C., and the reaction catalyzed with an anhydrous hydrogen halide gas at temperatures in the range of 28° to 65° C., for periods of time in the range of 0.5 to 60 minutes.

3,518,045

DYED POLYURETHANE THREADS

Wolfgang Rellenmann, Horst Wieden, Bela von Falkai, and Alfred Reichle, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 8, 1965, Ser. No. 512,518

Claims priority, application Germany, Dec. 10, 1964, F 44,665

Int. Cl. D06p 3/24

U.S. Cl. 8-178

9 Claims

Spin-dyed segmented polyurethane elastomer fibers consisting of a segmented polyurethane elastomer having tertiary amino groups and/or disulfonic acid groups or disulfimide groups and an acid and/or basic dyestuff are produced from a spinning solution containing said segmented polyurethane elastomer in an organic polar solvent and an acidic and/or a basic dyestuff, said dyestuff being soluble in said organic polar solvent. The solution is spun into an elastic fiber having improved color and wet fastness.

3,518,056

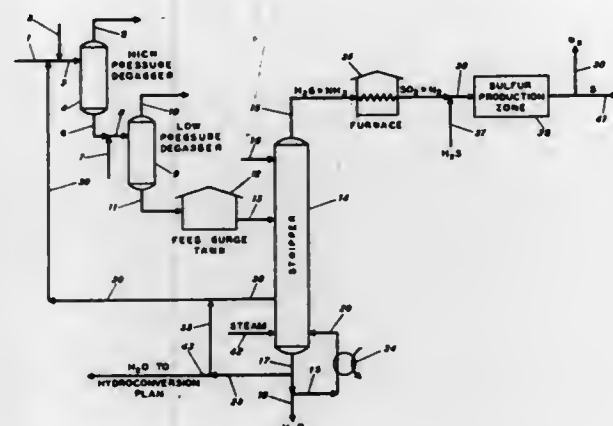
HYDROGEN SULFIDE RECOVERY BY DEGASSING, DISTILLATION AND AMMONIA RECYCLE WITH SUBSEQUENT SULFUR PRODUCTION

Robert J. Klett, San Francisco, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

Filed Sept. 26, 1968, Ser. No. 762,773
Int. Cl. B01d 3/06, 19/00; C01b 17/02

U.S. Cl. 23-225

9 Claims



Operation of a process to remove H_2S from an aqueous solution of H_2S , NH_3 , and light hydrocarbons under superatmospheric pressure, wherein an aqueous solution of H_2S and NH_3 is fed to a stripper, is improved in that aqueous feed solutions of substantial or high H_2S content are more advantageously handled by (1) combining an NH_3 -rich, H_2S -lean liquid stream withdrawn from the side of the stripper and/or from the bottom of the stripper with the aqueous solution of NH_3 , H_2S , and light hydrocarbons; then (2) removing light hydrocarbons as gases by reducing the pressure on the combined solution; (3) providing residence time for the combined solution; and then (4) feeding the combined aqueous feed stream to the stripper.

3,518,057

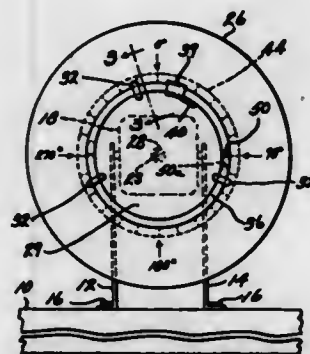
METHOD AND APPARATUS FOR THROMBUS FORMATION TIME DETERMINATIONS

Nicholas D. Giordano, Cleveland Heights, Ohio, assignor to Huron Road Hospital, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 22, 1966, Ser. No. 544,474
Int. Cl. G01n 33/16, 11/04

U.S. Cl. 23-230

8 Claims



Methods and apparatus for determination of thrombus formation time in a blood sample wherein in-vivo conditions are simulated by causing the sample to flow within a tubular hoop which is mounted on a turntable the plane of said turntable being positioned at an angle of approximately 75-82 degrees to the horizontal.

3,518,058

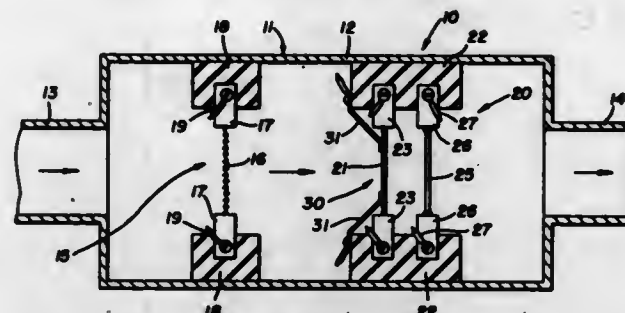
APPARATUS AND METHOD FOR DETECTING THE CARBON MONOXIDE CONTENT OF A GAS MIXTURE

Keith Slater, Guelph, Ontario, Canada, assignor of one-third to Richard N. Horger and one-third to Joseph Bango, Jr., both of Canton, Ohio

Filed Oct. 2, 1967, Ser. No. 672,278
Int. Cl. G01n 25/00, 31/10

U.S. Cl. 23-232

10 Claims



A method and apparatus for detecting and warning of the presence of dangerous concentrations of carbon monoxide in a gas mixture including introducing the gas mixture to be tested into a closed reaction chamber, exposing the gas mixture to nickel in the presence of heat for conversion of any carbon monoxide present to gaseous nickel carbonyl, passing the resultant product through a temperature environment sufficiently high to cause decomposition of the nickel carbonyl and deposition of nickel on a filter, and measuring by an electrical sensor the rate of change in electrical conductivity of the filter as nickel is deposited thereon as an indication of the concentration of carbon monoxide in the gas mixture.

3,518,059

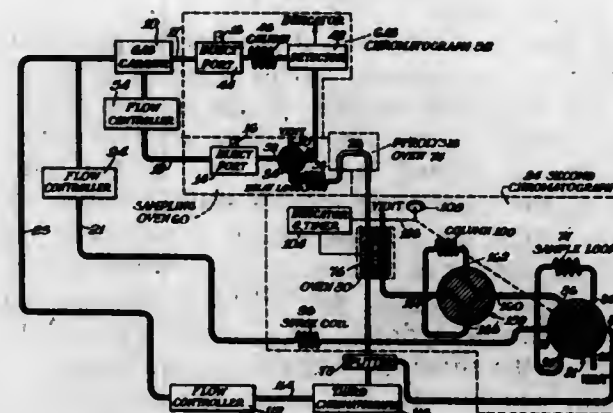
METHOD AND APPARATUS FOR DETERMINING CHEMICAL STRUCTURE

Eugene J. Levy, Oxford, Pa., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed May 31, 1967, Ser. No. 646,443
Int. Cl. G01n 31/08

U.S. Cl. 23-232

5 Claims



A method of and apparatus for pyrolyzing chemical compounds and using their volatile and non-volatile thermolytic dissociation products to obtain partial cracking patterns which are directly relatable to the molecular structure and the functional groups present in the original chemical compounds. The compounds are cracked in a pyrolyzer and the resulting product stream is divided into two portions by a splitter which simultaneously feeds one portion to a first chromatograph to obtain a cracking pattern for the volatile products in the product stream and the second portion to a second chromatograph to obtain a cracking pattern for the less volatile products in the product stream.

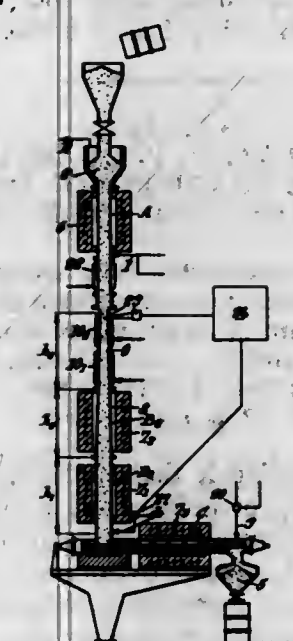
3,518,060

APPARATUS FOR CONVERTING UO_2 TO UF_4
Maurice Delange, Charbourg, Henri Huet, St. Vrain, and Paul Vertes, Antony, France, assignors to Commissariat a l'Energie Atomique, Paris, France, an organization of FranceOriginal application Mar. 29, 1965, Ser. No. 443,451, now Patent No. 3,403,986, dated Oct. 1, 1968. Divided and this application Oct. 25, 1966, Ser. No. 589,338
Claims priority, application France, Apr. 20, 1960, 824,748

Int. Cl. C10b

U.S. Cl. 23-262

2 Claims



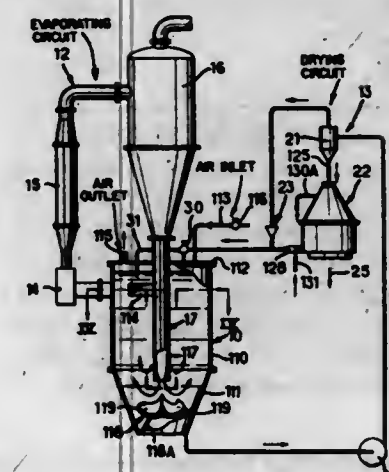
A first reactor for converting UO_2 by counter-current reaction with a reducing gas, to UO_3 , is mounted above a second reactor for converting the UO_3 by counter-current reaction with HF gas, to UF_4 . The bottom of the first reactor is connected to the top of the second reactor by cooled passage means which provide the only outlet for the gases issuing from the second reactor. Means responsive to the temperature of the UO_3 in the passage means are used in order to control means which in turn control the flow rate of the HF gas into the second reactor, to ensure elimination of the HF gas from the gaseous stream entering the first reactor.

3,518,061

INSTALLATIONS FOR CRYSTALLIZATION OF A SUBSTANCE IN SOLUTION, ESPECIALLY ANHYDROUS SODIUM SULFATEFrançois Laurenty, Le Champignon, 62 Le Touquet-Paris-Plage, France
Filed Nov. 16, 1966, Ser. No. 594,779Claims priority, application France, Mar. 29, 1966, 55,379; Nov. 3, 1966, 82,310
Int. Cl. B01d 9/02; C01d 5/16

U.S. Cl. 23-273

4 Claims



Anhydrous sodium sulfate is crystallized from solution in a vessel that feeds an evaporating circuit and a drying

circuit. The drying circuit includes a decanter fed from the vessel, a dryer fed by the bottoms of the decanter, and two branch conduits one of which feeds liquid from the decanter in bypass relation to the dryer and the other of which is fed by liquid from the dryer. All or part of the liquid from the bypass conduits is returned to the evaporating circuit or to a point in the vessel adjacent the intake of the evaporating circuit.

3,518,062

APPARATUS FOR THE PRODUCTION OF URANIUM FLUORIDE

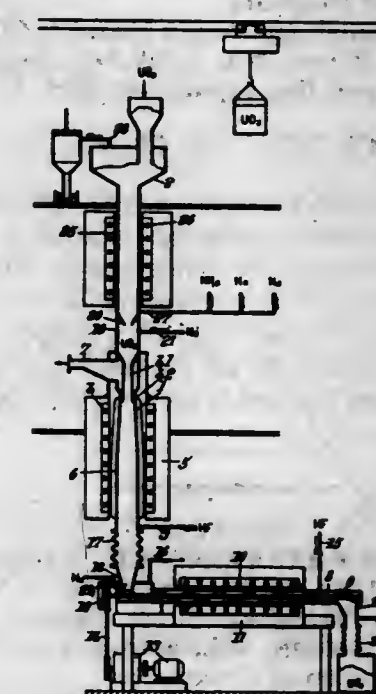
Maurice Delange, Mennecy, Henri Huet, Saint-Vrain, and Paul Vertes, Antony, France, assignors to Commissariat a l'Energie Atomique, Paris, France, an organization of France

Continuation of application Ser. No. 443,449, Mar. 29, 1965, which is a division of application Ser. No. 771,029, Oct. 31, 1958, now Patent No. 3,198,598. This application Apr. 4, 1968, Ser. No. 718,954
Claims priority, application France, Nov. 5, 1957, 750,882

Int. Cl. C01g 43/06

U.S. Cl. 23-284

3 Claims



Apparatus to produce uranium fluoride in which the uranium oxides UO_3 and U_2O_5 are fed to a vertical reduction reactor. The reduction reactor communicates through a funnel with a vertical hydrofluorination reactor. The active gases in the reactors are prevented from mixing. In the full form of the preferred embodiment, improved performance is achieved by the connection of a horizontal hydrofluorination reactor subsequent to the vertical reactor.

3,518,063

PURIFICATION OF BERYLLIUM BY LIQUID-LIQUID EXTRACTION

Forest G. Sealey and David J. Crouse, Jr., Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

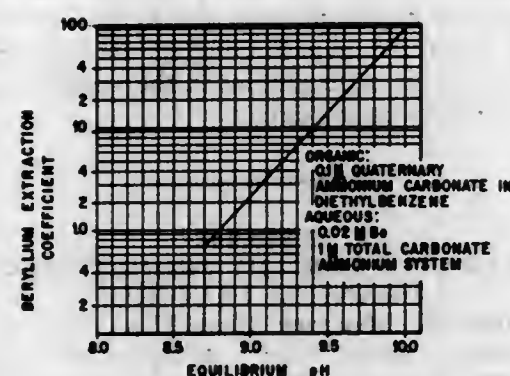
Filed Oct. 3, 1967, Ser. No. 672,649
Int. Cl. C01f 3/00; B01d 11/04

U.S. Cl. 23-312

10 Claims

A method of separating beryllium values from extraneous impurities comprising selectively extracting beryllium values from an aqueous alkaline carbonate

solution with an organic solution of a quaternary ammonium carbonate containing 39 to 75 carbon atoms



and having at least one methyl group attached to each nitrogen atom.

3,518,064

DRY HEATING PROCESS FOR PREPARATION OF ANTACID COMPOUNDS

Seymour Z. Lewin, Bayside, N.Y., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Original application Mar. 22, 1963, Ser. No. 268,512, now Patent No. 3,360,345, dated Dec. 26, 1967. Divided and this application Sept. 18, 1967, Ser. No. 678,469

Int. Cl. C01f 7/00; C01b 25/30

U.S. Cl. 23—315

7 Claims

This invention relates to a process for preparing buffering compositions which comprises heating a mixture of finely divided aluminum hydroxide and at least one finely divided alkali metal acid phosphate in the solid state and in the absence of free water at a temperature of 80° to 180° C., the mol ratio of the total amount of phosphates to aluminum hydroxide being in the range of about 0.05:1 to about 8:1.

3,518,065

PROCESS FOR PREPARING STOICHIOMETRIC URANIUM DIOXIDE

Leonard Vincent Triggiani, Silver Spring, and Irving Charles Stone, Ashton, Md., assignors to W. R. Grace & Co., a corporation of Connecticut

No Drawing. Filed Apr. 23, 1968, Ser. No. 723,561

Int. Cl. C01g 43/02

U.S. Cl. 23—355

1 Claim

A process for preparing urania microspheres, useful as fuel particles, in which the oxygen to uranium ratio is reduced to 2.0 by passing a reducing gas, such as hydrogen, through the particles at a temperature of about 300° to 800° C. and then densifying the particles by sintering at 1050° to 1150° C.

ERRATUM

For Class 29—195 see:
Patent No. 3,517,428

3,518,066

METALLIZING NON-METALS

Robert L. Bromes, Irvington, Ray C. Hughes, Ardsley, and Richard C. Sweet, North Tarrytown, N.Y., assignors, by mesne assignments, to U.S. Phillips Corporation, New York, N.Y., a corporation of Delaware

Original application Dec. 26, 1962, Ser. No. 247,246, now Patent No. 3,339,267, dated Sept. 5, 1967. Divided and this application July 12, 1967, Ser. No. 671,509

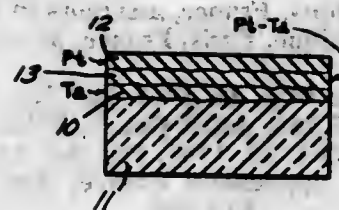
Int. Cl. B32b 15/04

U.S. Cl. 29—195

1 Claim

A metal-to-ceramic seal in which the surface of ce-

ramic body is covered with an active metal such as tantalum, columbium or vanadium which is covered with



an oxidation resistant metal layer such as platinum or palladium, the latter being fusion bonded to the metal.

3,518,067

METHOD OF PLATING POLYARYLENE POLYETHERS, POLYCARBONATE OR POLYHYDROXYETHERS AND THE RESULTING ARTICLES

Bruce P. Barth, Somerville, N.J., assignor to Union Carbide Corporation, a corporation of New York
Continuation-in-part of applications Ser. No. 481,402, Aug. 20, 1965, and Ser. No. 528,608, Feb. 18, 1966.
This application July 14, 1966, Ser. No. 565,109

Int. Cl. C23b 5/62; C23c 17/00

U.S. Cl. 29—195

22 Claims

Method of preparing a thermoplastic polymeric surface from the group of polyarylene polyethers, polycarbonates or polyhydroxyethers by treatment with a fluid from the group of N,N-dimethylformamide, pyridine and substituted pyridine compounds or alkylene glycols having a particular solubility parameter of 8.7 to 10.7. The N,N-dimethylformamide may be applied in gas or vapor form. The metal plated polymer will exhibit a peel strength of greater than 5 lbs. per inch. The metal coatings may be chromium, nickel or copper.

ERRATUM

For Class 51—309 see:
Patent No. 3,517,464

3,518,068

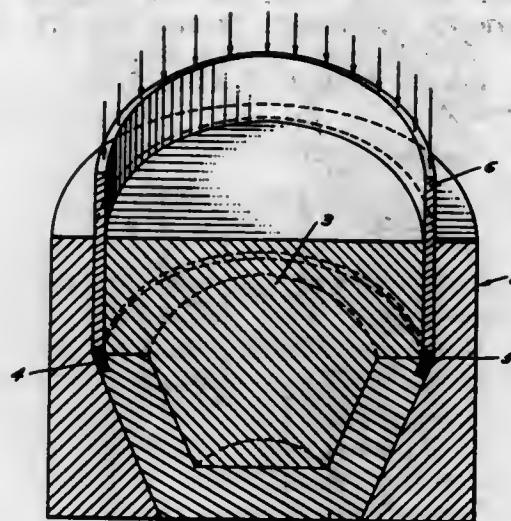
PROCESS FOR MANUFACTURING GRINDING WHEELS CONTAINING COPPER-COATED GRAINS

Kenneth H. Gillis, Southfield, Mich., assignor to General Electric Company, a corporation of New York
Filed Dec. 4, 1967, Ser. No. 687,807

Int. Cl. B24d 11/00

U.S. Cl. 51—295

4 Claims



An abrasive tool for use in grinding operations made by mixing together metal-coated diamond abrasive particles, a granulated organic matrix material, and a filler material and then compacting this mixture together at an elevated

temperature while the pressure is maintained constant throughout the compacting cycle until densification of the abrasive tool is completed.

3,518,069

METHOD OF FORMING GLASS FIBERS

William G. Cole, Jr., Nashville, Tenn., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Continuation-in-part of application Ser. No. 546,027, Apr. 28, 1966. This application Feb. 24, 1969, Ser. No. 811,273

Int. Cl. C03b 37/07

U.S. Cl. 65—2

2 Claims

In an apparatus for the manufacture of glass monofilaments from a feeder of molten glass, a series of fluid-permeable fins, with a source of fluid connected thereto, whereby a liquid coolant, preferably water, continuously fed to said fins, passes through the walls thereof by capillary action, and is evaporated from the surface thereof by the heat of the monofilaments being drawn from between said fins, to thereby provide a cooling effect in the area of said monofilaments.

3,518,070

MANUFACTURE OF HIGH OPTICAL QUALITY GLASS RODS

Eugene T. Natale and Harry F. Hicks, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Feb. 23, 1967, Ser. No. 618,072

Int. Cl. C03b 21/00

U.S. Cl. 65—102

4 Claims



Long glass rods of high optical quality are made from a compact glass spiral by heating the spiral and unwinding it. Optical quality suitable for a laser application has been obtained.

3,518,071

PRODUCTION OF NITROPHOSPHATE FERTILIZER AND AMMONIUM NITRATE-CALCIUM CARBONATE FERTILIZERS

John F. Villers-Fisher, Kendall Park, and Anthony J. Andreatch, New Brunswick, N.J., assignors to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 23, 1967, Ser. No. 610,954

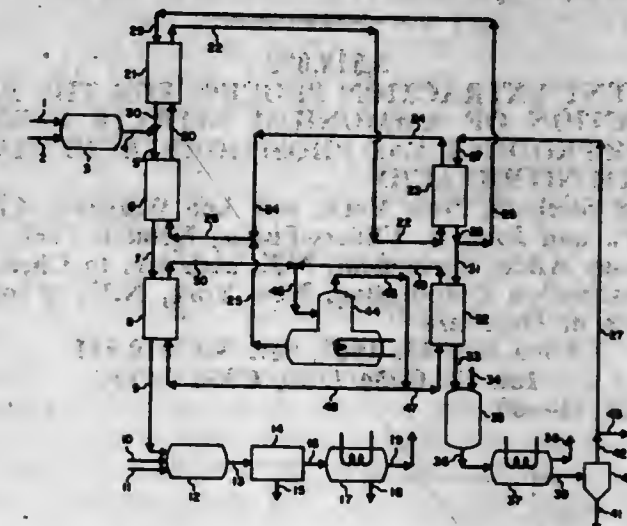
Int. Cl. C05b 11/06; C05c 1/00

U.S. Cl. 71—35

3 Claims

Phosphate rock is digested with aqueous nitric acid, to produce an aqueous solution containing calcium nitrate, phosphoric acid and nitric acid. The aqueous solution is extracted with a suitable organic solvent such as amyl alcohol, to yield an aqueous phase rich in calcium nitrate and an organic solvent phase rich in phosphoric acid and nitric acid. The organic solvent phase is extracted with a concentrated or saturated aqueous solution containing dissolved ammonium nitrate and ammonium phosphate, which removes phosphoric acid and nitric acid into the aqueous phase. A portion of the resultant aqueous phase may be recycled counter-current to the organic solvent phase containing the acids for removal of residual calcium nitrate contained therein. The resulting organic solvent phase of depleted phosphoric acid and nitric acid content is recycled for further extraction. The aqueous solution, now containing phosphoric and nitric acids as well as ammonium phosphate and ammonium nitrate, is

reacted with ammonia, to form an aqueous solution containing only ammonium phosphate and ammonium nitrate and, depending on process conditions, solid ammonium phosphate. This solution is evaporated, to form a slurry of solid crystals of ammonium phosphate or of mixed ammonium nitrate and ammonium phosphate, depending on process conditions, in a saturated solution. The concentrated solution is separated from the solid crystals, which comprise product nitrophosphate fertilizer,



and at least a portion of the concentrated solution is recycled for further extraction of organic solvent laden with phosphoric acid and nitric acid. The aqueous solution such as the aqueous solution containing the nitric and phosphoric acids, ammonium nitrate and ammonium phosphate, or the aqueous solution phase rich in calcium nitrate, may be initially extracted with a water-immiscible organic solvent such as benzene to remove residual primary organic solvent such as amyl alcohol. The final aqueous calcium nitrate solution is treated with ammonia and carbon dioxide to produce a fertilizer product consisting of ammonium nitrate containing calcium carbonate.

3,518,072

BENEFICIATION TREATMENT OF PHOSPHATE ROCK FOR PREPARATION OF FERTILIZERS AND OTHER PRODUCTS

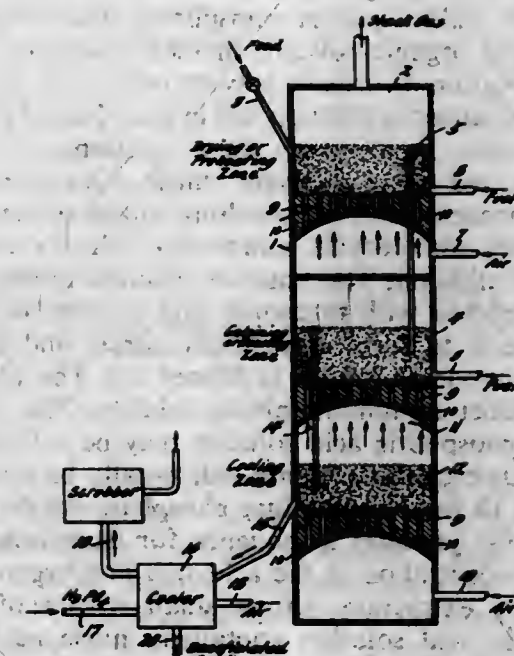
John G. Kronseder, 27 Pumpkin Hill, and David W. Leyshon, 110 Cross Highway, both of Westport, Conn. 06880

Filed Nov. 3, 1966, Ser. No. 591,728

Int. Cl. C05b 1/00, 17/00

U.S. Cl. 71—41

4 Claims



Phosphate rock having a CaO/P₂O₅ ratio in excess of 1.50 is beneficiated in a fluidized bed reactor having a

plurality of superposed treatment zones to increase the BPL content and lower the $\text{CaO}/\text{P}_2\text{O}_5$ ratio of the rock.

Rock to be treated is initially preheated, calcined at a temperature of from 1200° to 1850° F. and cooled to from 600° to 1200° F. Thereafter, the thus cooled rock is treated with phosphoric acid having P_2O_5 content from 20 to 40% to further cool the calcined rock to a temperature of from 220° to 550° F. and simultaneously beneficiate the rock.

3,518,073

SOLVENT EXTRACTION PROCESS FOR THE PRODUCTION OF AMMONIUM NITRATE FERTILIZER PRODUCT AND PHOSPHORIC ACID MIXED WITH NITRIC ACID

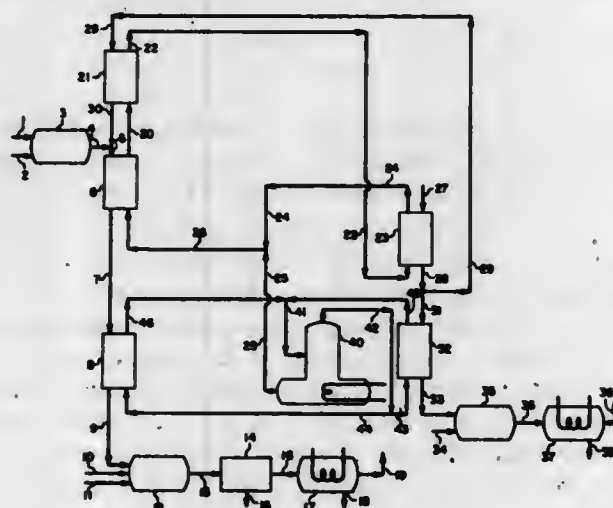
Samuel Strelzoff, New York, and Abe Warshaw, Clark, N.Y., and John F. Villiers-Fisher, Kendall Park, and Sydney Atkin, Springfield, N.J., assignors to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 23, 1967, Ser. No. 610,911

Int. Cl. C05c 1/00; C05d 7/00

U.S. Cl. 71—60

2 Claims



Phosphate rock is digested with aqueous nitric acid, to produce an aqueous solution containing calcium nitrate and phosphoric acid. In most instances, an excess of nitric acid is employed, so that the aqueous solution also contains nitric acid, which passes through the process together with the phosphoric acid. The aqueous solution is extracted with a suitable first organic solvent such as amyl alcohol, to yield an aqueous phase rich in calcium nitrate and an organic solvent phase rich in phosphoric acid and nitric acid. The organic solvent phase is extracted with water, to yield aqueous phosphoric acid solution and regenerated organic solvent. In most instances, a significant proportion of organic solvent remains in the calcium nitrate-rich aqueous solution and in the aqueous phosphoric acid solution. In this case, these solutions are extracted with a second organic solvent which is water-immiscible, such as benzene, and the resulting mixed solvents stream is separated into recycle components with or without resort to distillation. The aqueous calcium nitrate solution is then reacted with ammonia and carbon dioxide at a pH above 5, to form ammonium nitrate and precipitate calcium carbonate, which is filtered off. The filtrate provides product ammonium nitrate solution. The co-product aqueous phosphoric acid solution may be a final product per se; however this solution will usually be reacted with ammonia to yield ammonium phosphate-nitrate fertilizer. The process provides a sequence for depressing calcium nitrate concentration in the acid rich first organic solvent stream, by extraction with a small stream of aqueous phosphoric acid solution containing nitric acid. In one embodiment of the invention, the water-immiscible solvent containing dissolved first solvent is regenerated by extraction of first solvent, employing the aqueous digester

effluent and water in series, or by distillation, and the resultant water containing dissolved first solvent is then employed for the production of phosphoric acid solution by extraction of the acid rich organic solvent phase.

3,518,074

BENZOYLCHOLINE HALIDES AS PLANT GROWTH STUNTING AGENTS

Kisaburo Ueno, Kamakura, Akira Hirose, Yokohama, Yoshio Takazawa, Chigasaki, and Tatsuya Yamamura, Kamakura, Japan, assignors to Mitsui Toatsu Chemicals Incorporated, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Aug. 5, 1966, Ser. No. 570,448

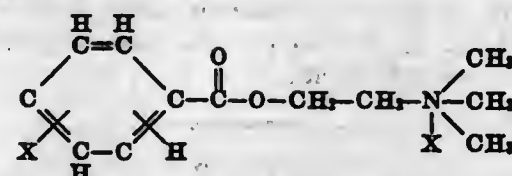
Claims priority, application Japan, Aug. 9, 1965, 40/48,051

Int. Cl. A01n 5/00, 9/24

U.S. Cl. 71—76

6 Claims

A composition comprising a botanically acceptable carrier and a growth retarding choline derivative having a formula:



wherein X is chlorine or bromine and X in the benzoyl radical is substituted in the ortho- or para-position, and treating plants therewith to retard their growth.

3,518,075

METHOD OF CONTROLLING WEEDS

Mervin E. Brokke, Richmond, Calif., and Chester L. Dewald, Houston, Tex., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

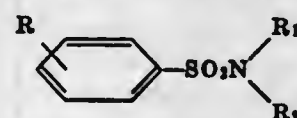
No Drawing. Filed Jan. 28, 1963, Ser. No. 254,418

Int. Cl. A01n 9/14

U.S. Cl. 71—103

6 Claims

This invention relates to the use as herbicides of certain compounds represented by the formula:



3,518,076

METHOD OF ELIMINATING WEED SPECIES WITH HERBICIDAL COMBINATION

William L. Wright, Greenfield, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed May 17, 1967, Ser. No. 639,048

Int. Cl. A01n 9/14, 9/20

U.S. Cl. 71—111

3 Claims

A combination containing an N,N-dialkyl-2,6-dinitroaniline and isopropyl N-phenylcarbamate or isopropyl N-3-chlorophenylcarbamate eliminates virtually all grass weeds and broadleaf weeds from crop-growing areas when applied pre-emergence.

3,518,077

HERBICIDAL COMPOSITIONS AND METHOD

Jordan P. Berliner and Sidney B. Richter, Chicago, Ill., assignors to Veliscol Chemical Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Application Nov. 7, 1966, Ser. No. 592,276, now Patent No. 3,446,832, dated May 27, 1969, which is a continuation-in-part of application Ser. No. 388,915, Aug. 11, 1964. Divided and this application Dec. 13, 1968, Ser. No. 807,146

Int. Cl. A01n 9/20

U.S. Cl. 71—118

10 Claims

An aqueous solution of alkali metal salts of N-alkoxy substituted phenoxyalkylene amides useful as herbicides

and as intermediates in the production of other compounds, particularly herbicides.

3,518,078

PORTABLE AUTO PREPARATOR

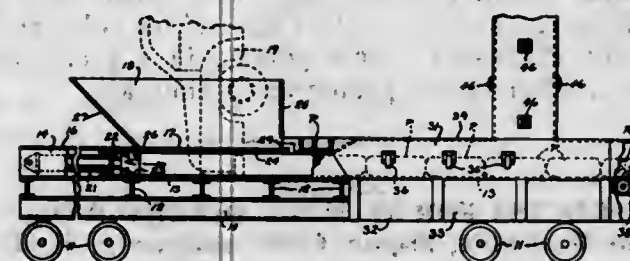
Julius L. Chazen, % SMC Industries, Chattanooga, Tenn. 37401

Filed Nov. 14, 1966, Ser. No. 594,203

Int. Cl. C21b 1/30; F23g 5/02; B26d 7/06

U.S. Cl. 75—44

5 Claims



A method in which junked vehicles have portions sheared off, one after another, by a shearing plunger which also causes intermittent advance of the sheared portions into and through an incinerator where the combustible contaminants are burned off.

3,518,079

PRODUCTION OF RIMMED STEELS

Raymond C. Oswald, Poland, Ohio, assignor to Jenner Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 30, 1967, Ser. No. 679,179

Int. Cl. C21c 7/00

U.S. Cl. 75—53

7 Claims

The production of rimmed steels, particularly medium and high carbon rimmed steels, by the addition of a rimming agent of iron carbonate to a molten steel bath.

3,518,080

HIGH-STRENGTH WELDABLE CONSTRUCTIONAL STEEL WITH HIGH MANGANESE

Holger Jarleborg and Karl-Johan Blom, Fagersta, Sweden, assignors to Fagersta Bruks Aktiebolag, Fagersta, Sweden, a joint-stock company of Sweden

No Drawing. Filed June 7, 1967, Ser. No. 644,112

Int. Cl. C22c 39/00

U.S. Cl. 75—123

8 Claims

A low-alloy, substantially pearlite-free steel having high tensile strength and toughness in combination with good welding properties. The steel contains, besides iron, 0.01–0.04% carbon; 2.2–6% manganese, up to 1% silicon, and up to 0.2% acid-soluble aluminum, together with at least one of the elements Nb, V and Zr in amounts of 0.01–0.2% each, and normal amounts of usual impurities.

3,518,081

IMAGE FORMATION AND DEVELOPMENT

John T. Bickmore, Rochester, and William L. Goffe, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Feb. 17, 1964, Ser. No. 345,433

Int. Cl. G03g 13/00

U.S. Cl. 96—1

12 Claims

Graphic reproductions are achieved by the image-wise modification of the triboelectric charging capability of a surface followed by the triboelectric charging of the modified surface to produce a charge pattern correspond-

ing to an image. The charge pattern may be developed with finely divided colored electroscopic particles and the resulting colored image either fixed on the surface of the insulating member or transferred to a receiving surface and fixed thereon.

3,518,082

METHOD OF ELECTROPHOTOGRAPHIC IMAGING EMPLOYING PHENAZINE AS THE SENSITIZER FOR THE PHOTOCONDUCTIVE MATERIAL

Eraldo M. Chiacchi, Sunnyvale, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

No Drawing. Continuation-in-part of application Ser. No. 491,833, Sept. 30, 1965. This application Mar. 10, 1969, Ser. No. 805,812

Int. Cl. G03g 13/22, 5/06

U.S. Cl. 96—1

1 Claim

A photosensitive electrophotographic material and photographic reproduction process using the same comprising an organic plastic material and a small amount of phenazine. The plastic may be one having inherent photoconductive properties in which case the properties are greatly enhanced or the phenazine can render plastics photoconductive which lack such inherent properties.

3,518,083

METHOD AND APPARATUS FOR PRODUCING PHOTOLITHOGRAPHIC STRUCTURES, PARTICULARLY ON SEMICONDUCTOR CRYSTAL SURFACES

Wolfgang Touchy, Munich, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

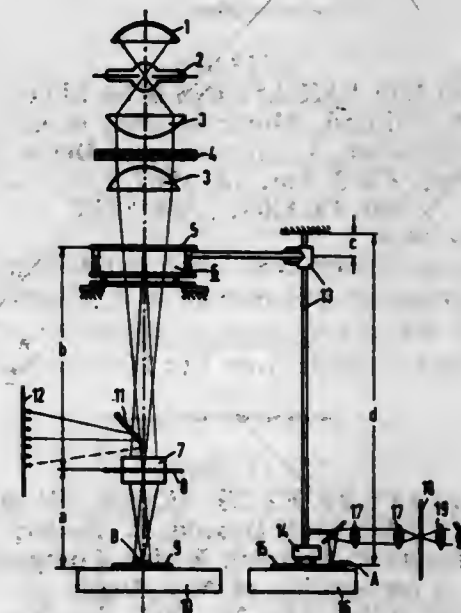
Filed Dec. 6, 1966, Ser. No. 599,577

Claims priority, application Germany, Dec. 6, 1965, S 100,902

Int. Cl. G03f 7/02

U.S. Cl. 96—33

12 Claims



Method and apparatus for carrying out the method, wherein a light-sensitive layer applied to a surface that is to be photolithographically processed is exposed in accordance with an original corresponding to the geometrical form to be produced on the surface, the exposed photosensitive layer is developed so that a copy of the corresponding original, preferably reduced in size, is produced on the layer. The original is traced with a sensing device, and the path taken by the sensing device over the original

is used for producing the movement of an exposure mark to describe a path geometrically similar to that of the sensing device on the light-sensitive layer.

3,518,084

METHOD FOR ETCHING AN OPENING IN AN INSULATING LAYER WITHOUT FORMING PIN-HOLES THEREIN

Fred Barson, Wappingers Falls, Richard T. Kuehn, Stormville, and Myron D. Palmer, Pleasant Valley, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Jan. 9, 1967, Ser. No. 607,923
Int. Cl. G03c 5/00, 5/06

U.S. Cl. 96—36.2 9 Claims

This method uses a double masking layer that is provided, preferably of photoresist material, on the insulating layer that an opening is to be etched therethrough to permit access to either an underlying metal land for electrical contact thereto or a semiconductor substrate for either electrical contact thereto or for diffusion therein. The double masking layer when used with two separate masks prevents undesired or accidental pinhole formation in the insulating layer. Additionally, the use of an enlarged opening or openings in the upper masking or photoresist layer permits control of tolerance errors.

3,518,085

LITH-TYPE EMULSIONS CONTAINING A POLYALKYLENEOXY POLYMER AND A 3-PYRAZOLIDONE DEVELOPING AGENT

Kirby M. Milton and Charles A. Goffe, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Sept. 23, 1965, Ser. No. 489,736
Int. Cl. G03c 5/24, 1/28, 1/04

U.S. Cl. 96—66.3 23 Claims

High contrast photographic emulsions in which the silver halide comprises at least 50% silver chloride are improved by the addition of a polyalkyleneoxy polymer and a 3-pyrazolidone silver halide developing agent. Further improvement is obtained by the incorporation of a vinyl polymer and an onium salt.

3,518,086

SILVER HALIDE EMULSIONS FOR LITHOGRAPHY

Frederick W. Millard, Montrose, Pa., assignor to GAF Corporation, a corporation of Delaware
No Drawing. Filed Apr. 18, 1967, Ser. No. 631,610
Int. Cl. G03c 1/04, 5/30

U.S. Cl. 96—66.4 9 Claims

Photographic "litho" type silver halide emulsions containing an alkylated polymer of a heterocyclic N-vinyl monomer of the lactam series in which the alkyl radical of said polymer contains from 2 to 2000 carbon atoms.

3,518,087

GRAVURE ETCH RESIST FILM

Edward C. Yackel and Donald P. Foster, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 26, 1967, Ser. No. 633,686
Int. Cl. G03c 1/90

U.S. Cl. 96—83 12 Claims

Glue is added to the latex stripping layer of gravure etch resist film. The glue is extracted from the latex by means of an adjacent gelatin-containing layer and a porous latex stripping layer results, which layer permits easy stripping of the support and simple removal of latex and gelatin residues from the resist with water. In addition, an unextractable gelatin may be added to the stripping layer to modify the adhesion and stripping properties of the film.

3,518,088

DEVELOPING AGENT DISPERSIONS

Joseph S. Dunn and Albert C. Smith, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Continuation of application Ser. No. 514,697, Dec. 17, 1965. This application May 7, 1969, Ser. No. 824,741
Int. Cl. G03c 1/04

U.S. Cl. 96—114 25 Claims

Dispersions of silver halide developing agents such as developing agents which are insoluble in water are prepared by mixing the developing agent with a non-proteinaceous, alkali permeable, synthetic, film-forming, high molecular weight polymer either in a water immiscible solvent for the polymer or in a latex of the polymer. The developer dispersion is incorporated in a gelatin light-sensitive, silver halide photographic emulsion.

3,518,089

PROCESS FOR MAKING SHERRY WINE

Hans Warkentin, Fresno, Calif., assignor to Vie-Del Company, a corporation of Nevada
No Drawing. Filed May 15, 1967, Ser. No. 638,608
Int. Cl. C12g 1/00

U.S. Cl. 99—35 5 Claims

Sherry wine is made by combining an ordinary wine with ascorbic acid, or materials similar in chemical nature to ascorbic acid, and allowing the wine to stand for a short period of time. Preferably the wine is heated and aerated during at least part of the time.

3,518,090

TREATMENT OF MILK TO IMPROVE ITS PROPERTIES FOR USE IN YEAST-RAISED BAKERY GOODS

Arthur M. Swanson, Madison, Wis., assignor to American Dry Milk Institute, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 5, 1967, Ser. No. 688,026
Int. Cl. A23c 9/00

U.S. Cl. 99—56 5 Claims

Fluid milk is processed to improve its properties for use in yeast-raised bread and other bakery goods by adjusting the pH of the fluid milk to about 8.5–8.9 and heating the milk at the adjusted pH to inactivate reactive groups in the casein micelle of the milk, which groups interfere with obtaining good loaf volume and fine grain in the baked product. The pH of the milk is then readjusted to about its starting pH, and the milk then concentrated and dried to provide a final product for use in the baking process.

3,518,091

CUP-SHAPED BREAD OR CAKE AND INTEGRAL CUP

Wesley Turner, 906 Curtis St., Albany, Calif. 94707
Continuation-in-part of application Ser. No. 502,192, Oct. 22, 1965. This application Apr. 3, 1969, Ser. No. 813,249
Int. Cl. A21d 8/06

U.S. Cl. 99—88 2 Claims

An article comprising a paper cup and a cake or bread baked in the cup, the baked product having a base and upstanding side walls forming a food filling cavity, the inner surface of the walls and base being relatively denser than the inner portions of the baked product providing an impervious surface to certain liquid fillings, the inner portions of the baked product being light and moist, and the portions adjacent the paper cup being less dense than the inner surface but more dense than the inner portions and clinging to the paper cup. The method of baking the product in which the inner surface is baked faster and more thoroughly because of contact with a metal core,

and the outer surface being baked more slowly because of the time lag caused by the thermal insulation of the paper cup.

3,518,092

COMESTIBLE COATING COMPOSITION

Stanley P. Rock, Flushing, Howard Roth, Bronx, and John E. Sommers, Valley Stream, N.Y., assignors to DCA Food Industries Inc., New York, N.Y.
No Drawing. Continuation of application Ser. No. 529,974, Feb. 25, 1966. This application May 2, 1969, Ser. No. 821,500
Int. Cl. A21d 13/08

U.S. Cl. 99—92 8 Claims

A sugar-dusting composition comprises a powdered mixture of 53% to 92.5% sugar, 4% to 30% starch, 2% to 8% shortening and ½% to 9% of a waxy material such as stearine. The waxy material is in the form of spheres in the mixture, with 90% thereof being under 200 micron diameter and forms coating layers on the sugar particles, which layers are coated by the shortening and starch. The composition is produced by mixing the sugar and particulate waxy material, applying the shortening in a liquid state while agitating, and then admixing the starch.

3,518,093

POME FRUIT JUICE CONTAINING PULP

Adolph Reynold Asti, San Carlos, Calif., assignor, by mesne assignments, to Redwood Food Packing Company, Redwood City, Calif., a corporation of California
Filed Mar. 28, 1966, Ser. No. 537,948
Int. Cl. A23l 1/02

U.S. Cl. 99—105 3 Claims

Production of a pome fruit juice resembling the natural fruit in liquid form by mixing desired proportions of pome fruit pulp, prepared by cooking and pulping pome fruits, and pome fruit juice, prepared by pressing the juice from disintegrated pome fruit. The fruit is pulped in the presence of an antioxidant.

3,518,094

CONTINUOUS PRODUCTION OF TELEMEA CHEESE

Vasile Nikolic, Bucharest, Romania, assignor to Ministerul Industriei Alimentare, Bucharest, Romania, a corporation of Romania
Filed Oct. 24, 1966, Ser. No. 588,924
Claims priority, application Romania, Nov. 16, 1965, 50,550
Int. Cl. A23c 19/02

U.S. Cl. 99—116 4 Claims

Telemea cheese is made by a process wherein milk is curdled and coagulated in a continuous manner concurrently with pressing of the curd and portioning of the cheese along a linear coagulation and pressing path such that the curd retains its original stratification.

3,518,095

DRY FONDANT AND METHOD OF MAKING THE SAME

Fred H. Harding, Port Washington, Reuben Horowitz, Flushing, and Anthony Monti, Brooklyn, N.Y., assignors to Su Crest Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Nov. 3, 1964, Ser. No. 408,676
Int. Cl. A23g 3/00

U.S. Cl. 99—141 19 Claims

Pulverized sugar, such as sucrose, is sprayed with an aqueous solution of an ingestibly-acceptable organic binding agent, preferably a carbohydrate such as invert sugar, and the resulting mixture is mixed for a period of time sufficient to form agglomerates having sizes in the range of 14 to 80 mesh. The agglomerates are rolled to impart

a generally spherical shape thereto and to firm them and dried to a moisture content of less than about 3 percent. The resulting product comprises pulverized sugar in a matrix of the binder, and can be used to prepare a creamy fondant.

3,518,096

FOOD PRESERVING PROCESS

Grover C. Layton, deceased, late of Bunnell, Fla., by Stella Layton, administratrix, Bunnell, Fla., assignor to First National Bank of Duneedin, Fla., trustee
No Drawing. Filed Oct. 6, 1965, Ser. No. 493,578
Int. Cl. A23b 7/00

U.S. Cl. 99—154 5 Claims

Preserving fresh fruits, vegetables and cut flowers by applying a solution of eugenol or oil of cloves.

3,518,097

METHOD OF PRODUCING DEHYDRATED FRIED POTATOES

Robert Menzi and Claude Gilday, Geneva, Switzerland, assignors to Georges Lesieur & Sons File, Paris, France
No Drawing. Filed Mar. 2, 1967, Ser. No. 619,959
Claims priority, application Switzerland, Mar. 22, 1966, 4,128/66
Int. Cl. A23b 7/03; A23l 1/12

U.S. Cl. 99—207 6 Claims

Producing dehydrated French fried potatoes by frying potato pieces at 100° to 110° C. to form a crust which is permeable to water vapor and to water or by frying so as to form a relatively impermeable crust which is then rendered at least partially permeable, by subjecting to vacuum while the pieces are still hot. The fried potato pieces are then freeze-dried.

3,518,098

METAL PROTECTING PREPARATIONS

Ian Alastair Moncrieff Ford, West Hagley, Bernard Carlton Cox, Oadby, and James Coward Thornton, Mountsorrel, England, assignors to J. Goddard & Sons Limited, Leicester, England
No Drawing. Filed June 23, 1964, Ser. No. 377,391
Claims priority, application Great Britain, June 25, 1963, 25,235/63
Int. Cl. C09g 1/02

U.S. Cl. 106—3 13 Claims

1. In a cleaning, polishing or coating composition for protecting metal surfaces containing silver, copper or nickel, the improvement which comprises the addition of an ester of a mercapto carboxylic acid of the formula $\text{HSC}_n\text{H}_{2n-1}\text{COO}-\text{R}$ wherein n is 1 or 2, and R is $\text{C}_m\text{H}_{2m+1}$ wherein m is 8 to 22, in an amount sufficient to protect the metal surface against tarnishing.

3,518,099

PROTECTIVE COATING FOR METAL SURFACES

Edward Holbus, 6108 Greenleaf Blvd., Racine, Wis. 53406
No Drawing. Continuation-in-part of application Ser. No. 469,309, July 22, 1965. This application Jan. 21, 1969, Ser. No. 792,862
Int. Cl. C08g; C09h 9/06; C09f

U.S. Cl. 106—10 5 Claims

For applying a self-polishing coating to an automobile body in a car wash as a separate application following wash and rinse:

Ranges of ingredients in preferred composition

3–10 parts by weight of carnauba wax
11–14 parts by weight of mineral oil
7–14 parts by weight of a cationic emulsifier
1–4 parts by weight of non-ionic emulsifier having 1–3 parts water soluble portion and ¼–1 part oil soluble portion

Sufficient water to bring 40 pounds of the foregoing ingredients to a total of 30 gallons in volume.

Procedure

The composition is emulsified by stirring the heated ingredients to make a concentrate. At the point of use the concentrate is usually diluted. Water is added and stirred. It is then sprayed on the surface to be protected at a temperature usually 120° F. or higher. The spraying is normally done with a vehicle of additional hot water.

When excess moisture is wiped off, a self-polishing glossy and protective coating is left on the surface. In a typical car wash using forty to fifty pounds pressure, the application may involve twelve to sixteen ounces of the dilute solution applied in about thirty seconds with about five to eight gallons of water.

3,518,100

STABILIZED ZIRCONIA SHAPES

Dwight S. Whittemore, Pittsburgh, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
No Drawing. Filed Oct. 30, 1967, Ser. No. 679,197
Int. Cl. C04b 35/48

U.S. Cl. 106—57

3 Claims

A stabilized zirconia of superior density especially suited for manufacture of ceramic dies and the like made of a refractory batch comprised of at least partially stabilized zirconia grain and a small amount of mullite.

3,518,101

CATIONIC ASPHALT EMULSIONS

Felix C. Gzinski, Glen Mills, and Robert C. Taylor, King of Prussia, Pa., assignors to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed May 23, 1967, Ser. No. 640,470
Int. Cl. C08h 13/00; C08k 1/62; C09d 3/24
U.S. Cl. 106—277

4 Claims

Aqueous asphalt emulsions of the cationic type prepared by using as an emulsifying agent a salt of an amine with a polybasic acid.

This invention relates to emulsions of asphalt in water which are useful for coating aggregate in the construction of roads and the like. More particularly, the invention is directed to aqueous asphalt emulsions of the cationic type, which typically are useful for coating a wide range of aggregates differing substantially in their electrochemical surface properties. The invention specifically is directed to the novel use of suitable amine salts of certain polybasic acids as emulsifying agents in preparing cationic aqueous asphalt emulsions having improved aggregate-coating ability, and to the new and improved asphalt emulsions so provided.

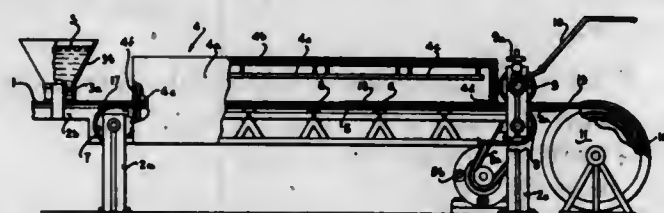
3,518,102

METHOD AND APPARATUS FOR MAKING FOAM BACKED CARPETS

Lothar Mertgen and Joachim Schabel, Bremen, Germany, assignors to Dierach & Schroder, Bremen, Germany
Filed July 9, 1965, Ser. No. 470,797
Claims priority, application Germany, Jan. 11, 1965, D 46,222
Int. Cl. B44d 1/44

U.S. Cl. 117—10

9 Claims



A method and apparatus for reinforcing the base fabric of a floor covering consisting of interlaced yarns in which

a layer of thermoplastic material mixed with a foaming agent applied to the rear side of the base fabric is first heated to cause the thermoplastic material to foam and gel, whereafter the layer, while still in hot condition, is pressed by a cooled profiled roll against the base fabric.

3,518,103

PROCESS FOR PRODUCING A NYLON-COATED LEATHER-LIKE PRODUCT

Lubomir Vlasovsky, Waterloo, Belgium, assignor to Monsanto Europe S.A., Brussels, Belgium, a Belgian company
No Drawing. Filed Jan. 23, 1967, Ser. No. 610,750
Int. Cl. D06n 3/08; B44d 1/16; B32b 27/34

U.S. Cl. 117—11

2 Claims

Nylon-coated products comprised of a substrate having a layer of nylon bonded thereto are prepared by employing an adhesive containing a polyurethane rubber and an organic polyfunctional isocyanate to accomplish the bonding. The nylon coating is normally applied onto a sheet of polyvinyl chloride material or the like to produce a leather-like cloth.

3,518,104

COATED CASTING BELT

Everett L. Plyler, Raleigh, N.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 22, 1966, Ser. No. 567,092
Int. Cl. B44d 1/14; B32b 15/08; B29c 1/00
U.S. Cl. 117—5.3

4 Claims

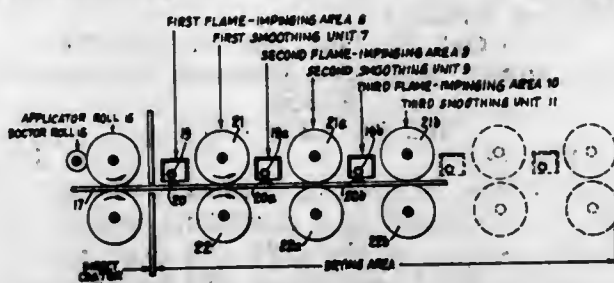
An endless casting belt suitable for making foam sheet products, possessing releasable characteristics, sufficient flexibility to pass around rollers and capable of withstanding relatively high temperatures without stretching or becoming distorted, said belt having a silicone-primer silicone-rubber surface thereon.

3,518,105

PANEL-TREATING PROCESS

Clifford T. McElroy, 3722 Locust Ave., Long Beach, Calif. 90807
Continuation-in-part of application Ser. No. 572,321, Aug. 15, 1966. This application Feb. 11, 1969, Ser. No. 798,387
Int. Cl. B41m 5/24; B44c 1/097; C23c 7/00
U.S. Cl. 117—46

2 Claims



Finish-treating plywood and cellulose-composition boards by coating a surface of said boards with a liquid coating material free of combustible solvents, then drying and singeing the applied coating by impingement of an open flame, followed by alternate smoothing and drying steps to successively dry and harden the coating to a lustrous finish.

3,518,106

PROCESS FOR CONTROLLED SUB-MICRON DISPERSIONS IN ALLOYS

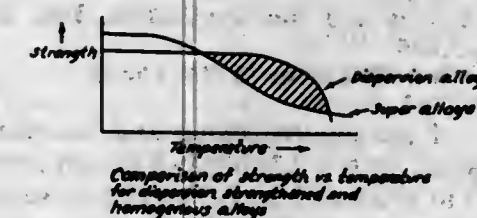
John A. Alexander, Oxon Hill, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 27, 1966, Ser. No. 590,102
Int. Cl. B44d 1/14

U.S. Cl. 117—71

2 Claims

An alloy having high structural strength suitable for use in such high temperature applications as gas turbine

equipment, which is produced by vacuum deposition of dispersions of sub-micron particles of a dissimilar metal on a thin heated layer of a matrix metal, oxidation of the dispersions of particles, overlaying the oxidized dispersions with a second thin layer of the matrix metal, and



repeating the process of depositing dispersions of sub-micron particles oxidized and covered with a layer of matrix metal to produce a three dimensional alloy structure of matrix metal with dispersions of sub-micron particles of a dissimilar metal distributed in the matrix metal.

3,518,107

POLYSULFIDE SEALANT BONDED TO CEMENTITIOUS AND ASPHALTIC SUBSTRATES

Edward G. Miller, Princeton, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
No Drawing. Original application May 2, 1966, Ser. No. 546,507. Divided and this application Jan. 16, 1969, Ser. No. 821,531
Int. Cl. B44d 1/14; B32b 13/12, 11/04

U.S. Cl. 117—72

3 Claims

A curable, liquid polysulfide polymer sealant composition is bonded to a cementitious or asphaltic substrate by means of a primer comprising a halogenated rubber and a polyisocyanate compound.

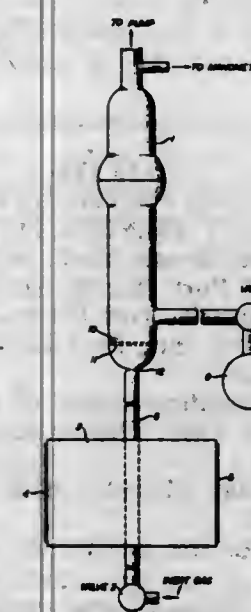
3,518,108

POLYMER COATING BY GLOW DISCHARGE TECHNIQUE AND RESULTING PRODUCT

John H. Heiss, Jr., Union, and Gerald Smolinsky, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York
Filed June 8, 1967, Ser. No. 644,503
Int. Cl. C08f 1/22, 13/00; B44d 1/02

U.S. Cl. 117—93

8 Claims



Polymer coatings are produced by contacting an organic species with an inert gas plasma. Resulting coatings manifest dielectric properties of device interest.

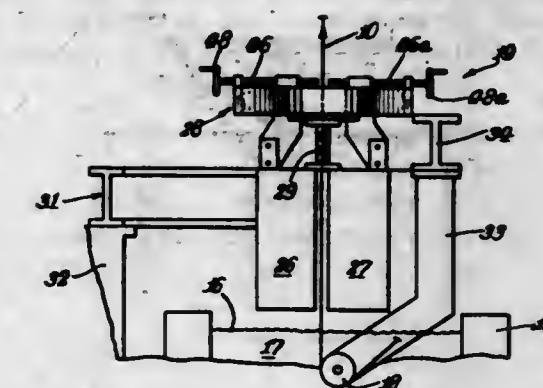
3,518,109

APPARATUS AND METHOD FOR CONTROLLING THICKNESS OF MOLTEN METAL COATING BY A MOVING MAGNETIC FIELD

James W. Halley, Dune Acres, Ind., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 15, 1968, Ser. No. 697,922
Int. Cl. C23c 1/02

U.S. Cl. 117—93.2

9 Claims



This disclosure deals with apparatus for controlling the thickness of a metal coating applied to a strip by a hot dip coating process. The coating control apparatus includes means for setting up a strong magnetic field, and the strip, with the metal coating still in its molten state, is passed through the magnetic field. The resulting interaction between the magnetic field and the metal coating results in a force on the coating which wipes the coating to a desired thickness.

3,518,110

RAZOR BLADE AND METHOD OF MAKING SAME

Irwin W. Fischbein, Hyde Park, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
No Drawing. Filed July 23, 1964, Ser. No. 384,805
The portion of the term of the patent subsequent to June 30, 1984, has been disclaimed
Int. Cl. B26b 21/54

U.S. Cl. 117—93.4

11 Claims

This invention relates to safety razor blades, either single edged or double edged, and pertains more specifically to an improved blade having on a cutting edge an adherent coating of a selected type of fluorocarbon polymer, which blade possesses unique shaving characteristics, and to a method for making the same. The fluorocarbon polymer melts between 310° C. and 332° C. and at 350° C. has a melt flow from 0.005 to about 600 grams per ten minutes.

3,518,111

PHOTOPOLYMERIZED FILM, COATING AND PRODUCT, AND METHOD OF FORMING

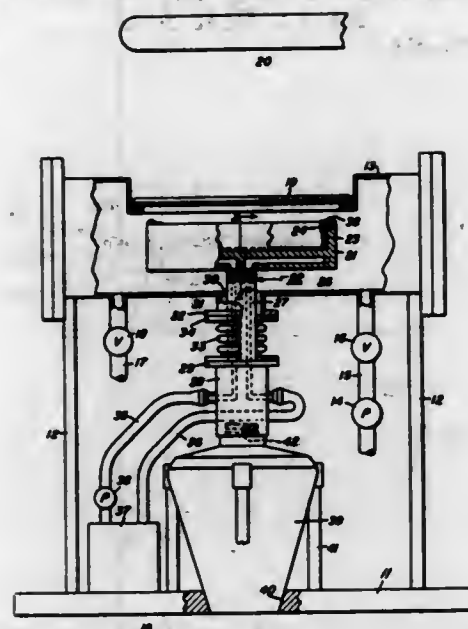
Archibald Nelson Wright, Schenectady, N.Y., and Wilfred F. Mathewson, Jr., Franklin, Mich., assignors to General Electric Company, a corporation of New York
Filed Dec. 1, 1966, Ser. No. 598,364
Int. Cl. B01j 1/10; C08f 1/18

U.S. Cl. 117—93.31

10 Claims

A thin, continuous film is formed on a substrate by ultraviolet surface photopolymerization of a material in the gaseous phase. The material is selected from various substituted saturated aliphatic hydrocarbons in which hydroxyl, halo, or amino groups have been substituted or from aromatic hydrocarbons in which hydroxyl, halo,

amino, alkyl, or mixed hydroxyl and alkyl groups have been substituted. Such films are useful as coating on metallic and non-metallic substrates, capacitor dielectrics,



cryogenic device insulation, insulation for microelectric devices, primer or insulation on electrically conductive wire, and for corrosion protection.

3,518,112 PROCESS FOR THE PREVENTION OF AGGLOMERATION OF POLYESTER PARTICLES

Joachim Hecht, Hans Luckert, and Hans-Ruedi Rufer, Domat-Ems Grisons, Switzerland, assignors to Inventa A.G. für Forschung und Patentverwaltung, Zurich, Switzerland.
No Drawing. Filed June 29, 1967, Ser. No. 698,991
Claims priority, application Switzerland, July 1, 1966, 9,821/66

(Filed under Rule 47(a) and 35 U.S.C. 116)
Int. Cl. B44d 5/08; C08g 17/14

U.S. Cl. 117—100 1 Claim
A process for the prevention of agglomeration of polyester resin particles by adding to the particles a given amount of a lubricant in very small quantities when the polyester is in amorphous state. The mixture then is heated slowly up to 150° C. whereby the resin converts from the amorphous to the crystalline state. The particles then are free-flowing. The process is applicable to all polyester resins which convert from the amorphous to the crystalline state.

3,518,113 POLYURETHANE LATICES AS PAPER-MAKING ADDITIVES

Ian C. MacGugan, Trenton, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed Dec. 5, 1966, Ser. No. 598,886
Int. Cl. B32b 29/00; D21h 1/28, 3/60

U.S. Cl. 117—155 5 Claims
Paper is treated with a polyurethane latex to upgrade its physical properties, particularly its fold strength. The polyurethane latices used are prepared by chain extending, in the presence of water, an isocyanate-terminated prepolymer obtained by the reaction of an organic compound having at least two active hydrogen atoms with a stoichiometric excess of an organic polyisocyanate.

3,518,114 PROCESS FOR RENDERING TEXTILES AND OTHER FIBROUS MATERIALS OIL, WATER- AND SOIL-REPELLENT

Allen G. Pittman, El Cerrito, and William L. Wasley, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application June 7, 1966, Ser. No. 555,703. Divided and this application Jan. 24, 1969, Ser. No. 823,205

Int. Cl. D06m 13/10, 15/30

U.S. Cl. 117—161 1 Claim
An adduct of hexafluoroacetone and an alkali metal fluoride is reacted with a 2,3-dihalo-n-propyl acrylate (or methacrylate) to produce 2,3-bis(heptafluoroisopropoxy)-n-propyl acrylate (or methacrylate). The products are useful in monomeric, and especially polymeric, form for enhancing the oil-, water-, and soil-repellency of fibrous materials, e.g., textiles.

3,518,115 METHOD OF PRODUCING HOMOGENEOUS OXIDE LAYERS ON SEMICONDUCTOR CRYSTALS

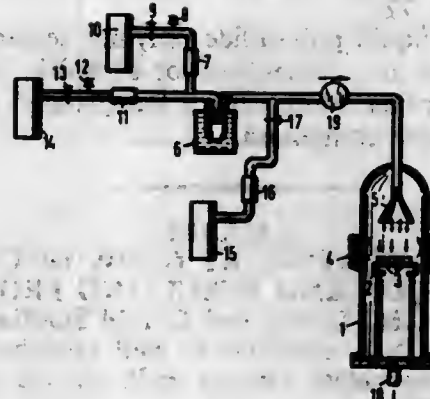
Erich Pammer and Eduard Folkmann, Munich, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany

Filed June 30, 1966, Ser. No. 562,003

Claims priority, application Germany, July 5, 1965, 8,97,992

Int. Cl. H01b 3/10

U.S. Cl. 117—213 4 Claims



Described is a method of producing homogeneous oxide layers on semiconductor crystals, particularly silicon semiconductor crystals, at elevated temperatures. The method comprises oxidizing the semiconductor crystal with CO₂ in conjunction with a hydrogen-containing compound as a catalyst transported by a carrier gas during the oxidation.

3,518,116 COMPOSITIONS AND METHODS FOR PRODUCING ELECTRICALLY CONDUCTIVE COATINGS

Arthur J. Stock, Port Huron, Mich., and Frank M. Hunter, deceased, late of Port Huron, Mich., by Margaret C. Hunter, administratrix, Port Huron, Mich., assignors to Acheson Industries, Inc., Port Huron, Mich., a corporation of Michigan

No Drawing. Continuation-in-part of application Ser. No. 464,240, June 15, 1965. This application July 10, 1968, Ser. No. 744,620

Int. Cl. H01j 29/00

U.S. Cl. 117—226 12 Claims
A composition for use in forming electrically conductive coatings, such as interior surface coatings for cathode ray tubes, which composition is comprised of a conductive pigment, alkali metal silicate, water soluble or dispersible organic resin material, alkali metal carboxylic acid salt, and water; and, the method of forming electrically conductive coatings using said composition.

ERRATUM

For Class 134—1 see:
Patent No. 3,517,674

3,518,117 PROCESS FOR REMOVING COPPER OXIDE FROM PROCESSING EQUIPMENT

Stanley Albert Sills, Pontypool, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Apr. 20, 1967, Ser. No. 632,219
Claims priority, application Great Britain, May 31, 1966, 24,223/66

Int. Cl. C23g 1/24, 1/26

U.S. Cl. 134—2 3 Claims
Copper-containing residues of polyamide or degradation products thereof are removed from processing equipment, such as steel melt-spinning equipment, by treating the equipment with a hot aqueous solution containing 10%–20% by weight of an ammonium salt of an inorganic acid. The treatment may be preceded by exposing the equipment to a mixture of steam and air at a temperature of 300° C.–600° C.

3,518,118 METHOD OF APPLYING NOXIOUS CLEANING CHEMICALS

Robert Emanuel Farison, Cincinnati, Ohio, assignor to W. R. Grace & Co., a corporation of Connecticut
No Drawing. Continuation of application Ser. No. 595,051, Nov. 17, 1966. This application Sept. 4, 1969, Ser. No. 855,384

Int. Cl. B08b 3/08

U.S. Cl. 134—36 2 Claims
Process for applying noxious cleaning chemicals to open surfaces without the formation of mist or overspray, eliminating the usual hazards to operating personnel when the noxious compositions are used, employing a foamable cleaning composition mixed with at least 90 volume percent gas.

3,518,119 METHOD OF APPLYING NOXIOUS CLEANING CHEMICALS

Robert Emanuel Farison, Cincinnati, Ohio, assignor to W. R. Grace & Co., a corporation of Connecticut
No Drawing. Continuation of application Ser. No. 595,051, Nov. 17, 1966. This application Sept. 4, 1969, Ser. No. 855,385

Int. Cl. B08b 3/08

U.S. Cl. 134—36 2 Claims
Process for applying noxious cleaning chemicals to open surfaces without the formation of mist or overspray, eliminating the usual hazards to operating personnel when the noxious compositions are used, employing a foamable cleaning composition mixed with at least 90 volume percent gas.

3,518,120 STORAGE BATTERY PLATES AND METHOD OF MANUFACTURE

Giles S. Lello and Paul V. Lowe, Milwaukee, Wis., assignors to Globe Union Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Mar. 25, 1968, Ser. No. 715,590

Int. Cl. H01m 39/00

U.S. Cl. 136—26 7 Claims
A dry activated negative plate for a dry charge battery of the lead-acid type comprising a spongy particulate lead

mass, the particles of which are substantially protectively coated with a coating of a polymerized rosin containing an abietic acid dimer in an amount of at least about ten percent.

3,518,121 NONAQUEOUS AMMONIA PRIMARY CELL UTILIZING NITRATED POLYSTYRENE CATHODE OXIDANT

Charles P. Haber, Riverside, and Gerald E. McWilliams, Corona, Calif., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed July 16, 1969, Ser. No. 842,363

Int. Cl. H01m 15/00

U.S. Cl. 136—83 8 Claims
Ammonia batteries using polynitrostyrenes as the active oxidant in a conductive cathode matrix; the polymeric oxidant being insoluble in the electrolyte does not migrate physically allowing efficient battery operation for extended periods of time.

3,518,122 FUEL CELL BATTERY FOR USE WITH AN ELECTROLYTE AS CARRIER FOR EMUL- SIFIED REAGENTS

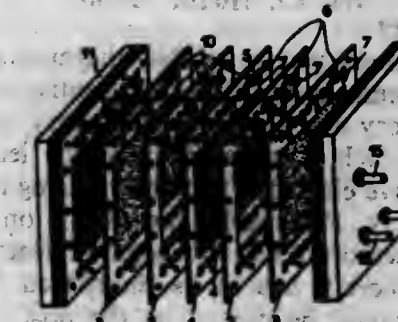
Bernard Warraswold, Paris, France, assignor to Societe General de Constructions Electriques et Mecaniques (Alstom), Paris, France, a corporation of France

Filed Feb. 26, 1968, Ser. No. 708,224

Claims priority, application France, Feb. 24, 1967, 2,735

Int. Cl. H01v 27/00, 27/26

U.S. Cl. 136—86 6 Claims



A fuel cell battery is formed by stacking a number of similar fuel cell units, formed as thin plates. A separate supply duct system for electrolyte and for first and second type reagents is formed in the stack of the units, with interconnections formed immediately adjacent the faces of the fuel cell electrodes to mix electrolyte and emulsified reagent (of oxidizing, and reducing type, respectively, at different faces of the electrode) immediately prior to application of the electrolyte-reagent emulsion to the electrode face.

3,518,123 METAL/AIR BATTERY

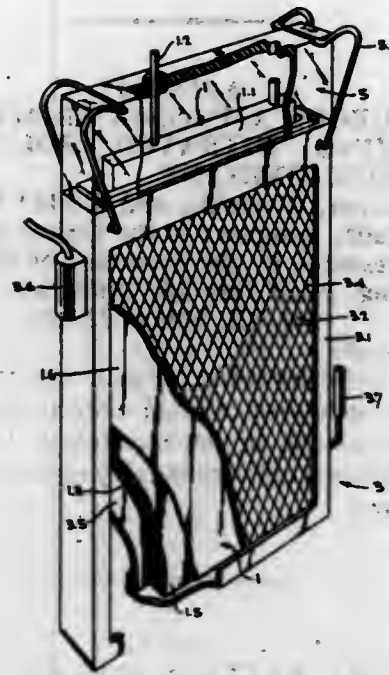
Emanuel G. Katsoulis, Long Island City, and John J. Prescia, Elmont, N.Y., assignors to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts

Filed June 10, 1968, Ser. No. 735,872

Int. Cl. H01m 27/00

U.S. Cl. 136—86 8 Claims
A metal/air cell is described comprising an air depolarized cathode having a hydrophobic polymer member in contact at one surface with an electrocatalyst, a

consumable metal anode, and an ion-conductive electrolyte separating said anode and cathode. The cell, which vent being set to open at a predetermined pressure developed in the battery during melting of the electrolyte



can be mechanically or electrically recharged, includes an electrolyte and/or water reservoir.

3,518,124

METHOD OF FORMING THE ELECTRODES IN A LOW MAINTENANCE STORAGE BATTERY
Joseph C. Duddy, Trevese, Pa., assignor to ESB Incorporated, a corporation of Delaware
No Drawing. Filed Sept. 6, 1968, Ser. No. 758,137
Int. Cl. H01m 39/00

U.S. Cl. 136—27. 2 Claims
A high polymer, water soluble thermoplastic film is interposed between the positive and negative electrodes of a lead acid battery and acts as a temporary colloidal trap for antimony which is released from the lead-antimony grid of the positive electrode primarily during initial charging of the battery. Preferably, the film is on the side of the battery separator facing the negative electrode. However, the film merely has to be interposed between the electrodes and could be placed on the positive electrode or the negative electrode.

In practice, the film is a homopolymer of polyethylene oxide which tends to precipitate in low pH acids to form a gel. The gel easily disperses and essentially disappears into solution upon agitation. Therefore, when a separator having this film on one side is placed in the electrolyte of a lead acid battery, the film turns to a gel and during charging of the battery the gel particles trap antimony moving from the positive to the negative electrode. As the charging continues and gassing commences, the gel disperses under the scrubbing action of the gas stream permitting the trapped antimony to reach the substantially fully charged negative electrode where it combines with hydrogen gas and is dissipated as stibine.

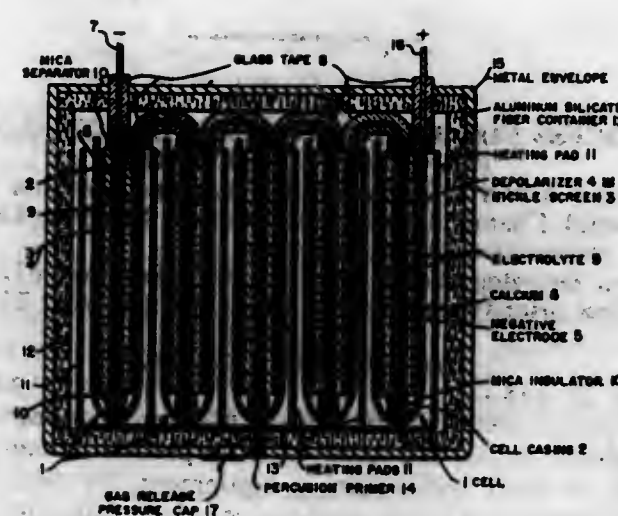
3,518,125

THERMAL BATTERIES

Adolph Fleischbach, Elberon Park, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed May 11, 1962, Ser. No. 195,026
Int. Cl. H01m 1/06, 17/06

U.S. Cl. 136—90. 4 Claims
1. A thermal battery comprising a solid electrolyte melting at temperatures between 150° C. and 600° C., the elements of said cell being hermetically sealed in a steel container said steel container having a vent, said



to allow all gas bubbles to escape from the electrolyte while it is melting.

3,518,126

DEFERRED ACTION BATTERY

Shiro Matsuno and Yoshio Kobayashi, Takatsuki, Japan, assignors to Yuasa Battery Company Limited, Haku-baicho, Takatsuki, Osaka Prefecture, Japan
Filed May 10, 1968, Ser. No. 728,122
Int. Cl. H01m 17/00

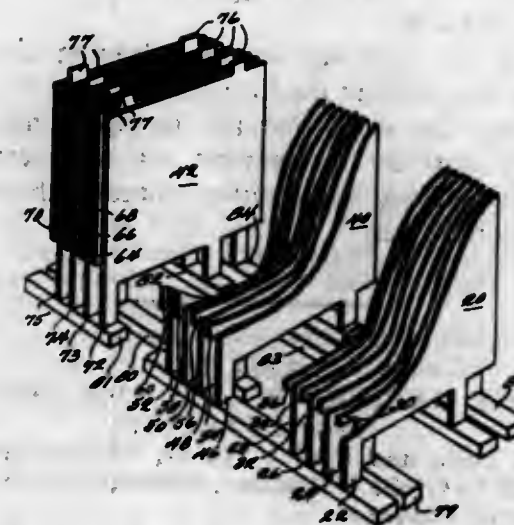
U.S. Cl. 136—100. 2 Claims
This invention relates to a deferred action battery adapted for long-time discharge that comprises a cake of active mixture serving as a cathodic oxidizing agent. The cake of active mixture is formed of powdered cupric sulfate bound together with synthetic resin and molded. Magnesium zinc and their alloys are used as an anodic reducing agent. Aqueous neutral salt solutions are used as an electrolyte.

3,518,127

FLOOR INTERCONNECTING BATTERY CELLS

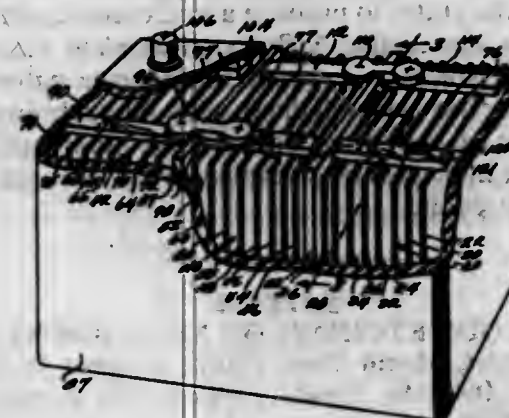
Robert R. Aronson, Ferndale, Mich., assignor, by mesne assignments, to Electric Fuel Propulsion, Inc., Ferndale, Mich., a corporation of Delaware
Filed Dec. 26, 1967, Ser. No. 693,274
Int. Cl. H01m 35/32

U.S. Cl. 136—134. 13 Claims



This invention relates to a storage battery with a plurality of intercellular separated connections within the battery case. Conducting bars, which link all the plates

of the same polarity in each cell, may extend through openings in the partitions separating adjacent cells to effect serial intercellular connection. A method of constructing the invention comprises pouring molten lead into troughs cut in or formed on the battery floor to form bars, certain troughs in adjacent cells being joined by an opening through the adjoining partition so that lead



moves into the opening. The plates are then set into the molten lead bars, which then harden and serve as intercellular and intracellular connections. A second method comprises attaching bars linking all the plates of the same polarity in each cell to connecting members associated with each partition to effect serial intercellular connection.

3,518,128

PROCESS FOR MANUFACTURING HIGH-STRENGTH, WEAR-RESISTANT PISTON RINGS

Tsutomu Takao, Kawaguchi-shi, and Kentaro Takahashi, Ohmiya-shi, Japan, assignors to Nippon Piston Ring Co., Ltd., Tokyo, Japan
No Drawing. Filed June 29, 1967, Ser. No. 649,865
Claims priority, application Japan, July 23, 1966, 41/48,226

Int. Cl. C21d 5/14

U.S. Cl. 148—3. 4 Claims
A process for manufacturing high-strength, wear-resistant piston rings by pouring a green ferrous material in a molten state consisting of 2.0–3.2% carbon, 0.6–1.5% silicon, 1% or less manganese, 1.0% or less phosphorus, 0.3% or less sulphur, 0.002–0.04% boron and 0.1–0.3% chromium, and the balance iron, into molds and leaving it as cast therein so that it may structurally be formed into white cast iron, removing the molded ferrous material from the molds and then subjecting the thus-obtained castings to specific heat treatments, such as tempering, reheating, quenching and the like, to thereby obtain high-strength, wear-resistant piston rings.

3,518,129

NOVEL PHOSPHATING SOLUTIONS CONTAINING LEAD AND FLUORIDE IONS

John W. Forsberg, Mentor-on-the-Lake, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
No Drawing. Filed Jan. 11, 1968, Ser. No. 697,020

Int. Cl. C23f 7/08

U.S. Cl. 148—6.15. 10 Claims
Aqueous phosphating solutions containing phosphate, nitrate, lead and fluoride ions apparently form a crystalline, fluoride-containing apatite-like coating on metal surfaces. This coating results in improved adhesion of siccativ organic coatings as compared with other lead phosphate solutions, while preserving the properties of weldability, improved drawing properties and improved adhesion of electrophoretic paints imparted by these other solutions.

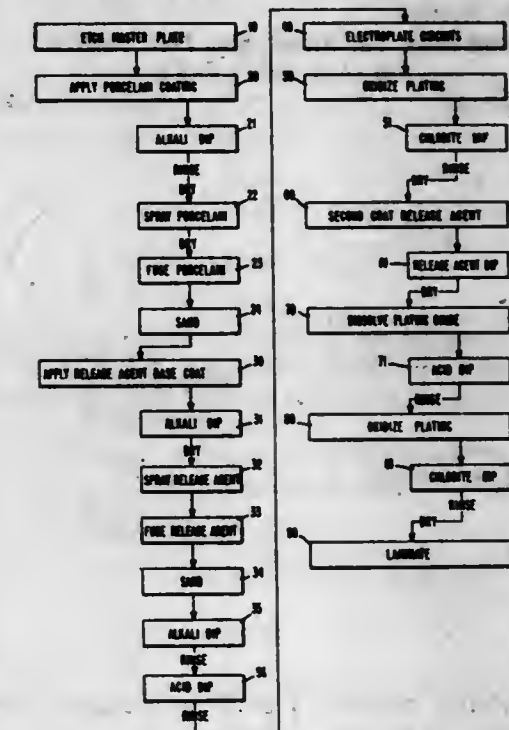
3,518,130

METHOD OF MAKING CONDUCTIVE CIRCUIT PATTERNS BY INTAGLIO PROCESS

Zdenek Cacka, Forest Hills, and Glenn V. Elmore, Vestal, N.Y., assignors, by direct and mesne assignments, to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Jan. 16, 1967, Ser. No. 609,350

Int. Cl. C23f 1/02; B44c 1/24

U.S. Cl. 156—3. 6 Claims



disclosure relates to a method for selectively etching out defects in a junction near the surface of a semiconductor.

3,518,132 CORROSIVE VAPOR ETCHING PROCESS FOR SEMICONDUCTORS USING COMBINED VAPORS OF HYDROGEN FLUORIDE AND NITROUS OXIDE

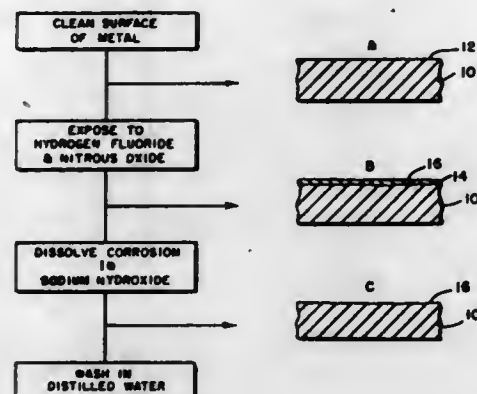
William B. Glendinning, Monmouth, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed July 12, 1966, Ser. No. 564,705

Int. Cl. H01L 7/34

U.S. Cl. 156—17

8 Claims



This disclosure relates to etching processes and particularly to etching by means of a vapor.

More particularly this disclosure describes the use of the combined vapors of hydrogen fluoride and of nitrous oxide applied to the surface of a semiconductor to cause a corrosive growth on the surface. This corrosive growth is removed by dissolving in a solution such as sodium hydroxide to leave an etched surface.

3,518,133 METHOD FOR MEASURING THE THICKNESS OF A DIFFUSED SURFACE LAYER

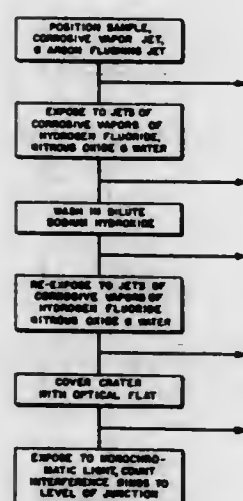
William B. Glendinning, Belford, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed June 1, 1967, Ser. No. 643,331

Int. Cl. H01L 7/50; G02F 1/34

U.S. Cl. 156—17

5 Claims



This invention is a method for measuring the thickness of a diffused surface layer that forms a junction with a

flat, silicon semiconductor. In this method, a very fine jet of hydrogen fluoride and other vapors are used to corrode through the diffused surface layer and the junction at a given point. The excess vapors are flushed away with a jet of argon gas. The corroded portion of the surface layer and junction, at the given point, is washed away, in a bath of dilute sodium hydroxide, to leave a crater. An additional jet of the same corrosive vapors is directed at the crater to produce a microscopic, delineating layer within the crater. A flat, optical plate placed over the crater produces a series of interference pattern rings within the crater when lighted with monochromatic light. The number of such rings between the outer surface and the junction indicates the thickness of the diffused surface layer at that point.

3,518,134 GASEOUS ETCHING OF MOLYBDENUM

Ruth C. Preist, Menlo Park, Calif., assignor to Stanford Research Institute, Menlo Park, Calif., a corporation of California

No Drawing. Filed Aug. 14, 1967, Ser. No. 660,241

Int. Cl. C23b 3/00; C23f 1/02

U.S. Cl. 156—18

11 Claims

A procedure for the precision etching of molybdenum surfaces at an etch rate of 0.1 to 1 micron or more per minute with a high etch factor is disclosed by heating the surface to a temperature above 300° C. while delivering to the surface a mixture of oxygen and hydrogen chloride gases at a pressure below about one atmosphere and removing the volatile oxychloride reaction gases from the etched surface. Precision etched patterns are obtained by the use of a thin film of aluminum oxide resist film on the surface.

3,518,135 METHOD FOR PRODUCING PATTERNS OF CONDUCTIVE LEADS

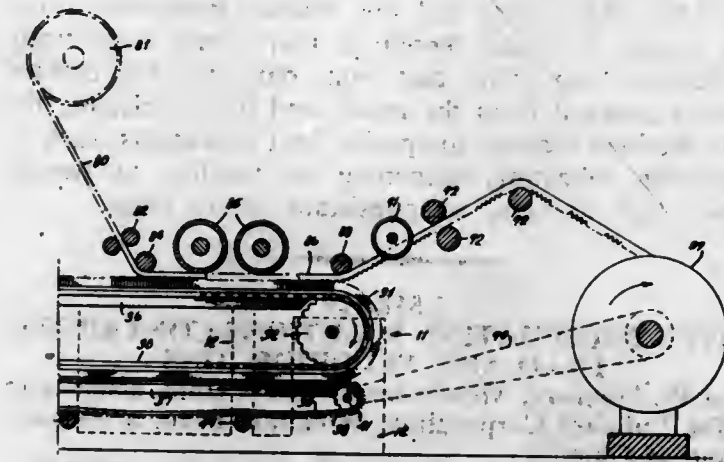
Nino P. Cerniglia, Revere, Jacob S. Crytzer, Hingham, and Richard C. Tonner, Braintree, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Jan. 30, 1967, Ser. No. 612,636

Int. Cl. H01L 7/50; C23f 1/00

U.S. Cl. 156—17

5 Claims



Method of forming two layers of conductive leads on the upper surface of a semiconductor device in which the two layers of leads are separated by a layer of silicon oxide or a related material. After the leads of the first layer have been formed and a layer of silicon oxide has been deposited on the leads, but before the leads of the second layer are formed, openings to permit interconnections between the two layers of leads are etched in the silicon oxide layer by an etching solution of hydrofluoric acid, ammonium fluoride, and an alcohol.

3,518,136 METHOD FOR WELDING PLASTIC MEMBERS

Eiji Mori, 10-35 2-chome, Ohokayama, Maeno-ku, Tokyo, Japan; Masao Ide, 15-18 1-chome, Ishikawamachi, Ohta-ku, Tokyo, Japan; and Seiji Kaneko, 187 1-chome, Kamiochikawa, Shizuoka-ku, Tokyo, Japan

Filed Oct. 13, 1967, Ser. No. 675,109

Claims priority, application Japan Oct. 19, 1966, 41/68,309, 41/68,310; Mar. 22, 1967, 42/17,606

Int. Cl. B29c 27/08

U.S. Cl. 156—73

5 Claims

A method for welding plastic members comprises passing ultrasonic waves of a frequency above 100,000 cycles per second through a liquid medium wherein the waves are focused onto the surfaces of plastic members to be welded, there being a liquid film in contact with the surface of one of the plastic members through which the waves are propagated.

3,518,137 METHOD AND APPARATUS FOR PRODUCING SAFETY GLASS PANEL ASSEMBLY

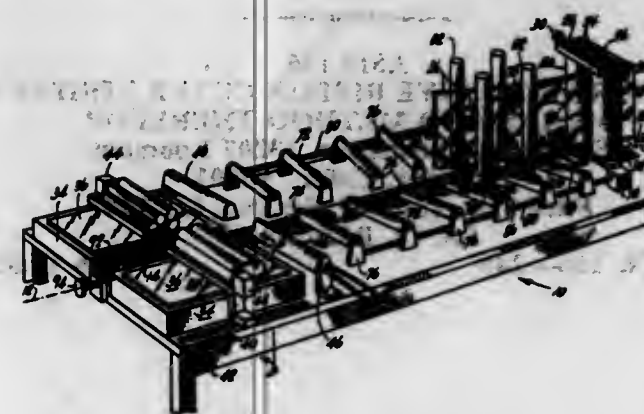
Vern E. Hamilton, Palos Verdes Estates, Calif., assignor, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed Oct. 31, 1966, Ser. No. 590,972

Int. Cl. B32 17/10

U.S. Cl. 156—104

20 Claims



Apparatus includes means to support two plates of glass with adhesive on at least one of them in vertical closely spaced relation. Plates are fed between vertical nip rollers while spaced apart by rigid spacing means at one or both lateral margins. Plates move past spacers and through nip rollers to be gradually adhered while driving out and preventing entrainment of air. Adhered plates may be passed through second set of sizing rollers to bring total thickness of laminate to desired size and also to force adhesive toward leading edge to eliminate slight gap formed at initiation of process.

3,518,138 NYLON TIRE CORD

Solomon P. Herah, Raleigh, Norman W. Boe, Durham, and George C. Stew, Jr., Chapel Hill, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Jan. 19, 1965, Ser. No. 426,661. Divided and this application Jan. 21, 1969, Ser. No. 821,534

Int. Cl. B29b 17/00; D02g 3/40

U.S. Cl. 156—110

14 Claims

Nylon reinforced vehicle tires have minimum flatspotting when the reinforcing cords that are embedded into the rubber plies of the tires have diffused throughout the yarns which make up the cords an organic hydroxylated plasticizer in an amount sufficient to decrease the cord modulus prior to hot stretch processing by at least 10 percent. After the cords have been subjected to hot stretch processing, a definite increase is observed in their modulus.

3,518,139 SHAPED ARTICLES FROM POLYURETHANES CURED WITH PHENOL BLOCKED POLYISOCYANATES

John A. Lovell, Monroe Falls, and Earl C. Graham, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 29, 1967, Ser. No. 671,578

Int. Cl. B29h 11/00

U.S. Cl. 156—112

7 Claims

This invention relates to a method of forming shaped articles with fluid reactants at about 75 to 150° F. by forming a reaction mixture of a liquid reactive hydrogen containing material of about 500 to 6000 molecular weight and organic polyisocyanate which is liquid at a temperature of about 150° F. and a phenol blocked organic polyisocyanate optionally with an inert filler, placing said mixture in a shaper and reacting to obtain a shaped gumstock and curing at a temperature of at least 250° F.

3,518,140 METHOD FOR ONE STAGE BUILDING OF RADIAL PLY TIRES BY SANDWICHING TREAD STRIPS BETWEEN THE RADIAL PLYS BEFORE EXPANSION TO TIRE FORM

John C. Smithkey, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 444,691, Apr. 1, 1965. This application Aug. 10, 1966, Ser. No. 571,575

Int. Cl. B29h 17/14, 17/26

U.S. Cl. 156—123

1 Claim

A pneumatic tire and a method of building the same in which one or more bias type breaker strips are applied between successive radial type carcass plies. The breaker strips are then pantographed upon shaping the tire to its toroidal shape thereby reducing the angle of the cords, decreasing the width of the strip or strips and increasing the length and thickness thereof.

3,518,141 METHOD OF APPLYING PHOTOGRAPHIC COATINGS TO A MOVING WEB WITH A SPLICED JOINT

Richard T. Bouras and Lawrence G. McDonald, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

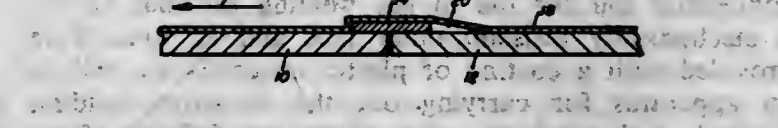
Continuation-in-part of application Ser. No. 679,083, Oct. 30, 1967. This application Oct. 28, 1968, Ser. No. 770,950

Int. Cl. B31f 5/00

U.S. Cl. 156—157

1 Claim

A method for reducing coating disturbances at splices in a web being coated by treating the splicing tape and the adjacent web surface with a material to prevent air entrapment in the coating.



A method for reducing coating disturbances at splices in a web being coated by treating the splicing tape and the adjacent web surface with a material to prevent air entrapment in the coating.

3,518,142 PROCESS FOR APPLYING HOT MELT ADHESIVE TO CORRUGATED PAPERBOARD

William P. Doble, Wallingford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 21, 1965, Ser. No. 473,581

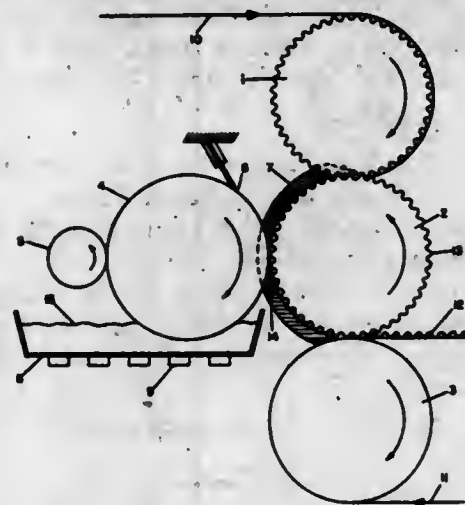
Int. Cl. B31f 1/22

U.S. Cl. 156—205

25 Claims

Corrugated paperboard which is highly resistant to the effects of moisture can be produced at high rates of

speed, i.e., up to and exceeding 1000 linear feet per minute by the use of hot melt adhesives which are applied to the flute tips of the corrugated medium. In order to operate successfully on corrugating machinery, the hot



melt adhesives must have ring and ball softening points in the range of 160-240° F. and Brookfield viscosities of 15,000-58,000 centipoises in the temperature range of about 280° F.-310° F.

3,518,143

METHOD OF WELDING WRITING MATERIALS, THERMOPLASTICS FOIL FOR WELDING THE WRITING MATERIALS AND APPARATUS FOR CARRYING OUT THE METHOD, EMPLOYING THE THERMOPLASTICS FOIL

Hans Führ, Aachener Strasse 90, Cologne, Germany

Filed Oct. 23, 1965, Ser. No. 502,881

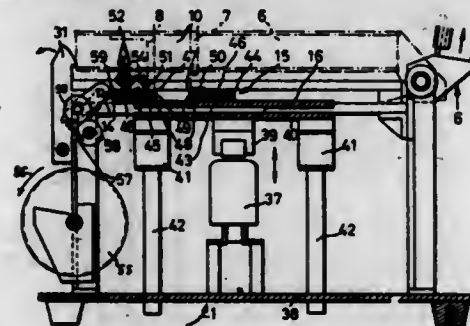
Claims priority, application Germany, Oct. 24, 1964,

A 47,425

Int. Cl. B42c 13/00, 19/00

U.S. Cl. 156-212

21 Claims



Method for welding together sheets of writing materials to be united on their end faces by a welding foil with synthetic plastic material, under the action of pressure and heat, so that a flexible binding is produced—a connecting foil for use in the welding method, having a mechanically resistant outer face and an inner face provided with a coating of plastic material—as well as an apparatus for carrying out the inventive welding method, and employing the connecting foil as aforementioned.

3,518,144

METHOD FOR PROVIDING CARTON BLANKS WITH A COATING OF PLASTIC

Torsten Jeppsson, Kjell Ingvar Holmström, and Rolf Magnus Dilot, Lund, Sweden, assignors to AB Akerlund & Ransing, Lund, Sweden, a firm of Sweden

Filed Mar. 20, 1967, Ser. No. 624,561

Claims priority, application Sweden, Mar. 25, 1966,

3,957/66

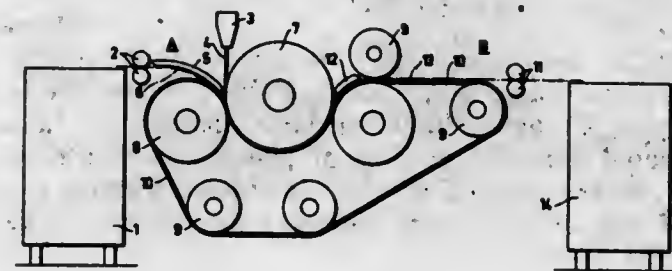
Int. Cl. B29c 17/14

U.S. Cl. 156-244

1 Claim

A method for providing carton blanks with a coating of a transparent plastic material and wherein printed matter on a surface of the carton blanks is viewable beneath

the plastic coating. The blanks are fed longitudinally in succession and with a slight gap between the edges of successive blanks to a station where the transparent plastic material is extruded as a web and applied in web form by a press roll to the printed surface of the line of blanks, the plastic web bridging the gaps between successive blanks. The continuous composite material which now



consists of the web of plastic material united to the line of carton blanks is cooled by a cooling roll and then passed between stretch rolls running at a surface speed in excess of the linear speed of the composite material which serve to accelerate the composite material and hence effect stretching and breaking of the plastic web in the gaps between successive blanks, thus separating the plastic coated blanks from each other.

3,518,145

PRESSURE SENSITIVE RIBBON COVER STRIPPING MEANS AND METHOD THEREFOR

Ferdinand Christensen, 13207 Loumont,

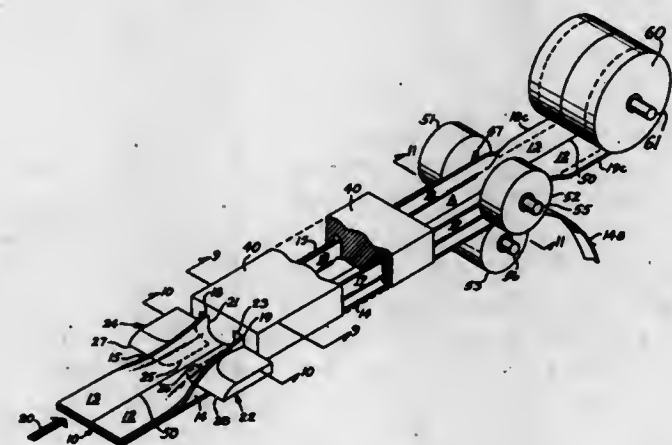
Whittier, Calif. 90601

Filed Mar. 13, 1967, Ser. No. 622,744

Int. Cl. B32b 31/00

U.S. Cl. 156-248

6 Claims



This invention defines means for stripping the edge portions of a pressure sensitive adhesive ribbon so as to permit ready removal of release paper covering thereon and assembly thereof with other components to be attached by the adhesive ribbon and provide grab surfaces by which the remainder of the cover can be removed to expose the adhesive surface of the ribbon.

3,518,146

METHOD OF MAKING SIMULATED INLAID DESIGNS

Marvin E. Plympton, San Diego, Calif.

(507 Maitland St., Imperial Beach, Calif. 92032)

Filed Mar. 25, 1966, Ser. No. 544,055

Int. Cl. B29c 9/00

U.S. Cl. 156-245

3 Claims

A method of manufacturing ornamental objects with simulated inlaid designs in which a partially gelled ther-

mosetting resin is covered with a second thermosetting resin, a design sheet is immersed in the second resin, and



a simulated inlaid material is placed in the second resin to completely cover the area of design.

3,518,147

PROCESS AND APPARATUS FOR MANUFACTURE OF NOVEL JOINT

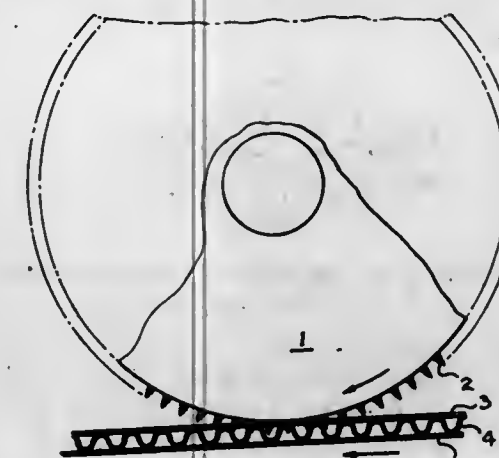
John H. Harmsen, Streator, Ill., assignor to Owens-Illinois, Inc., a corporation of Ohio

Filed Jan. 4, 1967, Ser. No. 607,291

Int. Cl. B32b 31/18

U.S. Cl. 156-252

10 Claims



This invention comprises joining together two or more layers of corrugated paperboard by perforating the surface of at least one layer and providing a multiplicity of apertures therein by means of a series of elongated elements, each of said elements having a coarse and uneven surface so as to remove perforated material from each aperture upon withdrawal of each element. An adhesive bonding agent is then applied to at least one layer in an amount sufficient to at least partially fill a portion of the apertures when the adhesive-containing, perforated or non-perforated layer is overlapped and contacted with the perforated or non-perforated surface of another layer. The two surfaces are maintained in direct contact position by an applied force until the agent has set sufficiently to join the surfaces of the overlapped layers.

3,518,148

APPARATUS FOR BONDING A FLEXIBLE PLASTIC BACKING TO A SYNTHETIC FIBER TEXTILE

Earl H. Jacobson, Cayuga, N.Y., assignor to Auburn Plastics, Inc., Auburn, N.Y., a corporation of New York

Filed Mar. 16, 1967, Ser. No. 623,665

Int. Cl. B29c 3/00

U.S. Cl. 156-380

3 Claims

An apparatus for bonding a plastic backing to a textile of synthetic fibers includes a flexible endless translucent

belt supported on a translucent table top having radiant heaters thereunder. The method comprises spreading liquid plastic on the belt, pressing the textile on the



3,518,149

SEALING APPARATUS FOR SHAPING OF RADIAL TIRE CARCASSES

Henri Mirtain, Compiègne, France, assignor to Societe Francaise du Pneu Englebert, Châlons, Val-d'Oise, France, a corporation of France

Filed May 18, 1966, Ser. No. 551,021

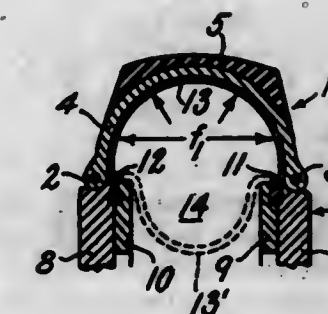
Claims priority, application France, Apr. 14, 1966,

57,688

Int. Cl. B29h 17/26, 17/16

U.S. Cl. 156-416

3 Claims



Sealing apparatus including a resilient annular seal for each end flange of tire building supports on which the tire carcass is to be inflated. The seal has a lip having a cross section, at the periphery, of a right triangle with the hypotenuse extending outwardly to sealingly contact the inner bead area of the tire carcass when inflated, but forming a clearance prior to inflation.

3,518,150

DEVICES FOR BONDING THERMOPLASTIC FILAMENTS

Sol L. Giles, Monrovia, Calif., and Philip G. Patch, 18084 Sandy Cape Drive, Pacific Palisades, Calif. 90272; said Giles assignor to said Patch

Filed Sept. 27, 1966, Ser. No. 583,137

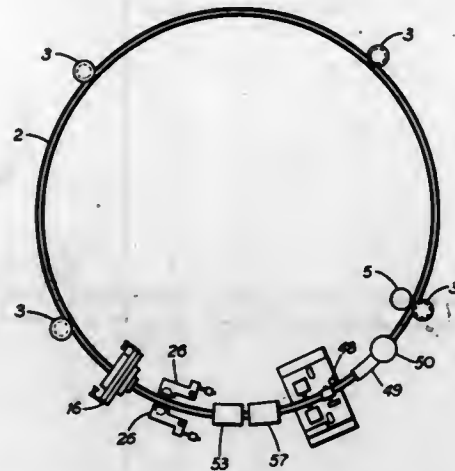
Int. Cl. B65h 81/00

U.S. Cl. 156-426

9 Claims

An apparatus producing thermoplastic strips of bonded material suitable for use as artificial eyelashes or the like comprised of a driven mandrel ring adapted during its movement to receive weft and warp filaments and move

the same through a sequential bonding, curing, cutting, stripping and collecting operation, whereafter the indi-

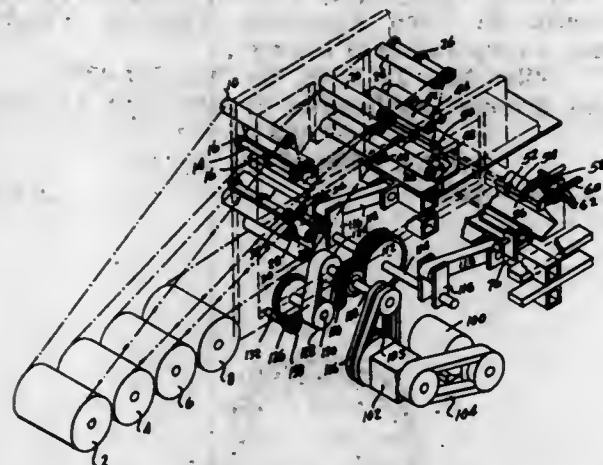


vidual strips can be cut widthwise to provide smaller usable strips.

3,518,151
MEANS FOR PRODUCING HONEYCOMB STOCK
Daniel H. Ellnor, 11418 Denton Drive,
Dallas, Tex. 75229
Filed Nov. 24, 1967, Ser. No. 685,355
Int. Cl. B32b 31/18

U.S. Cl. 156—512

4 Claims

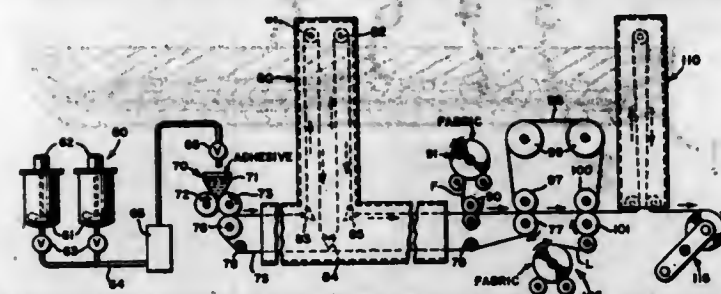


Means for severing predetermined lengths from a plurality of superimposed webs which previously have had imprinted on selected surfaces thereof spaced stripes of adhesive, said means comprising: a pair of constantly rotating feed rolls advancing said superimposed webs therebetween; a pair of intermittently rotating feed rolls receiving said webs from said constantly rotating rolls; a reciprocating cutter synchronized with said intermittently rotating rolls and acting to sever strips of predetermined width from said superimposed webs; a magazine to receive the severed strips in stacked relationship; means movable with said cutter for pressing said strips into said magazine, and a dancer roll to remove slack from said webs between said constantly and said intermittently rotating rolls.

3,518,152
APPARATUS FOR PRODUCING FABRIC-FILM LAMINATES
Michael Storti, Barrington, R.I., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 500,904
Int. Cl. B32b 31/08

U.S. Cl. 156—540 2 Claims
Apparatus for forming composite laminates including a fabric substrate and an adhesive film wherein a continuous film of adhesive composition is formed, dried to a tacky but uncured state, thereupon laminated to a fabric substrate web, and thereafter wound up as a

preliminary laminate product for subsequent laminating with other materials or for forming by a molding or embossing process coupled with permanent curing. Alternatively, before being wound up, the preliminary



laminate may be immediately laminated with a fabric layer or other material layer to provide a three component laminate or immediately formed by molding or embossing and finally permanently cured.

3,518,153
EMBOSSING FLOOR MATERIAL
David K. Slosberg, Yardley, Edward M. Nakonieczny, Philadelphia, and Merrill M. Smith, Morrisville, Pa., assignors to American Bitrite Rubber Co., Inc., Trenton, N.J., a corporation of Delaware
Filed May 3, 1966, Ser. No. 547,219
Int. Cl. B32b 7/10; B44f 1/04

U.S. Cl. 161—5

15 Claims

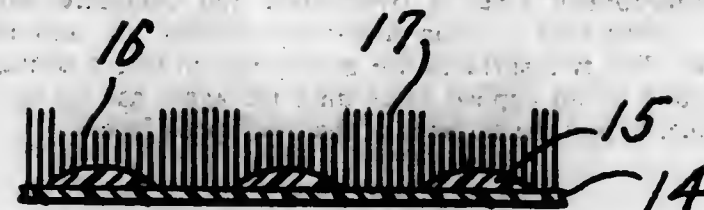


The invention is a composite flooring material having two layers of vinyl resins. The base layer has an embossed surface, and to this embossed surface is fusion bonded a top layer of vinyl resin, the upper surface of the latter being smooth. If desired, a reflective material may be incorporated between the two layers prior to bonding. The relationship between the viscosities of the two layers of vinyl resin is such that the upper layer may be fusion bonded to the lower layer without disrupting the embossed surface of the latter.

3,518,154
PROCESS FOR MAKING FLOCK DECORATED MATERIALS AND PRODUCT
Jack M. Broadhurst, Mishawaka, Ind., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey
Filed Sept. 6, 1967, Ser. No. 665,812
Int. Cl. D04h 11/00; B44c 1/08

U.S. Cl. 161—64

8 Claims



The invention resides in the production of a patterned flocked material produced without resorting to grid-like shield members. The pattern is effected by first depositing a liquid, plastic material on a continuous belt in an interrupted pattern containing a plurality of spaced open portions. Thereafter, the wet plastic design is flocked, heated, if necessary, so that it is partially fused or cured, and then this flocked component is passed onto a second releasable belt which has been prepared with a film of liquid plastic material. The entire composite is one again

flocked, preferably with a material exhibiting a different color or length, whereby the second application of flock fiber only adheres to those exposed surfaces of the second plastic layer. Lastly, the entire composite is passed through a final heating unit wherein the first flocked component is united to the second layer, and all the flock material is securely set.

3,518,155
BOND STRENGTH BETWEEN RUBBER AND TEXTILES
Helmut Freytag, Cologne-Stammheim, Ivo Dane and Erwin Muller, Leverkusen, and Guido Fromandi, Schildgen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 16, 1966, Ser. No. 572,661
Claims priority, application Germany, Sept. 18, 1965, F 47,241

Int. Cl. B32b 25/08, 27/05, 27/42
U.S. Cl. 161—92 5 Claims
Vulcanizable rubber mixture containing (a) tetramethylolacetylene-diurea or said diurea having one or more of its hydroxyl groups etherified or esterified and (b) 1,5-dihydroxynaphthalene or at least one benzene derivative substituted in the m-position by amino and/or hydroxyl and/or etherified or esterified hydroxyl groups or a condensate thereof with a ketone or an aldehyde and the utility thereof in producing rubber/fabric articles having the fabric bonded to said rubber.

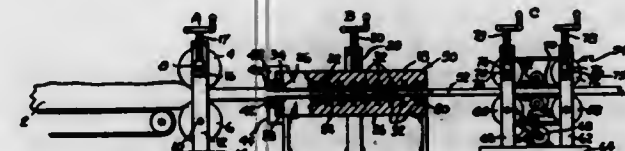
3,518,156
FIRE RETARDANT STRUCTURE
Leo J. Wendecker, Midland, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Sept. 29, 1967, Ser. No. 671,792
Int. Cl. B32b 7/00, 33/00

U.S. Cl. 161—161 9 Claims
A laminate panel is prepared employing an open cell plastic foam impregnated with a phenol-formaldehyde type resin and hardened to maintain the open cell structure. Skins are provided of a similar resin. The resultant panel is fire retardant and does not give off noxious fumes under the influence of flames.

3,518,157
METHOD FOR FORMING AND CURING FIBROUS MATERIALS
Rupert Douglas Terry, Toledo, George John Hannes, Maumee, and William Peter Hahn, Toledo, Ohio, assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 485,754, Sept. 8, 1965. This application May 26, 1967, Ser. No. 641,494
Int. Cl. D04h 1/58; B32b 5/02, 31/20

U.S. Cl. 161—170

6 Claims



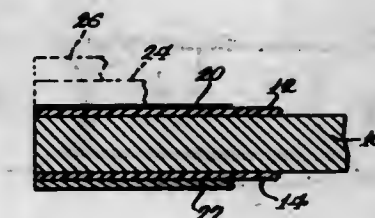
Continuous method of consolidating, shaping and setting a moving, low density loose mass of fibers containing binder throughout to produce permanently shape retaining, smooth surfaced products, comprising imparting to the fibers an initial compression and advancing the cure of the binder in the area adjacent the surfaces compressed, thereafter completing the compression to final density and configuration while ironing smooth the compressed

surfaces and completing the cure of the binder throughout, and moving the mass of fibers through the aforesaid operations by applying a pulling force upon the emerging bonded product; and means therefor comprising, for example, in sequence the combination of opposing heated rollers and fixed opposing heated platens with a device for applying a mechanical pulling force.

3,518,158
RELEASE SHEET OR WEB HAVING A PRINTABLE SURFACE
Alan R. Hurst, Hinsdale, Ill., assignor to ARHCO, Inc., a corporation of Illinois
Filed Oct. 31, 1968, Ser. No. 772,118
Int. Cl. C09j 7/02; B32b 7/06

U.S. Cl. 161—208

7 Claims



A laminate useful as a release sheet or web having a heavy paper layer with a silicone release coating, a polyethylene film layer bonded to the reverse surface of the heavy paper layer and a thin sheet or layer of printable paper bonded to the polyethylene layer. A second polyethylene film layer is preferably secured to the release side of the paper before applying the release coating. The resulting laminate is useful as a release web, e.g., for contacting, carrying and releasing tacky adhesive coated surfaces in the manufacture of labels or the like. The printable paper provides an exposed back surface for printing instructions, logos and the like.

3,518,159
METHOD OF MAKING A FAST-CURING ADHESIVE AND A METHOD OF BONDING MEMBERS UTILIZING SAID ADHESIVES
Harlan G. Freeman, Gene F. Baxter, and George Graham Allan, Seattle, Wash., assignors to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
No Drawing. Filed May 18, 1967, Ser. No. 639,270
Int. Cl. B32b 27/08, 27/42; C08g 37/06

U.S. Cl. 161—258 18 Claims
A method of bonding a number of members together at ambient temperature utilizing fast bonding adhesives wherein separate adhesive compositions are spread on each of the surfaces to be bonded, the adhesive compositions capable of reacting with each other on contact to produce an infusible glue line without the application of external energy. To one surface is applied an adhesive composition containing a phenol-resorcinol-aldehyde condensation product and excess aldehyde, and to the second surface is applied an adhesive composition containing as one of its components a polyfunctional aromatic amine.

3,518,160
CHEMICAL TRANSFER RECEIVING SHEETS AND A METHOD OF PREPARING SUCH SHEETS
Dorothy J. Beavers and Henry C. Yutzy, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Continuation of application Ser. No. 293,882, July 9, 1963. This application Feb. 16, 1968, Ser. No. 706,192
Int. Cl. D21d 3/00

U.S. Cl. 162—135 6 Claims
A nucleated receiving sheet when used in a diffusion transfer process comprises a paper support which has

impregnated therein a size comprising a hydrophilic colloid and silver precipitating nuclei. The size also preferably contains an antistain agent. Advantageously the size is applied as a tub size to the paper, and is impregnated therein by means of a size press roll.

3,518,161

SUCTION BOX WITH FORAMINOUS BELT RUNNING THEREOVER

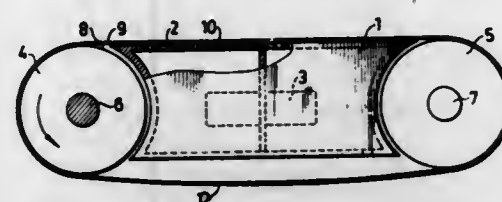
Hugo Ekberg, Villagatan 14, Ornskoldsvik, Sweden, and Bengt Georg Dahlberg, Vattagatan 3, Alfredshem, Sweden

Filed Mar. 24, 1967, Ser. No. 625,865

Int. Cl. D21f 1/48

U.S. Cl. 162-367

2 Claims



A suction box conveyor in which an endless belt of woven fabric (textile or wire) passes about rolls and over a foraminous upper deck of a suction box between rolls. Wrinkling and misalignment of the belt are avoided by driving one conveyor roll and providing it with a high friction surface such as rubber. The other conveyor roll idles and has a smooth surface. The lower run of the belt sags between the rolls. In the suction box, the hole area is at least 20% of the upper deck area and the upper edges of the holes are smoothly rounded.

3,518,162

NUCLEAR REACTOR CONTROL ELEMENT DRIVE APPARATUS

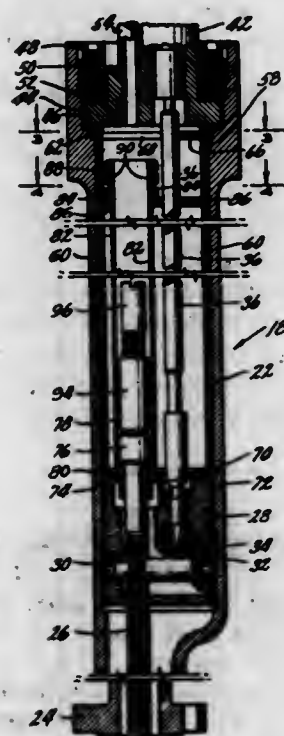
Harold V. Lichtenberger, West Simsbury, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware

Filed Oct. 10, 1967, Ser. No. 674,206

Int. Cl. G21c 7/20

U.S. Cl. 176-36

6 Claims



A rack and pinion nuclear reactor control element drive assembly with a piston and cylinder arrangement to guide the upper end of the rack and to control the rate of

descent and deceleration of the control element during scram by means of reactor coolant liquid inlet and outlet openings in the cylinder. The cylinder is open at the top to permit access to means for uncoupling the control element assemblies from the drives.

3,518,163

SODIUM-COOLED FAST-FLUX TEST REACTOR

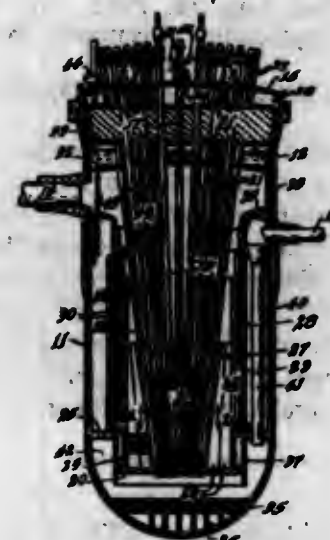
Deslonde R. de Boisblanc, Idaho Falls, Idaho, assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 4, 1968, Ser. No. 718,685

Int. Cl. G21c 1/02

U.S. Cl. 176-40

2 Claims



A sodium-cooled fast-flux test reactor including a core consisting of an array of hexagonal fuel tubes tilted to conform to a split truncated cone. A plurality of vertical closed test loops are arranged in a vertical plane bisecting the conical reactor core.

3,518,164

DIAGNOSTIC SPUTUM COLLECTION SYSTEM

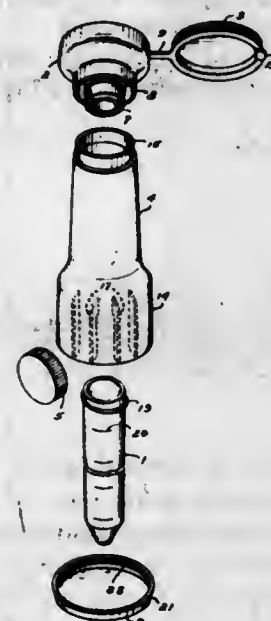
John Philip Andelin, Los Angeles, and Jay H. Moody, Northridge, Calif., assignors to B-D Laboratories, Inc., East Rutherford, N.J., a corporation of Delaware

Filed Apr. 11, 1967, Ser. No. 630,099

Int. Cl. C12k 1/04

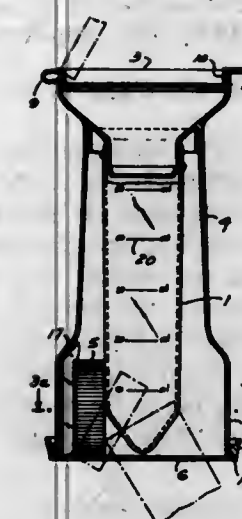
U.S. Cl. 195-127

8 Claims



A sputum collection system is disclosed wherein a graduated elongated specimen receptacle is provided which

communicates with and is removably held by the discharge tube of a funnel. The receptacle and funnel assembly is secured to and supported in vertical position by an outer protective body in which the specimen receptacle



is coaxially enclosed. The specimen receptacle is removable from the funnel through the open flared base of the outer protective body and is provided with a sealing screw cap.

3,518,165

PROCESS FOR SEPARATING ALKYLATION EFFLUENT BY PLURAL STAGE DISTILLATION WITH BENZENE RECYCLE

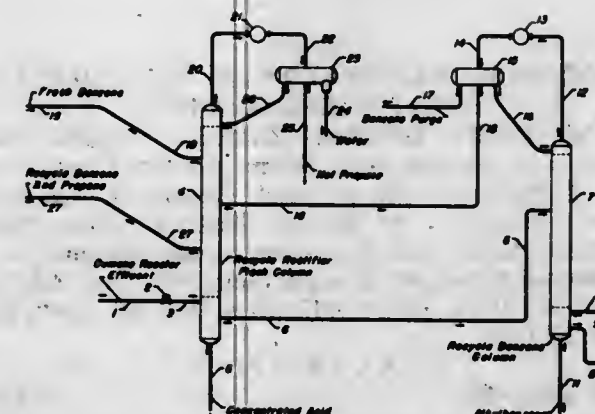
Dennis J. Ward, Lombard, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Mar. 29, 1968, Ser. No. 717,099

Int. Cl. B01d 3/00

U.S. Cl. 203-78

6 Claims



Separation process for a reaction zone effluent, such as an aromatic alkylation reaction zone effluent. The effluent is passed into a rectified flash zone under conditions sufficient to provide an overhead fraction comprising diluent, a side-cut fraction comprising diluent and alkylatable aromatic compound, and a bottoms fraction comprising alkylatable aromatic compound and alkylated aromatic compound. The bottoms fraction is separated into an alkylatable aromatic fraction and an alkylated aromatic fraction. The alkylatable aromatic fraction is returned to the rectified flash zone as reflux and the side-cut fraction therefrom is returned to the aromatic alkylation reaction zone, while the overhead fraction and the alkylated aromatic fraction are recovered. The process is equally effective in the separation of the effluent from an oligomerization reaction zone. Specific application of the process is in the synthesis of ethylbenzene, cumene, heptene, propylene-trimer, and propylene-tetramer.

3,518,166

HYDROGEN SULFIDE AND AMMONIA RECOVERY BY DEGASSING AND PLURAL DISTILLATION WITH AMMONIA RECYCLE

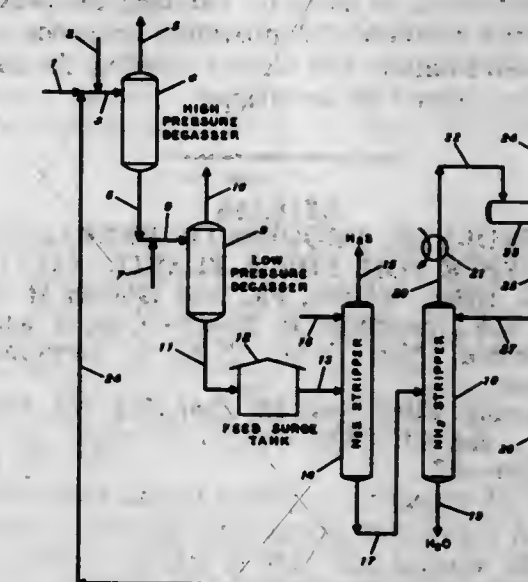
Robert J. Klett, San Francisco, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

Filed Sept. 26, 1968, Ser. No. 762,701

Int. Cl. B01d 3/06; 19/00; C01c 1/10

U.S. Cl. 203-78

6 Claims



Operation of a process to recover H_2S and NH_3 from an aqueous solution of H_2S , NH_3 , and light hydrocarbons under superatmospheric pressure, wherein the H_2S and NH_3 are recovered separately from an H_2S stripper and an NH_3 stripper, respectively, is improved from a control and stability standpoint, and aqueous feed solutions of high H_2S content are more advantageously handled by (1) combining an NH_3 -rich, H_2S -lean condensate stream generated in the overhead system of the NH_3 stripper with the aqueous solution of NH_3 , H_2S , and light hydrocarbons; then (2) removing light hydrocarbons as gases by reducing the pressure on the combined solution; (3) providing residence time for the combined solution; and then (4) feeding the combined aqueous feed stream to the H_2S stripper.

3,518,167

HYDROGEN SULFIDE AND AMMONIA RECOVERY BY DEGASSING AND DISTILLATION WITH AMMONIA RECYCLE

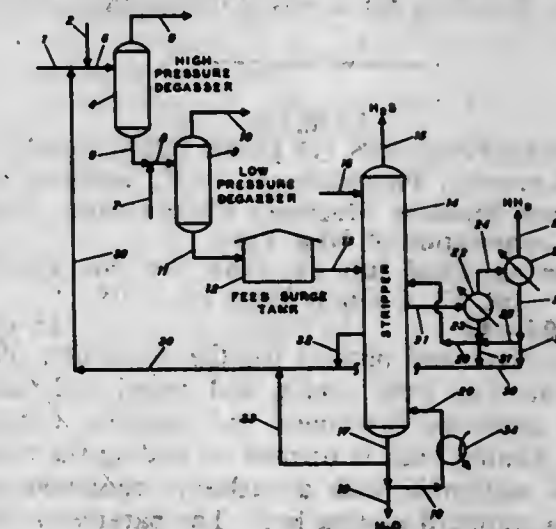
Robert J. Klett, San Francisco, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

Filed Sept. 26, 1968, Ser. No. 762,702

Int. Cl. B01d 3/06; 19/00

U.S. Cl. 203-78

6 Claims



Operation of a process to recover separate H_2S -rich and NH_3 -rich streams from an aqueous solution of H_2S ,

NH₃, and light hydrocarbons under superatmospheric pressure, wherein an aqueous solution of H₂S and NH₃ is fed to a stripper, is improved from a control and stability standpoint, and aqueous feed solutions of substantial or high H₂S content are more advantageously handled by (1) combining an NH₃-rich, H₂S-lean condensate stream, obtained by partial condensation of a vapor sidestream withdrawn from the stripper, with the aqueous solution of HN₃, H₂S, and light hydrocarbons; then (2) removing light hydrocarbons as gases by reducing the pressure on the combined solution; (3) providing residence time for the combined solution; and then (4) feeding the combined aqueous feed stream to the stripper.

3,518,168

ELECTROLYTIC PROCESS OF PREPARING A COPPER FOIL FOR A PLASTIC COAT

Thomas E. Byler, Warren, Pa., and Donald H. Osborn, Rome, N.Y., assignors to Revere Copper and Brass Incorporated, New York, N.Y., a corporation of Maryland

No Drawing. Filed Nov. 18, 1966, Ser. No. 595,348

Int. Cl. C23b 1/00, 3/00, 5/50

U.S. Cl. 204—32

1 Claim

Method of preparing a copper foil to increase the adhesion of a subsequent plastic coat by first electroetching in a specific mineral acid bath to attain a uniform roughened surface, secondly rinsing said surface and lastly electroplating dendritic copper deposits from a specific cyanide copper bath at a current density of about 50-130 amperes per square foot.

3,518,169

ALKALI SOLUTION TREATMENT OF CATHODICALLY CHROMATED METAL SURFACE

Taro Oyama and Tsuneo Inui, Kudamatsu-shi, Japan, assignors to Toyo Kasei Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed July 13, 1965, Ser. No. 471,703

Int. Cl. C23f 13/00; C23b 11/00

U.S. Cl. 204—35

6 Claims

Cathodically chromated metal surfaces treated with an aqueous solution containing at least one alkaline salt selected from the group consisting of ammonium hydroxide, alkali metal hydroxides, alkaline earth hydroxides, alkali metal—and ammonium salts of acetates, borates, carbonates, bicarbonates, chromates, dichromates, formates, oxalates, phosphates, pyrophosphates, hypophosphates, phosphites, hypophosphites and silicates exhibit substantially improved corrosion resistance and are highly receptive to organic coatings. Preferably the treatment may be carried out cathodically at a temperature of from 30° to 70° C.; at a current density of less than 10 amps per square decimeter for a period of less than 2 seconds.

3,518,170

ELECTRODEPOSITION OF IRON GROUP METALS

Herman Koretzky, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

No Drawing. Filed July 26, 1965, Ser. No. 474,991

Int. Cl. C23b 5/32, 5/04, 5/08

U.S. Cl. 204—43

15 Claims

An electrolyte and process for the deposition of iron group metals; i.e., iron, cobalt, and nickel and their alloys, with improved brightness and magnetic characteristics. The plating bath is formed by adding the reaction product of sulfamide with a carbonyl containing compound to a standard plating bath. The parameters of the bath are not critical. The process includes the step of electrolyzing a plating bath including an additive formed by the reaction of sulfamide with a carbonyl.

PURIFICATION OF NICKEL ELECTROPLATING SOLUTIONS

Reuben Merker, Riverdale, N.Y., and Salvatore Lucca, Paramus, N.J., assignors to The Metalux Corporation, Paterson, N.J.

No Drawing. Continuation-in-part of application Ser. No. 534,413, Mar. 15, 1966. This application July 24, 1969, Ser. No. 844,643

Int. Cl. C23b 5/08

U.S. Cl. 204—49

3 Claims

Zinc, copper and/or iron impurities ordinarily associated with nickel electroplating baths can be removed from solution by introducing an amount of dimethyldithiocarbamate or dibutyldithiocarbamate or, preferably, diethyldithiocarbamate of nickel into the electroplating bath sufficient to convert the zinc, copper and/or iron impurities into relatively insoluble metal dimethyldithiocarbamates etc. salt. The insoluble salts may be removed from the electroplating baths by passing the treated solution through a standard filtering system.

3,518,172

PROCESS FOR THE ELECTROLYSIS OF ALUMINUM CHLORIDE

Gilbert S. Layne and James O. Huml, Midland, Mich., and Richard Dale Smith, Madison, Conn., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 24, 1967, Ser. No. 618,335

Int. Cl. C22d 3/12

U.S. Cl. 204—67

8 Claims

The molten salt electrolysis of aluminum chloride to produce aluminum and chlorine is improved by employing as at least one bath component an alkali or alkaline earth fluoride as a vapor pressure control agent. The effective volatilization temperature of aluminum chloride is thereby significantly increased.

3,518,173

CONTINUOUS MANUFACTURE OF CHLORATES AND PERCHLORATES

George J. Crane, Islington, Ontario, Canada; Ernest Arthur Du Vernet and Selma Leslie Crane, executors of the last will of said George J. Crane, deceased, assignor to Huron Nassau Ltd., Nassau, Bahamas Islands, a corporation of the Bahamas

Continuation-in-part of application Ser. No. 362,720, Apr. 27, 1964. This application Dec. 26, 1967, Ser. No. 693,551

Int. Cl. C01b 11/26

U.S. Cl. 204—95

4 Claims

The operation of a plurality of multipolar electrolytic cells in the production of an alkali metal chlorate or perchlorate, particularly sodium chlorate or perchlorate, by the electrolysis of an electrolyte comprising an aqueous solution of an alkali metal chloride on a continuous basis. In the continuous operation, the electrolyte is partially electrolyzed in a first cell and further electrolyzed in subsequent cells, in each cell the electrolyte being continuously recirculated through the cell from a cell tank to effect electrolysis; a small proportion of the recirculating volume of the electrolyte in each cell being continuously passed serially between the cells, fresh electrolyte being continuously fed to the first cell and electrolyzed electrolyte being continuously withdrawn from the last cell of the series. By the improved operation of the multipolar cell according to the present invention, the overall efficiency of the process for the production of the alkali metal chlorate or perchlorate is substantially increased.

METHOD AND APPARATUS FOR PURIFICATION OF WATER CONTAINING ORGANIC CONTAMINANTS

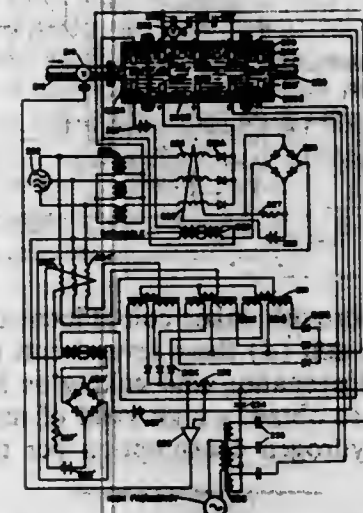
Kiyoshi Inoue, 182 3-chome, Tamagawayoga-machi, Setagaya-ku, Tokyo, Japan

Continuation of application Ser. No. 317,841, Oct. 21, 1963; This application Aug. 10, 1967, Ser. No. 659,813

Int. Cl. C02b 1/82

U.S. Cl. 204—149

6 Claims



Method and apparatus for the elimination of organic contaminants from water whereby a normally water-insoluble fluoride compound is introduced into and maintained in direct contact with the water at a cathodic region thereof, while a direct electric current is passed directly through the water to release fluoride ion from this normally insoluble compound and electrically promote the interaction of the fluoride ion with the organic contaminants. A high-frequency alternating current may be superimposed upon the direct current while the mass of insoluble fluoride can encase the cathode in a porous mass. The electrodes may be disposed upon a floating vessel which simultaneously carries the current source into insoluble fluoride.

3,518,175

PROCESS OF FORMING CROSSLINKABLE COPOLYMERS OF POLYESTERS AND SUBSTITUTED BENZOPHENONES AND PRODUCT THEREOF

Vernon Lee Bell, Newport News, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 455,313, May 12, 1965. This application Apr. 15, 1966, Ser. No. 342,750

Int. Cl. C08f 47/00

U.S. Cl. 204—159.19

16 Claims

Crosslinkable copolymers formed by copolymerizing an organic polyester, e.g., polyethylene terephthalate, with a photosensitizing compound selected from a limited group of substituted benzophenones.

3,518,176

GRAFT POLYMERIZATION OF STARCH IN NOVEL ALCOHOL REACTION MEDIUM

Zolla Reyes, Menlo Park, Calif., and Charles R. Russell, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Feb. 25, 1966, Ser. No. 529,947

Int. Cl. C08f 1/16

U.S. Cl. 204—159.12

5 Claims

Process for graft polymerizing onto a starch, amylose, or amylopectin, a vinyl monomer in an aqueous medium, the improvement comprising replacing the water with an equal volume of ethylene glycol, glycerol, n-butanol, sorbitol, or dimethylformamide. The reaction is catalyzed by radiation or ceric-ion catalysts.

PREPARATION OF POLYOXYMETHYLENE USING HIGH ENERGY RADIATION

Nelson S. Marcus, Adelphi, Md., and Fred Jaffe, Cincinnati, Ohio, assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Continuation-in-part of applications Ser. No. 72,865, Dec. 1, 1960, Ser. No. 118,511, June 21, 1961, and Ser. No. 228,544, Aug. 30, 1962. This application July 5, 1966, Ser. No. 562,467

Int. Cl. C08f 1/24, 1/00

U.S. Cl. 204—159.21

11 Claims

High molecular weight polyoxymethylene is prepared by irradiating trioxane with high ionizing irradiation, and subsequently heating the irradiated trioxane below the melting point thereof to achieve polymerization.

3,518,178

MANUFACTURE OF ALKYL AMINES USING A SILENT ELECTRIC DISCHARGE

James C. Burleson, St. Charles, and William F. Yates, Chesterfield, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Filed Jan. 3, 1967, Ser. No. 606,756

Int. Cl. C07c 87/04

U.S. Cl. 204—177

4 Claims



Olefin hydrocarbons are converted to primary amines by subjecting the olefin hydrocarbons and ammonia under select conditions to a silent electric discharge.

3,518,179

TEMPERATURE COMPENSATED ELECTROCHEMICAL CELL

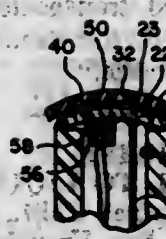
Thomas M. Bleak, Buena Park, and Joe A. Porter, Whittier, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Filed Mar. 11, 1968, Ser. No. 712,264

Int. Cl. G01n 27/54, 27/46

U.S. Cl. 204—195

1 Claim



The specification discloses a temperature sensing element such as a thermistor attached to or located immediately adjacent one of the electrode elements of a polarographic cell for indication of membrane temperature. The

temperature sensing element may be directly bonded to the electrode or disposed within a thermally conductive tube or U-bracket which is attached to the electrode.

3,518,180

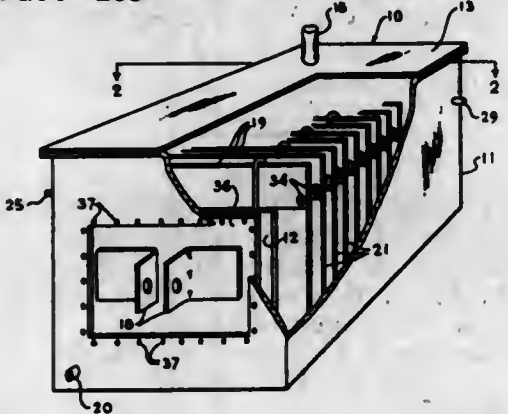
BIPOLAR ELECTROLYTIC CELL

Morris P. Grotheer, Lewiston, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Filed Oct. 12, 1964, Ser. No. 403,104
Int. Cl. C22d 1/02; B01k 3/02

U.S. Cl. 204-268

9 Claims



A bipolar electrolytic cell for the production of chlorates and perchlorates is provided with non-porous, internally cooled bipolar electrodes interposed between two terminal monopolar electrodes which are connected to a source of direct current. The non-porous, internally cooled bipolar electrode comprises a cathode face and an anode face electrically connected by internally spaced ribs and an outer sealing rim. The internal ribs function as baffle means to direct the flow of coolant within the bipolar electrode, producing a minimum temperature differential across either face of the bipolar electrode.

3,518,181

PYROLYTIC METHODS OF TREATING BITUMINOUS TAR SANDS AND PREHEATING OF THE SAME

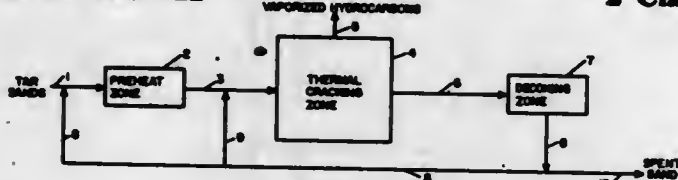
Harold F. Tee, Bala Cynwyd, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 26, 1967, Ser. No. 656,160

Int. Cl. C10g 1/00

U.S. Cl. 208-11

2 Claims



The specification discloses an improvement in pyrolytic methods of treating bituminous tar sands. Specifically, the improvement comprises preheating the tar sands to between 200° and 380° F. and feeding the preheated sands, while within this temperature range, into the pyrolytic treating zone. It has surprisingly been found that tar sands, when heated above about 200° F., flow readily and are easily handled and transported but that when heated above about 380° F. the sands become viscous again and tend to reaggregate.

3,518,182

CONVERSION OF COAL TO LIQUID PRODUCTS

Norman J. Paterson, San Rafael, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

Filed Mar. 29, 1968, Ser. No. 717,093

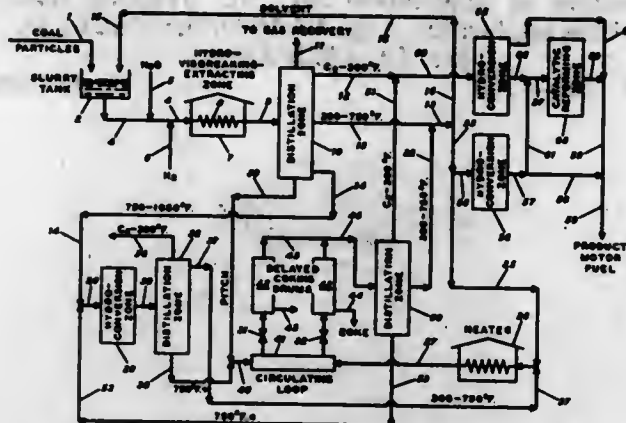
Int. Cl. C10g 1/04, 1/06, 9/14

U.S. Cl. 208-50

5 Claims

This disclosure relates to a process for converting coal primarily to motor fuels by a process combination where-

in (a) coal particles are mixed with solvent, such as a gas oil boiling between about 300 and 750° F.; (b) the mixture of coal particles and solvent is hydrovisbroken and hydrocarbons are extracted from the coal by passing the mixture through a heated coil together with H₂ and



H₂O; (c) the hydrovisbreaker coil effluent is fractionated into several cuts; and (d) these several cuts are selectively subjected to hydrogenation and coking as interconnected processing steps to obtain a high yield of motor fuel with relatively low hydrogen consumption per ton of coal.

ERRATA

For Classes 210-7 and 210-19 see:
Patent Nos. 3,517,810 and 3,517,811

3,518,183

PROCESS FOR SEPARATION OF OIL FILMS FROM WATER

Anthony C. Evans, Redondo Beach, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 9, 1969, Ser. No. 831,728

Int. Cl. B01d 17/02

U.S. Cl. 210-40

5 Claims

Hydrocarbon oil films may be removed from the surface of water by applying a large surface area of a block copolymer to the oil, absorbing the oil into the block copolymer, and separating the oil impregnated block copolymer from water.

3,518,184

TEXTILE FIBER FINISH COMPOSITION

William N. Potter III, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 4, 1967, Ser. No. 636,009

Int. Cl. D06m 15/10

U.S. Cl. 252-8.75

7 Claims

A finish for polyamide staple fibers which comprises

- a n-butyl monoether of a polyoxyalkylene glycol where the monoether has a viscosity of about 90 to 160 centipoises at 25° C.,
- a potassium salt of phosphate mono- and diesters of an aryl containing low weight polyoxyethylene alcohol,
- mineral oil,
- a sodium salt of sulfated peanut oil, and
- an alkali metal and/or an amine salt of oleic acid.

3,518,185

DRILLING MUD ADDITIVES

Philip Roemer, Bradley, and Russell Downhour, Jr., Kankakee, Ill., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 7, 1966, Ser. No. 525,320

Int. Cl. C10m 3/22; C131 1/08, 1/00

U.S. Cl. 252-8.5

2 Claims

A drilling mud additive has been prepared from farinaceous material which contains relatively high gluten and fat contents and which has between 30 to 40% room

temperature, soluble water solids on a dry basis. The product is particularly useful in rotary method of boring oil and gas wells as additive to the drilling mud to inhibit water loss. The key to achieving the desired product is pretreatment of the raw flour and control of moisture.

3,518,186

OLEOPHILIC GRAPHITE AND HEAVY METAL SULPHIDES IN COMPOSITES AND BEARINGS

George Ingls Andrews, Richmond, and Aleksander Jerzy Grodzek and Rodney Ernest Witheridge, London, England, assignors to The British Petroleum Company Limited, London, England, a corporation of England

No Drawing. Filed Mar. 28, 1968, Ser. No. 718,962

Claims priority, application Great Britain, Apr. 5, 1967,

15,533/67

Int. Cl. C10m 5/18, 5/02

U.S. Cl. 252-12

1 Claim

Composites made from a metal or solid polymeric matrix especially a PTFE matrix, which incorporate also oleophilic graphite or oleophilic molybdenum disulphide are harder and wear better than corresponding composites containing ordinary graphite and molybdenum disulphide.

3,518,187

OLEOPHILIC TIN SULPHIDE

Aleksander Jerzy Grodzek, Ealing, London, England, assignor to The British Petroleum Company Limited, London, England, a corporation of England

No Drawing. Filed Mar. 5, 1968, Ser. No. 710,655

Claims priority, application Great Britain, Mar. 20, 1967,

12,841/67

Int. Cl. C10m 1/12

U.S. Cl. 252-25

3 Claims

Oleophilic tin sulphides are prepared by grinding a tin sulphide in an organic liquid preferably in a ball mill. Oleophilic tin sulphides are solid lubricants. Dispersions in oil of the oleophilic tin sulphides possess load-carrying properties.

3,518,188

SILICONE COMPOUNDS AND GREASES

Ewald Pison and Siegfried Nitzsche, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed Sept. 5, 1967, Ser. No. 665,241

Claims priority, application Germany, Sept. 15, 1966,

W 42,413

Int. Cl. C10m 7/26, 7/08, 7/02

U.S. Cl. 252-28

5 Claims

Compounds and greases based on organosiloxane fluids filled with silica or other pulverulent material are stabilized on storage and against the effects of heat by incorporating therein an organosiloxane resin.

3,518,189

GREASE COMPOSITION FOR USE AT HIGH TEMPERATURES AND HIGH SPEEDS

John B. Christian, Yellow Springs, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Continuation-in-part of application Ser. No. 453,529, May 5, 1965. This application Jan. 3, 1968, Ser. No. 696,971

Int. Cl. C10m 7/50, 7/30, 7/02

U.S. Cl. 252-28

2 Claims

A grease composition useful under high pressure and temperature conditions consisting by weight of 58.5 to 64.5% of an inhibited organosiloxane fluid, 35 to 40% ammeline, and 0.5 to 1.5% of finely divided silica having particles ranging in diameters from 0.015 to 0.02 micron.

3,518,190

OLEOPHILIC GRAPHITE THICKENED GREASE

Aleksander Jerzy Grodzek, Ealing, London, England, assignor to The British Petroleum Company Limited, London, England

No Drawing. Filed June 19, 1968, Ser. No. 738,129

Claims priority, application Great Britain, June 20, 1967,

28,328/67

Int. Cl. C10m 5/18, 5/02

U.S. Cl. 252-29

3 Claims

Oleophilic graphite prepared by grinding graphite and poly-tetra-fluoro-ethylene in an organic liquid has enhanced grease-thickening, load-carrying and high temperature stability.

3,518,191

MODIFIED OLEOPHILIC GRAPHITE AND HEAVY METAL SULPHIDES

Aleksander Grodzek, London, Geoffrey Hairline Bell, Ashford, and Stanley C. Dodson, Staines, England, assignors to The British Petroleum Company Limited, London, England, a corporation of England

No Drawing. Filed Feb. 21, 1968, Ser. No. 707,314

Claims priority, application Great Britain, Feb. 22, 1967,

8,361/67

Int. Cl. C10m 1/36, 1/12, 1/10

U.S. Cl. 252-29

3 Claims

A modified oleophilic graphite can be prepared by grinding graphite in an organic liquid in the presence of a polymer.

The modified oleophilic graphites have enhanced grease thickening properties and form harder greases.

3,518,192

OLEOPHILIC GRAPHITE

Roger John Russell Cairns, Addlestone, Surrey, and Stanley Charles Dodson, Leatherhead, Surrey, England, assignors to The British Petroleum Company Limited, London, England

No Drawing. Filed Feb. 20, 1969, Ser. No. 801,198

Claims priority, application Great Britain, Feb. 29, 1968,

9,818/68

Int. Cl. C10m 5/02

U.S. Cl. 252-29

3 Claims

Oleophilic graphite produced by grinding graphite in water containing oil-soluble surface active agent e.g. n-butylamine.

3,518,193

SYNERGISTIC ANTIOXIDANT MIXTURE AND USE THEREOF

Henryk A. Cyba, Evanston, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of applications Ser. No. 367,854, May 15, 1964, and Ser. No. 559,410, June 22, 1966, the latter application being a division of application Ser. No. 366,921, May 12, 1964. This application Mar. 6, 1968, Ser. No. 710,782

Int. Cl. C10m 1/38, 1/54

U.S. Cl. 252-46.3

18 Claims

Synergistic antioxidant mixture of a borate of N,N-di-hydrocarbyl-alkanolamine or borate of polyalkyl- or polycycloalkyl- polyhydroxyalkyl-alkylenepolyamine and an N-hydroxyphenyl-benzotriazole, with or without additional antioxidants. This antioxidant mixture is used as an additive in organic substrate normally subject to oxidative deterioration.

3,518,194

LUBRICATING COMPOSITION

Joseph J. McGrath, Monroeville, and Harold O. Strange, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 29, 1968, Ser. No. 709,205

Int. Cl. C10m 1/38, 3/32

U.S. Cl. 252—47.5 8 Claims

A lubricating oil composition having improved non-sludging properties is obtained by incorporating a phenothiazine carboxylic acid ester in the composition. Examples of the esters include

n-butyl phenothiazine-1-carboxylate;
isooctyl phenothiazine-2-carboxylate;
dodecyl phenothiazine-3-carboxylate;
tridecyl phenothiazine-2-carboxylate;
hexadecyl phenothiazine-4-carboxylate;
di-isooctyl phenothiazine-2,8-dicarboxylate.

3,518,195

CORROSION-INHIBITED AND STABILIZED
PERFLUORINATED POLYETHER OILS

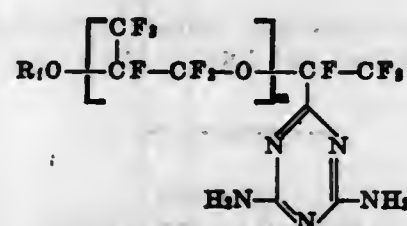
Bruce H. Garth, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 5, 1968, Ser. No. 734,571

Int. Cl. C10m 1/32

U.S. Cl. 252—51.5 6 Claims

Corrosion- and degradation-inhibited oil compositions comprising a perfluorinated polyether oil and a substituted guanamine of the structure



where R_1 is perfluoroalkyl and m is an integer.

3,518,196

ULTRAVIOLET STABILIZED PETROLEUM
HYDROCARBONS

Jackson S. Boyer, Claymont, Del., and Richard D. Cassar, West Chester, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Dec. 18, 1967, Ser. No. 691,153

Int. Cl. C10m 1/24, 1/26

U.S. Cl. 252—56 26 Claims

Petroleum hydrocarbon compositions having improved resistance to ultraviolet degradation comprising petroleum hydrocarbon fractions containing 0.01–10.0 weight percent of certain polymethylated muconic acids and their hydrocarbyl esters, said acids being selected from the group consisting of α,α' -dimethylmuconic acid, α,β' -dimethylmuconic acid, α,α',β -trimethylmuconic acid, α,β,β' -trimethylmuconic acid, and $\alpha,\alpha',\beta,\beta'$ -trimethylmuconic acid.

3,518,197

LUBRICANT COMPOSITIONS

Rudolf J. A. Eckert, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 12, 1968, Ser. No. 721,092

Claims priority, application Great Britain, Apr. 14, 1967, 17,198/67

Int. Cl. C10m 1/26

U.S. Cl. 252—56 5 Claims

Lubricating oil compositions containing a copolymer of (1) ethylene, (2) an alkyl ester of an unsaturated

monocarboxylic acid and (3) a hydroxyalkyl ester of an unsaturated monocarboxylic acid exhibit excellent properties relative to thermal stability, viscosity index improvement and dispersant activity.

3,518,198

PIEZOELECTRIC CERAMICS

Norio Tsubouchi, Masao Takahashi, Tomoji Ohno, and Tsuneo Akashi, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan

Filed Dec. 5, 1968, Ser. No. 781,407

Int. Cl. C04b 35/00

U.S. Cl. 252—62.9 2 Claims

Piezoelectric ceramics are provided comprised essentially of a solid solution based on the system

$(\text{Ag}_{1/2}\text{Bi}_{1/2})\text{TiO}_3-(\text{Ag}_{1/2}\text{Bi}_{1/2})\text{ZrO}_3-\text{PbTiO}_3-\text{PbZrO}_3$

and wherein up to about 25 atom percent of lead may be replaced by at least one metal selected from the group consisting of barium, strontium and calcium.

3,518,199

PIEZOELECTRIC CERAMICS

Norio Tsubouchi, Masao Takahashi, Tomoji Ohno, and Tsuneo Akashi, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan

Continuation-in-part of application Ser. No. 684,788,

Nov. 21, 1967. This application July 10, 1969, Ser. No. 840,630.

Claims priority, application Japan, Nov. 26, 1966,

41/77,371, 41/46,787; Dec. 29, 1966, 42/973,

42/46,788

Int. Cl. C04b 35/00, 35/46; H01v 7/02

U.S. Cl. 252—62.9 9 Claims

A piezoelectric ceramic is disclosed consisting essentially of a solid solution of the three components

$\text{Pb}(\text{Fe}_{1/2}\text{Zr}_{1/2})\text{O}_3$

PbTiO_3 and PbZrO_3 , wherein Z represents one element selected from the group consisting of Nb and Sb. Up to about 25 atom percent of Pb may be replaced by at least one element selected from the group consisting of Ba, Sr and Ca. The ceramic may have incorporated in it about 0.1 to 3.0 weight percent of MnO.

3,518,200

ORGANIC PHOSPHORUS COMPOUNDS, COMPOSITIONS CONTAINING SAME, AND USES THEREOF

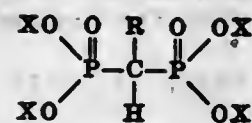
Steven Joseph Fitch, Baltimore, Md., and Riyad R. Irani, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 271,607, Apr. 9, 1963. This application Sept. 12, 1966, Ser. No. 578,500

Int. Cl. C11d 7/36, 7/50, 9/34

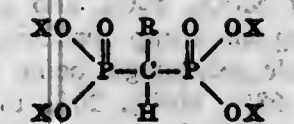
U.S. Cl. 252—89 12 Claims

A detergent composition is described containing an organo-methylene diphosphonic compound having the formula



wherein R is selected from the class consisting of aliphatic hydrocarbyl, alicyclic, aryl, alkaryl, and aralkyl groups of from 5 to 30 carbon atoms and X is selected from the

class consisting of hydrogen ions, alkali metal ions, ammonium ions and amine ions; as well as a dry cleaning composition containing an ester of an organo-methylene diphosphonic acid having the formula



wherein R is selected from the class consisting of aliphatic hydrocarbyl, alicyclic, aryl, alkaryl, aralkyl groups of from 5 to 30 carbon atoms and X is selected from the class consisting of aliphatic hydrocarbyl, aryl, alkaryl and aralkyl groups of from 1 to 30 carbon atoms.

3,518,201

CHLORINE RELEASE DETERGENT COMPOSITION
WITH IMPROVED DEFOAMER STABILITY

Forrest Ashton Wemels, Baltimore, Md., assignor to W. R. Grace & Co., a corporation of Connecticut

No Drawing. Continuation-in-part of application Ser. No. 585,771, Oct. 11, 1966. This application Sept. 4, 1969, Ser. No. 855,386

Int. Cl. C11d 7/56

U.S. Cl. 252—99 5 Claims

A detergent composition is disclosed having chlorine release with improved defoaming agent stability. The detergent composition, particularly suitable for dishwashing, contains as essential ingredients a chlorine degradable polyethenoxy nonionic surfactant defoaming agent, a chlorine release agent, and sodium metasilicate pentahydrate.

3,518,202

STABILIZED 1,1,1-TRICHLOROETHANE
COMPOSITION

Leighton S. McDonald, Angleton, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 29, 1967, Ser. No. 694,416

Int. Cl. C09d 9/00

U.S. Cl. 252—171 7 Claims

1,1,1-trichloroethane stabilized with minor amounts of



in combination with nitromethane and/or propargyl alcohol and a lower alkylene oxide having from 3 to 5 carbon atoms which may contain a chlorine atom. The invention also relates to a process for preventing deterioration of 1,1,1-trichloroethane in contact with the metals aluminum, zinc, iron or copper or their alloys which comprises maintaining in intimate admixture with such 1,1,1-trichloroethane and metals a stabilizing amount of 4,7-dihydro-1,3-dioxepin in combination with nitromethane and/or propargyl alcohol and a lower alkylene oxide.

3,518,203

CORROSION AND SCALE INHIBITOR COMPOSITIONS AND PROCESSES THEREFOR

Emilio A. Savinelli, Convent, N.J., and James K. Rice, Pittsburgh, Pa., assignors to Drew Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 28, 1966, Ser. No. 561,023

Int. Cl. C02b 1/18, 5/02

U.S. Cl. 252—181 13 Claims

This disclosure is directed to compositions and methods for inhibiting corrosion and the deposition of scale in cooling water systems. An example of a superior composi-

tion disclosed is a combination of a water soluble salt of zinc or cadmium, an amino tri (alkylphosphonic) acid and a leucocyanidin-catechin polymer.

3,518,204

CONTROL OF THE RATE OF PRECIPITATE
GROWTH AND OF PRECIPITATION IN
AQUEOUS SYSTEMS

Gerald D. Hansen, Jr., Holicong, and Elizabeth A. Guffee, Philadelphia, Pa., assignors to Bets Laboratories, Inc., Trevose, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 591,719, Nov. 3, 1966. This application Nov. 1, 1967, Ser. No. 679,619

Int. Cl. B01d 15/00; C02b 1/14, 5/06

U.S. Cl. 252—181 8 Claims

The present invention concerns methods and compositions for controlling the precipitation of undesirable and harmful precipitates from aqueous systems. Such control is achieved and exerted in respect to both the time and area at which such precipitation occurs, and in respect to the nature of the precipitate which is obtained. The control is accomplished by means of introducing within the aqueous system to be treated, a rate controlling agent which is competitive with the precipitate forming ingredients of the system in respect to their ability to react or associate within one another and thereby form a precipitate. However, the reactivity of the precipitate forming ingredients is preferential in relation to the rate controlling agent and the latter therefore merely impairs or inhibits the rate at which precipitate particles are formed and precipitated. The materials which provide the rate controlling function are those acids having a dissociation constant of between 3 to 8, such as triglycolamic acid.

3,518,205

FLUORESCENT PIGMENT

Mark S. Vukosovich, Brecksville, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 558,407, May 17, 1966. This application May 23, 1967, Ser. No. 640,713

Int. Cl. C09k 1/02

U.S. Cl. 252—301.3 23 Claims

Product and process for producing a transparent, hard, inert silica particle with fluorescent dye and solvent sorbed within its porosity.

This pigmentary particle has usefulness in imparting a brilliant fluorescent color to paint, paper, and textile coatings, silk screen and printing inks, plastics, crayons, chalks and the like, and it can also be used to brighten non-fluorescent conventional colors.

3,518,206

SUPPORTED CATALYSTS COMPOSED OF SUBSTRATE COATED WITH COLLOIDAL SILICA AND CATALYST

Donald Maurice Sowards, Ashbourne Hills, Claymont, and Alvin B. Stiles, Welshire, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 684,553, Nov. 20, 1967, which is a continuation-in-part of application Ser. No. 513,563, Dec. 13, 1965. This application May 17, 1968, Ser. No. 729,901

Int. Cl. B01j 11/06, 11/40

U.S. Cl. 252—446 6 Claims

Catalyst substrates or supports having a low surface area are coated with colloidal amorphous silica spherulites to obtain a high surface area coating. The complete supported catalyst is formed by subsequent appli-

cation of the catalytic material to the dried coating or optionally the liquid silica coating composition can contain the catalytic materials and the complete catalyst coating formed in one step.

3,518,207

IMPREGNATION PROCESS FOR PLATINUM-ALUMINA CATALYST AND CATALYST PRODUCED THEREBY

Robert W. Hagy and Zebulon V. Morgan, Marietta, Ohio, and Robert L. Northcraft, Pennsboro, W. Va., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

Filed Oct. 30, 1967, Ser. No. 679,036

Int. Cl. B01j 11/08

U.S. Cl. 252-466

3 Claims

This invention relates to a process for preparing platinum-alumina reforming catalyst of improved activity having platinum uniformly distributed therein which comprises continuously contacting calcined formed particles of alumina with a carbon dioxide saturated platinum-containing solution. In the practice of the invention the continuous contacting of said formed particles is carried out by continuously feeding gaseous carbon dioxide into a platinum containing solution while said platinum-containing solution is being continuously recirculated through a bed of formed alumina particles.

3,518,208

CATALYST FOR THE WATER GAS SHIFT REACTION

Michael R. Schneider, Moosburg, Germany, assignor to Girdler-Sudchemie Katalysator G.m.b.H., Munich, Germany, a corporation of Germany

No Drawing. Filed Aug. 8, 1966, Ser. No. 570,769

Int. Cl. B01j 11/06

U.S. Cl. 252-468

2 Claims

Catalysts effective in the reaction of carbon monoxide and steam to form hydrogen at carbon dioxide in the temperature range from 180° to 460° C., comprising oxides of copper, zinc and iron, and procedures for using such catalysts to produce hydrogen at relatively low temperature.

3,518,209

SEMICONDUCTIVE GLASSES

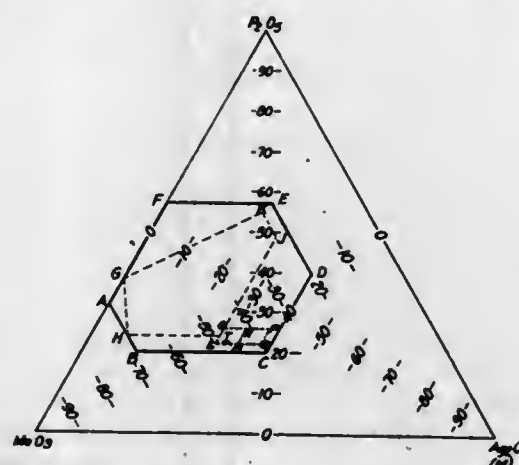
Jason D. Provance, Glendora, Calif., assignor to Bourns, Inc., a corporation of California

Filed July 12, 1967, Ser. No. 652,974

Int. Cl. C03c 3/00; H01b 1/06

U.S. Cl. 252-521

16 Claims



Glasses characterized by resistivities three orders or more lower than usual glasses, suitable for applications requiring resistivities of the order of from 10^8 ohm cm. to 10^{10} ohm cm. (compared to resistivities of from 10^{13}

ohm cm. to 10^{15} ohm cm. characterizing usual glasses), the glasses having relatively low melting temperatures, and characterized by two types of materials, one type being essentially vitreous and free of dissociated metal particles, the glasses of the first type consisting essentially of fused mixtures of MoO_3 , P_2O_5 , and a metal oxide selected from among the group consisting of Ag_2O , CuO , and V_2O_5 , the mole percentages being within the ranges of from 20% to 68% MoO_3 , 20% to 57% P_2O_5 , and 30% to 0% of oxide of one or more metals selected from among Ag, Cu and V; and the second type being a combination of vitreous and crystalline material consisting essentially of fused mixtures of MoO_3 , P_2O_5 , and an oxide selected from among the group consisting of Ag_2O , CuO , and V_2O_5 , the mole percentages being within the ranges of from 20% to 68% MoO_3 , from 20% to 57% P_2O_5 , and 30% to 40% of the other oxide or oxides selected from among Ag_2O , CuO , and V_2O_5 .

3,518,210

BARK-PHENOL-ALDEHYDE MOLDING COMPOUNDS AND RESINS AND METHODS OF FORMING SAME

Joel J. Edelstein, West Hartford, and John M. De Bell, Enfield, Conn., and Charles H. Parker, Monson, Mass., assignors to U.S. Plywood-Champion Papers Inc., Hamilton, Ohio, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 510,368, Nov. 29, 1965. This application July 3, 1969, Ser. No. 839,055

Int. Cl. C08g 51/18

U.S. Cl. 260-17.2

30 Claims

An infusible resin formed by reaction of a phenol-aldehyde condensation product with a bark derivative produced by acidification of the product formed when tree bark is heated with an alkali metal hydroxide to a temperature of about 200° C. to 260° C. in the absence of oxygen, the reaction taking place in the presence of an aldehyde source.

3,518,211

R.T.V. POLYSULFIDE SEALANTS

James A. Downs, Collinsville, Ill., and Stanley T. Schellenbach, Des Peres, Mo., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

Continuation of abandoned application Ser. No. 126,811, July 21, 1961. This application July 27, 1965, Ser. No. 475,224

Int. Cl. C08g 43/00

U.S. Cl. 260-18

2 Claims

Sealant compositions cureable at room temperature in the presence of atmospheric moisture are produced by admixing (1) a thiol terminated liquid polysulfide resin, (2) a mixture of barium oxide and barium peroxide; and (3) a cure accelerator which is a lanthanide metal salt of an organic acid. The moisture can be directly admixed if desired.

3,518,212

MONOEPOXIDE RESIN COMPOSITIONS

James E. Ruecke, Rocky River, Ohio, assignor, by mesne assignments, to SCM Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 18, 1966, Ser. No. 573,212

Int. Cl. C08g 30/12

U.S. Cl. 260-18

1 Claim

1. A process for making an epoxide modified polycarboxylic acid resin suitable for electrocoating which comprises: forming a monoeoxide resin comprising the reaction product of:

- (1) one mole of polyepoxy resin having n epoxy equivalents per mole,
- (2) $n-1$ mols of a monocarboxylic acid,

(3) from 0.1-2% of a secondary amine by weight of said polyepoxy resin and said monocarboxylic acid, said secondary amine selected from the group consisting of C_{1-4} lower alkyl amines and C_{1-4} alkanolamines at a temperature not substantially above 350° F.; and then reacting said monoeoxide resin with a polycarboxylic acid resin having an acid value of at least 60 in relative proportions of monoeoxide and polycarboxylic acid resin supplying an acid value between about 50 and about 200, said polycarboxylic acid resin comprising the reaction product of an α,β -unsaturated dicarboxylic acid or anhydride thereof coupled with a siccative oil, the reaction between said monoeoxide resin and said polycarboxylic acid resin conducted at a temperature not substantially above 250° F. for suppressing the carboxyl-hydroxyl reaction and formation of water.

3,518,213

AQUEOUS RESINOUS COATING COMPOSITIONS FOR ELECTROPHORETIC DEPOSITION

Mitsui Miyoshi and Kazuo Matsura, Kawasaki-shi, and Yutaka Otsuki, Tokyo, Japan, assignors to Nippon Oil Company, Limited, Tokyo, Japan

No Drawing. Filed July 22, 1968, Ser. No. 746,273

Claims priority, application Japan, Aug. 5, 1967, 42/49,992; Mar. 29, 1968, 43/20,096

Int. Cl. C09d 3/66; 5/02; C23b 13/00

U.S. Cl. 260-22

14 Claims

A novel resinous coating composition for electrophoretic deposition in the form of an aqueous solution or emulsion mainly consisting of a product obtained by neutralizing an adduct of a polybutadiene having a molecular weight of 500-2,000 and containing 50-90% 1,2-linkage, 10-50% 1,4-linkage and an unsaturated dicarboxylic anhydride with a basic compound, and a process for producing said composition.

3,518,214

SYNTHETIC RUBBER MANUFACTURE

Charles Glenn Wheelus, Panama City, Fla., assignor, by mesne assignments, to Arizona Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 692,713, Dec. 22, 1967. This application Nov. 27, 1968, Ser. No. 779,605

Int. Cl. C08d 1/09, 31/06

U.S. Cl. 260-27

18 Claims

In synthetic rubber manufacturing processes wherein aqueous emulsions of butadiene and styrene or butadiene and acrylonitrile or other vinyl monomer are prepared with an emulsifying agent containing a water-soluble soap of a disproportionated rosin and are polymerized in the presence of a free radical catalyst system, the adverse action of free oxygen on the polymerization is offset by heat-modifying the disproportionated rosin before it is converted into its soap. The heat-modification is obtained by maintaining the rosin at about 250° C. to 300° C. for about 1 to 18 hours at atmospheric or subatmospheric pressures.

3,518,215

STRIPPABLE WAX COATING COMPOSITIONS

Dominic A. Apikos, Laurel Springs, N.J., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 10, 1966, Ser. No. 556,555

Int. Cl. C08f 45/44, 45/52

U.S. Cl. 260-28.5

1 Claim

This invention relates to a strippable wax coating containing an ethylene-vinyl acetate polymeric composition and a stripping agent which is either a N-substituted fat-

ty acid amide or an N-alkoxylated amine containing a fatty acid residue. Particularly preferred are wax compositions which contain as the stripping agent either an N-ethoxylated amine or an N-substituted fatty acid amide both containing fatty acid residues having from 10 to 17 carbon atoms. The compositions can also contain minor amounts of a mineral oil to increase the strippability.

3,518,216

CORRUGATED PAPERBOARD COMPOSITION

Wildon T. Harvey, Hockessin, Del., and Jay C. Knapp, Jr., Princeton, N.J., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 364,832, May 4, 1964. This application July 6, 1967, Ser. No. 651,364

Int. Cl. C08f 45/52; D21h 1/36

U.S. Cl. 260-28.5

2 Claims

A corrugated paperboard composition having improved wet stiffness comprising corrugated paperboard impregnated with 25 to 50 weight percent of a composition consisting essentially of a specific petroleum paraffin wax containing 0.2 to 2.0 weight percent synthetic petroleum polymer resin.

3,518,217

SPRAYABLE VIBRATION DAMPING MATERIAL

Richard M. Irwin, Philadelphia, and David H. Kollock, Flourtown, Pa., assignors to Philadelphia Resins Company Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 25, 1966, Ser. No. 552,728

Int. Cl. C08g 51/04, 51/24

U.S. Cl. 260-29.2

5 Claims

A sprayable vibration damping composition comprising by weight 3%-5% of a liquid epoxy resin, 15%-25% of a polyamide curing agent for the epoxy resin, 70%-85% of sand, 1½% to 4% of water, 2%-3% of asbestos floats, and 3% of a solvent for the polyamide curing agent.

3,518,218

WATER- AND OIL-REPELLENT EMULSION FINISH FOR CELLULOSIC MATERIALS AND PROCESS FOR PREPARING THE EMULSION

William J. Connick, Jr., and Samuel E. Elzey, Jr., New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed July 20, 1967, Ser. No. 655,266

Int. Cl. C08g 51/24; C09d 5/00

U.S. Cl. 260-29.2

2 Claims

A process is described for preparing a stable aqueous emulsion of a polymer derived from an alkyl perfluoroalkanoate and an alkylenimine, employing 2.5-10% (based on total solvent weight) of a water-miscible polymer solvent, and special emulsifiers.

3,518,219

NOVEL POLYIMIDE FORMING MIXTURES

Edward Lavin, Longmeadow, and Albert H. Markhart, Wilbraham, Mass., and Robert E. Kass, Simsbury, Conn., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 562,458, July 5, 1966, which is a continuation-in-part of application Ser. No. 280,634, June 7, 1962. This application Aug. 31, 1967, Ser. No. 664,618

Int. Cl. C08g 20/32

U.S. Cl. 260-33.4

22 Claims

Disclosed herein are compositions based on polyamines and ester derivatives of trimellitic acid which can be coated on a substrate and polymerized in situ to provide polyimide resins.

$>C=O$ or $>SO_2$; X represents OR, NHR, or halogen; and n is at least 2. These polymers are prepared by the condensation polymerization of monomeric aromatic compounds having a condensable amino group and two functional groups condensable with the amino group, one of these functional groups being a sulfonic radical and the other being either a sulfonic or a carboxylic radical. These new polymers have very good resistance to high temperatures, for example up to 500-600° C., and in some cases even as high as 1000° C. and are useful in preparing laminates, adhesives, fibers, and molding compositions, particularly where such materials are required to stand high temperatures such as in aerospace flight.

3,518,234

NOVEL AROMATIC POLYAMIDE IMINES, NOVEL N-ARYL SUBSTITUTED POLYBENZIMIDAZOLES DERIVED THEREFROM AND PROCESSES FOR PREPARATION THEREOF

Shigeyoshi Hara, Masao Senoo, Moriya Uchida, Tsunemasa Yoshida, and Yoshio Imai, Tokyo, Japan, assignors to Teijin Limited, Osaka, Japan, a corporation of Japan

No Drawing. Filed May 27, 1968, Ser. No. 732,037

Int. Cl. C08g 20/32

U.S. Cl. 260-78

Int. Cl. C08g 20/32

14 Claims

A process for preparing a polyamide imine and a heat-stable polybenzimidazole which comprises reacting an aromatic triamine such as 2,4-diaminodiphenylamine or an aromatic tetramine such as 1,3-dianilino-4,6-diaminobenzene with an aromatic dicarboxylic halide in an inert organic liquid medium to form the polyamide imine, and heating or chemically treating said polyamide imine to convert it into a polybenzimidazole. Said polyamide imine is soluble in a normal organic solvent, and said polybenzimidazole is a mouldable and also soluble in a normal organic solvent.

3,518,235

CROSSLINKABLE AROMATIC SULFONE POLYMERS

Seal M. Cohen, Springfield, and Raymond H. Young, Jr., East Longmeadow, Mass., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

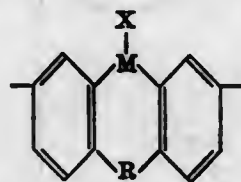
No Drawing. Filed Nov. 10, 1966, Ser. No. 593,285

Int. Cl. C08g 23/00

U.S. Cl. 260-79.3

4 Claims

This application relates to novel aromatic sulfone polymers which have a high degree of thermal stability and are capable of crosslinking to form a reticulate polymeric structure. The crosslinking functional group may be generally represented by the following structure:



wherein M is a metal, X is a halogen and R is a divalent radical.

3,518,236

ACCELERATION OF SULFUR-VULCANIZATION OF RUBBER WITH SULFINIC ACIDS AND DERIVATIVES

Byron A. Hunter, Woodbridge, Conn., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey

No Drawing. Filed July 20, 1967, Ser. No. 654,705

Int. Cl. C08c 11/54; C08f 27/06; C07d 87/22

U.S. Cl. 260-79.5

15 Claims

Scorch safety or delayed action acceleration is achieved by using, as accelerators, organic sulfinic acids, metal or amine salts of sulfinic acids, aldehyde reaction products

of sulfinic acids (hydroxy sulfones), or aldehyde-amine reaction products of sulfinic acids. Examples are p-toluene sulfinic acid, zinc benzene sulfinate, n-butylammonium-p-toluene sulfinate, reaction product of p-toluene sulfinic acid and formaldehyde, reaction product of p-toluene sulfinic acid and ethanolamine.

3,518,237

ETHYLENE COPOLYMERISATION CATALYST

Edward William Duck, Southampton, and David Page Grievs, Holbury, England, assignors to The International Synthetic Rubber Company Limited, Southampton, England, a corporation of the United Kingdom

No Drawing. Continuation-in-part of application Ser. No. 558,242, June 17, 1966. This application Oct. 9, 1967, Ser. No. 673,916

Int. Cl. C08f 15/40

U.S. Cl. 260-80.78

15 Claims

A catalyst system which is effective in homo- and copolymerizing α -olefins comprises:

- An organic compound comprising vanadium, titanium or zirconium not containing a halogen directly attached to the metal atom,
- an aluminium trihalide or an aluminium dihalohydride and
- an alkyl, aryl or alkylaryl organo-metallic compound of lithium.

The catalyst may also be used to prepare terpolymers of α -olefins in which the third monomer is a second α -olefin or a non-conjugated diolefin.

3,518,238

PROCESS FOR THE MANUFACTURE OF POLYMERS

Akira Onishi, Shiro Anzai, Koichi Irako, Ryota Fujio, Mitsuo Enomoto, and Minoru Kojima, Tokyo, Japan, assignors to Bridgestone Tire Company Limited, Tokyo, Japan

No Drawing. Filed Oct. 17, 1968, Ser. No. 768,535

Claims priority, application Japan, Oct. 20, 1967, 42/67,198

Int. Cl. C08d 1/20; C08f 1/68

U.S. Cl. 260-82.1

20 Claims

This invention relates to a process for manufacturing polymers of conjugated diolefins in the presence of an alfin catalyst in an inert diluent at -25° C.-120° C., with the use of a novel molecular weight moderator comprising a diolefin having double bonds in the 1 and 4 positions, to obtain the corresponding gel free polymer of a molecular weight ranging from about 50,000 to 1,250,000 which is useful as an elastomer for various uses.

3,518,239

PREPARATION OF COPOLYMERS OF VINYL CHLORIDE AND OXAZOLINES

John A. Frump, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

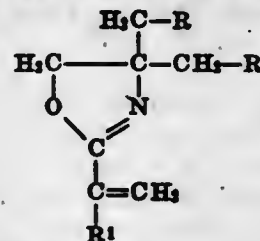
No Drawing. Filed Feb. 14, 1968, Ser. No. 705,280

Int. Cl. C08f 1/13, 19/00

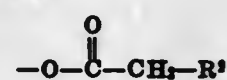
U.S. Cl. 260-87.5

3 Claims

A process for the aqueous emulsion polymerization of vinyl chloride and an oxazoline of the formula



wherein R is the radical



hydrogen, a lower alkyl radical having 1 up to about 3 carbon atoms or the hydroxyl radical, R¹ is an alkyl radical having, for example, 1 up to about 24 carbon atoms, and R² is hydrogen or an alkyl radical having, for example, 1 up to about 24 carbon atoms, by, polymerizing vinyl chloride and the said oxazoline in an aqueous emulsion polymerization medium containing stabilizing amounts of 2-amino-2-methyl-1-propanol.

3,518,240

NOVEL AMINO ACID PROTECTING GROUPS

Manohar A. Tilak and Charles S. Hollinden, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Sept. 7, 1967, Ser. No. 665,987

Int. Cl. C08f 15/04; C07c 103/52

U.S. Cl. 260-88.2

2 Claims

Novel resin, useful as C-terminal protecting group in solid-state peptide synthesis, comprising a styrene-divinylbenzene copolymer having an ω -haloalkanoyl or an ω -hydroxyalkanoyl group attached to a phenyl group of the copolymer; allows use of benzyloxycarbonyl protecting group for the amine function.

3,518,241

ACRYLATE AND METHACRYLATE ESTERS AND POLYMERS THEREOF

Irl N. Duling, West Chester, and Abraham Schneider, Overbrook Hills, Pa., and Robert E. Moore, Wilmington, Del., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

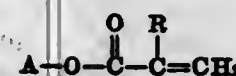
No Drawing. Filed Mar. 24, 1967, Ser. No. 625,581

Int. Cl. C08f 3/64, 3/66

U.S. Cl. 260-89.5

10 Claims

Alkyl or cycloalkyladamantylacrylates and methacrylates corresponding to the formula



wherein R is hydrogen or methyl and A is an adamantane moiety having 1-4 alkyl and/or cycloalkyl substituents on the adamantane nucleus are disclosed. The ester group is attached to the adamantane nucleus at a bridgehead position. These products, which are normally colorless liquids, can be prepared by esterifying acrylic or methacrylic acid, or preferably their acid chlorides, with a monool corresponding to the moiety A. These unsaturated esters are polymerized, preferably by free radical catalysis, to give solid polymers which have unusually high T_g values, good high temperature stability characteristics and high refractive indexes. The monomers can be used to make homopolymers or copolymers with other unsaturated monomers, and the polymerization can be carried out in a solvent or in bulk. Specific examples of the monomers are 3,5-dimethyladamantyl-1-acrylate and the corresponding methacrylate.

3,518,242

POLYVINYL ALCOHOL AND DERIVATIVES CROSSLINKED WITH TITANIUM, PERMANGANATE, OR VANADYL IONS

Joseph D. Chrisp, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 30, 1966, Ser. No. 538,536

Int. Cl. C08f 3/34

U.S. Cl. 260-91.3

12 Claims

A method is disclosed for crosslinking a polyvinyl polyhydroxy compound (polyvinyl alcohol) which com-

prises reacting, in an aqueous solution, the polyhydroxy compound with a crosslinking agent selected from a vanadyl ion, a titanium ion in the plus three valence state, or a permanganate ion and increasing the pH of the reaction mixture.

3,518,243

SULFONATED DERIVATIVES OF A GLYCOPETIDE EXTRACTED FROM ANIMAL ORGANS, USEFUL AS DRUGS AND A PROCESS FOR THE PREPARATION THEREOF

Adriano Butti, Tavernola, Como, Giuseppe Prino, Milan, and Gianfranco Bertolini, Mantova, Como, Italy, assignors to Prephar Prospection de Recherches Pharmaceutiques S.A., Schaffhausen, Switzerland, a Swiss corporation

No Drawing. Continuation-in-part of application Ser. No. 705,915, Feb. 16, 1968. This application July 28, 1969, Ser. No. 845,574

Claims priority, application Italy, Feb. 23, 1967, 13,002

Int. Cl. A61k 17/00; C07g 7/00

U.S. Cl. 260-112

26 Claims

Process for sulfonating glycopeptides of animal origin with a sulfonating agent in a heterocyclic tertiary base solvent. Resulting sulfonated product can be converted to corresponding ammonium or metal salts. The salts have pharmaceutical activity, particularly as anti-inflammatory agents.

3,518,244

WATER-SOLUBLE QUATERNARY AMINE CONTAINING MONOAZO DYESTUFFS

Eberhard Mundlos, Frankfurt am Main, and Reinhard Mohr, Johann Ostermeier, Bernhard Spieh, and Kurt Hohmann, Offenbach am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 20, 1967, Ser. No. 632,210

Claims priority, application Germany, Apr. 26, 1966, F 49,010

Int. Cl. C09b 29/06; D06p 1/02

U.S. Cl. 260-149

9 Claims

Water-soluble basic monoazo dyestuffs which are suitable for the dyeing or printing of textile fibrous materials consisting of native or regenerative cellulose, polyamides, polyesters, polyacrylonitrile or polyvinylidene cyanide.

3,518,245

AZO DYESTUFFS AND THEIR METAL COMPLEX COMPOUNDS

Fritz Meininger, Frankfurt am Main, and Hans Helmut Steuernagel, Kelkheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 19, 1966, Ser. No. 602,585

Claims priority, application Germany, Dec. 24, 1965, F 47,999

Int. Cl. C07c 107/08; C09b 45/14

U.S. Cl. 260-150

7 Claims

Azo dyestuffs and metal complex compounds thereof comprising a diazo component and as coupling component a β -naphthol-sulfonic acid substituted by a phenyl urea group that contains on the phenyl a fiber-reactive vinyl sulfone or an ethyl sulfone group substituted in β -position by a radical capable of being split off.

3,518,246

MONOAZO PYRIMIDYL CONTAINING DYES
Guenther Auerbach, Basel, Jakob Benz, Oberwil, Basel-Land, and Walter Wehrli, Riehen, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Mar. 9, 1966, Ser. No. 532,872
Claims priority, application Switzerland, Mar. 11, 1965, 3,423/65

Int. Cl. C09b 62/22, 62/24, 62/26

U.S. Cl. 260—154

5 Claims

Organic water-soluble dyes having in their molecular structure at least one 2,4-dihaloypyrimidylacetyl group (which may be methyl-substituted in the 6-position) bound in the 5-position through an amino group (which may be monosubstituted) produce dyeings which have good fastness to light, washing, milling, perspiration, water and rubbing.

3,518,247

BASIC MONOAZO DYES CONTAINING AN N-METHYLPYRIDINIUM, 2- OR 4-DIMETHYLENE GROUP

Rudolf Altermatt, Technau, Basel-Land, and Roland Entschel and Curt Müller, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Aug. 20, 1965, Ser. No. 481,404
Claims priority, application Switzerland, Aug. 28, 1964, 11,325/64; Sept. 4, 1964, 11,553/64; July 26, 1965, 10,436/65

Int. Cl. C09b 1/28, 29/36, 51/00

U.S. Cl. 260—156

9 Claims

Basic dyestuffs containing an N-methylpyridinium-2-dimethylene group or an N-methylpyridinium-4-dimethylene group are especially useful in dyeing polymeric in dyeing cotton, plastics, polyesters, polyolefins polyamides, paper and especially polyacrylonitrile fibers in very level, even shades which have good fastness to washing, perspiration, sublimation, pleating, decatising, ironing, water, sea water, dry cleaning, cross-dyeing and solvents.

3,518,248

SCILLIGLAUCOSIDIN - α - L-RHAMNOSIDE AND METHOD FOR ITS ISOLATION FROM WHITE SQUILL

Franz Pattermann, Ingelheim am Rhein, Germany, assignor to Boehringer Ingelheim G.m.b.H., Ingelheim am Rhein, Germany, a corporation of Germany

Filed Sept. 26, 1967, Ser. No. 670,719

Claims priority, application Germany, Oct. 4, 1966, B 89,199

Int. Cl. C07c 173/00

U.S. Cl. 260—210.5

4 Claims

The new cardiac-active principle Scilliglaucosidin- α -L-rhamnoside useful for increasing the contractibility of the heart muscle, diminishing the heart rate and improving cardiac efficiency in warmblooded animals, and a method of isolating it from the mother liquor of the proscillaridin A isolation process.

3,518,249

OLIGOSACCHARIDE PROPIONATE COMPOSITIONS AND PROCESSES

Gordon D. Hlatt, Martin E. Rowley, and Walter D. Slowig, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 1, 1966, Ser. No. 598,176

Int. Cl. C08b 3/08, 21/02, 29/10

U.S. Cl. 260—227

2 Claims

Oligosaccharide propionates having an average degree of polymerization of from about 4 to about 20 and con-

taining up to about 10 percent hydroxyl are useful as plasticizers and as control agents for manufacture of foamed plastics. The oligosaccharide propionates can be prepared by degrading a cellulose propionate in the presence of an acid catalyst.

3,518,250

SUBSTITUTION OF IMINO-HETEROCYCLIC COMPOUNDS

Robert R. Schumaker, Los Gatos, Calif., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

No Drawing. Filed Dec. 17, 1965, Ser. No. 514,708

Int. Cl. C07b 27/00

U.S. Cl. 260—239

5 Claims

Alkylation of nitrogen heterocyclic compounds in a medium of dimethyl sulfoxide and aqueous alkali.

3,518,251

CERTAIN AMINOALKYLAMINO SUBSTITUTED AZACYCLOALKENES

Karl Gatzl, Basel, Switzerland, assignor to J. R. Geigy, Basel, Switzerland

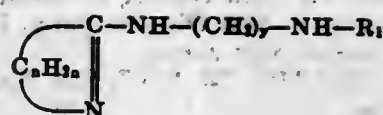
No Drawing. Continuation-in-part of application Ser. No. 290,343, June 25, 1963. This application June 7, 1967, Ser. No. 644,078

Int. Cl. C07d 27/14, 29/38, 41/08

U.S. Cl. 260—239

8 Claims

Fungicidal heterocyclic amines of the formula



wherein:

n is a whole number from 3 to 15,

y is a whole number from 2 to 6, and

R₁ represents hydrogen or alkyl, cycloalkyl, aryl or aralkyl radicals or heterocyclic radicals,

as well as fungicidally effective salts of such amines with organic or inorganic acids, and their quaternary salts, and fungicidal compositions containing such novel compounds.

3,518,252

PRODUCTION OF ALIPHATIC SCHIFF BASES AND DIAMINOALKANONE DERIVATIVES THEREOF

Nobuo Izawa, Sakai, and Yoshio Tamura and Akihisa Furutani, Mishima-gun, Osaka-fu, and Kazuo Okamoto, Osaka, Japan, assignors to Kanegafuchi Bosai Kabushiki Kaisha, Tokyo, Japan

Filed Apr. 14, 1966, Ser. No. 542,614

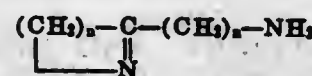
Claims priority, application Japan, Apr. 14, 1965, 40/22,022

Int. Cl. C07d 27/14, 29/38, 41/00

U.S. Cl. 260—239

3 Claims

A process for producing a Schiff base of the formula:



wherein n is 3–11 by the reaction between the corresponding 5–13 membered lactam and a decarboxylation-condensing agent such as calcium oxide or calcium hydroxide, characterized by continuously contacting the lactam in the state of a gas with the condensing agent in solid particulate form at an elevated temperature, preferably within the range of 320–550° C.

3,518,253

(CARBOXYCYCLOALKYL)ACYLAMINO-PENICILLINS

George R. Foster, Horsham, John Herbert Charles Naylor, Dorking, and Harry Smith, Maplehurst, near Horsham, England; said Foster assignor to Beecham Group Limited, Brentford, England, a British company
No Drawing. Continuation of application Ser. No. 623,845, Mar. 17, 1967. This application May 2, 1968, Ser. No. 728,249

The portion of the term of the patent subsequent to May 16, 1984, has been disclaimed

Int. Cl. C07d 99/16, 99/20

U.S. Cl. 260—239.1

8 Claims

Disclosed are (carboxycycloalkyl)acylamino-penicillins useful against certain microorganisms of the genus Pseudomonas.

3,518,254

SYNTHESIS OF 1,3-DIAZEPINO[1,2-a]INDOLIN-1(2H)-ONES

Peter H. L. Wei, Upper Darby, and Stanley C. Bell, Penn Valley, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 9, 1967, Ser. No. 681,862

Int. Cl. C07d 53/02

U.S. Cl. 260—239.3

13 Claims

The disclosure teaches the preparation of novel 1,3-diazepino-[1,2-a]indolin-1(2H)-ones found to possess pharmacological activity in mammals, including central nervous system depressant action. The process unexpectedly forming these compounds involves the reaction of haloacylanilides with potassium or sodium cyanide.

3,518,255

ACETALIC ETHERS OF ESTRA-1,3,5(10)-TRIENES AND PROCESS FOR THEIR PREPARATION

Carmelo Gandolfi and Marco Amendola, Milan, Italy, assignors to Carlo Erba S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed July 2, 1968, Ser. No. 741,857

Claims priority, application Italy, July 7, 1967, 18,113/67

Int. Cl. C07c 173/00

U.S. Cl. 260—239.55

43 Claims

3-acetalic, 17 β -acetalic and 3,17 β -bis-acetalic ether derivatives of estra-1,3,5(10)-trienes are disclosed. The disclosed compounds have, when orally administered, estrogenic activity.

3,518,256

2-[2-(5-NITRO-2-FURYL)VINYLPYRIDINE] DERIVATIVES AND PROCESS FOR PREPARATION THEREOF

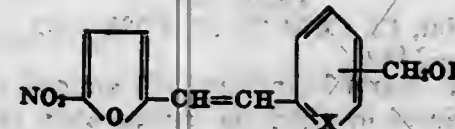
Shinsaku Minami, Yamatokoriyama-shi, Minoru Nakata, Amagasaki-shi, Katsuo Fujimoto, Osaka-fu, and Yoshiyuki Takase, Amagasaki-shi, Japan, assignors to Dai-ichippon Pharmaceutical Co., Ltd., Higashi-ku, Japan
No Drawing. Filed July 19, 1965, Ser. No. 473,166
Claims priority, application Japan, July 24, 1964, 39/42,189; Nov. 25, 1964, 39/66,338; Jan. 6, 1965, 40/526

Int. Cl. C07d 31/28

U.S. Cl. 260—240

6 Claims

A compound of the formula:



wherein X represents a member selected from the group consisting of N and N→O, the radical —CH₂OR is at 5- or 6-position of the pyridine ring, and R represents a

member selected from the group consisting of hydrogen and lower alkanoyl. Such compounds have anti-bacterial activity.

3,518,257

NOVEL NITROFURAN DERIVATIVES AND PROCESS FOR THEIR PREPARATION

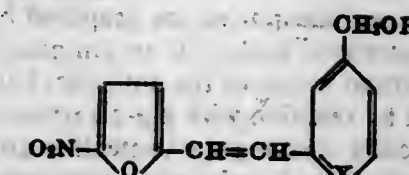
Shinsaku Minami, 31 4-chome, Yamagi, Yamato Koriyama-shi, Nara-ken, Japan, and Masao Shimizu, 1-29 2-chome, Sumahomachi, Sumai-ku, Kobe, Japan
No Drawing. Filed Nov. 1, 1966, Ser. No. 591,139
Claims priority, application Japan, Nov. 15, 1965, 40/70,113

Int. Cl. C07d 31/28

U.S. Cl. 260—240

8 Claims

Novel compounds having excellent antimicrobial activities of the formula



wherein X represents a member selected from the group consisting of N and N→O, and R represents a member selected from the group consisting of hydrogen and lower alkanoyl. Such compounds are produced by heating the corresponding N-oxide with a lower fatty acid anhydride to a temperature of at least 90° C.

3,518,258

PYRANO[3,2-i]QUINOLIZINE AND PROCESS FOR THE PRODUCTION

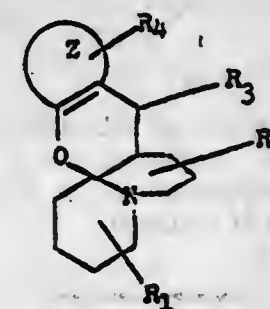
Max von Strandmann, Rockaway, Marvin P. Cohen, New Milford, and John Shavel, Jr., Mendham, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
No Drawing. Filed May 9, 1967, Ser. No. 637,886

Int. Cl. C07d 33/38

U.S. Cl. 260—240

6 Claims

Substituted pyrano[3,2-i]quinolizines of Formula I



and the process for their preparation are disclosed. R₁, R₂, R₃, are hydrogen, lower alkyl, aralkyl, aryl, and R₄ is hydrogen, alkyl, aralkyl, alkylene, aralkylene, alkoxy, aryloxy, hydroxy, alkylamine, acylamine, halogen and Z represents an aromatic or heteroaromatic nucleus such as benzene, naphthalene, pyridine, quinoline, isoquinoline, and carbazole.

3,518,259

CERTAIN 1,4-DIHYDRO-8-[2-(5-NITRO-2-FURYL)VINYLOXO-1,7-NAPHTHYRIDINE-3-CARBOXYLATES

George Y. Lesher, Schodack, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 2, 1967, Ser. No. 671,947

Int. Cl. C07d 31/36

U.S. Cl. 260—240

9 Claims

1-R₁-3-(COOR) - 1,4 - dihydro-8-[2-(5-nitro-2-furyl)-Y]-4-oxo-1,7-naphthyridines where R₁ and R are each H or lower-alkyl and Y is CH=CH, CH=C(CH₃) or CH(OH)CH₃, having antibacterial properties, are prepared by reacting a 1-R₁-3-(COOR)-1,4-dihydro-8-methyl (or ethyl)-1,7-naphthyridine with 5-nitro-2-furaldehyde.

The compounds where Y is CH(OH)CH₃, obtained as side products from the 8-methyl compounds, are readily converted to the preferred compounds where Y is CH=CH by reaction with a dehydrating agent, e.g., acetic anhydride.

3,518,260

METHOD FOR PREPARING AMINOACYL CEPHALOSPORINS

John L. Spencer and Charles W. Ryan, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Mar. 8, 1965, Ser. No. 438,046

Int. Cl. C07d 99/24

U.S. Cl. 260—243

10 Claims

7-aminoacyl cephalosporins are prepared by reacting 7-aminocephalosporanic acid with an aminoacylating agent in which the amino group of the aminoacylating agent has been protected by reaction with a β -dicarbonyl compound, then hydrolytically cleaving the protecting group from the reaction product. The 7-aminoacyl cephalosporins are effective antibiotics.

3,518,261

PROCESS OF PREPARING PHOSPHORUS ESTERS
Thanh-Thuong Nguyen, Arcueil, and Daniel Demozay, Villeurbanne, France, assignors to Pechiney-Progil-Societe pour le Developpement et la Vente de Specialites Chimiques, Paris, France

No Drawing. Filed June 15, 1966, Ser. No. 557,621

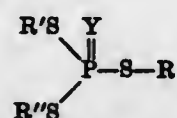
Claims priority, application France, June 18, 1965, 21,372

Int. Cl. C07d 87/46

U.S. Cl. 260—247.1

3 Claims

Trithio- and tetrathio-phosphoric esters having the general formula



prepared by the reaction of the halide of the R group with the tetramethyl ammonium salt of disubstituted derivatives of trithio-phosphoric or tetrathio-phosphoric acids in the presence of a solvent.

3,518,262

DIORGANO-AMINOMETHYLPHOSPHINE SULFIDES AND PROCESS

Ludwig Mäler, Zurich, Switzerland, assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 12, 1966, Ser. No. 571,964

Int. Cl. C07d 87/46

U.S. Cl. 260—247.1

8 Claims

Diorganoaminomethylphosphine sulfides of the formula R¹R²(R³R⁴NCH₂)₂PS wherein R¹ and R² are alkyl groups of up to 4 carbon atoms or phenyl, R³ and R⁴ are selected from the group consisting of alkyl groups of up to 4 carbon atoms, phenyl, dodecyl, alkenyl groups of up to 4 carbon atoms, or R³ and R⁴ taken together with the associated nitrogen atom are selected from the group consisting of piperidinyl, pyrrolidinyl or morpholinyl, and provided R⁴ can be a hydrogen atom, which compounds are useful as oil and gasoline additives and heat transfer fluids and are exemplified by diphenyl-diethylaminomethylphosphine sulfide, di-isobutyl-piperidinomethylphosphine sulfide and diethyldiarylamino-methylphosphine sulfide.

3,518,263

BASICALLY SUBSTITUTED 10,5-(EPOXYMETH-ANO) - 10,11 - DIHYDRO - 5H - DIBENZO[a,d]CYCLOHEPTEN-13-ONES

Thomas A. Dobson and Martin A. Davis, Montreal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 1, 1966, Ser. No. 591,106

Int. Cl. C07d 87/36

U.S. Cl. 260—247.2

6 Claims

The title compounds are prepared by reacting the corresponding 11-bromo compounds with a secondary amine. Geometrical isomers are obtained by reacting 10,11-epoxy-10,11-dihydro-5H-dibenzo[a,d]cycloheptene-5-carboxylic acid with a secondary amine. The compounds are antibacterials and trichomonocidal agents.

3,518,264

PROCESS FOR THE PREPARATION OF TRIACRYLYL PERHYDRO-s-TRIAZINES

Warren L. Beears, Brecksville, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 25, 1968, Ser. No. 770,819

Int. Cl. C07d 55/12

U.S. Cl. 260—248

5 Claims

In the reaction of α,β -olefinically unsaturated nitriles with formaldehyde to form perhydro-s-triazines, the formation of polymeric by-product has been minimized while yields of perhydro-s-triazine greater than 95% are obtained. To obtain these improved results the reaction is conducted in a chlorinated hydrocarbon solvent with an excess of the α,β -olefinically unsaturated nitrile and a low concentration of an acid catalyst.

3,518,265

PROCESS FOR THE PREPARATION OF 1,3,5-TRIACRYLYL PERHYDRO-s-TRIAZINES

Warren L. Beears, Brecksville, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 25, 1968, Ser. No. 770,818

Int. Cl. C07d 55/12

U.S. Cl. 260—248

7 Claims

In the reaction of α,β -olefinically unsaturated nitriles and formaldehyde with an acid catalyst, the formation of polymeric by-product has been minimized while high yields of perhydro-s-triazine are obtained. To obtain these improved results the reaction is conducted in a chlorinated hydrocarbon solvent with an excess of the α,β -olefinically unsaturated nitrile and in the presence of an acid anhydride.

3,518,266

QUATERNARY 3-ARYL-7-TRIAZINYLAMINO-COUMARIN SALTS

Heinrich Häussermann, Riehen, and Eduard Troxler, Basel, Switzerland, assignors to Celgy Chemical Corporation, Ardsley, N.Y., a corporation of New York

No Drawing. Filed July 23, 1968, Ser. No. 746,746

Claims priority, application Switzerland, July 25, 1967, 10,557/67

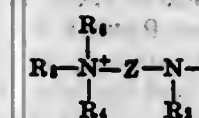
Int. Cl. C07d 55/20; C09k 1/02

U.S. Cl. 260—249.6

7 Claims

Quaternary 3-aryl-7-[triazinyl-(2)-amino]-coumarin salts are disclosed in which the carbon atom in 4-position in the triazinyl nucleus is substituted by a lower alkyl group, an optionally substituted lower alkoxy or lower alkylthio group, or an unsubstituted or organically sub-

stituted amino group, and the carbon atom in 6-position in the triazinyl nucleus is substituted by the grouping

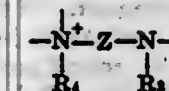


wherein

Z represents an alkylene or oxa-alkylene bridge;

R₂ represents hydrogen or a lower alkyl or alkenyl group;

R₄, R₅ and R₆ represent certain organic substituents; or R₄ and R₅ together with the nitrogen atom represent certain heterocyclic radicals; or the grouping



may represent a piperazinium radical, and which novel coumarins are useful for protecting foodstuffs and the like against the growth of Penicillium thereon; they are also useful for the optical brightening of acrylic fiber materials in unexpectedly high degrees of whiteness free from greenish hues; compositions containing the novel coumarins and a method of brightening acrylic fibers therewith are also described.

The novel compounds show also unexpectedly little tendency to precipitate from aqueous thiocyanate ion-containing spinning baths for producing polyacrylonitrile filaments.

ERRATUM

For Class 260—256.5 see:
Patent No. 3,518,392

3,518,267

1-AMINOALKYL AND 1-HYDROXYALKYL-TETRA-HYDRO-HALO-SULFAMYL-QUINAZOLINONE

Bola Vilhal Shetty, Rochester, N.Y., assignor to Pennwalt Corporation, East Orange, N.J., a corporation of Pennsylvania

No Drawing. Filed Feb. 23, 1968, Ser. No. 707,411

Int. Cl. C07d 51/48

U.S. Cl. 260—256.5

11 Claims

A 1,2,3,4-tetrahydro-halo-sulfamyl-quinazolinone having diuretic properties, characterized by having in the 3-position a substituted or unsubstituted aryl or alkyl group and by having in the 1-position an aminoalkyl, or hydroxyalkyl group.

3,518,268

SUBSTITUTED 5-CARBONYL- OR 5-THIOCARBONYL-DIBENZO[b,f]AZEPINES

Kurt Adank, Matten, Basel-Land, Switzerland, assignor to Celgy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 17, 1966, Ser. No. 594,986

Claims priority, application Switzerland, Nov. 24, 1965, 16,163/65

Int. Cl. C07d 51/70

U.S. Cl. 260—268

8 Claims

5-carbonyl or 5-thiocarbonyl-dibenz[b,f]azepines substituted by an esterified heterocyclic alkanol group are coronary dilators. An illustrative embodiment is the benzoic acid ester of 4-(5H-dibenz[b,f]azepine-5-carbonyl)-1-piperazinoethanol.

3,518,269

1-OXIME SUBSTITUTED QUINOLIZINES

Richard E. Brown, Hanover, and Robert I. Melnik, Rockaway, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

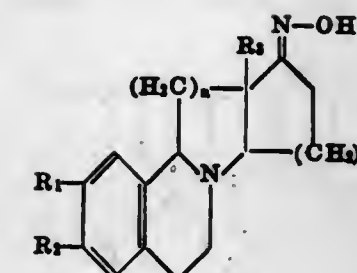
No Drawing. Filed May 4, 1967, Ser. No. 636,024

Int. Cl. C07d 101/00

U.S. Cl. 260—286

3 Claims

The present invention relates to 1-oxime substituted quinolizines of the Formula I:



(I)

wherein R₁ and R₂ represent hydrogen, hydroxy, or lower alkoxy; R₃ represents hydrogen, or lower alkyl; n may be 1, 2, or 3.

3,518,270

6,7,12,13 - TETRAHYDRO - 6,12 - IMINO - 5H - BENZO[5,6]CYCLOOCT[1,2-b]INDOLE DERIVATIVES AND PROCESS FOR THEIR PRODUCTION

John Shavel, Jr., Mendham, and Harold Zinnes, Rockaway, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

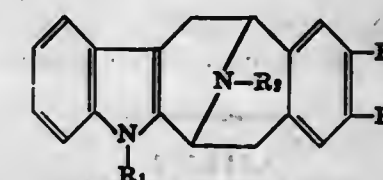
No Drawing. Continuation-in-part of application Ser. No. 634,133, Apr. 27, 1967. This application May 17, 1967, Ser. No. 644,752

Int. Cl. C07d 35/10

U.S. Cl. 260—286

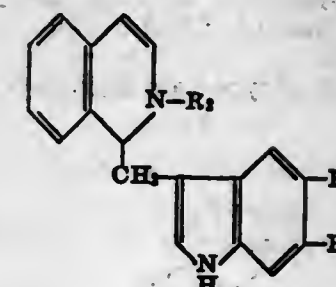
9 Claims

The invention describes compounds of structure I



(I)

and a method for their production. They are prepared by cyclization of compounds of structure II



(II)

by treatment with excess dilute acid. Compounds of structure I, wherein R is H, can be alkylated. Compounds of structure I, wherein R₂ is benzyl, can be debenzylated. Compounds of structure I are useful as central nervous system stimulants, central nervous system depressants and useful as antifungal agents.

3,518,271

1,2,3,4,4a,5,6,7,8,13-DECAHYDRO-7,13b-METHANO-13bH-INDOLO[3,2-c][1,2]BENZAZOCINES AND PROCESS FOR THEIR PRODUCTION

John Shavel, Jr., Mendham, and Harold Zimes, Rockaway, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

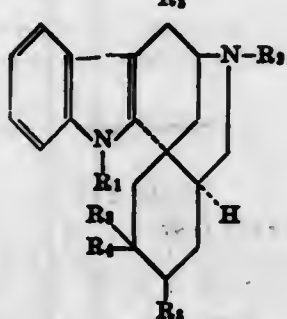
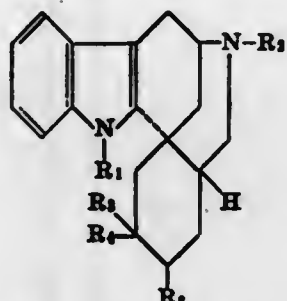
No Drawing. Continuation-in-part of application Ser. No. 634,133, Apr. 27, 1967. This application Aug. 31, 1967, Ser. No. 664,626

Int. Cl. C07d 35/02

U.S. Cl. 260-286

11 Claims

Compounds of the following structures Ia and Ib:



are disclosed wherein R₁ is hydrogen, lower alkyl or aralkyl; R₂ is hydrogen, lower alkyl, aralkyl, aryl, cyclopropylmethyl, carbomethoxy and acyl; R₃ and R₄ are hydrogen, hydroxy, lower alkyl, or aryl; and R₅ represents hydrogen and carbomethoxy. The method of preparation of Ia and Ib wherein R₃ and R₄ are keto consists of reducing a compound of structure II or III with sodium and tert-butanol in liquid ammonia and treatment of the resulting product with dilute acid. After separation of the epimeric ketones, they are transformed into a variety of derivatives. These products are useful as analgesics.

3,518,272

TETRAHYDRO BENZOPYRANOQUINOLINES AND PROCESS FOR THEIR PRODUCTION

Max von Strandmann, Rockaway, Marvin P. Cohen, New Milford, and John Shavel, Jr., Mendham, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

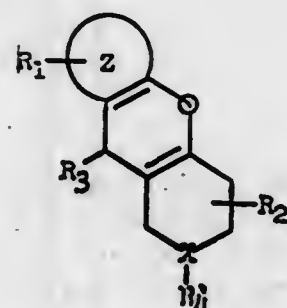
No Drawing. Filed Feb. 5, 1968, Ser. No. 702,770

Int. Cl. C07d 39/00

U.S. Cl. 260-286

4 Claims

Pyran derivatives of type I are disclosed:



wherein Z is an aromatic or heteroaromatic nucleus; X is CH, N, S; R₁ is hydrogen, halogen, nitro, hydroxy, lower alkoxy, carbomethoxy, lower alkyl, aryl, aralkyl and various amino substituents; R₂ and R₃ are hydrogen, lower alkyl, cycloalkyl, aryl, aralkyl; R₄ is hydrogen, oxygen, lower alkyl, aralkyl, aryl or acyl. Certain of the compounds where X is sulfur may be without an R₄ substituent.

These compounds are useful as central nervous system stimulants.

3,518,273

BENZOPYRANQUINOLINOL DERIVATIVES AND PROCESS FOR THEIR PRODUCTION

Maximilian von Strandmann, Rockaway, Marvin P. Cohen, New Milford, and John Shavel, Jr., Mendham, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

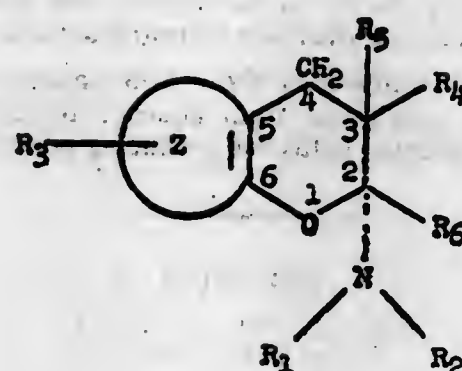
No Drawing. Filed Aug. 3, 1966, Ser. No. 569,832

Int. Cl. C07d 39/00

U.S. Cl. 260-289

8 Claims

Pyran derivatives of the formula:



(III)

are disclosed wherein R₁ and R₂ are each lower alkyl, aralkyl, aryl or R₁ and R₂ taken together with the nitrogen atom to which they are attached form a piperidine, pyrrolidine or morpholine nucleus; Z represents a carbocyclic or heterocyclic nucleus; R₃ is hydrogen, lower alkyl, halogen; R₄ and R₅ are each hydrogen, lower alkyl, aralkyl, aryl; or R₄ and R₅ taken together form with the second and third carbon atom of the pyran ring, a saturated aliphatic ring such as cyclopentane, cyclohexane or cycloheptane; R₆ is hydrogen or lower alkyl.

The compounds of this invention are useful as intermediates for the production of other pyran derivatives which are useful as anti-microbial agents.

3,518,274

PHENYL SUBSTITUTED N-(2-AMINOETHYL)-N-BENZYLAMIDES

Wallace Glenn Strycker, Goshen, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Continuation-in-part of application Ser. No. 569,647, Aug. 1, 1966. This application Oct. 9, 1967, Ser. No. 674,007

Int. Cl. C07d 29/30

U.S. Cl. 260-294

2 Claims

A series of phenyl substituted N-(2-aminoethyl)-N-benzylamides in which the ethyl group is substituted in the 1 or 2 position by a phenyl group, prepared by reacting a haloacyl halide including a phenyl group with benzylamine, reacting the product with a compound of the formula BH wherein B is a heterocyclic group, reducing

(I)

the resulting product and forming the desired compound with a final acylation. These compounds display analgesic activity.

3,518,275

8-CARBOBENZOXY-1,3,8-TRIAZASPIRO[4,5]DECANE-2,4-DIONE

Rudolf G. Griot, Florham Park, N.J., assignor to Sandoz-Wander, Inc., Hanover, N.J., a corporation of Delaware

No Drawing. Original application Mar. 24, 1964, Ser. No. 354,431, now Patent No. 3,330,836. Divided and this application Nov. 18, 1966, Ser. No. 608,711

Int. Cl. C07d 29/26

U.S. Cl. 260-294.3

1 Claim

The compounds are 8-carbobenzoxy- (or benzyl-)1,3,8-triazaspiro[4,5]decane-2,4-diones, useful as intermediates in the preparation of tranquilizers and blood-pressure reducing agents.

3,518,276

SUBSTITUTED 1-BENZOYLPROPYL-4-HYDROXY-4-PHENYL PIPERIDINE DERIVATIVES

Paul Adriaan Jan Janssen, Voorschoten, Belgium, assignor to Janssen Pharmaceutica, a corporation of Belgium

No Drawing. Filed Nov. 23, 1966, Ser. No. 596,396

Claims priority, application Great Britain, Dec. 8, 1965, 52,125/65; Sept. 23, 1966, 42,589/66

Int. Cl. C07d 29/20

U.S. Cl. 260-294.7

3 Claims

The compounds herein are of the class of 4-hydroxy butyrophenone piperidines useful for their central nervous system depressant activity.

3,518,277

2-β-DILOWERALKYLAMINOPROPIONYL-1-PHENYL-1,2,3,4-TETRAHYDROBENZOTHIENO[2,3-C]PYRIDINES

John T. Suh, Mequon, Wis., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 621,437, Mar. 8, 1967. This application Feb. 16, 1968, Ser. No. 705,892

Int. Cl. C07d 63/18

U.S. Cl. 260-294.8

2 Claims

The compounds are 2-β-diloweralkylaminopropionyl-1-phenyl-1,2,3,4-tetrahydrobenzothieno[2,3-C]pyridines, useful as antihypertensive agents and central nervous system stimulants. A compound disclosed is 2-β-diethylaminopropionyl-1-phenyl-1,2,3,4-tetrahydrobenzothieno[2,3-C]pyridines.

3,518,278

SUBSTITUTED-1,2,3,4-TETRAHYDROBENZOTHIENO 2,3-PYRIDINE

John T. Suh, Mequon, Wis., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 705,969, Feb. 16, 1968, which is a continuation-in-part of application Ser. No. 621,475, Mar. 8, 1967. This application Mar. 20, 1969, Ser. No. 809,003

Int. Cl. C07d 31/50

U.S. Cl. 260-294.8

6 Claims

The compounds are substituted-1,2,3,4-tetrahydrobenzothieno[2,3-c]pyridine useful as central nervous system

depressants and tranquilizing agents. A compound disclosed is 6-chloro-1,2,3,4-tetrahydrobenzothieno[2,3-c]pyridine.

3,518,279

THIAZOLYLPHENYL PHOSPHATES

Bernard Miller, Princeton, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

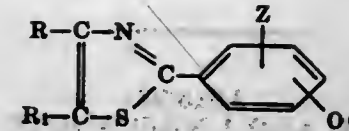
No Drawing. Filed Aug. 29, 1967, Ser. No. 663,971

Int. Cl. C07d 91/32

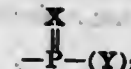
U.S. Cl. 260-302

8 Claims

Pesticidal compounds of the formula:



wherein Q is



X is either oxygen or sulfur, Y is lower alkyl, lower alkoxy, lower alkylthio, halo-substituted lower alkyl, halo-substituted lower alkoxy, phenyl or lower alkyl-amino and each Y may be the same or different, Z is hydrogen, lower alkyl or halo, R is hydrogen, lower alkyl or phenyl, and R₁ stands for hydrogen, lower alkyl, cyano, carb(lower)alkoxy or acetyl are disclosed. They may be prepared from the hydroxy thiazole compounds having the above formula wherein Q is H.

3,518,280

1-P-CHLOROBENZOYL-2-METHYL-5-METHOXY-INDOLE-3-MALONIC ACID DERIVATIVES

John M. Chemerda, Watchung, and Meyer Slettinger, North Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 656,040, July 26, 1967. This application June 27, 1968, Ser. No. 740,453

Int. Cl. C07d 27/56

U.S. Cl. 260-326.13

3 Claims

A new method of preparing 1-p-chlorobenzoyl-2-methyl-3-indolylacetic acids by hydrolysis of 1-p-chlorobenzoyl-2-methyl-5-methoxyindole-3-malonate.

3,518,281

PRODUCTION OF 2,3-DIHYDROPYRAN

Dennis Charles Holtman, Cincinnati, Ohio, assignor to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed June 28, 1968, Ser. No. 740,861

Int. Cl. C07d 7/08

U.S. Cl. 260-345.1

8 Claims

A process is provided for the production of 2,3-dihydropyran by catalytically converting tetrahydrofurfuryl alcohol to 2,3-dihydropyran in the vapor phase at a temperature of from about 200° to 375° C. using an eta alumina catalyst.

3,518,282
METHOD FOR PREPARING LEVOPIMARIC ACID DIOXIDE FROM PEROXIDE USING FERROUS SULFATE

Walter H. Schuller, Jacob C. Minor, and Ray V. Lawrence, Lake City, Fla., and Hideo Kanno, Tokyo, Japan, assignors to the United States of America as represented by the Secretary of Agriculture
 No Drawing. Filed June 7, 1967, Ser. No. 644,087
 Int. Cl. C07d 5/32

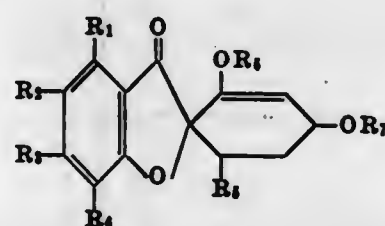
U.S. Cl. 260—346.2 4 Claims
 Levopimaric acid dioxide can be prepared from levopimaric acid transannular peroxide using aqueous solutions of ferrous sulfate at ambient temperatures. A dioxide having excellent purity is obtained. The barium/cadmium salts of levopimaric acid dioxide are excellent heat stabilizers for poly-(vinyl chloride)-poly-(vinyl acetate) resins.

3,518,283
PIVALOYL AND UNDECANOYL ESTERS OF GRISEOFULVOL

Arnold Brossi, Verona, N.J., and Max Gerecke, Basel, and Emilio Kyburz, Reinach, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 86,850, Feb. 3, 1961. This application Dec. 26, 1968, Ser. No. 787,263
 Claims priority, application Switzerland, Feb. 12, 1960, 1,551/60

U.S. Cl. 260—346.2 2 Claims
 Compounds of the formula



wherein R_1 , R_2 , R_3 , and R_4 can be the same or different and represent hydrogen, lower alkyl, lower haloalkyl, lower alkoxy, hydroxy, or halogen; R_5 represents hydrogen or a lower alkyl group; R_6 represents a lower alkyl group; R_7 represents hydrogen, alkanoyl, oxalyl, alkenoyl, aroyl, aralkanoyl, aryloxyalkanoyl, alkyl, alkoxy-alkyl, or aryl.

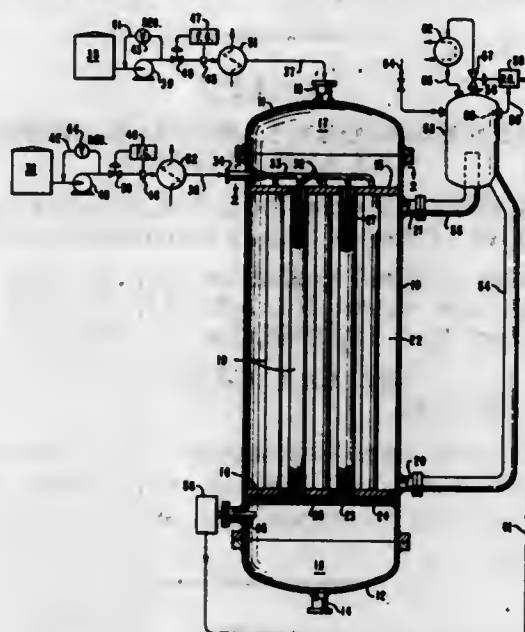
The spirocyclic keto compounds of the above formula are useful as antifungal agents, e.g., against *Trichophyton mentagrophytes* and *Botrytis allii*.

3,518,284
PARTIAL OXIDATION OF ORGANIC COMPOUNDS

E. Gordon Foster, Bronxville, N.Y., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
 Continuation-in-part of application Ser. No. 262,608, Mar. 4, 1963. This application Feb. 20, 1967, Ser. No. 619,887

U.S. Cl. 260—346.4 4 Claims
 In a process of partially oxidizing in the vapor phase organic compounds with an oxygen-containing gas comprising injecting the reactants separately into confluence zones of multi-tubes having a ratio of length to diameter

of above 200 and having inert packing or inert packing mixed with a catalyst and forcing the reactants through



the tubes at an elevated but non-explosive temperature range of from about 400 to about 1500° F.

3,518,285
HYDROCARBON OLEFIN OXIDATION

Donald M. Fenton, Anaheim, Calif., and Larry G. Wolgemuth, Lansing, Ill., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Continuation-in-part of application Ser. No. 411,616, Nov. 16, 1964. This application Mar. 16, 1967, Ser. No. 623,564

U.S. Cl. 260—348.5 10 Claims
 Hydrocarbon olefins are oxidized to more valuable products by contacting in liquid phase the olefin with a rhenium compound and hydrogen peroxide. Hydrogen peroxide is used to maintain the rhenium compound in its higher valency for repeated oxidation of the olefin. Temperatures from -50° to 150° C. and pressures from 1 to about 250 atmospheres are used. A major product is the olefin oxide, useful as a precursor for polymers, glycols, etc.

3,518,286
ORGANOTIN N-CARBAMATES

Kailash Chandra Pande, Adrian, and Guenther Fritz Lengnick, Manlyon Beach, Mich., assignors, by mesne assignments, to Stauffer-Wacker Silicone Corporation, a corporation of Delaware

No Drawing. Filed Dec. 27, 1965, Ser. No. 530,747
 Int. Cl. C07f 7/22; B01j 11/06

U.S. Cl. 260—429.1 6 Claims
 This invention relates to a novel class of tin compounds and to organopolysiloxane compositions incorporating such compounds. The organotin N-carbamates contain either one or two tin atoms interconnected to a hydrocarbon radical via an acyloxylated nitrogen atom. The said tin compounds find utility as curing agents for silicone elastomers.

3,518,287
METAL OXIDE ACYLATES AND THEIR PROCESS OF PREPARATION

Jacobus Rinse, 77 Anderson Road, Bernardsville, N.J. 07924
 No Drawing. Filed July 5, 1967, Ser. No. 651,120
 Int. Cl. C07f 11/00, 15/02, 7/94

U.S. Cl. 260—438.5 10 Claims
 Organic metal compounds containing a high percentage of metal and having a central molecular structure comprising two or three metal atoms connected by oxygen bonds to each other, at least one of the metals being

trivalent, and, in turn, connected to two or three acyloxy groups or to three divalent-metal acyloxy groups are prepared by reacting metal acetates or formates with metal oxides or hydroxides and with an aliphatic acid having from 7-22 carbon atoms or with a divalent metal acyl oxide of such acid to form products useful as resin additives, fungicides, anti-corrosives and colorants.

3,518,288
POLYOXYETHYLENE SILOXANE BRANCH COPOLYMERS

Loren A. Haluska, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed May 2, 1966, Ser. No. 546,548
 Int. Cl. C07f 7/10

U.S. Cl. 260—448.2 5 Claims
 New siloxane polyalkylene oxide copolymers are disclosed which are useful in the preparation of rigid polyurethane foams. These new copolymers make it possible to consistently produce uniform fine-celled foams having a high percentage of closed cells under a wide variety of manufacturing conditions.

3,518,289
PROCESS FOR PREPARING BICYCLOTETRA-SILAZANES AND TRICYCLOTETRASILAZANE COMPOUNDS

Christopher A. Pearce, Cowbridge, Glamorgan, and Norman C. Lloyd, Radyr, Cardiff, Glamorgan, Wales, assignors to Midland Silicones Limited, Reading, Berkshire, England

No Drawing. Filed May 21, 1968, Ser. No. 730,937
 Claims priority, application Great Britain, May 26, 1967, 24,694/67

U.S. Cl. 260—448.2 4 Claims
 Organosilazane materials are prepared by heating a bicycletetrasilazane to produce mixtures of tricycletetrasilazanes and silazane polymers. These compounds are useful in the formation of coating compositions.

3,518,290
BICYCLOTETRASILAZANES AND THE PREPARATION THEREOF

Christopher A. Pearce, Cowbridge, Glamorgan, and Norman C. Lloyd, Radyr, Cardiff, Glamorgan, Wales, assignors to Midland Silicones Limited, Reading, Berkshire, England

No Drawing. Filed May 21, 1968, Ser. No. 730,940
 Claims priority, application Great Britain, May 26, 1967, 24,693/67

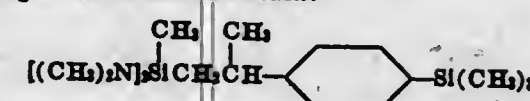
U.S. Cl. 260—448.2 11 Claims
 Novel compositions of matter and processes for preparing bicyclo- and aminocyclotetrasilazanes. These compounds are useful as starting materials for the preparation of silazane polymers, as intermediates in the preparation of silazane-siloxane copolymers and as cross-linking agents for siloxane polymers.

3,518,291
ORGANOMETALLIC AMINOSILICON COMPOUNDS

John L. Speter, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

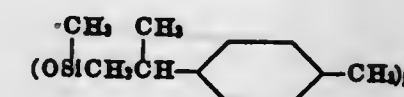
No Drawing. Original application Dec. 5, 1966, Ser. No. 598,892, now Patent No. 3,445,425. Divided and this application Oct. 16, 1968, Ser. No. 796,250
 Int. Cl. C07d 103/04; C07f 7/10

U.S. Cl. 260—448.2 2 Claims
 A compound of the formula:



875 O.G.—86

is useful in making silica and glass water repellant and a compound of the formula:



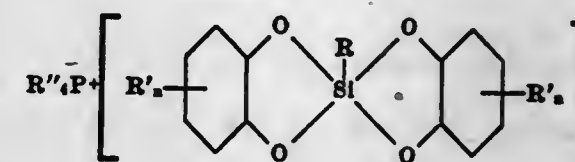
where f is 3 or 4 is useful in making siloxane copolymers which are lubricants.

3,518,292
QUATERNARY PHOSPHONIUM SILICON COMPLEXES

Cecil L. Frye, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Mar. 27, 1967, Ser. No. 625,965
 The portion of the term of the patent subsequent to Dec. 26, 1984, has been disclaimed
 Int. Cl. C07f 7/06

U.S. Cl. 260—448.3 5 Claims
 The title complexes of the formula are claimed. These complexes are useful as catalysts for the preparation of siloxane polymers having a narrow molecular weight distribution.



wherein

R is a monovalent hydrocarbon or monovalent aliphatic halohydrocarbon radical,
 R' is a substituent that activates the aromatic ring,
 n is an integer from 0 to 2, and
 R'' is a monovalent hydrocarbon radical.

3,518,293
PROCESS FOR THE PREPARATION OF TRIFLUOROMETHYL ISOCYANATE

Erich Klauke, Cologne-Flittard, and Hans Holtschmidt, Leverkusen-Steinbuechel, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 10, 1967, Ser. No. 637,365
 Claims priority, application Germany, May 11, 1966, F 49,175

U.S. Cl. 260—453 5 Claims
 Trifluoromethyl isocyanate is prepared by reacting anhydrous hydrogen fluoride with chlorocarbonyl isocyanide dichloride.

3,518,294
AROMATIC DICARBOXYLIC ACIDS HAVING TWO SULFONATE LINKAGES

Burton M. Rein, Piscataway, N.J., assignor to Mobil Oil Corporation, a corporation of New York
 No Drawing. Filed Mar. 9, 1967, Ser. No. 621,774
 Int. Cl. C07c 143/68; C08g 33/14

U.S. Cl. 260—456 2 Claims
 Aromatic dicarboxylic acids having three or more phenylene groups and two sulfonate linkages. They are

prepared by oxidation of (A) bis-toluenesulfonate ester of a bis-phenol or (B) m-benzenedisulfonate of a cresol. These dicarboxylic acids are polymerizable with glycol to produce thermally stable polyesters.

3,518,295

PROCESS FOR PREPARING UNSATURATED NITRILES BY CATALYTIC AMMOXIDATION OF OLEFINS

Jamal S. Eden, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed May 2, 1968, Ser. No. 726,214

Int. Cl. C07c 121/02

U.S. Cl. 260—465.3

5 Claims

Unsaturated nitriles such as acrylonitrile and methacrylonitrile are prepared in excellent yields by the ammoxidation of propylene or isobutylene in the presence of a catalyst containing chromium molybdate, tellurium oxide and phosphorus oxide.

3,518,296

PROCESS OF PREPARATION OF ALKYL CYCLOPENTANE DIONES AND INTERMEDIATES THEREFOR

Robert Bucourt, Clilchy-sous-Bois, André Pierdet, Noisy-le-Sec, Germain Costerousse, Montrouge, Daniel Hainaut, Paris, Robert Joly, Montmorency, Julien Warnant, Neuilly-sur-Seine, and Bernard Goffinet, Paris, France, assignors to Roussel-UCLAF, Paris, France, a corporation of France

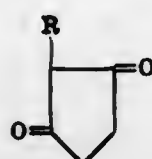
No Drawing. Filed Apr. 22, 1964, Ser. No. 361,877

Int. Cl. C07c 69/74

U.S. Cl. 260—468

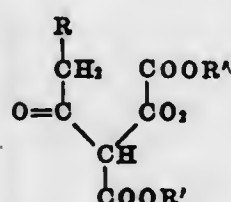
10 Claims

The present invention relates to a new process of preparation of alkyl cyclopentane diones. It more particularly relates to a new process of preparation of 2-alkyl cyclopentane-1,3-diones of the following general Formula I:



(1)

in which R represents a lower alkyl radical by reacting a β -keto ester of the formula



wherein R and R' are lower alkyl, with an alkaline cyclizing agent, saponifying the resultant 2-lower-alkyl-4-carboxylate-cyclopentane-1,3-dione, decarboxylating the resultant 2-lower alkyl-4-carboxy-cyclopentane-1,3-dione and recovering said 2-alkyl cyclopentane-1,3-diones. The invention also resides in the intermediate 4-substituted compounds.

3,518,297

N-(ACETYSALICYL)ANTHRANILIC ACID COMPOUNDS

Rosario Busacca, Milan, Italy, assignor, by mesne assignments, to Pharmirix Anstalt, Schaan, Liechtenstein, a Liechtenstein body corporate

No Drawing. Filed June 12, 1967, Ser. No. 645,532

Claims priority, application Great Britain, June 13, 1966, 26,286/66

Int. Cl. A61k 27/00; C07c 69/14

U.S. Cl. 260—480

2 Claims

N-(acetylsalicyl)anthranilic acid and its salts are useful in reducing inflammation, pain and fever.

3,518,298

DIALKANOLYOXYBUTENE PRODUCTION

Walter H. Peterson, Point Richmond, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 16, 1968, Ser. No. 698,124

Int. Cl. C07c 67/04

U.S. Cl. 260—497

3 Claims

1,2-dialkanolyoxy-3-butene and 1,4-dialkanolyoxy-2-butene are produced as the major products by the process which comprises intimately contacting butadiene, butadiene polyperoxide, and an alkanolic acid or alkanolic acid anhydride in the presence of a palladium salt as catalyst.

3,518,299

USE OF FATTY ACID SALTS IN THE SULFOXIDATION PROCESS

Terence G. Alston, Los Angeles, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Mar. 3, 1969, Ser. No. 803,993

Int. Cl. C07c 139/04

U.S. Cl. 260—513

8 Claims

The invention comprises the use of a C_{12} - C_{22} fatty acid salt, e.g., potassium stearate, to promote the activity of sulfur trioxide in the sulfoxidation of paraffin hydrocarbons to alkane sulfonic acids. The process comprises contacting a paraffin with sulfur dioxide, oxygen, sulfur trioxide and a minor amount of the fatty acid salt at temperatures between about 20° and 100° C. and sufficient pressures to maintain liquid phase conditions. The reaction is initiated in the presence of a free radical initiator which can be ultraviolet light, peroxides or azo compounds.

3,518,300

PREPARATION OF o-PHENETHYL BENZOIC ACID

Shrikant V. Dighe, Silver Spring, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed May 2, 1967, Ser. No. 635,374

Int. Cl. C07c 63/00

U.S. Cl. 260—515

3 Claims

An o-phenethyl benzoic acid is prepared by reacting hydrogen with either benzal phthalide or benzyl phthalide in an acid medium in the presence of a platinum metal catalyst.

3,518,301

ALKYL AROMATIC OXIDATION PROCESS

Charles L. Thomas, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 6, 1966, Ser. No. 584,663

Int. Cl. C07c 63/02

U.S. Cl. 260—524

8 Claims

This invention relates to the oxidation of alkyl aromatic compounds to aromatic carboxylic acids and poly-

carboxylic acids. In more particular, it relates to a catalytic method of oxidizing alkyl aromatic hydrocarbons to aromatic carboxylic acids wherein a copper chromite is employed with one or more known oxidizing gases.

3,518,302

PROCESS FOR THE PREPARATION OF ALPHA NITRO-KETONES AND CARBOXYLIC ACIDS

Alan F. Ellis, Murrysville, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 527,769, Feb. 16, 1966. This application Jan. 23, 1967, Ser. No. 610,824

Int. Cl. C07c 57/02, 53/00, 53/22

U.S. Cl. 260—526

25 Claims

A process for the preparation of an alpha nitro-ketone by:

- (1) heating a nitro-nitroso compound where the nitro and nitroso groups are on adjacent carbon atoms and where the carbon atom bearing the nitroso group also bears a hydrogen atom,
- (2) in the presence of an aqueous solution of an acid catalyst having a dissociation constant at 25° C. of greater than 10^{-3} ,
- (3) under reaction conditions such that there is substantially no thermal carbon to nitrogen bond cleavage and substantially no carbon to carbon bond cleavage.

When the alpha nitro-ketone has at least four carbon atoms and at least one hydrogen atom attached to the same carbon atom which bears the nitro group, it can be converted to a carboxylic acid by contacting the alpha nitro-ketone with an immiscible aqueous solution of a catalyst comprising a compound which, when dissolved in water, results in the production of hydroxyl ions.

3,518,303

PROCESS FOR EXCHANGING HALOGEN FOR HYDROCARBON RADICALS IN COMPOUNDS CONTAINING A THIOPHOSPHORUS HALIDE GROUP

Ludwig Maier, Zurich, Switzerland, assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 297,951, July 26, 1963. This application Mar. 3, 1965, Ser. No. 436,957

Claims priority, application Switzerland, July 26, 1962, 9,010/62

Int. Cl. C07f 9/02

U.S. Cl. 260—543

16 Claims

Process for exchanging halogen atoms for hydrocarbon radicals in compounds which contain thiophosphorus halide groups by reaction with organic aluminum compounds in an inert atmosphere.

3,518,304

FLUOROUREAS

Collin Swithenbank, Perkins, Sheldon N. Lewis, Willow Grove, and Kenneth L. Viste, Warminster, Pa., assignors to Rohm and Haas Company, Philadelphia, Pa., a corporation of Delaware

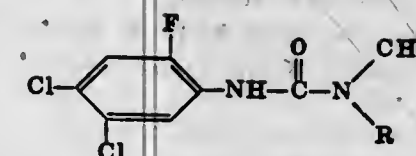
No Drawing. Filed Oct. 17, 1967, Ser. No. 675,797

Int. Cl. B21d 3/02; C07c 127/00

U.S. Cl. 260—553

3 Claims

Compounds of the formula



where R is H or CH_3 , useful as pre-emergence and post-emergence herbicides.

3,518,305

NITRO-TRIFLUOROMETHYLBENZAMIDES

Dean E. Welch, 800 Beck St., and Robert R. Baron, 3009 Clark St., both of Charles City, Iowa 50616

No Drawing. Filed Aug. 14, 1967, Ser. No. 660,179

Int. Cl. C07c 103/22

U.S. Cl. 260—558

9 Claims

A new series of nitro-trifluoromethylbenzamides and feed compositions containing the same to be used for the prevention and control of coccidiosis in animals.

3,518,306

7- AND/OR 9-(N-NITROALKYLAMINO)-6-DEMETHYL-6-DEOXYTETRACYCLINES

Michael Joseph Martell, Pearl River, and Adma Schneller Ross, Suffern, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Feb. 19, 1968, Ser. No. 706,687

Int. Cl. C07c 103/19

U.S. Cl. 260—559

10 Claims

This disclosure describes compounds of the class of 7- and/or 9-(N-nitrosoalkylamino)-6-demethyl-6-deoxy-tetracyclines useful as antibacterial agents.

3,518,307

CYCLOHEXYNYL AMINES

William Taub, Zurich, Rolf Dumas, Basel, and Franz Ostermayer, Riehen, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of New York

No Drawing. Filed Feb. 2, 1968, Ser. No. 702,552

Claims priority, application Switzerland, Feb. 6, 1967, 1,820/67

Int. Cl. C07c 87/34; A61k 27/00

U.S. Cl. 260—563

4 Claims

Alkyl and alkenyl substituted cyclohexenyl amines are prepared which compounds as well as pharmaceutically acceptable acid addition salts thereof have analgesic and anorexigenic activities; therapeutic compositions containing said compounds and methods of producing analgesic and anorexigenic effects in mammals; an illustrative embodiment is 1-methyl-3-cyclohexen-1-ylamine.

3,518,308

N-PENTAHALOPHENYL-AMINO AMMONIUM SALTS

Werner Daum, Krefeld-Bockum, and Hans Scheimpflug, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Sept. 23, 1966, Ser. No. 581,442

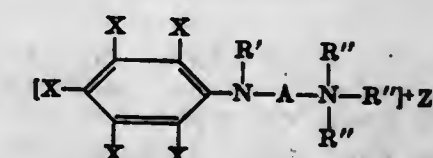
Claims priority, application Germany, Sept. 27, 1965, F 47,281

Int. Cl. C07c 87/30; A01n 9/20

U.S. Cl. 260—567.6

9 Claims

N-pentahalophenyl-amino ammonium salt having the formula



in which A is lower alkylene, R' is hydrogen or alkyl, at most one R'' group is arylmethyl, optionally substituted with halo, nitro, alkoxy, alkyl and/or methylene dioxy, at least two R'' groups are aliphatic, optionally halo-substituted, X is chloro and/or bromo, and Z is a salt-forming anion, e.g. halo-anion, which possesses bactericidal activity and which may be produced by conventional methods.

3,518,309

2,4-DINITROANILINES

Quentin F. Soper, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

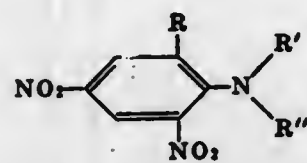
No Drawing. Original application Dec. 22, 1965, Ser. No. 515,760, now Patent No. 3,442,639, dated May 6, 1969. Divided and this application Sept. 18, 1968, Ser. No. 798,221

Int. Cl. A01n 9/20; C07c 87/58, 87/60

U.S. Cl. 260—577

5 Claims

Herbicidal 2,4-dinitroanilines of the following formula:



wherein R is trifluoromethyl, or halo having a molecular weight less than 81; R' is hydrogen, C₂-C₄ alkyl, allyl, chloroalkyl, crotyl, or methallyl; and R'' is C₁-C₇ alkyl, allyl, chloroalkyl, crotyl, or methallyl, the sum of the carbon atoms in R' and R'' being greater than 3 and less than 9.

3,518,310

PREPARATION OF β-HYDROXYPROPIONALDEHYDE AND β-ALKOXYPROPIONALDEHYDES

Eugene F. Lutz, Concord, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 9, 1968, Ser. No. 704,257

Int. Cl. C07c 45/00

U.S. Cl. 260—602

2 Claims

Hydroxylic compounds are added to acrolein in the liquid phase in the presence of carbon dioxide as catalyst.

3,518,311

TERTIARY PHOSPHINE SULFIDES AND PROCESS FOR PREPARING

Ludwig Maier, Zurich, Switzerland, assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 5, 1965, Ser. No. 445,793

Int. Cl. C07d 105/02

U.S. Cl. 260—606.5

3 Claims

Tertiary-phosphine sulfides depictable by the formula R¹R²R³(PS) wherein R¹ and R² are alkyl having from 1 to 2 atoms and R³ is alkyl having from 8 to 18 carbon atoms. These compounds find utility as heat transferring liquids and lubricant additives.

3,518,312

METHYLENE BIS(DIALKYL PHOSPHINES)

Ludwig Maier, Zurich, Switzerland, assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 7, 1966, Ser. No. 532,863

Claims priority, application Switzerland, Mar. 12, 1965, 3,528/65

Int. Cl. C07f 9/50

U.S. Cl. 260—606.5

4 Claims

Tertiary diphosphines of the formula



and method of making by reacting a diphosphine of the formula H₂P-R²-PH₂ with a straight-chain, terminal

double bond olefin of the formula R²CH=CH₂ in the presence of a free-radical catalyst.

3,518,313

METHOD OF STABILIZING AQUEOUS FORMALDEHYDE

Akihiko Iida, Chiba-shi, and Iwao Maruta, Ichikawa-shi, Japan, assignors to Kao Soap Co., Ltd., Chuo-ku, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Mar. 20, 1967, Ser. No. 624,186

Claims priority, application Japan, Apr. 5, 1966, 41/21,354

Int. Cl. C07c 45/24

U.S. Cl. 260—606

3 Claims

A method of stabilizing aqueous formaldehyde solutions by adding thereto a water solubilized high molecular weight substance obtained by mixing and dissolving in a concentrated aqueous solution of an anionic surface active agent a water insoluble acetal of polyvinyl alcohol selected from the group consisting of polyvinyl formal, polyvinyl acetacetal and polyvinyl butyral.

3,518,314

TREATMENT OF POLYPHENYL THIOETHERS WITH ALKALI METAL HYDRIDES

Carl W. Gieseking, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 1, 1968, Ser. No. 717,982

Int. Cl. C07c 149/02

U.S. Cl. 260—609

14 Claims

A process for the treatment of polyphenyl thioethers to improve their oxidative stability and to decrease their corrosiveness to metals wherein the thioether is contacted with a contacting agent selected from the group consisting of alkali metal aluminum hydrides and alkali metal hydrides.

3,518,315

ETHER PRODUCTION

Edgar J. Smutny, San Francisco, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of applications Ser. No. 455,965 and Ser. No. 456,001, both May 14, 1965. This application Nov. 6, 1967, Ser. No. 681,029

The portion of the term of the patent subsequent to Aug. 16, 1983, has been disclaimed

Int. Cl. C07c 43/20

U.S. Cl. 260—612

9 Claims

Aromatic 2,7-alkadienyl ethers, produced by reaction of certain α,ω-conjugated alkadienes and phenols, in the presence of a platinum, palladium or ruthenium compound as catalyst and a phenoxide anion catalyst promoter.

3,518,316

BROMINATION PROCESS

Charles Carmen Cumbo, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 8, 1968, Ser. No. 743,030

Int. Cl. C07c 25/00, 43/20

U.S. Cl. 260—612

5 Claims

High purity 4,4'-dibromobiphenyl and 4,4'-dibromodiphenyl ether are obtained by reacting one mole of biphenyl or diphenyl ether with approximately 2.0 moles of bromine in the presence of liquid sulfur dioxide at temperatures within the range of -40° C. to -5° C.

3,518,317

PRODUCTION OF SUBSTITUTED PHENOLS

Douglas Shooter and Anthony Howden Jubb, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Apr. 20, 1967, Ser. No. 632,213

Claims priority, application Great Britain, Apr. 21, 1966, 17,495/66

Int. Cl. C07c 39/06

U.S. Cl. 260—621

7 Claims

Phenol or mono-alkylphenols are alkylated with alkyl benzenes (e.g. trimethyl benzenes) using an aluminum silicate or metal halide catalyst, to give e.g. cresols.

3,518,318

OCTADIENYL PHENOLS

Edgar J. Smutny, San Francisco, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 14, 1965, Ser. No. 455,970

The portion of the term of the patent subsequent to Aug. 16, 1983, has been disclaimed

Int. Cl. C07c 39/18

U.S. Cl. 260—624

5 Claims

Primary octadienyl phenols are produced by contacting a phenol having at least one replaceable ortho or para hydrogen substituent with 1,3,7-octatriene in the presence of a palladium, platinum or ruthenium compound as catalyst, a phenoxide anion catalyst promoter and a stabilizing agent selected from an excess of the phenol and tertiary aromatic phosphine.

3,518,319

PROCESS FOR IMPROVING OXO SELECTIVITY TO UNBRANCHED ALCOHOLS

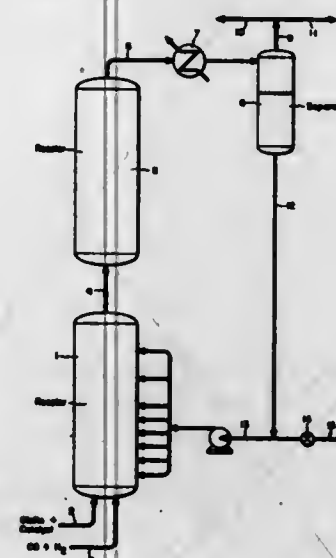
Henry George Ellert, James William Robinson, and John Dana Koontz, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 30, 1965, Ser. No. 443,889

Int. Cl. C07c 45/08

U.S. Cl. 260—638

9 Claims



In the oxonation of unbranched olefins, improved selectivities to unbranched aldehydes and/or alcohols are obtained by employing a two-stage or two-vessel reactor whereby the unbranched olefinic compounds, H₂, CO and a carbonylation catalyst are reacted in the first carbonylation zone at a temperature of from 150° to 250° F. and at a pressure ranging from 1500 to 4500 p.s.i.g. The liquid product from the first zone is then passed into the second

carbonylation zone wherein the temperature is maintained at about 275° to 400° F. and at a pressure of from 1500 to 4500 p.s.i.g. A portion of the final aldehyde product withdrawn from the second carbonylation zone is recycled to the first carbonylation zone and the remainder may be hydrogenated to a primary, unbranched alcohol product.

3,518,320

INHIBITING POPCORN POLYMER FORMATION WITH TERTIARY AMINO HYDROXY BENZENE COMPOUND

Harry Elmer Albert, Lafayette Hill, Pa., assignor to Pennwalt Corporation, a corporation of Pennsylvania

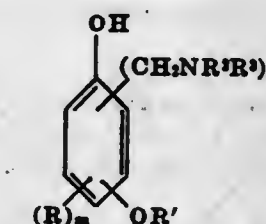
No Drawing. Filed May 13, 1968, Ser. No. 728,769

Int. Cl. C07c 7/18

U.S. Cl. 260—666.5

10 Claims

Popcorn polymer formation in processes for preparing synthetic rubber is inhibited by contacting the monomers with a tertiary amino hydroxy benzene compound having the structure



where R is an alkyl group; m is 0 or 1; R' is selected from the group consisting of hydrogen, alkyl radicals, and a benzyl radical; R² and R³ are selected from the group consisting of alkyl radicals, β-hydroxyalkyl radicals, and oxydiethylene when R₂ and R₃ together form a single radical; and n is 1 or 2.

3,518,321

PREPARATION OF A SYNTHETIC LUBRICATING OIL VIA A DISPROPORTIONATION REACTION

Henry J. Peterson, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed May 8, 1968, Ser. No. 727,669

Int. Cl. C07c 3/00, 3/50; C10m 3/10

U.S. Cl. 260—672

5 Claims

A low pour point, high viscosity index synthetic lubricating oil, which is 1,3,5-tri-n-alkylbenzene, is obtained in high yields by the disproportionation of mono-n-alkylbenzene in which the alkyl group has 6 to 9 carbon atoms, at selected operating conditions and with aluminum chloride catalyst. Each alkyl group of the 1,3,5-tri-n-alkylbenzene likewise contains 6 to 9 carbon atoms.

3,518,322

HYDROCARBON SEPARATIONS

Rodney D. Beckham, Bridgeton, George D. Davis, Creve Coeur, and Earle C. Makin, Jr., St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 29, 1968, Ser. No. 748,240

Int. Cl. C07c 7/16

U.S. Cl. 260—674

17 Claims

A process for the separation and recovery of aromatic hydrocarbons from admixture with unsaturated aliphatic hydrocarbons by means of selective complex formation using cuprous fluoroborates or cuprous fluorophosphates as the complexing agent.

3,518,323

PURIFICATION OF BUTYLENES

Lloyd A. Pine, Durward T. Roberts, Jr., and Gordon B. Jolley, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 26, 1966, Ser. No. 740,696
Int. Cl. C07c 3/20, 11/02

U.S. Cl. 260—683.15 11 Claims

This invention relates to a process for the separation of isobutylene from butylene mixtures. In particular, it relates to a process wherein isobutylene is removed from hydrocarbon mixtures, or feeds, containing isobutylene and n-butylenes. Such mixtures are contacted with supported nickel oxide catalysts at mild temperatures, ranging generally up to about 250° F. to substantially dimerize the isobutylenes, after which time the n-butylenes rich fraction can be readily separated from the resultant mixture, as by distillation. In a preferred combination, the so-purified n-butylenes rich fraction can then be contacted with propylene, at more stringent conditions in the presence of supported nickel oxide catalysts, to produce a codimerization reaction which forms highly linear C₈ through C₉ olefins, particularly heptenes.

3,518,324

OPTICAL COMPOSITIONS OF SILICONE RUBBER

Keith E. Polmanteer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Aug. 21, 1967, Ser. No. 661,816
Int. Cl. G08g 47/06; G02b 3/00

U.S. Cl. 260—825 10 Claims

Compositions containing improved physical properties are disclosed that are particularly useful in the manufacture of articles wherein optical clarity is desirable, and compositions consisting essentially of (1) 60 to 70 parts of a dimethylvinylsilyl endblocked copolymer consisting essentially of about 6 to 9 mol percent of phenylmethylsiloxane units, about 0.1 to 0.2 mol percent of vinylmethylsiloxane units, and the balance essentially dimethylsiloxane units, (2) 30 to 40 parts of a dimethylvinylsilyl endblocked copolymer consisting essentially of about 15 to 25 mol percent of methylvinylsiloxane units, about 4 to 6 mol percent of phenylmethylsiloxane units, and the balance essentially dimethylsiloxane units, there being a total of 100 parts of (1) and (2) in the composition, and (3) 2 to 10 parts, per 100 parts of (1) and (2), of a resin consisting essentially of trimethylsiloxane units, dimethylvinylsiloxane units and SiO_{4/2} units, the ratio of the sum of the trimethylsiloxane units and dimethylvinylsiloxane units to the SiO_{4/2} units in the resin being in the range of 0.6–1.2:1, at least (1) and (2) being free of materials having molecular weights of less than about 5000, all said parts being on a weight basis. These compositions are useful, for example, as interlayers in safety glass, in the preparation of pharmaceutical equipment, in the preparation of volumetric apparatus and in the preparation of lenses, especially contact lenses.

3,518,325

POLYSILOXANE RELEASE COATINGS

James K. Campbell, Midland, and Lawrence C. Sprenger, North Bradley, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Continuation-in-part of application Ser. No. 676,636, Oct. 19, 1967, which is a continuation-in-part of application Ser. No. 648,937, June 26, 1967. This application Apr. 1, 1969, Ser. No. 812,450
Int. Cl. C08g 47/00

U.S. Cl. 260—825 6 Claims

Polydimethylsiloxane coatings for fibrous substrates possessing rapid curing and excellent release properties

are made from a mixture of polydimethylsiloxane, methyl hydrogen polysiloxane, silicate ester of the formula Si{(OC₂H₅)₂OR}₂, a curing catalyst and optionally an isocyanate.

3,518,326

THERMOSETTING RESINS DERIVED FROM N-3-OXOHYDROCARBON-SUBSTITUTED ACRYLAMIDES

John W. Forsberg, Mentor-on-the-Lake, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
No Drawing. Continuation-in-part of application Ser. No. 619,565, Mar. 1, 1967. This application May 19, 1969, Ser. No. 826,006

Int. Cl. C08g 37/38 21 Claims

A thermosetting polymeric composition is prepared by the reaction of an N-3-oxohydrocarbon-substituted acrylamide (preferably diacetone acrylamide) with an aliphatic aldehyde containing no more than 4 carbon atoms, preferably formaldehyde, in a strongly alkaline medium. While the structure of the composition is not known, it is believed to be a crosslinked product formed by hydroxymethylation and subsequent condensation through the hydroxymethyl groups. The acrylamide olefinic bonds are apparently unaffected. These compositions are useful either alone or in combination with unsaturated polyesters, for the preparation of thermosetting molding powders. They may also be used to replace polyesters (in full or in part) in typical applications such as production of resin-impregnated fiber glass mats and various kinds of laminates.

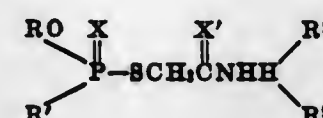
3,518,327

PHOSPHORO AND PHOSPHONO ACETYLHYDRAZIDES

Ralph B. Fearing, Bardonia, N.Y., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 423,356, Jan. 4, 1965. This application Apr. 10, 1967, Ser. No. 629,401

Int. Cl. C07f 9/08, 9/16; A01n 9/36 9 Claims

This invention is for novel pesticides having the general formula



wherein R is lower alkyl; R' is lower alkyl or lower alkoxy; the radicals represented by X and X' are independently selected from the group consisting of oxygen and sulfur; R² and R³ are independently selected from the group consisting of hydrogen, methyl, ethyl, formyl, acetyl, and in combination can be selected from the group consisting of ethylidene and methylene. The lower alkyl radicals suitable for R and R' are the straight and branched chain aliphatic radicals having from 1 to 8 carbons, and include for example, methyl, ethyl, n-propyl, isopropyl, amyl, octyl, and the like. Similarly the lower alkoxy radicals suitable for R' are the straight and branched chain radicals having from 1 to 8 carbons and include methoxy, ethoxy, n-propoxy, isopropoxy, amyloxy, octyloxy and the like. Particularly effective as pesticides in the control of insects such as *M. domestica*, *B. germanica*, and *O. fasciatus*. They are also effective in the control of acarids, such as *tetranychus telarius*, both contact and systemic.

3,518,328

PROCESS FOR PREPARING MICROSPHERES OF URANIUM, PLUTONIUM OR THORIUM CARBIDE

Leonard V. Triggiani, Hyattsville, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Mar. 21, 1967, Ser. No. 624,708
Int. Cl. G21c 21/00

U.S. Cl. 264—5 7 Claims

A method of preparing actinide carbide microspheres by co-precipitating a solution of the actinide metal and an alkaline dispersion of carbon, followed by peptization thereby forming an actinide oxide sol containing carbon. The sol is then formed into droplets and the droplets gelled by passing through a solvent column. The gelled droplets are washed and sintered to density into the desired carbide composition.

3,518,329

PREPARATION OF DIPHENYLOLPROPANE GRANULES

Johan W. Hoogendorn, Gelsen, Netherlands, assignor to Stamcarbon N.V., Heerlen, Netherlands
No Drawing. Filed Nov. 22, 1967, Ser. No. 684,934
Claims priority, application Netherlands, Nov. 26, 1966, 6616683

Int. Cl. B01j 2/04; B29c 23/00 4 Claims

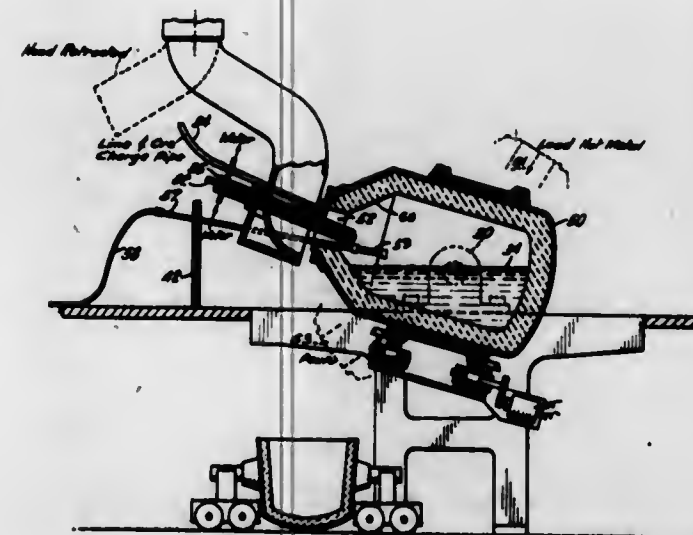
A process is described for the preparation of an improved solid form of diphenylolpropane wherein a melt of this substance is sprayed through a prilling tower wherein the gaseous coolant contains diphenylolpropane seeding material, and the droplet temperature is reduced to approximately 60° C. in a fall of 7 meters. Substantially dust-free, strong prills of reduced electrostatic characteristics and improved free flowing characteristics, are obtained by this process.

3,518,330

METHOD FOR PROLONGING THE LIFE OF THE CONE SECTION OF THE REFRACTORY LINING OF A BASIC OXYGEN FURNACE OF THE KALDO TYPE

Raymond J. Demahon, Mount Vernon, N.Y., assignor to Quigley Company, Inc., a corporation of New York
Original application Jan. 7, 1965, Ser. No. 424,071, now Patent No. 3,351,460, dated Nov. 7, 1967. Divided and this application Aug. 28, 1967, Ser. No. 663,864
Int. Cl. F27d 1/16

U.S. Cl. 264—30 3 Claims



A method of repairing the refractory lining in the cone section of a steel producing basic oxygen furnace of the continuously rotating converter type while it is operating

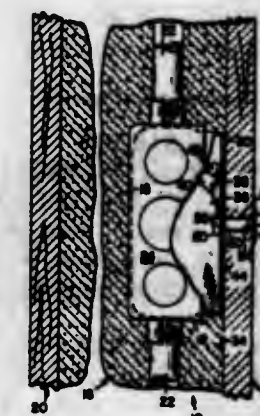
on an inclination and producing steel. Refractory slurry is sprayed onto the exposed and molten slag coated cone section to build up a composite coating of refractory material and slag.

3,518,331

METHOD FOR FORMING IMPROVED CONCRETE STRUCTURE

Paul J. Maritz, 1265 Folsom St., San Francisco, Calif. 94103
Original application May 5, 1966, Ser. No. 548,007, now Patent No. 3,453,788, dated July 8, 1969. Divided and this application July 23, 1968, Ser. No. 764,356
Int. Cl. E04b 1/16; B28b 7/32

U.S. Cl. 264—35 6 Claims



A method of forming a concrete structure having a junction box embedded therein wherein an inflatable bag in the junction box is inflated before concrete is poured adjacent to the junction box to form the structure with the junction box embedded in one face thereof. The junction box is held against movement as the concrete is poured and the method is suitable for use with fixed and movable forms.

3,518,332

METHOD FOR MAKING THIN, MICRO-POROUS FLUOROCARBON POLYMER SHEET MATERIAL

Jack C. Sklarck, Trenton, N.J., and William F. Koble, Philadelphia, Pa., assignors to ESB Incorporated, a corporation of Delaware
No Drawing. Filed Nov. 22, 1967, Ser. No. 684,921
Int. Cl. B29d 27/08

U.S. Cl. 264—49 7 Claims

A method for making thin, microporous fluorocarbon polymer sheet material comprising forming a mixture of fluorocarbon polymer particles, metallic salt particles, and a paraffin wax material. This mixture is formed into a sheet material and the paraffin wax is removed by treating the sheet with a petroleum solvent. Then the sheets are sintered prior to removal of the pore-former salt, and after the sintering operation, the pore-former salt is removed by leaching with a suitable solvent.

3,518,333

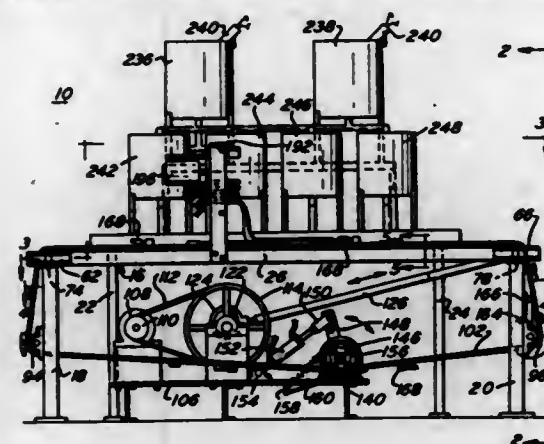
METHOD FOR CONTINUOUSLY MAKING PEARLESCENT PLASTIC SHEETING

George R. Adey, Huntingdon Valley, and Wilmer Souder, Jr., Pottstown, Pa., assignors to Denton Plastic Products Corp., Southampton, Pa., a corporation of Maryland
Filed May 15, 1967, Ser. No. 638,482
Int. Cl. B29b 5/00; B29d 7/02

U.S. Cl. 264—70 1 Claim

Method for continuously making pearlescent sheeting including using a reciprocating surface mounted on an endless chain driven by an intermittent drive. Pumps de-

liver resin material from containers to one or more vertically aligned nozzles being traversed across the surface.



Initiation of displacement of the surface is regulated by position of traversing nozzle.

3,518,334

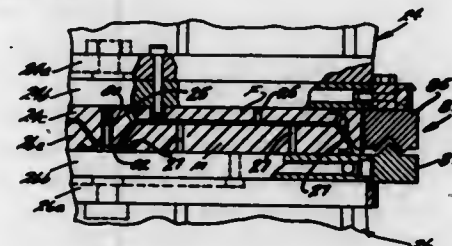
METHOD OF FORMING THREE DIMENSIONAL PLASTIC ARTICLES

William H. Carrigan, Croton, and James A. Maciam, Comstock Park, Mich., assignors to Kirkhof Manufacturing Corporation, Grand Rapids, Mich., a corporation of Michigan

Filed Oct. 1, 1968, Ser. No. 764,128
Int. Cl. B29c 17/04, 17/10

U.S. Cl. 264—89

13 Claims



A method for forming three dimensional articles such as trays into plastic web stock by heat and pressure. Articles formed in a web stock under heat and pressure are peripherally cut while still in the forming equipment for separation from the web. Tabs holding the articles to the web matrix are left after the cutting process. Special relief pleats with hinges and/or special relief slits are formed in the web to prevent subsequent shrinkage and tension stresses in the web matrix from causing the articles to prematurely break loose from the matrix or to be shifted out of proper orientation or registration.

3,518,335

TIRE VULCANIZING METHOD

Casmer S. Jablonski, Detroit, Mich., assignor to Uniroyal, Inc., New York, N.Y., a corporation of New Jersey

Filed Apr. 13, 1967, Ser. No. 630,595
Int. Cl. B29h 21/02, 17/10

U.S. Cl. 264—93

1 Claim



Providing at least one relatively short cavity in a tire mold in the region of tire marking indicia so that

trapped gas will escape into such cavity whereby the indicia will be molded without blemish and without requiring tire rubber to be trimmed in the indicia regions.

3,518,336

METHOD OF FORMING A COMPACT ARTICLE OF PARTICULATE MATERIAL

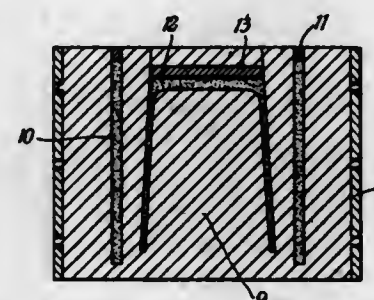
William Charles Payne, East Molesey, England, assignor to Engelhard Industries Limited, Sutton, Surrey, England, a British company

Filed Oct. 1, 1968, Ser. No. 764,152
Claims priority, application Great Britain, Oct. 4, 1967, 45,298/67

Int. Cl. B22f 3/04

U.S. Cl. 264—111

7 Claims



A method of compaction of a particulate material into a work-piece especially applicable to the production of a work-piece which has relatively thin sections and which is, therefore, comparatively weak until the usual post-compaction heat treatment operation has been carried out, and to a method of compaction of a particulate material which is difficult to compact and which, despite the use of high compacting pressures, often results in a green compact of low strength.

3,518,337

PROCESS FOR DISPERSING PARTIALLY MISCIBLE POLYMERS IN MELT SPINNABLE FIBER-FORMING POLYMERS

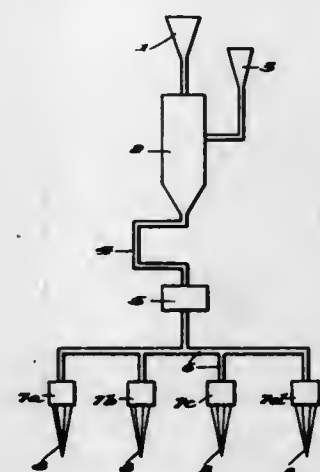
Jesús Nicolás, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 14, 1967, Ser. No. 667,787

Int. Cl. B29f 3/10

U.S. Cl. 264—176

6 Claims



A process to improve uniformity of filaments of synthetic, fiber-forming polymers having dispersed therein discrete particles of a partially miscible, substantially inert polymer. Process encompasses saturating the fiber-forming polymer melt with the partially miscible polymer prior to further injection of the latter during the melt-spinning operation.

3,518,338

MOLDING PROCESS

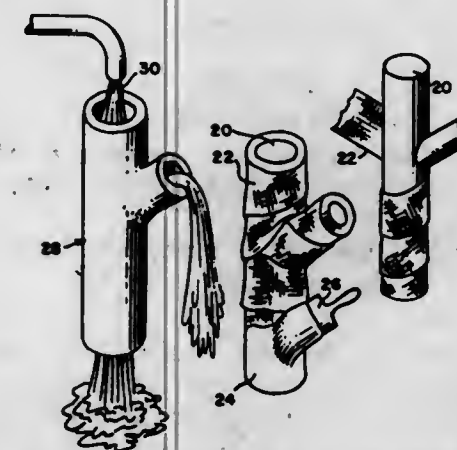
William C. Tambussi, 366 Monroe Ave., Cherry Hill, N.J. 08034

Original application June 8, 1964, Ser. No. 373,199, now Patent No. 3,364,839, dated Jan. 16, 1968. Divided and this application Nov. 28, 1967, Ser. No. 686,240

Int. Cl. B29c 1/02, 1/08

U.S. Cl. 264—221

5 Claims



A method of forming articles by molding hardenable material around a mandrel. The mandrel comprises the reaction product of calcium sulfate anhydrite and ammonium alum, and the mandrel is removed from the hardenable material by dissolving the mandrel in a solvent therefor.

3,518,339

METHOD FOR CUSHIONING AND SEALING

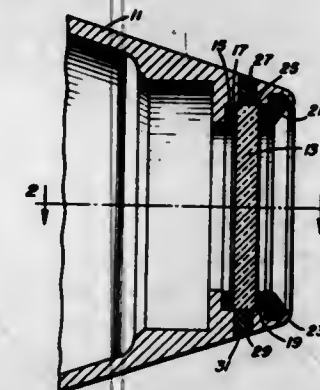
John C. Goff, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 18, 1965, Ser. No. 480,831

Int. Cl. B29d 3/00

U.S. Cl. 264—249

1 Claim



A method of cushioning and sealing a fragile disc within a tubular member by forming an annular recess adjacent the end of the tubular member with a circumferential groove therein, inserting the disc within the annular recess with a gasket on either side thereof in such a manner as to peripherally enclose the groove, positioning a retaining ring within the annular recess, crimping the end portion of the tubular member about the retaining ring, and filling the groove with an epoxy resin.

3,518,340

METHOD OF FORMING SILICONE RUBBER DRUG CARRIERS

Dick Raper, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Filed Apr. 15, 1968, Ser. No. 721,428

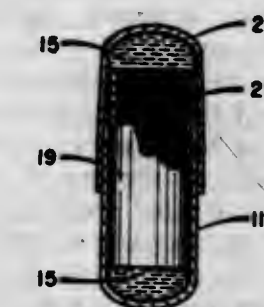
Int. Cl. B29c 5/00; B29d 3/00; B29h 9/11

U.S. Cl. 264—251

8 Claims

A silicone rubber drug carrier suitable for handling in automated pharmaceutical capsule filling machines can be made by placing a silicone rubber adhesive in the lower shell portion of a conventional pharmaceutical capsule,

placing the material to be enclosed in the carrier into the silicone rubber tube, placing a silicone rubber adhesive in the upper shell portion of the capsule, placing the upper shell portion over the silicone rubber tube and



lower shell portion, and allowing the adhesive to vulcanize and seal the ends of the tube. The capsule can remain in place around the silicone rubber drug carrier until the carrier is to be used.

3,518,341

PROCESS FOR PRODUCING SYNTHETIC RESIN ARTICLES HAVING EXCELLENT MAR RESISTANT SURFACES

Hiroshi Haryu, Tokyo, Japan, assignor to Mitsubishi Rayon Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed May 18, 1967, Ser. No. 639,290

Claims priority, application Japan, May 23, 1966, 41/32,864; Aug. 19, 1966, 41/54,597

Int. Cl. B29d 7/02, 9/00, 11/00

U.S. Cl. 264—255

6 Claims

A process for producing a molded synthetic resin article having an excellent mar resistant surface. The inner surface of a mold is coated with a dimethacrylate or diacrylate having a high affinity to a synthetic resin base material. The coating is covered with a film such as cellophane and completely polymerized. The film is removed from the completely polymerized coating and the mold is filled with a monomer material composed substantially of methyl methacrylate and/or styrene, or a partially polymerized material of the monomer. The monomer or partially polymerized monomer is then completely polymerized.

3,518,342

CENTRIFUGAL MOLDING METHOD FOR MAKING FACING FOR BUILDING BLOCKS

Raymond N. Logan, Farmers Branch, Tex., assignor to Broadway Finance Corporation, Milwaukee, Wis., a corporation of Wisconsin

Continuation-in-part of application Ser. No. 441,188,

Mar. 19, 1965. This application Nov. 15, 1968, Ser.

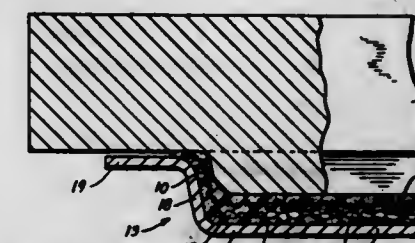
No. 815,507

(Filed under Rule 47(b) and 35 U.S.C. 118)

Int. Cl. B29c 5/04

U.S. Cl. 264—257

7 Claims



A light weight shallow pan-shaped cap for facing a concrete building block is produced by:

- (1) pouring polymerizable synthetic resin containing a particulate mineral appearance-producing substance into a flat-bottomed pan-shaped female mold section;
- (2) laying a fiber glass reinforcing mat into the resulting pool of resin;
- (3) setting a block-like male mold section of a size and shape to nest within the female mold section, onto

the contents of the female mold section with the two mold sections in nested relation; but with their contiguous sides spaced apart a distance to permit the resin to rise therebetween; and

(4) applying heat to the assembly while rotating it about a fixed axis with the female mold section radially outermost and firmly supported against the thrust of centrifugal force, but with the male mold section supported against outward force only by the mold contents so that centrifugal force acting on the assembly compacts the mold contents between the nested mold sections to form the same into the desired shape with the outer surface thereof defined by an uninterrupted homogeneous layer of resin. When the resin is set, the mold is opened and the product formed therein is removed.

3,518,343

EFFERVESCENT TABLET AND PROCESS FOR MAKING SAME

Thomas Laurence Welsh, Donald Leroy Peterson, Blasey Thomas Palermo, and George Carr Hoss, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Oct. 2, 1967, Ser. No. 671,948
Int. Cl. A61j 3/10

U.S. Cl. 424—44

8 Claims

An effervescent tablet is produced by preparing a powdered tabletable composition comprising an effervescent couple, an antimicrobial substance, a tableting lubricant, and preferably, a flavoring, sweetening and/or coloring agent, mixing the same to achieve uniformity, and compressing into coherent tablet form. The lubricant can be fumaric acid or particles of a liquid lubricant coated with an oil-insoluble film-forming substance. Upon dissolution, a solution having antimicrobial properties is produced. The solution is useful for cleaning solid surfaces, particularly, the teeth and periodontal gum areas of the oral cavity.

3,518,344

TABLETING LUBRICANT

Thomas Laurence Welsh and George Ronald Tomatch, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Oct. 2, 1967, Ser. No. 672,004
Int. Cl. A61j 3/10; A61k 11/02, 11/04

U.S. Cl. 424—44

3 Claims

An improvement in the process of compressing powdered tabletable materials is gained by mixing with said materials prior to tableting, a lubricant comprising, in combination, a siloxane polymer and dry-mixable particles of a lubricating oil coated with an oil-insoluble film-forming substance. The lubricant acts as both a punch face lubricant and as a diwall lubricant for said tabletable materials. The powdered tabletable materials lubricated with the above lubricant can be those intended for general cleaning of solid surfaces or those intended for therapeutic employments.

3,518,345

TABLETING LUBRICANT

Allen I. Dines, Columbus, Ohio, and Willard Gene Brown, Stockton, Calif., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Oct. 5, 1967, Ser. No. 672,978
Int. Cl. A61j 3/10; A61k 11/02, 15/12

U.S. Cl. 424—44

3 Claims

An improvement in the process of compressing powdered tabletable materials is gained by mixing with said

materials prior to tableting, a lubricant comprising dry-mixable particles each having a core containing a lubricating oil and a coating of an oil-insoluble film-forming substance. The lubricant acts as both a punch face lubricant and as a diwall lubricant for said tabletable materials. The powdered tabletable materials lubricated with the above lubricant can be those intended for ingestion, such as for alkalizing of the stomach, or those intended for external use, such as for the general cleaning of solid surfaces.

3,518,346

TABLETING

Peter H. Cox, Oss, Netherlands, assignor to Miles Laboratories, Incorporated, Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Jan. 2, 1968, Ser. No. 694,890
Int. Cl. A61j 3/10

U.S. Cl. 424—44

5 Claims

An improvement in the process of compressing powdered tabletable compositions is gained by mixing fumaric acid with said composition prior to compression. The fumaric acid acts as a surface lubricant and as an internal compression lubricant for said tabletable compositions. The powdered tabletable compositions lubricated with fumaric acid can be those intended for internal employment such as for alkalizing of the stomach or intended for external use such as for general cleaning of solid surfaces.

3,518,347

VACCINE FOR EQUINE INFLUENZA

Vytautas Pavlanis, Paul Marola, Armand Boudreault, and Jean Claude Glicker, Montreal, Quebec, Canada, assignors to L'Institut de Microbiologie et d'Hygiene de l'Universite de Montreal, Laval des Rapides, Quebec, Canada, a corporation of Canada

No Drawing. Filed May 28, 1965, Ser. No. 459,873
Int. Cl. A61k 23/00

U.S. Cl. 424—89

4 Claims

Myxoviruses which cause equine influenza in horses cannot be used to produce vaccines which elicit a satisfactory immunological response and give adequate protection to horses inoculated with such vaccines. However, these myxoviruses potentiate the antigenicity of viruses of human strains of influenza virus in horses and when strains of human influenza virus are combined with strains of equine influenza virus, a vaccine can be produced which protects horses from equine influenza better than a vaccine containing only the human influenza virus.

3,518,348

HALOGENATED PHENOL-BORATE FUNGICIDE COMPOSITIONS

Joseph Dulat, Surbiton, England, assignor to United States Borax & Chemical Corporation, Los Angeles, Calif.

No Drawing. Filed Feb. 1, 1966, Ser. No. 523,940
Claims priority, application Great Britain, Feb. 11, 1965, 6,000/65

Int. Cl. A01n 13/00

U.S. Cl. 424—148

9 Claims

Dustless, granular, non-segregating fungicide compositions comprising a hydrated alkali metal borate and alkali metal salt of a halogenated phenol are provided. The granular compositions can be prepared by forming an admixture of a halogenated phenol or its salts and an alkali metal borate and adding water thereto.

ELECTRICAL

3,518,349

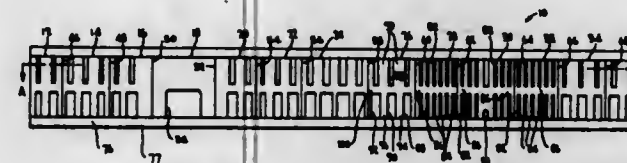
PERFORATED OR VENTILATED SHELL FOR ELECTRIC ARC FURNACES

Chester E. Grigsby, Philadelphia, Pa., assignor to General Refractories Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Dec. 3, 1968, Ser. No. 780,761
Int. Cl. H05b 7/18; F27d 1/10

U.S. Cl. 13—10

7 Claims



A steel supporting structure for a furnace comprising refractory bricks, including a plurality of rigidly fixed steel plates surrounding the refractory bricks and forming an outer supporting steel sidewall, and bottom plate therefor. These plates are provided with a plurality of vertical or horizontal elongated slots for exposing and cooling the outer surfaces of the refractory bricks by means of the thermal updraft created by the "chimney effect" of the slots in the plates thereby extending the useful service of the refractory bricks.

3,518,350

CONTROL METHOD AND CONTROL SYSTEM FOR BATCH-LIKE ELECTRIC MELTING FURNACE

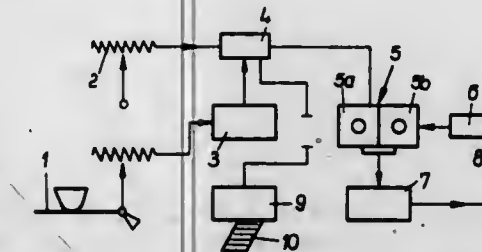
Hermann Karl Lünig, Duisburg, Germany, assignor to DEMAG-Elektrometallurgie G.m.b.H., Duisburg, Germany

Filed Feb. 23, 1967, Ser. No. 617,934
Claims priority, application Germany, Mar. 7, 1966, D 49,520

U.S. Cl. 13—12

Int. Cl. H05b 7/18

12 Claims



The invention is a control method and a control system for batch-type electric melting furnaces, such as electric arc and induction furnaces. In the method, the total weight of a batch and the specific unit electric energy requirement for the material of the batch are used to derive the total electric energy requirement for a particular process stage and the derived value is continuously compared with the value of the energy actually used during the particular process stage. When the two energy values attain equality, the particular stage is terminated or, alternatively, the next process stage is initiated.

In the control system, a weighing unit provides the batch or charge weight to an adding device, and the specific energy consumption for the particular material to be processed is set on an adjustable value device. The batch weight and the specific energy consumption value are fed to a computer which derives the total electric energy requirement for the particular process stage. The

output of the computer is applied to one side of a comparing unit. The actual energy consumption is applied to the other side of the comparing unit. When the two values are equal, the supply of energy to the furnace is interrupted to terminate the process stage or, alternatively, the apparatus is switched over to a further process stage in which a comparison between desired and actual values is again made and, when the desired and actual values are equal, the further stage is interrupted. In this further stage, the pre-calculated energy requirements are fed to the computer from a device operating on a punched card or punched tape.

3,518,351

HEATING ELEMENT

Roger W. Ohmsorg, Niagara Falls, and Richard L. Casper, Grand Island, N.Y., assignors to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Filed Dec. 16, 1968, Ser. No. 783,851
Int. Cl. H05b 3/40, 3/60

U.S. Cl. 13—25

14 Claims



A heating element especially useful for connection to a source of three phase electric power. The element comprises three parallel hollow conductors mutually connected at one end by a connecting member having a resistance less than that of any one conductor. The connecting member is preferably of a material of low resistivity and preferably comprises a base portion having cylindrical projections that are individually received in the respective conductors to form a rigid, electrically conductive junction. Such heating elements are especially useful in the production of float glass wherein they are maintained at temperatures between 1000 and 1500° C. for long periods of time.

3,518,352

RHYTHM GENERATING CIRCUIT FOR MUSICAL INSTRUMENT

Bradley J. Plunkett, Sepulveda, Calif., assignor to Warwick Electronics Inc., Chicago, Ill., a corporation of Delaware

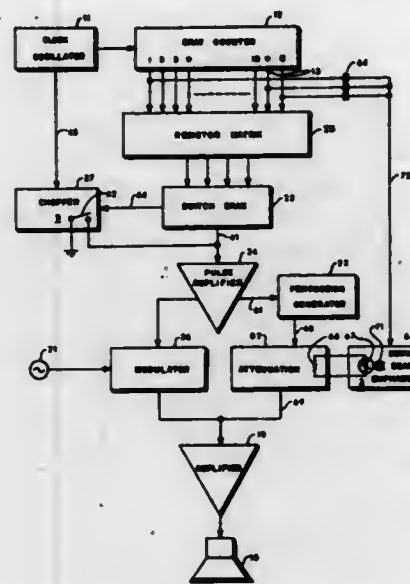
Filed June 30, 1967, Ser. No. 650,530
Int. Cl. G10f 1/00; G10h 1/02

U.S. Cl. 84—1.03

5 Claims

A rhythm generating circuit comprises a clock oscillator driving a ring counter, the output of which is fed to a distribution matrix and thence to a bank of switches. The switches, individually, when operated, establish predetermined rhythm patterns, as for example preselected dance rhythms. Output from the switch bank serves to

activate audio frequency sources, either through a modulator or by direct stimulation of the audio frequency. Emphasis means are provided for giving increased amplitude on each downbeat, i.e. on the first beat of each measure.



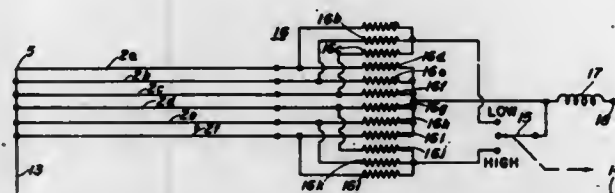
Means are also provided for chopping or curtailing the beat, so that where a particular rhythm calls for rapidly recurring beats, they will be separated by an appreciable time interval.

3,518,353 TONE CONTROL FOR STRINGED MUSICAL INSTRUMENTS

Jamie F. Appleton, 800 S. 7th St.,
Burlington, Iowa 52601
Filed May 20, 1968, Ser. No. 730,451
Int. Cl. G10h 3/00, 1/02

U.S. Cl. 84-1.15

2 Claims



A tone control for stringed musical instruments wherein conductive strings have an alternating current induced in them due to vibrations in a magnetic field and the signals thus created are mixed through a resistive network so as to compensate for distortion and loss of volume in an amplifier when a tone switch is used in the amplifier.

3,518,354 VIBRATO SYSTEM WITH VARIABLE SPEED SIGNAL STORAGE DISC

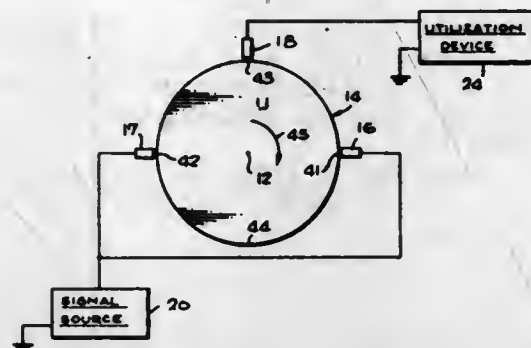
Raymond Lubow, 2841 Montcalm Ave.,
Los Angeles, Calif. 90046
Filed Mar. 18, 1968, Ser. No. 713,699
Int. Cl. G10h 1/02

U.S. Cl. 84-1.25

12 Claims

A vibrato-producing apparatus which includes a conductive cylindrical body which is coated with dielectric material. The body is rotatable about its longitudinal axis at a rate which varies above and below an average rate during each revolution. A pair of record electrodes are positioned on opposite sides of the body. Signals, which are simultaneously applied to the two record-electrodes, are stored simultaneously in opposite surface elements of

the dielectric material. Thus, each element stores signals which have been frequency modulated above and below



the input signal frequency. A read electrode is used to read the signals stored at each surface element.

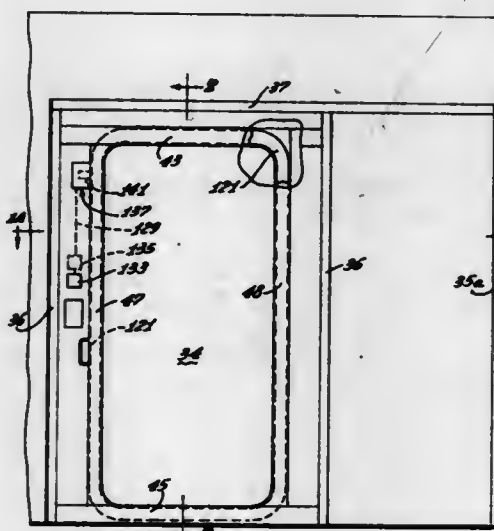
3,518,355 ELECTROMAGNETIC SHIELD

Carl T. Luce, Woodland Hills, Calif., assignor to
Electromagnetics Inc., Los Angeles, Calif., a corporation of California

Filed Dec. 6, 1968, Ser. No. 781,895
Int. Cl. H05k 9/00

U.S. Cl. 174-35

24 Claims



This disclosure describes a room or enclosure which is shielded against electromagnetic radiation. The room has a wall with an opening therein. A door is provided for sealing the opening, the door being urged against the surface of the wall surrounding the opening by a force which extends at least substantially continuously around the opening.

3,518,356 COVER FOR A WALL SWITCH

George Friedman, 72 Spruce St.,
Hicksville, N.Y. 11801

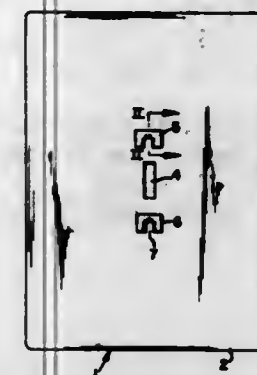
Filed Feb. 12, 1969, Ser. No. 798,760
Int. Cl. H05k 5/03

U.S. Cl. 174-66

9 Claims

A switch plate cover is attached to the two screws provided on standard American wall switch plates on opposite sides of the switch actuating member, approximately 2 1/2" apart. The cover has two fixed brackets on its inner face for receiving the screw heads, and the screw shanks project through U-shaped notches in the brackets which are open in a common direction. The

switch actuating member projects through a slot centered in the otherwise imperforate cover between the brackets.



A raised edge of the cover is contiguously adjacent the wall.

3,518,357 INDICATOR FOR BUS DUCT JOINT

Russell S. Davis, Detroit, Mich., assignor to I-T-E
Imperial Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Aug. 4, 1969, Ser. No. 847,313
Int. Cl. H02g 5/04

U.S. Cl. 174-88

10 Claims



The cover for a bus duct housing at a joint region thereof is provided with an aperture aligned with the joint clamping bolt and positioned opposite the free end thereof. As the bolt is being tightened for the application of pressure to the electrical connections between bus bars at the joint region, the bolt forces a plastic or steel insert closing the aperture outward and at the same time a deformable plastic tape covering the aperture is deformed by the bolt so that the tape is forced outside the housing. The tape is of a color that contrasts sharply with the color of the bus duct housing to provide a visual indication that the joint has been tightened.

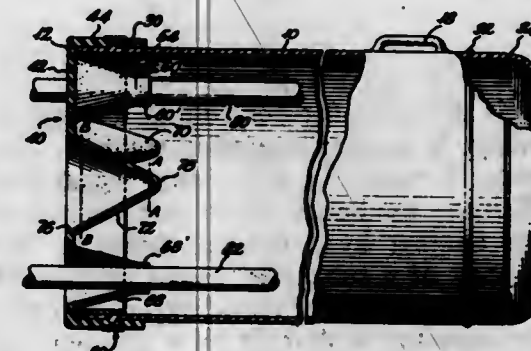
3,518,358 CABLE OR LIKE ENCLOSURE

Norman H. Brown, Kenmore, N.Y., assignor to The
Dexter Corporation, Windsor Locks, Conn., a corporation of Connecticut

Filed June 19, 1967, Ser. No. 647,019
Int. Cl. H02g 15/08

U.S. Cl. 174-138

4 Claims



An end cap for tubular cable enclosures and the like which may be open at one or both ends, said end cap comprising a unitary body of resilient material having an essentially planar web portion with a peripheral flange

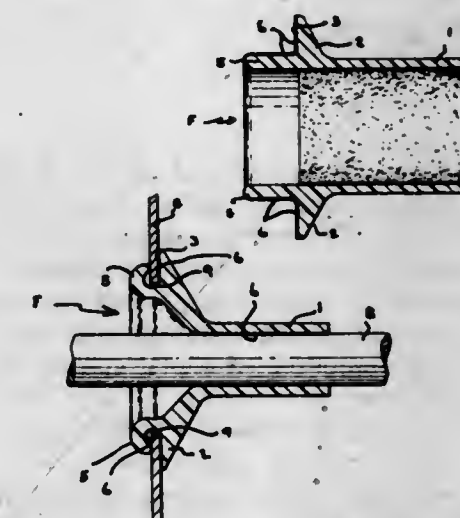
projecting in one direction therefrom for sealingly engaging the outer surface of a tube end, one or more cable receiving apertures in said web portion, and each of said apertures being closed by an integral frusto-conical closure member protrudes from said web in the same direction as and to an extent greater than said flange, thereby facilitating accurate cut-off to closely engage a cable of particular size, and the wall thickness of said frusto-conical closure member is substantially less than that of the web so that after desired cut-off the frusto-conical portion can be deflected to protrude from the opposite surface of the web, in a direction opposed to the flange.

3,518,359 HEAT-SHRINKABLE SEALING AND STRAIN-RELIEF FITTINGS FOR ELECTRICAL CABLES

John Omer Trimble, Malvern, and Arthur Llewellyn Mueller, Berwyn, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Filed Mar. 28, 1968, Ser. No. 716,905
Int. Cl. H01b 17/30; F16 5/02; B23p 11/02
U.S. Cl. 174-153

8 Claims



A fitting for sealingly engaging an opening in a mounting member and an electrical cable passing therethrough comprises a tubular member of heat-shrinkable material having a flange extending outwardly from the tubular member adjacent one end, the exterior surface of the flanged end of the tubular member and an interior surface of the tubular member from the flange to the other end having sealant material thereon, the flanged end of the tubular member and the section of the tubular member having the sealant material on the interior surface being shrinkable into engagement with the area of the mounting member around the opening and into engagement with the part of the cable passing through the fitting so as to provide strain-relief therefor.

3,518,360 PORTABLE COLOR TELEVISION CAMERA SYSTEM

Walter G. Gibson, Princeton, N.J., and Arthur J. Gravel, Maple Glen, Pa., assignors to RCA Corporation, a corporation of Delaware

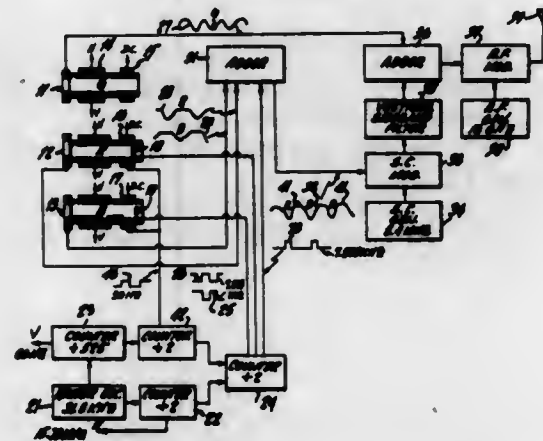
Filed Oct. 18, 1967, Ser. No. 678,481
Int. Cl. H04h 9/40

U.S. Cl. 178-5.2

3 Claims

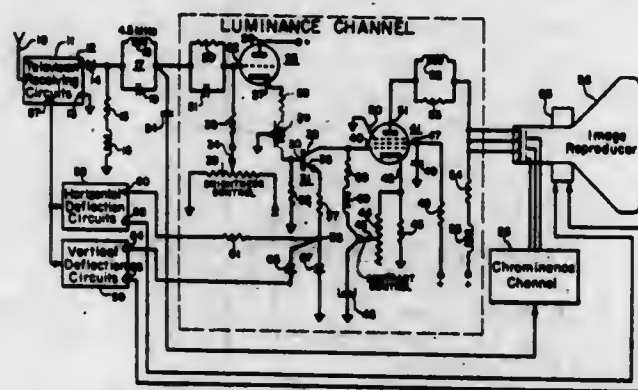
There is disclosed apparatus for reducing the effective bandwidth required for transmitting color television broadcasting information from a remote camera to a base station such as a television studio, where the color signal is received and further processed for retransmission to the viewing public.

A major portion of the disclosure is concerned with a remote camera operating in accordance with the disclosed apparatus which camera uses red, blue and green sensors of which, the red and blue sensors are activated only on alternate scanning lines in an odd line-interlaced raster and each of the resulting signals is repetitively transmitted in two successive line scanning periods with the alternate red and blue sensor activation being reversed after each frame of two line-interlaced fields and with the vertical sawtooth deflection of the scanning beams of the red and blue sensors being slightly shifted oppositely in respective odd- and even-line fields.



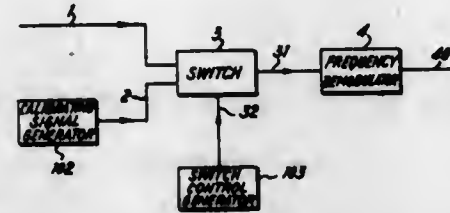
The color signal thus obtained from the camera is modulated by a radio frequency carrier and is transmitted to the remote station. The remote station is adapted to receive the radio frequency carrier demodulate it and retrieve the color information impressed thereon. The receiving apparatus at the base station also serves to delay a portion of the demodulated signal containing the composite red and blue information by one horizontal line scanning interval, to provide a further signal which together with the composite signal allows one to retrieve the original red and blue signals present in the original scene, during a proper line scanning interval.

3,518,361
TWO-STAGE DC COUPLED VIDEO AMPLIFIER
Robert W. Krug, Oak Park, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 29, 1966, Ser. No. 597,619
Int. Cl. H04n 5/48
U.S. Cl. 178-5.4 1 Claim



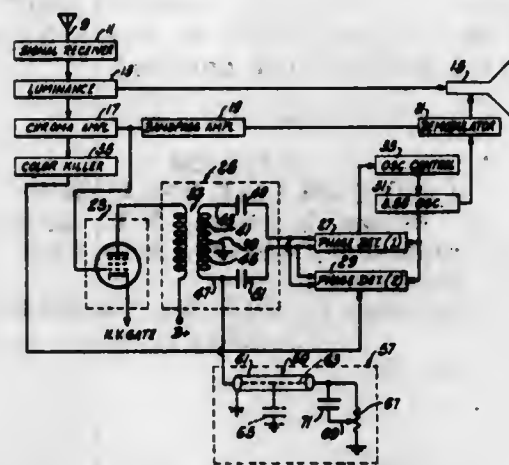
The luminance channel of a color television receiver includes a first transistor stage and a second vacuum tube stage. Contrast control is provided by cathode degeneration in the final video amplification stage. The operating load current for the first stage is derived from the cathode circuit of the output stage.

3,518,362
DEMODULATING CIRCUIT FOR WAVES FREQUENCY MODULATED BY SIGNALS OF THE VIDEO TYPE
Roland Fessard, Asnières, France, assignor to Compagnie Française de Télévision, a corporation of France
Filed Feb. 27, 1967, Ser. No. 618,754
Claims priority, application France, Mar. 3, 1966, 52,075
Int. Cl. H04n 5/58, 9/48
U.S. Cl. 178-5.4 5 Claims



In order to ensure proper demodulation of a wave frequency modulated by signals of the video type containing periodic time intervals during which the signal is not transmitted, referred to as blanking intervals, and to enable proper restoration of the DC component of said video type signals after demodulation there is provided an auxiliary circuit for substituting for said wave to be demodulated during at least a part of at least some of said blanking intervals a signal, referred to as calibrating signal, having a constant frequency for at least the duration of said part of said blanking interval.

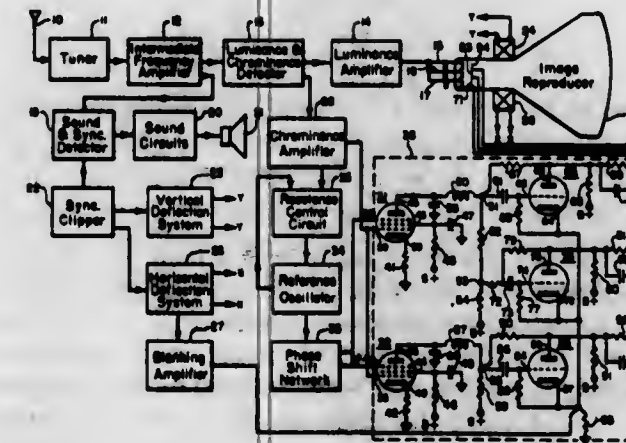
3,518,363
HUE CONTROL CIRCUITRY
David Lee Funston, Batavia, Marion Jonathan Pifer, Williamsville, and Robert Charles Wheeler, Batavia, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 28, 1967, Ser. No. 626,589
Int. Cl. H04n 9/50
U.S. Cl. 178-5.4 5 Claims



Circuitry is provided for controlling the hue of a reproduced image in a color television receiver. The phase of a periodically recurring color burst signal and a developed reference oscillation signal are shifted with respect to one another by a network tuned to resonance at the frequency of a subcarrier signal and including an inductor whereacross one of the above-mentioned signals appear. The inductor is shunted by a parallel connected first capacitance means and a resistor. The resistor has a positionable arm, and a second capacitance means couples the positionable arm of the resistor to an end terminal of the inductor. The resistance of the tuned circuit remains substantially constant and the desired phase shift

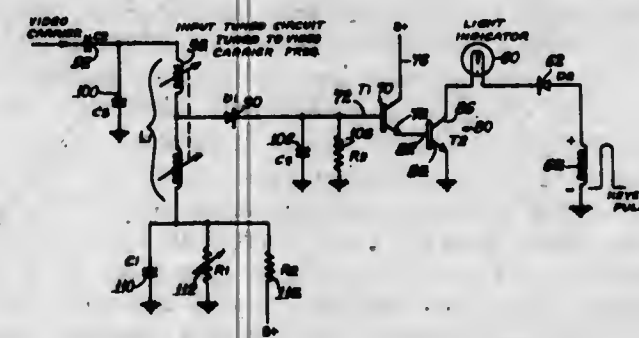
is accomplished by varying the location of the positionable arm of the resistor which, in effect, varies the capacitance content of the resonant network.

3,518,364
CHROMINANCE DEMODULATOR SYSTEM FOR COLOR TELEVISION
Robert W. Krug, Oak Park, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 3, 1967, Ser. No. 627,685
Int. Cl. H04n 9/50
U.S. Cl. 178-5.4 9 Claims



A color demodulator system comprises two demodulators for deriving first and second color-information signals from a received signal, and a trio of identical inter-coupled matrix amplifiers for developing from the two derived signals three control signals suitable for controlling a color image reproducer. By way of illustration, the system may have three triode matrix amplifiers inter-coupled by a common cathode impedance. The two color-information signals, X and Z, are applied to first and second ones of the matrix amplifiers wherein they matrix with a signal formed across the common cathode impedance to form B-Y and R-Y color-control signals, respectively. The third control signal, G-Y, is formed in the remaining matrix amplifier by combining a portion of the Z color-information signal with the signal developed across the common cathode impedance. All three matrix amplifiers may be identical in design and each may have its own stabilizing feedback network.

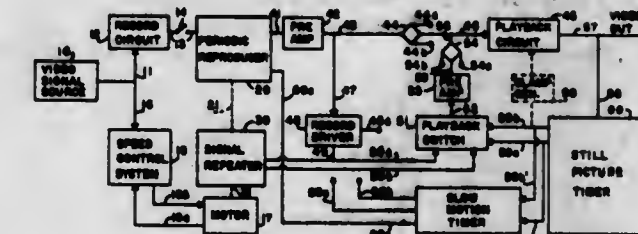
3,518,365
KEYED FINE TUNE INDICATOR FOR COLOR OR MONOCHROME TV
Aron K. Chaddha, Melrose Park, Trevor L. Jones, Chicago, and Sam P. Stamatis, Glenview, Ill., assignors to Wells-Gardner Electronics Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 9, 1967, Ser. No. 614,956
Int. Cl. H04n 5/50
U.S. Cl. 178-6.8 5 Claims



A fine tuning visual indicator for television receivers utilizing a keyed pulse simultaneously with the video car-

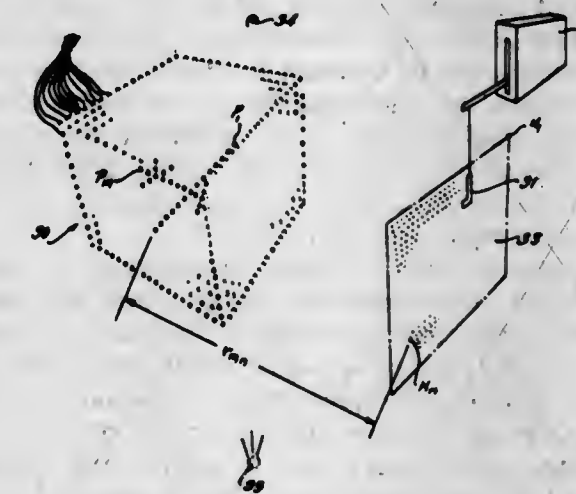
rier signal in a gate circuit to actuate visual indicating means.

3,518,366
SLOW MOTION PICTURE VIDEO SYSTEM WITH MAGNETIC DISC STORAGE
John T. Phan, Redwood City, Calif., assignor, by means assignments, to Data Memory, Inc., Mountain View, Calif., a corporation of California
Filed Aug. 3, 1967, Ser. No. 658,253
Int. Cl. H04n 5/02, 5/78
U.S. Cl. 178-6.6 20 Claims



A slow motion picture video system including a periodic reproducer with a magnetic storage device for intermittently reproducing consecutive portions of a recorded moving picture video signal, a slow motion timer to determine the periodic rate at which the periodic reproducer reproduces the portions of the moving picture video signal, and a single picture reproducer to receive each of said portions of the moving picture video signal, and to form therefrom continuous frames of a still picture video signal during each of said periodic intervals, said still picture video signal having the same picture information in each field thereof and having the visual reproducing signals of the moving picture video signal, whereby the consecutively formed still picture video signals enable a slow motion video signal to be developed.

3,518,367
METHODS AND APPARATUS FOR PRODUCING ARTIFICIAL HOLOGRAMS
Harold A. Smith, Plainfield, N.J., assignor to Devenco Incorporated, a corporation of New York
Filed June 7, 1966, Ser. No. 555,802
Int. Cl. H04n 5/84; G02b 3/00
U.S. Cl. 178-6.7 21 Claims



Data relating to the position and amplitude of a plurality of points on a three-dimensional object are obtained, and from this data a plurality of signals are produced. Amplitude and phase of each signal are related to the point on object to which the signal corresponds. Each signal is attenuated and phase shifted, and all signals are vectorially added to produce signals representing points on

an imaginary hologram plane. Hologram signals are recorded on a medium which can modulate visible light. Object signals may be electrical signals, or they may be signals emanating from a two or three-dimensional array of signal propagators.

3,518,368
APPARATUS AND INFORMATION PROCESSING METHODS FOR A TRACKING SYSTEM TRACKER UNIT

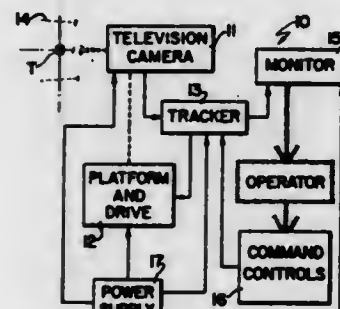
Everette C. Olson, Columbus, Ohio, assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Oct. 12, 1964, Ser. No. 403,398

Int. Cl. H04n 3/00

U.S. Cl. 178—6.8

18 Claims



1. A tracking system tracker unit which generates an electrical azimuth tracking error correction signal in response to detected changes in a television camera output video signal picturing a selected target in a contrasting background to control the viewing axis of the television camera in azimuth tracking relation to the selected target, comprising:

- Detector circuit means detecting voltage amplitude changes in the television camera output video signal and producing detection pulses that identify and mark positive-going and negative-going voltage changes that indicate the real time-position of edge-like characteristics of the selected target,
- Separator circuit means functioning to classify contrast detection pulses received from said detector circuit means into separate positive-going and negative-going voltage change channels,
- Pulse generator circuit means generating a horizontal tracking gate pulse having a definite time duration and having a variable time-position in each line of horizontal scan of the television camera,
- Two AND gate circuit means each receiving one different class of contrast detection pulses separately channelled by said separator circuit means and horizontal tracking gate pulses generated by said pulse generator circuit means and gating time-coincident portions of those pulses received therein as azimuth tracking error detection pulses,
- Summing circuit means functioning to add the tracking error detection pulses gated by said two AND gate circuit means and produce a tracking error detection pulse signal representing the difference thereof and representing a selection of a desired direction of azimuth tracking error correction, and
- Integrator circuit means integrating the signal produced by said summing circuit means to form said electrical azimuth tracking error correction signal, said azimuth tracking error correction signal positioning the horizontal tracking gate pulse generated by said pulse generator circuit means in a non-singularly coincident relation to received contrast detection pulses at each of said two AND gate circuit means and controlling movement of the viewing axis of the television camera to an aligned azimuth tracking relation to the selected target.

3,518,369
APPARATUS AND INFORMATION PROCESSING METHODS FOR A TRACKING SYSTEM TRACKER UNIT

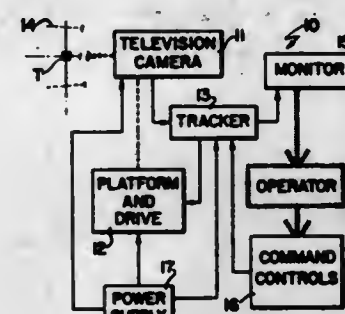
Richard B. Kuhn, Columbus, Ohio, assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Oct. 12, 1964, Ser. No. 403,399

Int. Cl. H04n 3/16

U.S. Cl. 178—6.8

7 Claims



1. A tracking system tracker unit which generates an electrical elevation tracking error correction signal in response to detected changes in a television camera video signal that identifies a selected target in a contrasting background to control the viewing axis of the television camera in elevation tracking relation to the selected target, comprising:

- Detector circuit means detecting voltage amplitude changes in the television camera video signal and producing a detection pulse that identifies the real-time position of an edge-like characteristic of the selected target in a horizontally-oriented line of scan,
- Synthesizing circuit means responding to said detection pulse to synthesize a top edge-like characteristic of the selected target from said detection pulse and producing said synthesized top edge-like characteristic as an output signal,
- Delay-producing circuit means responding to said output signal and establishing a fixed-time delay immediately after said synthesizing circuit means output signal,
- Separate circuit means responding to said fixed-time delay and synthesizing a false bottom edge-like characteristic of the selected target from said synthesizing circuit means output signal as a separate output signal,
- Pulse generator circuit means generating a singular variably-positioned vertical tracking gate pulse,
- Gating circuit means gating different tracking error detection pulses based on the time-coincidence involving said synthesizing circuit means output signal and said separate output signal, respectively, with said vertical tracking gate pulse,
- Summing circuit means functioning to add said different tracking error detection pulses gated by said gate circuit means and producing an output tracking error detection pulse signal representing the difference of said different tracking error detection pulse in a television camera video signal field of scan and representing the selection of a desired direction of elevation tracking error correction, and
- Integrator circuit means integrating said output tracking error detection pulse signal to form said electrical elevation tracking error correction signal, said elevation tracking error correction signal variably-positioning said vertical tracking gate pulse in a non-singularly coincident relation to said different tracking error detection pulses to accomplish tracking system elevation tracking correction and controlling the position of the viewing axis of the television camera in aligned elevation tracking relation to the selected target.

3,518,370
MODULATION ERROR CANCELLING APPARATUS

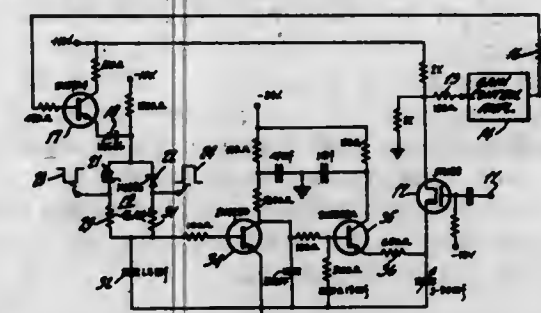
John J. O'Toole, Cherry Hill, N.J., assignor to RCA Corporation, a corporation of Delaware

Filed Mar. 30, 1967, Ser. No. 627,012

Int. Cl. H04n 5/40

U.S. Cl. 178—7.1

7 Claims



The amplitude, relative to a reference, of the horizontal synchronizing pulses of a composite video signal is detected to form a correcting wave representing any unwanted envelope modulation of the composite video signal and the wave is combined in opposite polarity with the signal to cancel the modulation.

3,518,371
PRESET SENSITIVITY AND AMPLIFICATION CONTROL SYSTEM

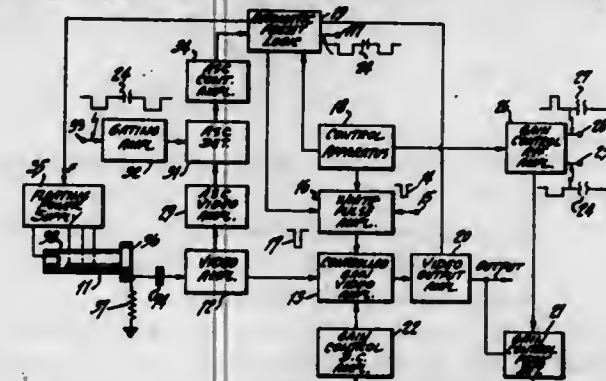
Robert R. Brooks, Willingboro, N.J., assignor to RCA Corporation, a corporation of Delaware

Filed Oct. 18, 1966, Ser. No. 587,497

Int. Cl. H04n 5/34

U.S. Cl. 178—7.2

10 Claims



In a television camera control system, apparatus is provided for automatically increasing the camera sensitivity to a selected maximum in response to decreased light, at which point the automatic sensitivity control circuit is interrupted and the sensitivity is returned to a nominal predetermined value so that, upon a subsequent increase in light and a return to automatic operation, no sudden change in sensitivity is required, thereby avoiding the development of objectionable transients in the resultant video signal.

3,518,372
TRACKING SYSTEM PLATFORM STABILIZATION

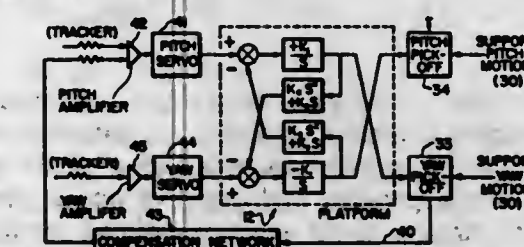
Theron J. Johns, Columbus, Ohio, assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Nov. 14, 1966, Ser. No. 593,931

Int. Cl. H04n 7/18

U.S. Cl. 178—7.81

7 Claims



A tracking system having a platform that supports a

television camera sensor and a stabilization gyroscope means and that is subjected to platform vibration is provided with apparatus and methods for effecting improved platform nutation damping to minimize the loss of sensor lock-on during system operation.

3,518,373
DISPLAY CONTRAST ENHANCEMENT APPARATUS FOR USE WITH A CATHODE RAY TUBE

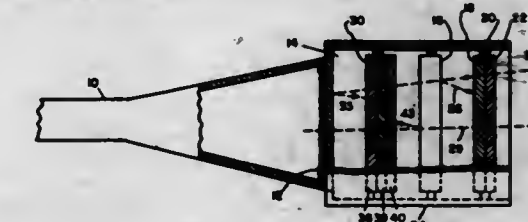
Rosario E. Cusera, Waltham, and Joseph L. Hallett, Sudbury, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Sept. 24, 1968, Ser. No. 761,982

Int. Cl. H04n 5/72

U.S. Cl. 178—7.85

4 Claims



A display contrast enhancement apparatus employing in light transmitting arrangement a cathode ray tube having a narrow band luminous substance disposed on the face thereof, a narrow band interference filter with a passband equal to and centered about the frequency spectrum of the luminous substance to reflect ambient and emitted light not within the passband and a set of absorption filters to absorb not only the reflected light not within the passband but also light within the passband reflected from the face of the tube.

3,518,374
APPARATUS FOR SYNCHRONIZING MASTER AND SLAVE TELEVISION SYNC GENERATORS

Gerald Hamilton Askew, London, England, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

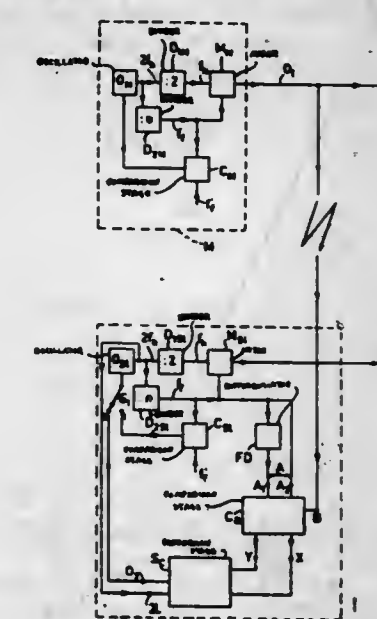
Filed Oct. 5, 1966, Ser. No. 584,538

Claims priority, application Great Britain, Oct. 6, 1965, 42,394/65

Int. Cl. H04n 5/04

U.S. Cl. 178—69.5

8 Claims



The present invention relates to synchronizing a slave television apparatus as soon as possible after the synchronizing signal from a master television apparatus has been received. The apparatus comprises an auxiliary comparison stage having two output terminals, and producing a correction signal from one output if the pulses from the slave lead the pulses from the master or a correction

signal from the other output if the pulses from the master lead the slave pulses. The output signals are applied to an oscillator of the slave generator so as to slow down or to speed up respectively its pulse repetition rate until pulses of master and slave generator are in synchronism.

3,518,375

VOICE OVERRIDE CIRCUIT

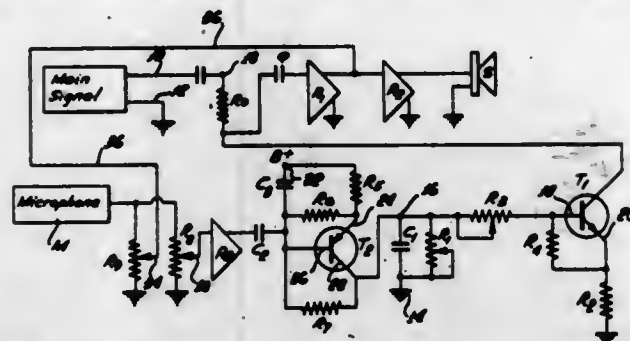
William R. Hawkins, Van Nuys, Calif., assignor to Newcomb Electronics Corp., Sylmar, Calif., a corporation of California

Filed Feb. 7, 1967, Ser. No. 614,491

Int. Cl. H04m 9/10

U.S. Cl. 179—1

14 Claims



The main signal normally progresses through amplifiers A1, A2 to a speaker S. However, the main signal is attenuated by the action of a transistor T1 when a microphone M is operated. A resistor R0 and transistor T1 form a circuit dividing the main signal. When transistor T1 is in its high impedance state, the mid-terminal Q of the divider transmits to amplifier A1 substantially the full signal strength. A signal derived from the microphone causes a condenser C1 rapidly to charge and transistor T1 to conduct. The terminal Q now scales off only a small portion of the main signal, which is thus attenuated. When the microphone signal reduces below a preset level, the charge on condenser C1 leaks off through resistor R1, and the transistor T1 ultimately shuts off so that normal operation resumes.

3,518,376

LOW FREQUENCY TELEVISION SYSTEM

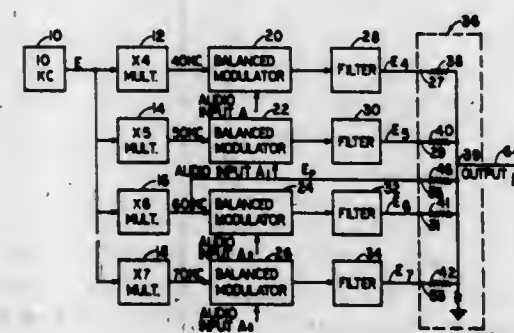
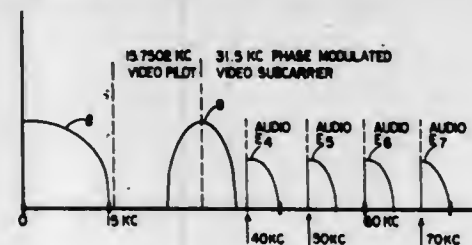
Ira Kamen, New York, N.Y., and Harold R. Walker, Metuchen, N.J., assignors to Educating Systems, Inc., New York, N.Y., a corporation of New York

Filed June 2, 1966, Ser. No. 554,827

Int. Cl. H04j 1/00

U.S. Cl. 179—15

11 Claims



A communication system is described wherein a plurality of signals are transmitted over a common low-frequency circuit. In a preferred embodiment, a television

camera which is operated under the control of a common selected standard T-V broadcast signal provides a video signal which is sampled at a low frequency rate related to the synchronization signal presented in the standard selected T-V broadcast signal. The sampled video signal is transmitted over a low-frequency circuit to a remote receiving site. At the receiving site, a television receiver operated with the same synchronization signal used with the transmitting camera is operated to display the sampled video signals as received over the low-frequency circuit. The sampling of the T-V signal at the transmitter site near the camera is conducted at a frequency differing slightly from the synchronization signals in the broadcast signal so that upon arrival at the receiving site, a complete video picture can be reproduced.

3,518,377

PULSE CODE MODULATION TERMINAL WITH IMPROVED SYNCHRONIZING CIRCUITRY

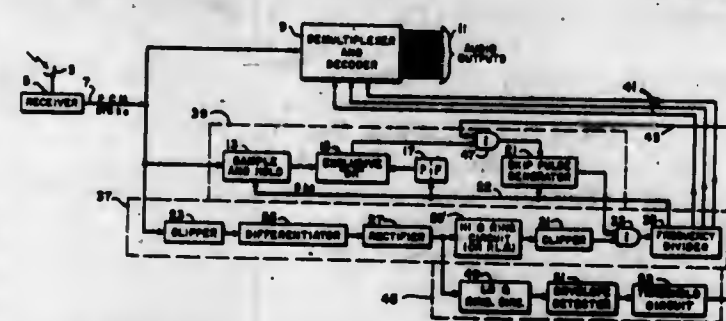
Larry U. Dworkin, Oceanport, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 17, 1967, Ser. No. 624,676

Int. Cl. H04j 3/06

U.S. Cl. 179—15

4 Claims



This pulse code modulation terminal for demultiplexing and decoding PCM signals includes a timing circuit for producing timing pulses subharmonically related to the PCM bit frequency and a frame synch circuit for bringing said timing pulses into synchronization with the framing bits of the PCM signal. A fade detector is arranged to inhibit the operation of the frame synch circuit in response to short interruptions of the PCM signal, caused for example by fading in a radio link. This prevents frame hunting which would otherwise cause a loss of information after the PCM signal returns.

3,518,378

POLARIZED ALARM AND COMMUNICATION MONITORING SYSTEM

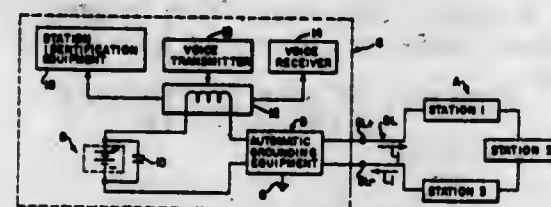
Robert Benton McLeod, Clinton, and Foster Earle Weld, Newton Highlands, Mass., assignors, by means assignments, to Gulf & Western Systems Company, New York, N.Y., a corporation of Delaware

Filed Jan. 23, 1967, Ser. No. 610,897

Int. Cl. H04m 11/04

U.S. Cl. 179—5

7 Claims



A combined telephone-telegraphy communication system including a central station and a plurality of local stations connected together in series by a single metallic signal line across positive and negative output terminals of a central station direct current voltage source. The central station includes automatic grounding equipment for, upon an open circuit in the signal line, con-

necting the negative side of the source to ground and connecting the negative and positive output terminals together. Each local station is a polarized load and includes a circuit for, upon actuation, connecting the negative side of the load to ground to complete a ground return path to the central station.

3,518,379

AUTOMATIC PROGRAM SELECTOR DEVICE

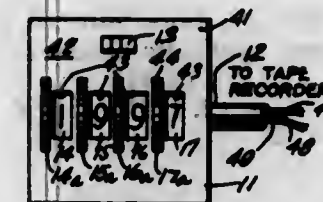
Richard H. Walburn, 6220 Kentwood Place, Fort Worth, Tex. 76112

Filed Mar. 3, 1967, Ser. No. 620,301

Int. Cl. G11b 15/24

U.S. Cl. 179—100.1

7 Claims



An automatic song selector for tape recorders having an adjustable counter device with automatic switch means which will wind and rewind the tape reels without the user having to monitor the tape recorder.

3,518,380

TELEPHONE MICROPHONE CUTOFF

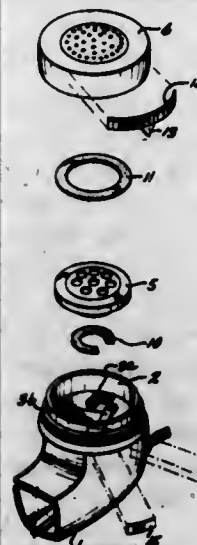
Edward N. Brennan, 7016 Pleasant St. SW., Tacoma, Wash. 98499, and Clifford P. Harris, 34043 51st Ave. S., Auburn, Wash. 98002

Filed Jan. 15, 1968, Ser. No. 697,989

Int. Cl. H04m 1/19

U.S. Cl. 179—167

10 Claims



The microphone capsule of a telephone handset is rotatively integrated with the perforated screw cap of the microphone. The ring contact of the microphone has an insulating patch engageable by the ring contact-engaging terminal when the microphone cap is unscrewed slightly from fully-tightened position so as to interrupt the circuit between the telephone cord and the microphone capsule. An index and indicia cooperating between the microphone cap and the handset case indicate visually whether the microphone capsule circuit is completed or broken.

In the use of a telephone, it is desirable on occasion to inactivate the transmitting mechanism such as to eliminate the effect of background noise on the microphone while a person using the telephone is listening or to enable such person to talk to another in the room while listening without such conversation being heard by the other party to the telephone conversation, for example, to request that noise interfering with the telephone conversa-

tion be reduced. The present invention operates somewhat like the microphone used in short wave radiophone communication in which it is necessary to close a switch to transmit. Also, the present invention serves somewhat the same function as a hold button on a telephone desk set, except that when such a hold button is pressed the circuits to both the speaker and the microphone of the handset are disconnected.

ERRATUM

For Class 191—62 see:
Patent No. 3,517,787

3,518,381

TWO-BUTTON TWO-STAGE SWITCH

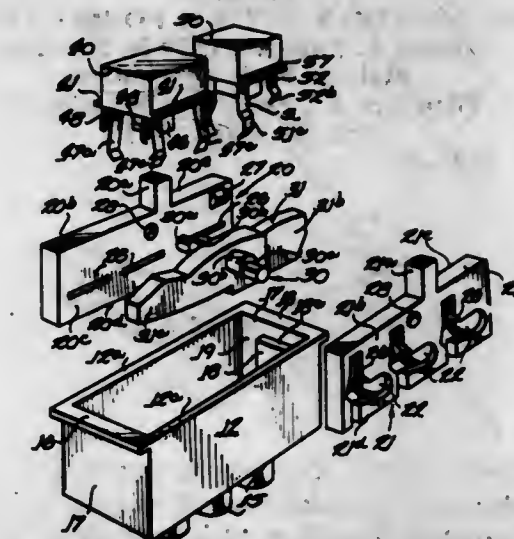
Edwin G. Gaynor, Southport, Conn., assignor to Edwin S. Gaynor, Southport, Conn.

Filed Jan. 13, 1969, Ser. No. 790,563

Int. Cl. H01h 9/26

U.S. Cl. 200—5

10 Claims



A switch for controlling energization and de-energization of a plurality of electric discharge lamps and operable upon a single activation of one of a plurality of manual control members first momentarily to close a given circuit and thereafter to complete closure thereof. This comprises a compact assembly including terminals of a plurality of circuits supported by opposing frames and controlled by manually operable members for opening and closing those circuits, one of said members being operative upon continuing activation thereof first momentarily to connect terminals closing a given circuit and then to complete closure thereof which is maintained by detent means associated with said one member and said frames, until opened by activation of another of said members.

3,518,382

ROTOR DRUM CONTACT CONSTRUCTION WITH INTEGRAL MOLDED INSULATION SPACER MEANS

Russell R. Krons, 6613 N. Prospect, Oklahoma City, Okla. 73111

Original application Oct. 28, 1963, Ser. No. 319,222, now Patent No. 3,411,301, dated Nov. 19, 1968. Divided and this application Nov. 18, 1968, Ser. No. 776,597

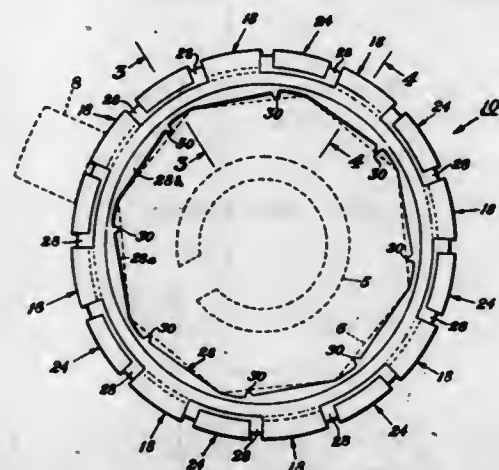
Int. Cl. H01h 1/10

U.S. Cl. 200—24

8 Claims

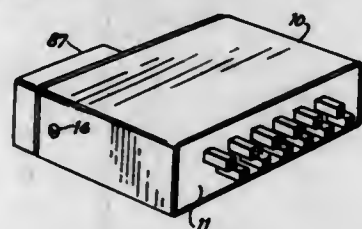
A rotary switch is formed from a plurality of integral members, each of which has a ring portion electrically interconnecting a plurality of electrically conductive segments extending therefrom. Nonconductive material is molded between the conductive members so that the segments are spaced apart in electrically isolated relationship, yet form a substantially continuous common outer

surface of conductive material. The molded nonconductive material is recessed from the common outer surface



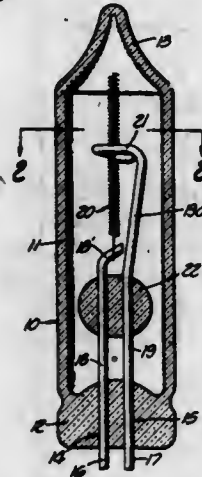
of the segments, and may cover the inwardly facing surface of the ring portion of one or more of the members.

3,518,383
KEYLESS IGNITION SWITCH FOR AUTOMOBILES
August C. Purpura, 1559 N. 5th Ave.,
Melrose Park, Ill. 60160
Filed Oct. 17, 1967, Ser. No. 676,675
Int. Cl. H01h 27/10
U.S. Cl. 200—43 14 Claims



A keyless switch operated by depressing a series of push buttons in a predetermined sequence to energize a pair of circuits. The first push buttons of the code close a first switch for energizing a first circuit and the last push button of the code closes a second switch for energizing a second circuit. Operation of any button out of the proper sequence prevents closing of both the first and second switches. A prevent mechanism precludes operation of more than one push button at a time.

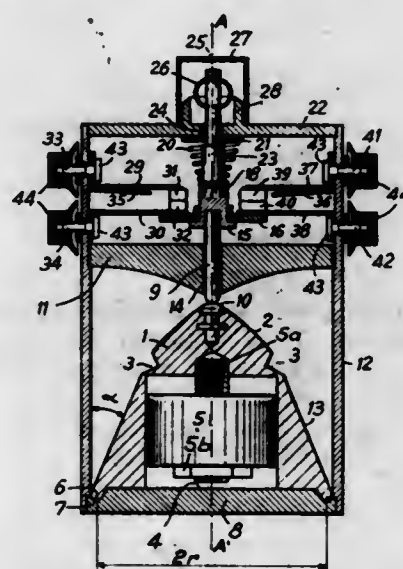
3,518,384
FORCE RESPONSIVE SWITCH
James A. Carley, San Pedro, Leonard H. McRoskey, Los Angeles, and Robert Q. Parsons, San Gabriel, Calif.; said Leonard H. McRoskey assignor of one-half to John W. McRoskey and Catherine McRoskey
Filed Oct. 30, 1967, Ser. No. 679,098
Int. Cl. H01h 35/14
U.S. Cl. 200—61.45 12 Claims



A vibration sensitive switch having a pair of terminal electrodes sealed in the base end of a sealed envelope

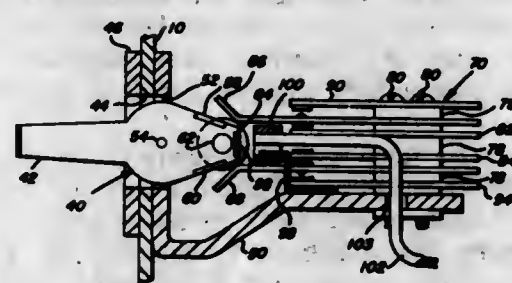
of glass preferably containing an inert gas, one electrode having a one turn coil formed at its free end to provide a ring contact, and the other electrode having an elongate coiled spring secured at one end thereto, this spring extending through the ring and having its free end positioned beyond the ring, and a bridging bead of glass inwardly spaced from the base to rigidly interconnect and hold the electrodes.

3,518,385
VEHICLE ANTI-FIRE SAFETY DEVICE
Jacques Boudes, Le Merentle, Batiment A/2, 124 Rue Auguste Blanqui, 13 Marseille 5^e, France, and Mario Gerometta, 26 Rue des Trois Mages, 13 Marseille 6^e, France
Filed Oct. 11, 1968, Ser. No. 766,736
Claims priority, application France, Oct. 16, 1967, 22,011
Int. Cl. H01h 35/14
U.S. Cl. 200—61.45 12 Claims



A safety device for a vehicle circuit breaker, said circuit breaker being driven by the pivoting, through a predetermined angle of a tipping organ, responsive to an overthrow or a violent shock undergone by the vehicle. The tipping organ is a solid placed on the frame of the vehicle and the gravity center is situated above the support points of the solid in such a position that the smallest angle formed by the vertical line passing through the gravity center and the lines joining the gravity center to the lines joining the support points of the solid is at least equal to the smallest vehicle overthrow angle. The solid pivots, but is prevented from sliding or rising with respect to the vehicle frame.

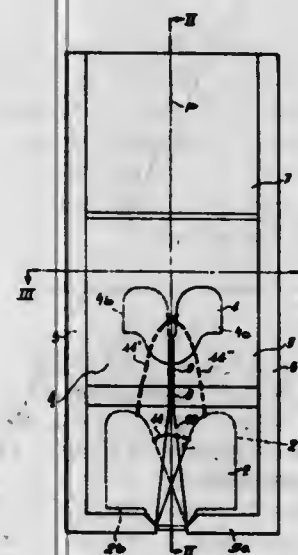
3,518,386
ILLUMINATED SWITCH MEANS
Irwin J. Gaberman, Waltham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Aug. 27, 1968, Ser. No. 755,682
Int. Cl. H01h 9/18
U.S. Cl. 200—167 3 Claims



Illuminated switch means comprising a fiber optic harness including a plurality of fiber optic elements having

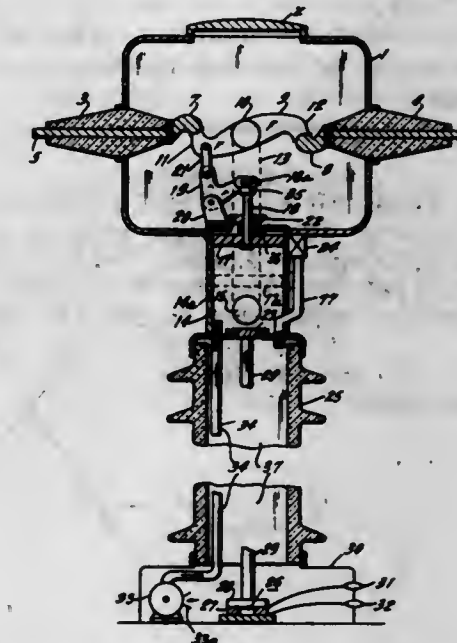
a common end located adjacent a common source of illumination and respective opposite ends disposed adjacent respective transilluminative actuating portions of respective illuminated switches.

3,518,387
ARC-QUENCHING ELECTRODE ASSEMBLY FOR HIGH-POWER CIRCUIT BREAKERS AND SWITCHES
André Latour, Grenoble, France, assignor to Magrini-Fabbriche Rianite Magrini-Scarpa e Magnano M.S.M. S.p.A., Milan, Italy, a corporation of Italy
Filed Apr. 13, 1967, Ser. No. 630,592
Claims priority, application France, Apr. 14, 1966, 57,551
Int. Cl. H01h 9/30, 33/00
U.S. Cl. 200—144 12 Claims



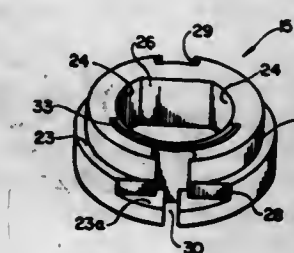
Arc-quenching electrode assembly for high-power circuit breakers and switches which has a plurality of mutually parallel, transversely spaced primary plates carrying respective relatively large primary electrodes across which the breaker arc is applied and forming arc chutes for the deionization of the breaker arcs, and at least one secondary plate between each pair of primary plates and having a pair of secondary electrodes of dimensions smaller than those of the primary electrodes for subdividing each primary fractional arc into a number of secondary arcs. The secondary plates are formed with upwardly narrowing throttling slots forming a progressively constricted aperture between each pair of primary blast electrodes or horns for limiting the movement of the primary arc between them toward the secondary electrodes until the amplitude of the primary discharge falls off in its periodic sinusoidal cycle, the upwardly converging slot having a relatively narrow gap adapted to pass only a relatively thin spark and terminating substantially at the secondary electrodes. The primary electrodes and secondary electrodes are mutually offset and offset from the corresponding electrodes of an adjoining arc chute and the arc loops between the electrodes are maximized to provide a multi-convolution configuration for the current flow which promotes the magnetic-field effect upon the discharge. The primary electrodes have extensions reaching toward the secondary electrodes and of a specific resistivity dimensioned to attenuate the current flow as the arcs move toward the secondary electrodes.

3,518,388
GAS BLAST CIRCUIT BREAKER HAVING SERIES-CONNECTED MOVABLE NOZZLE CONTACTS
Hansruedi Aumayer, Los Angeles, Calif., Otto Jensen, Malvern, Pa., and Fritz Kesselring, Kuesnacht, Zurich, Switzerland, assignors of one-half each to I-T-E Imperial Corporation, Philadelphia, Pa., a corporation of Delaware, and Siemens Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany
Filed Nov. 2, 1967, Ser. No. 680,200
Claims priority, application Germany, Nov. 9, 1966, 1,665,803
Int. Cl. H01h 33/86
U.S. Cl. 200—148 4 Claims



A high voltage gas blast circuit breaker having an angularly rotatable contact arm having two nozzles at either end. The movable contact arm angularly moves within a high-pressure gas container, with the nozzle contacts at the end of the arm engaging and disengaging a stationary contact. Gas flows into the nozzles to a gas discharge region to extinguish arcs drawn when the contact arms are rotated to a disengaged position. The two nozzles and contact arm may be a hollow, continuous, generally cylindrical rotating arm which communicates with a gas discharge region.

3,518,389
ROTOR ASSEMBLY FOR INTEGRAL ELECTRICAL SWITCH
John P. Doering, Jr., Santa Ana, and Roy G. Brant, Huntington Beach, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Mar. 14, 1968, Ser. No. 713,131
Int. Cl. H01h 3/00
U.S. Cl. 200—166 5 Claims



An integral rotary switch including a high temperature resistant nonconductive base member in the form of a

thin wafer having oppositely disposed flat surfaces and an aperture therethrough. A plurality of switch contact pads are formed on at least one surface of the base member in an array disposed around the aperture. Each pad is electrically connected to an electrical network deposited on the surface of the base member. A rotor and switch contact assembly is mounted through the aperture and includes a pair of rotor parts each having a cylindrically shaped hub section and a flange section. The hub sections of the rotor parts are positioned into the aperture from opposite sides of the base member so that the ends of the respective hub sections are in abutting relation and attached to form an integral rotor adapted to rotate within the aperture. A contact member is supported on the rotor and includes at least one outwardly extending arm resiliently biased into contact with a surface of the base and adapted to traverse an arcuate path on the surface of the base and sequentially contact the switch pads.

3,518,390

MULTILAYER ELECTRIC CONTACTS

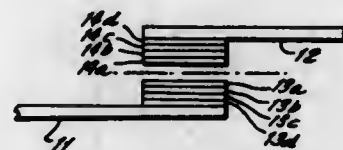
Takeshi Sasamoto, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan
Filed July 19, 1968, Ser. No. 746,078

Claims priority, application Japan, July 21, 1967, 42/46,922

Int. Cl. H01h 1/02

U.S. Cl. 200—166

7 Claims



Selectively engageable electric contacts wherein at least one of the engaging contact surfaces is provided with a plurality of layers of metallic material upon a metallic base member in which the multiple layers are comprised of alternating layers of a first metal having a relatively small heat conductivity and a relatively high melting point as compared with the adjacent metallic layer wherein the metals are not diffused and wherein the metal having the lower melting point and lower heat conductivity constitutes the outermost layer in order to significantly reduce complementary buildup and pitting of the engaging contact surfaces and to assure even contact wear after repeated use.

3,518,391

SWITCH CONSTRUCTION WITH SWITCH BASE AND TELESCOPING COVER

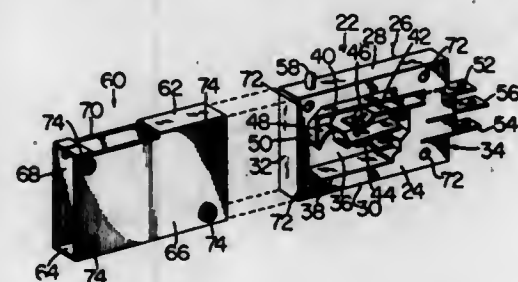
George M. Hipple, Columbus, Ohio, assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware

Filed Apr. 18, 1968, Ser. No. 722,307

Int. Cl. H01h 9/02

U.S. Cl. 200—168

8 Claims



This application discloses a switch construction with a flat sided switch base and a flat sided telescoping cover

and method of making the same. The switch base has two pairs of adjoining opposed flat base sides and a pair of adjoining base ends, with the base encompassing a switch cavity and a switch access opening, with switch means in such cavity. A flat sided cover telescopes over the flat sides of the base and covers the switch in the cavity and the access opening and tightly seals the same. A switch actuator extends out of the base, and the cover has an actuator receiving opening to accept the actuator.

3,518,392

CERTAIN 2-SPIRO-TETRAHYDRO-HALO-SULFAMYL-QUINAZOLINONES

Bola Vithal Shetty, Rochester, N.Y., assignor to Pennwalt Corporation, East Orange, N.J., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 517,995, Jan. 3, 1966. This application Nov. 2, 1967, Ser. No. 680,010

Int. Cl. C07d 51/48

U.S. Cl. 260—256.5

4 Claims

A tetrahydro-6-sulfamyl-7-haloquinazolinone compound having diuretic properties with low potassium excretion, characterized by having a phenyl, or phenylalkyl group, which may be substituted or unsubstituted, in the 3-position, and having a di-alkyl, halogen substituted di-alkyl, or a spiro group which may be carbocyclic or heterocyclic, in the 2-position.

3,518,393

BLOODWARMERS

Johann Lodewyk Naudé Besseling and Arthur Barclay Bull, Rosebank, Cape Town, Cape Province, Republic of South Africa, assignors to South African Inventions Development Corporation

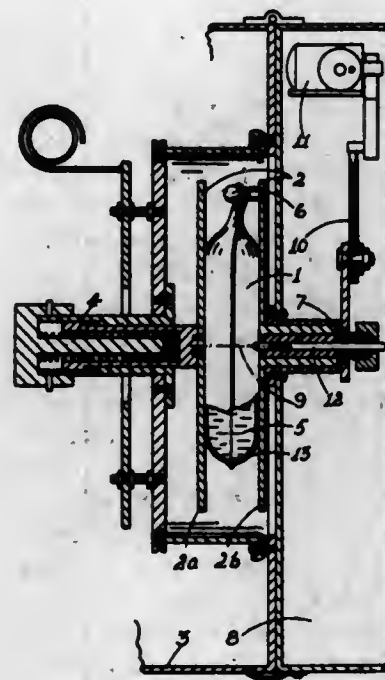
Filed Nov. 19, 1968, Ser. No. 776,958

Claims priority, application Republic of South Africa, Nov. 21, 1967, 67/7,010

Int. Cl. H05b 5/00

U.S. Cl. 219—10.41

4 Claims



Method and apparatus for heating blood which is contained in a flexible bag which entails snugly locating the bag between spaced electrode plates and passing an electromagnetic field through the blood. The snug location of the bag is essential to effect uniform heating of the blood and to prevent burning of the blood with the consequent dangerous effects. A probe is provided for measuring the blood temperature, and an arrangement is

provided for agitating the blood to assist in the uniform heating of the blood.

3,518,394

OUTPUT TRANSFORMER AND WORK INDUCTOR FOR INDUCTION GENERATORS

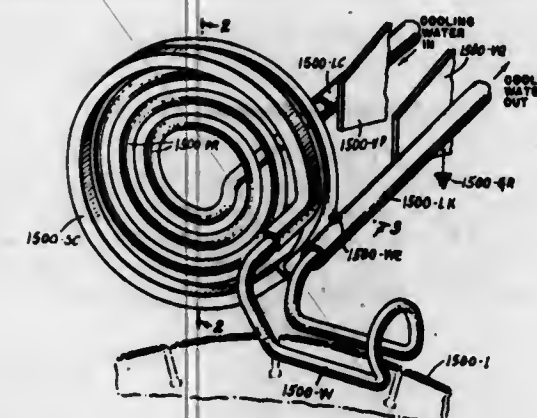
Chester H. Dawson, Danbury, Conn., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Original application May 16, 1967, Ser. No. 638,998, now Patent No. 3,449,146, dated June 10, 1969. Divided and this application Oct. 14, 1968, Ser. No. 767,385

Int. Cl. H05b 5/00, 9/02

U.S. Cl. 219—10.75

10 Claims



A combined output transformer and work coil inductor for coupling the output of an induction generator to a workpiece to be heated thereby. In an illustrative embodiment the combination involves a multi-turn transformer primary, a single turn transformer secondary, and a single loop work coil so arranged that there can be series flow of cooling water through the entire assembly and so arranged that one end of each of the coils is maintained at substantially ground potential to minimize problems associated with arc-over and/or short circuits to work being processed in or through the work coil.

3,518,395

END WELD CONTROL CIRCUIT

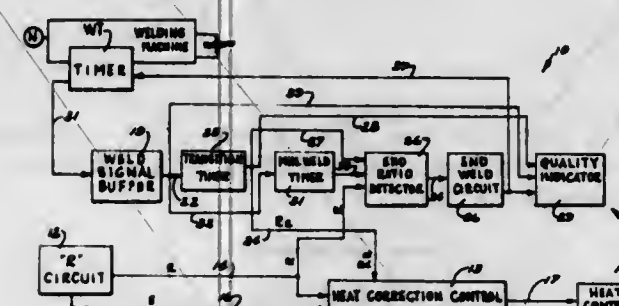
Peter W. Vanderhelst, Livonia, Mich., assignor to Robatron Corporation, Detroit, Mich., a corporation of Michigan

Filed July 3, 1967, Ser. No. 650,789

Int. Cl. B23k 9/10

U.S. Cl. 219—110

4 Claims



A resistance drop welding control circuit includes apparatus operable in conjunction with the weld timer of a resistance welding machine for terminating the weld interval in response to a drop of the welding resistance value to a preselected fraction of its peak value. A buffer circuit driven by the weld timer provides an output during the weld interval. A transition timer energized thereby provides a first transition signal during the ini-

tial part welding interval during which resistance irregularities and instabilities are likely to occur and a second transition signal for the remainder of the weld interval. A signal proportional to the instantaneous welding resistance is applied to an end ratio detector. The second transition signal is applied to the end ratio detector to allow it to store the peak value of the resistance signal. After the minimum time normally required to achieve a good weld has passed a minimum weld timer energizes the end ratio detector in synchronism with the alternating power supply to the welding machine to cause the end ratio detector to provide an output upon occurrence of completion of a whole number of cycles of welding current flow and a drop in the instantaneous welding resistance to a preselected fraction of its peak value. An end weld circuit energized by said output thereupon causes the weld timer to terminate the weld interval. A quality indicator responds to termination of the weld interval by the weld timer prior to energization of the end weld circuit to indicate a possible defective weld.

3,518,396

DIELECTRIC HEATING APPARATUS

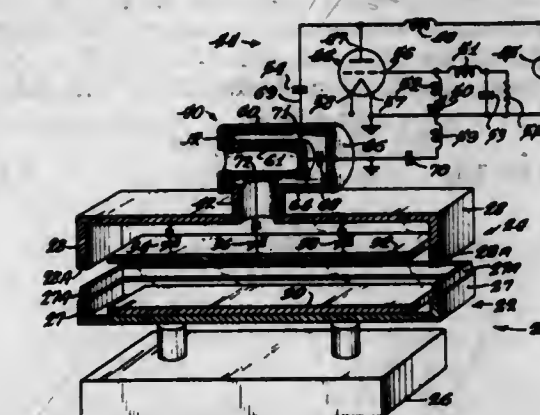
Thomas Lamont Wilson and Willard H. Hickok, Louisville, Ky., assignors to Chemotron Corporation, Chicago, Ill., a corporation of Delaware

Filed May 27, 1968, Ser. No. 732,267

Int. Cl. B23k 13/02; H05b 5/00

U.S. Cl. 219—10.53

11 Claims



A dielectric heating apparatus comprising a pair of heating electrodes, a series of resonant circuits that interconnect these electrodes at spatially distributed points, and a low impedance, high-Q tank circuit that couples one of the resonant circuits to a source of radio frequency power. The low impedance and high-Q of the tank circuit prevent changes in the nature of the work-load from changing the frequency at which the press operates. Variable capacitors in the distributed resonant circuits make possible the generation of either uniform or non-uniform heat distribution patterns.

3,518,397

APPARATUS FOR ELECTROSLAG WELDING

James R. Hannahs, Troy, Ohio, assignor to Hobart Brothers Company, Troy, Ohio, a corporation of Ohio

Filed June 20, 1968, Ser. No. 738,599

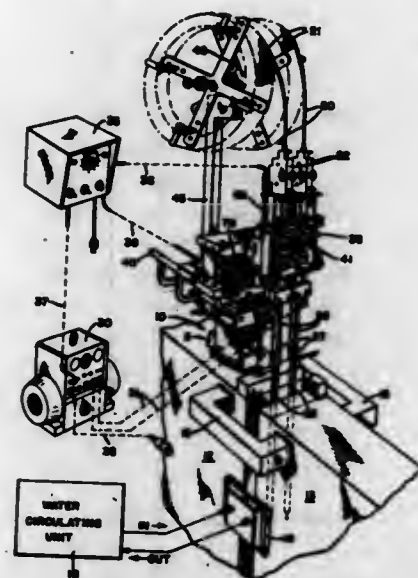
Int. Cl. B23k 25/00, 9/18

U.S. Cl. 219—73

2 Claims

An electroslag welding process and apparatus includes a consumable guide adapted to extend into a space formed between the parts to be welded. This space normally contains flux and slag forming ingredients which become molten and electrically conductive. A wire electrode is fed through the consumable guide and is melted by the flow of current from the electrode through the molten flux to the parts, and as the molten metal rises, the guide

is consumed. The consumable guide is oscillated across the thickness of the weld to insure even heat distribution



and to maintain uniform penetration of heat into the parts.

3,518,398

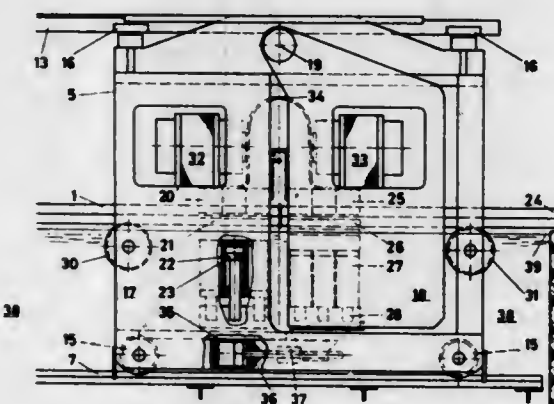
BUTT-WELDING DEVICE FOR BILLETS

Emil Denzler, Schlieren, and Hans Rudolf Zollinger, Geroldswil, Switzerland, assignors to H. A. Schlatter AG., Schlieren, Switzerland, a joint-stock company
Filed Oct. 20, 1967, Ser. No. 676,776
Claims priority, application Switzerland, Oct. 28, 1966, 15,639/66

Int. Cl. B23k 11/04

U.S. Cl. 219—101

6 Claims



Apparatus for welding together preheated material. The device consists of at least one resistance flash-butt welding machine which is movable along guide rails. Each machine consists of two pivotably connected clamping devices, the lower parts of which are submerged in a reservoir containing a cooling medium.

3,518,399

RESISTANCE DROP FEEDBACK WELD CONTROL

Peter W. Vanderhelst, Livonia, Mich., assignor to Robatron Corporation, Detroit, Mich., a corporation of Michigan
Filed July 3, 1967, Ser. No. 650,964

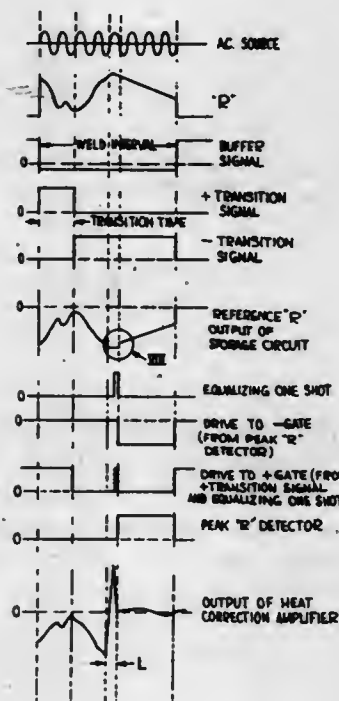
Int. Cl. B23k 11/16, 11/24

U.S. Cl. 219—110

9 Claims

A resistance drop welding control circuit includes apparatus operable in conjunction with the weld timer of a resistance welding machine for terminating the weld interval after the weld contact resistance has dropped to a preset fraction of its peak value. Further apparatus is provided

which constrains the weld contact resistance to follow a predetermined decreasing function during fusion. The constraining apparatus includes an operational amplifier fed with a resistance signal proportional to the weld contact resistance. A first negative feedback loop around the amplifier includes a storage circuit and a gate circuit energized during the initial portion of the weld interval to update the storage circuit from the output of the amplifier. Conduction of the gate closes the first feedback loop and limits the gain of the amplifier to a preselected level. After the initial unstable resistance portion of the weld interval has passed, means render the gate circuit unidirectionally conductive and prevent a change in amplifier output corresponding to the drop in contact resistance at the start of fusion from being applied as negative feedback to the amplifier input, the gain of the amplifier increasing in



response to such a drop. A detector responds to a preset increase in gain and momentarily renders the gate fully conductive to update the storage circuit and return the storage signal and resistance signal to equivalence. The detector then turns off the gate and turns on a heat correction gate completing a second negative feedback loop around the amplifier to thereafter limit its gain. A discharge circuit energized by the detector gradually drains the storage circuit in accordance with a preselected function which the contact resistance is to follow so that the amplifier is driven when the resistance signal deviates from the stored signal as the latter follows the desired function. A heat control amplifier driven by the sum of the output of the heat correction gate and a heat control reference signal regulates the weld heat to cause the weld contact resistance to decrease during fusion in accordance with the preselected function.

3,518,400

METHOD OF WELDING WITH A HIGH ENERGY BEAM

James E. Gallivan, Thompsonville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 30, 1968, Ser. No. 756,446

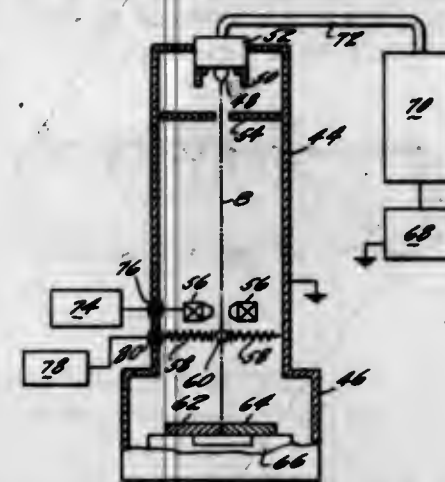
Int. Cl. B23k 15/00

U.S. Cl. 219—121

10 Claims

An improved method of welding by means of a high energy penetrating beam is disclosed in which an oscillatory motion in the direction of the weld seam is superimposed on the steady translational motion of the beam

along the seam. The intensity of the beam is adjusted to cause complete beam penetration at all points in a the tube to be welded and applying the arc of a welder to the tip of the tapered plug. The plug melts forming a highly reliable seal.



slot swept by the oscillating beam and to form a weld as the oscillating beam translates along the seam.

3,518,401

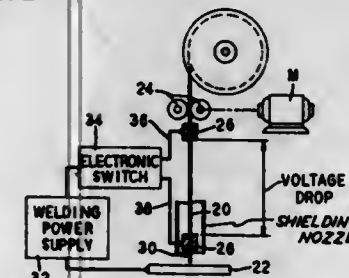
ELECTRIC ARC PULSING

Howard Hume Mathews, Boonton Township, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 4, 1967, Ser. No. 672,862

Int. Cl. B23k 9/10

U.S. Cl. 219—131

4 Claims



Welding power is supplied to the arc alternately by way of a first contact tube close to the arc-sustaining tip of the welding electrode and a second contact tube relatively remote from said tip, the frequency of alternation and the relative time of dwell of the power on the two contact tubes being determined by a resistor-capacitor timing circuit together with a pair of saturable transformers controlling rectifiers in circuit with the respective contact tubes.

3,518,402

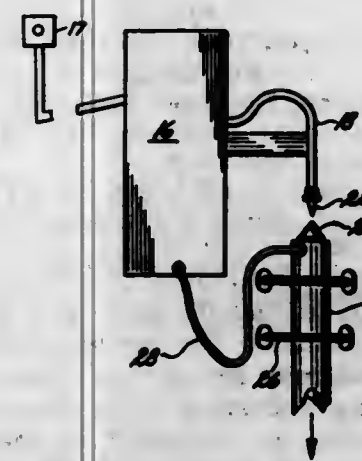
METHOD FOR SEALING HIGH PRESSURE TUBES

Michael S. Hersh, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 11, 1968, Ser. No. 758,945

Int. Cl. B23k 9/00

U.S. Cl. 219—137

3 Claims



A method of sealing a high pressure tube by welding made up of the steps of inserting a tapered plug within

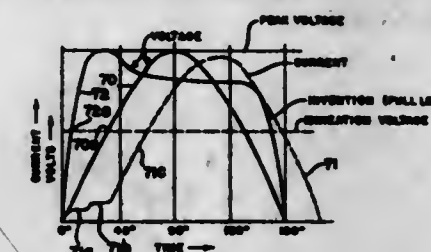
**3,518,403
ALTERNATING CURRENT POWER SOURCE FOR ELECTRIC ARC WELDING**

George G. Landis, South Euclid, Ohio, and James B. Stearns, Brookfield, Wis., assignors to The Lincoln Electric Company, Cleveland, Ohio, a corporation of Ohio
Original application Feb. 10, 1965, Ser. No. 431,640. Divided and this application Apr. 18, 1967, Ser. No. 646,784

Int. Cl. B23k 9/00

U.S. Cl. 219—137

4 Claims



An alternating current, electric arc welding power source has an open circuit voltage and a voltage wave shape having a slope as the voltage crosses the zero axis at least steeper than a 120 cycle sine wave of the same open circuit voltage. The source also has an inductive impedance at least high enough to shift the phase of the voltage relative to the current so that when the current passes through zero, the voltage across the arc gap is substantially equal to or exceeds the ionization voltage of the hot gases in the gap. Additionally, the source has an inductive impedance low enough to provide a short circuit to rated welding current ratio of more than 1.5 to 1.

3,518,404

WELDING WIRE FOR ELECTRIC ARC-WELDING IN AIR

Karel Christiaan ter Haar, Utrecht, Netherlands, assignor, by mesne assignments, to U.S. Philips Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed July 22, 1968, Ser. No. 746,291
Claims priority, application Netherlands, July 20, 1967, 6710039

Int. Cl. B23k 35/22

U.S. Cl. 219—146

2 Claims

Electrode for use in electric arc welding in air without the use of a protective gas atmosphere. The electrode is in the form of a tubular iron shell having a core of slag-forming materials comprising calcium fluoride, titanium dioxide, potash feldspar and ferrotitanium and metal powder.

3,518,405

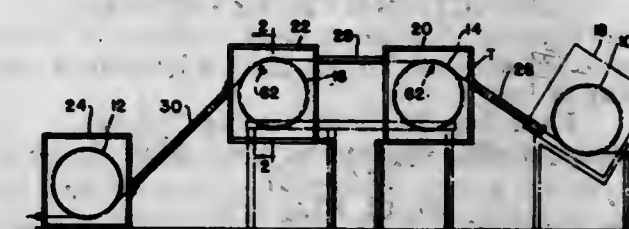
PRODUCTION OF ANNEALED TUBING BY STRAND ANNEALING PROCESS

James L. Herren, Decatur, Ala., and Edward P. Habdas, Dearborn, Mich., assignors to Calumet & Hecla Corporation, Allen Park, Mich., a corporation of Delaware
Filed Feb. 19, 1968, Ser. No. 706,589

Int. Cl. C21d 9/62

U.S. Cl. 219—155

3 Claims



Metal tubing such as thin-walled copper tubing is brought to annealing temperature by electric current

passed through a section of the tubing intermediate a pair of peripherally grooved contact wheels of substantial diameter, and sparking is substantially eliminated by forming the tube contacting portion of at least one of the contact wheels of electrographitic material.

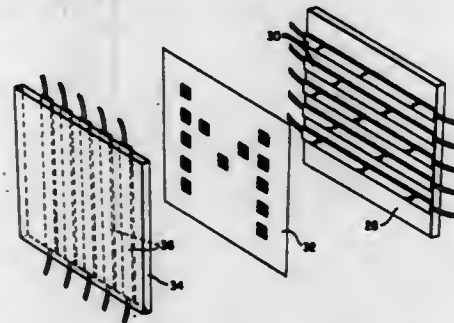
3,518,406

THERMAL HALF-SELECT PRINTING MATRIX
John L. Janning, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Original application June 19, 1967, Ser. No. 646,888, now Patent No. 3,466,423, dated Sept. 9, 1969. Divided and this application Nov. 8, 1968, Ser. No. 774,391
Int. Cl. H05d 1/00; G01d 15/00

U.S. Cl. 219-216

2 Claims



Thermal half-select printing matrices in which printing on an adjacent heat-sensitive material occurs only at those matrix points which have coincident electrical current flowing through crossing electrically resistive thermal printing conductors which define those points are disclosed.

3,518,407

HEATING DEVICE

Ekkehard Andrich, Aachen, Germany, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

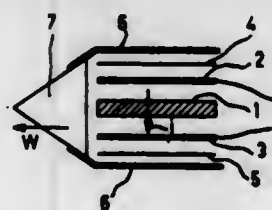
Filed Mar. 27, 1968, Ser. No. 716,424

Claims priority, application Germany, Apr. 4, 1967, N 30,274

Int. Cl. B23k 3/02; H05b 3/12

U.S. Cl. 219-229

4 Claims



An electrical heating device which maintains a constant temperature by the use of a heating element consisting of a material having a high positive temperature coefficient of resistance with a transition point at the desired temperature. The element is arranged coextensive with the heat flow so that heat withdrawal causes a temperature gradient in the heating element and hence a greater heating rate at that part of the element.

3,518,408

RETRACTABLE CIGAR LIGHTER

Sergio Pittacco, Moncalieri, Italy, assignor to Falcos S.p.A., Moncalieri, Torino, Italy, a joint-stock company of Italy

Filed Aug. 15, 1968, Ser. No. 752,943

Claims priority, application Italy, Sept. 6, 1967, 52,934/67

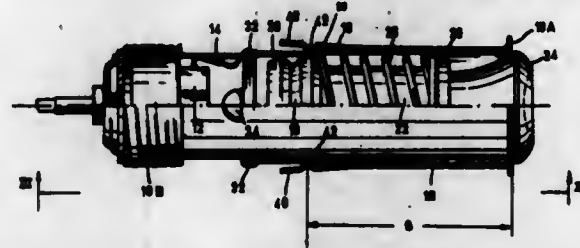
Int. Cl. F23g 7/00

U.S. Cl. 219-264

2 Claims

A retractable cigar lighter for mounting in a vehicle has a tubular body housing a relatively slidable bushing.

A lighter member is slidable in the bushing, against the action of a biasing spring, into engagement with electrical heating contacts at a closed end of the body, being released automatically when it has been heated sufficiently



so as to spring outwards, carrying with it the bushing, until the latter is arrested by resiliently yieldable retaining elements, at a position in which a knob attached to the lighter member projects beyond the mounting panel for the lighter.

3,518,409

ELECTRIC STEAM VAPORIZER FOR THERAPEUTIC USE

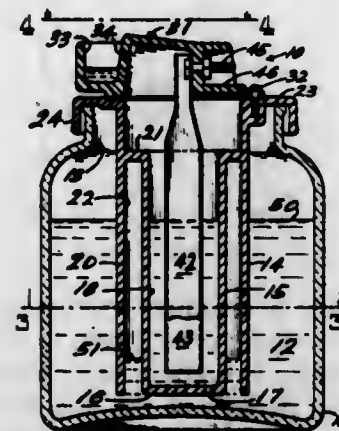
William H. Corbett, Somerset, Pa., assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio

Continuation of application Ser. No. 503,353, Oct. 23, 1965. This application May 1, 1969, Ser. No. 821,157

Int. Cl. H05b 3/60

U.S. Cl. 219-271

3 Claims



An electric steam vaporizer for therapeutic use having a water receptacle with an electrode housing positioned within the receptacle. The electrode housing has a continuous inner wall which defines a boiling chamber. An impervious skirt is spaced from the inner wall and an impervious top wall connects the skirt and the inner wall to define an open bottomed insulating chamber. A cover having depending spaced electrodes extending into the boiling chamber is mounted on the electrode housing. In a further embodiment, the open bottom of the insulating chamber is closed by an end cap attached to the skirt and inner wall.

3,518,410

ELECTRICAL HEATING DEVICE FOR FLUENT PRODUCTS

Alan Dillarstone, Highland Park, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Mar. 1, 1967, Ser. No. 619,670

Int. Cl. H05b 1/00, 3/00, 11/00

U.S. Cl. 219-300

7 Claims

A heating device for rapidly elevating the temperature of a fluent material after the material is discharged from a pressurized container. The heating device comprises a step-down transformer having a tubular secondary winding for carrying and heating the fluent material. The secondary winding is positioned so that the material discharged from the container flows into the tubular secondary, is heated as it flows therethrough, and is discharged therefrom as a heated product ready for use.

The transformer is mounted for up and down movement in a housing enclosing at least the top part of the container. The arrangement is such that manually induced



downward movement of the transformer causes the discharge valve of the container to be opened to cause flow of material through the secondary.

3,518,411

INFRARED HEATING APPARATUS FOR SEALING REED SWITCHES

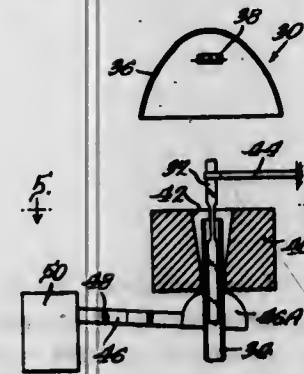
Terry L. Rohde, Chicago, Ill., assignor to C. P. Clare & Company, Chicago, Ill., a corporation of Delaware

Filed Jan. 17, 1968, Ser. No. 698,471

Int. Cl. H05b 1/00, 3/00

U.S. Cl. 219-349

6 Claims



An apparatus for and a method of sealing a magnetic reed in the open end of a tube of infrared absorbing glass includes an elliptical reflector with an infrared energy source at one focal point. The open end of the tube is disposed at the second focal point of the elliptical reflector with the axis of the tube extending along an extension of the line connecting the two focal points. The end of the tube to be sealed is also received within a conical reflector with the tube axis aligned with the axis of the cone of reflection. The conical reflector is moved along the axis of the tube as the glass softens to form the seal so as to concentrate the infrared energy on the top of the seal.

3,518,412

COUNTER STORAGE AND VISUAL READOUT MEANS

Werner Schürmann, Hattliberg, Switzerland, assignor to Mettler Instruments AG, Zurich, Switzerland, a corporation of Switzerland

Filed Jan. 13, 1967, Ser. No. 609,206

Claims priority, application Switzerland, May 25, 1966, 7,583/66

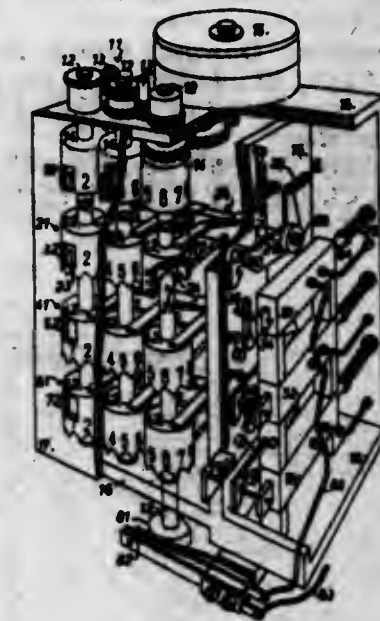
Int. Cl. G06m 3/06

U.S. Cl. 235-92

8 Claims

Counter apparatus including improved read-out means, comprising a set of digit-bearing counting cylinders se-

cured to parallel shafts journaled in a frame, and at least one set of digit-bearing storage cylinders mounted for free rotational and sliding movement on the shafts. The invention is characterized in that the storage cylinders normally have a retracted position relative to the frame in which said storage cylinders are coupled with the



shafts at the same orientation as said counting cylinders, respectively, displacement means being provided for shifting said set of storage cylinders axially relative to the frame to a read-out position in which the storage cylinders are decoupled from the shafts. The displacement means include arrester means for preventing rotation of the storage cylinders when in the decoupled read-out position.

3,518,413

APPARATUS FOR CHECKING THE SEQUENCING OF A DATA PROCESSING SYSTEM

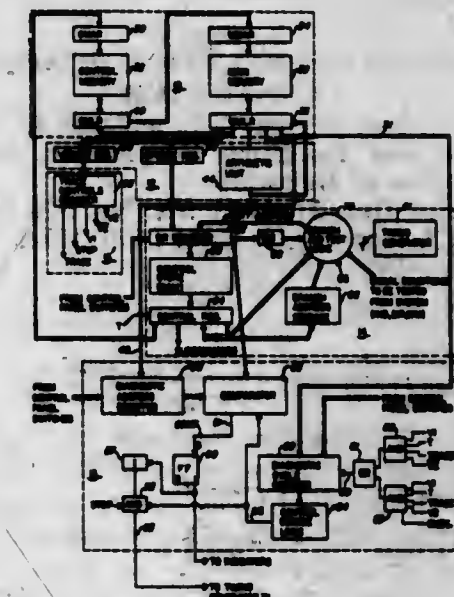
Thomas O. Holley, Newton, Mass., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Mar. 21, 1968, Ser. No. 714,947

Int. Cl. G06f 11/04

U.S. Cl. 235-153

9 Claims



Diagnostic apparatus for utilization in program controlled data processing systems for testing the processing of program instructions effected in accordance with sequence of micro-operations generated by the control sequencing portion of such data processing system wherein the diagnostic apparatus effects testing of the processing

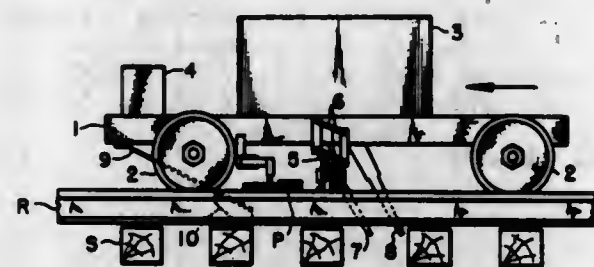
3,518,422

VEHICLE CONTROL APPARATUS

Richard B. Doorley, Brentwood Borough, and Paul S. Settle, Jr., Fox Chapel Borough, Pa., assignors to Railway Maintenance Corporation, Pittsburgh, Pa., a corporation of Pennsylvania.
Original application May 16, 1966, Ser. No. 550,347, now Patent No. 3,362,348, dated Jan. 9, 1968. Divided and this application Nov. 9, 1967, Ser. No. 723,956
Int. Cl. B61l 3/06; B61k 9/08

U.S. Cl. 246—167

13 Claims



Apparatus for controlling vehicles traveling along rail-road track comprising a first vehicle carrying an encoder for placing a coded mark on at least one rail of the track and at least one vehicle traveling along the track behind the first vehicle and carrying a pick-up head for sensing marks placed by the encoder. The pick-up head being operatively connected with means for controlling the vehicle upon which it is carried.

3,518,423

CROSSING FROGS FOR RAILWAY POINTS

Walter Birnbacher, Zeltweg, Austria, assignor to Oesterreichisch-Alpine Montangesellschaft, Vienna, Austria, a company

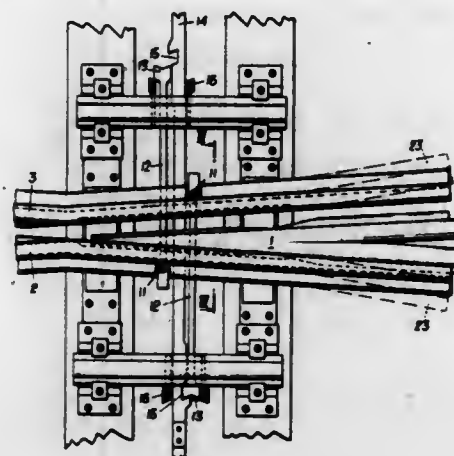
Filed Feb. 13, 1968, Ser. No. 705,140

Claims priority, application Austria, Feb. 17, 1967, A 1,603/67

Int. Cl. E01b 7/14

U.S. Cl. 246—468

4 Claims



Crossing frog for rails including a frog tip and two vane rails surrounding the frog tip wherein both of the vane rails are arranged for swivelling movement such that one of the two vane rails is always in contact with the frog tip in the end position of the swivelling range. The frog tip and each of the vane rails include mutually corresponding lateral projections and recesses which engage when one of the vane rails contacts the frog tip. The vane rails may include a shortened rail base portion, a recess being provided in the vane rails between the rail head and the shortened rail base portion for engagement with lateral projections on the frog tip. An ascent may be provided at the free end of each of the vane rails to prevent a train from being de-railed in the event of a maladjustment of the rail switch or of one of the vane rails.

3,518,424

ION BEAM INTENSITY CONTROL FOR A FIELD IONIZATION MASS SPECTROMETER EMPLOYING VOLTAGE FEEDBACK TO THE ION SOURCE

Graham G. Wanless, Westfield, N.J., and George A. Glock, Jr., Baltimore, Md., assignors to Esso Research and Engineering Company, a corporation of Delaware

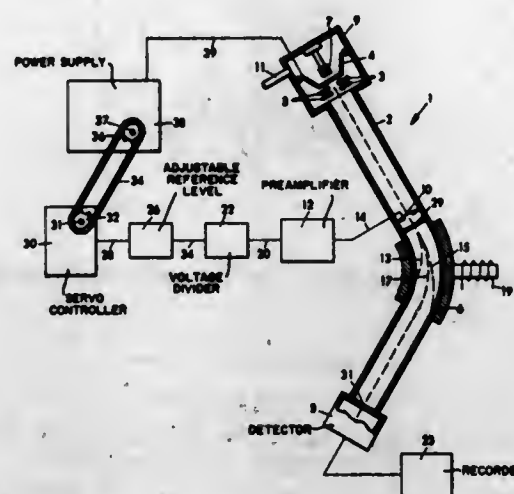
Filed Sept. 13, 1967, Ser. No. 673,530

(Filed under Rule 47(a) and 35 U.S.C. 116)

Int. Cl. H01j 39/36

U.S. Cl. 250—41.9

3 Claims



In a field-ionization mass spectrometer a controller which varies the cathode potential with respect to the anode in the mass spectrometer source to compensate for fluctuations in output of ion source. The system of the instant invention also compensates for the bleeding down of the sample under examination which is encountered over the course of a mass spectrometric determination.

3,518,425

METHOD AND APPARATUS UTILIZING A RADIOACTIVE SOURCE AND DETECTOR FOR WEIGHING MATERIAL CARRIED BY A SCREW CONVEYOR

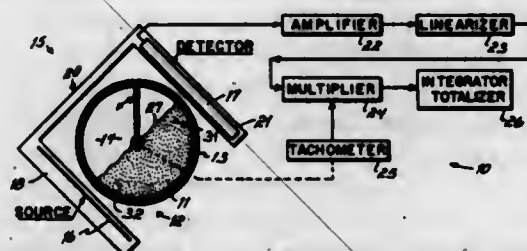
Clifford L. Gruenwald, Cincinnati, Ohio, assignor to The Ohmart Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed May 17, 1966, Ser. No. 550,821

Int. Cl. G01n 21/26; H01j 37/00

U.S. Cl. 250—43.5

6 Claims



Apparatus for weighing the amount of material delivered by a screw conveyor. The apparatus includes an elongated radioactive source and an elongated detector, such as an ionization chamber, Geiger tube or the like. The source and detector are mounted parallel to one another on opposite sides of the screw conveyor. The axis of the source and detector are disposed substantially perpendicular to the free surface of material carried by the conveyor. The detector generates an electrical signal corresponding to material weight per unit length of conveyor. A tachometer generates a signal corresponding to conveyor speed. These signals are multiplied and integrated to detect a signal corresponding to total material weight.

3,518,426

BLAZED DIFFRACTION GRATING X-RAY SPECTROMETER

Allstair John Campbell, Cambridge, England, assignor to Cambridge Instrument Company Limited, London, England, a British company

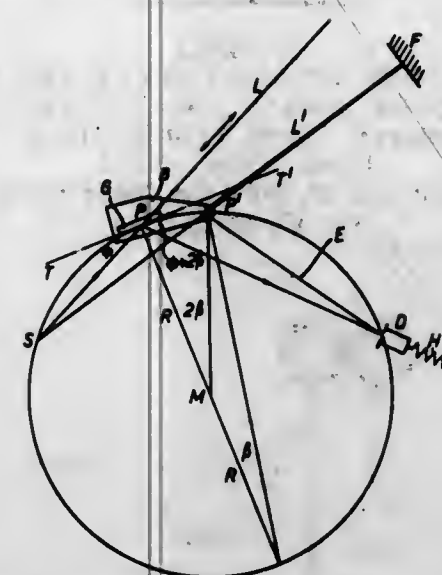
Filed Feb. 16, 1968, Ser. No. 705,852

Claims priority, application Great Britain, Feb. 16, 1967, 7,461/67

Int. Cl. G01n 23/20

U.S. Cl. 250—51.5

10 Claims



In an X-ray spectrometer employing a blazed diffraction grating optimum conditions are ensured, without making approximations about the sine of an angle being equal to the angle, by supporting a curved blazed grating on a mounting having a pivot defining a pseudo-pole lying on the same Rowland circle as the pole of the grating, the spacing between the two poles subtending at the centre of the Rowland circle an angle equal to twice the blaze angle. The distance from the detector slit to the pseudo-pole is kept equal to the distance between the pseudo-pole and the source as the true grating pole moves linearly towards and away from the source. This distance relationship can be maintained by a cord or tape passing around the pseudo-pole.

3,518,427

UNIVERSAL PLANAR X-RAY RESONATOR

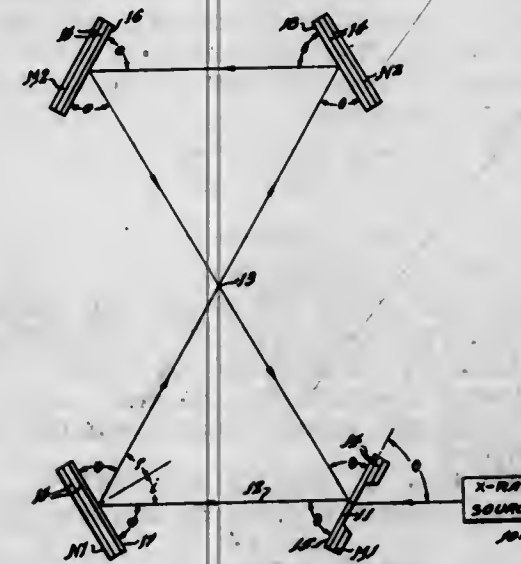
Rodney M. J. Cotterill, Downers Grove, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed June 5, 1968, Ser. No. 734,688

Int. Cl. H05g 1/02

U.S. Cl. 250—53

3 Claims



A device for selecting and conserving a monochromatic X-ray beam by successive reflections from an even num-

ber of Bragg reflectors, pairs of which are parallel. This sets forth a geometrical relationship of reflectors which permits tuning X-rays of various wave lengths for any crystal having corresponding Bragg angles ranging from about 15° to about 60°.

3,518,428

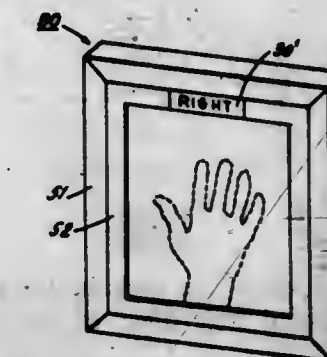
MAGNETICALLY ATTRACTIVE IDENTIFYING PLATES FOR ATTACHMENT TO X-RAY CASSETTES

Jack Ring, 224 Louise Drive, Morrisville, Pa. 19067
Continuation-in-part of application Ser. No. 712,786, Mar. 13, 1968. This application May 15, 1968, Ser. No. 729,144

Int. Cl. G03b 17/24, 41/16

U.S. Cl. 250—67

10 Claims



A nameplate assembly for use with X-ray cassettes, and the like, for providing positive indication on exposed negatives and to provide a positive identification for the user as to the word which will be formed upon an X-ray plate (i.e., exposed negative) and further comprised of magnetic means for simple straightforward mounting upon a mounting board to greatly facilitate removal and replacement of such identifying plates in making X-rays.

3,518,429

DEVICE FOR PULSE SHAPE DISCRIMINATION

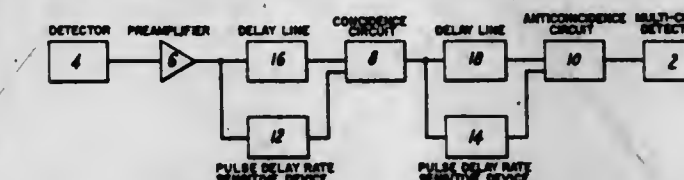
René Laguerre, Meudon-la-Forêt, France, assignor to Commissariat à l'Energie Atomique, Paris, France
Filed Jan. 3, 1966, Ser. No. 518,314

Claims priority, application France, Jan. 12, 1965, 1,614

Int. Cl. G01t 1/20

U.S. Cl. 250—71.5

6 Claims



Pulses of a given type in a sequence of pulses are discriminated by slope in a radiation detecting device connected to a coincidence circuit with a first pulse decay rate sensitive device connected to the circuit. An anti-coincidence circuit is controlled by a second pulse decay rate sensitive device. Both circuits are connected to a receiver.

3,518,430

APPARATUS FOR MEASURING AVERAGE THICKNESS OR DENSITY OF STRIP MATERIAL

Elwood T. Davis, Havertown, Pa., assignor to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 24, 1967, Ser. No. 677,702

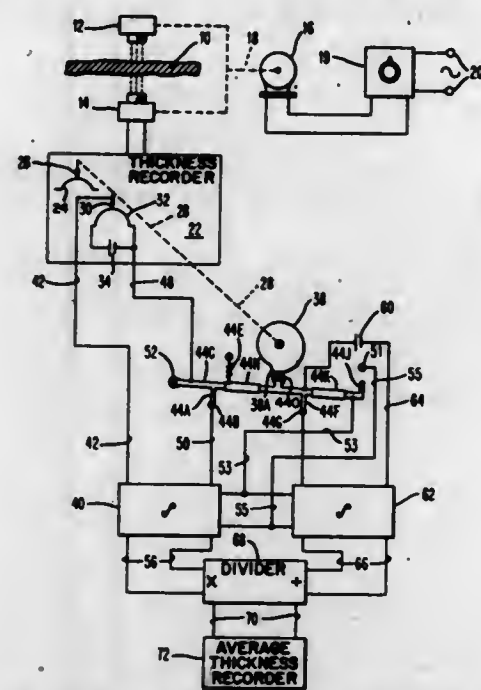
Int. Cl. G01n 23/14

U.S. Cl. 250—83.3

3 Claims

Average thickness or density across the width of a strip material is measured by integrating the output of a detector which scans the strip across its variable width and

divides the value obtained by the integral of a fixed voltage, the integral being taken for the period of the scan.

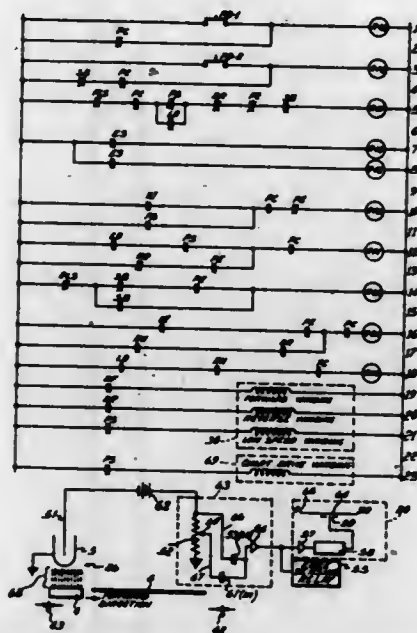


The result of the division is the average thickness or density of the strip scanned regardless of the width of the strip.

3,518,431 WEB THICKNESS GAUGING AND RECORDING SYSTEM HAVING AUTOMATIC WEB EDGE SENSING

Snowden Rowe, Cincinnati, Ohio, assignor to The Ohmart Corporation, Cincinnati, Ohio, a corporation of Ohio
Continuation of application Ser. No. 492,712, Oct. 4, 1965. This application Mar. 4, 1968, Ser. No. 710,397
Int. Cl. G01n 23/16
U.S. Cl. 250-83.3

6 Claims



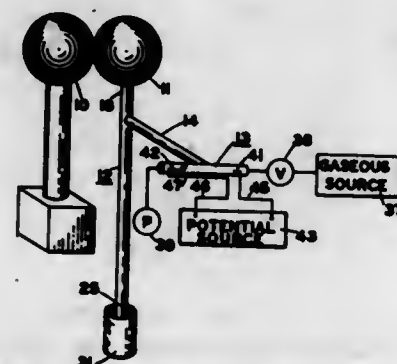
A gauging and recording system is disclosed which includes a radiation source and a detector mounted on opposite sides of a sheet for bidirectional transverse motion, a reversible motor drive operatively coupled to the source and detector for driving them as a unit back and forth across the sheet in a transverse scanning path extending beyond both sheet edges, and a sheet edge sensor circuit responsive to the sudden change in the output of the detector occurring each time an edge is traversed for generating a multi-purpose control signal. The multi-purpose control signal is operative to reverse the direction of the gauge scanning motor when the gauge moves "off-sheet" to prevent unnecessary overshoot, to initiate and terminate recorder chart movement when the gauge goes

"on-sheet" and "off-sheet," respectively, thereby conserving chart paper by not recording the output of the detector when the detector is "off-sheet," and to switch the mode of operation of the system from an "off-sheet" mode to an "on-sheet" mode wherein the detector signal is suppressed and not suppressed, respectively, when the gauge goes "off-sheet" and "on-sheet," respectively, thereby preventing hard pegging of the recorder pen when the gauge goes "off-sheet" and read on air.

3,518,432 ACCELERATION APPARATUS FOR THE PRODUCTION OF X-RAYS AND NEUTRONS

Robert C. Uleski, 1410 W. 21st St., Lorain, Ohio 44052
Filed Oct. 17, 1967, Ser. No. 675,910
Int. Cl. G21g 3/04
U.S. Cl. 250-84.5

19 Claims



Acceleration apparatus having a beam tube with an aluminum target at one end of the tube and a beryllium target at the other end of the tube, the targets being respectively provided with a positive accelerating potential and a negative accelerating potential. A particle source, utilizing an ionization mechanism and a propelling magnetic field, is employed to feed electrons and positively charged particles into the beam tube at a place intermediate the targets. A third target, uranium, is disposed externally of the beam tube in the vicinity of the beryllium target. The electrons, as they are fed into the beam tube are accelerated toward and bombard the aluminum target to produce X-rays. The positively charged particles, as they are fed into the beam tube, are accelerated toward and bombard the beryllium target. It is known, that when beryllium is bombarded by positively charged particles, the reaction releases neutrons. The released neutrons in turn bombard the uranium. The latter reaction produces plutonium 239. The electrons and the positively charged particles (propellant masses) are accelerated in substantially a vacuum environment. The high voltage source for energizing the aluminum target and the beryllium target features a first hollow substantially spherical ball, such as that used in a Van de Graff generator. A second hollow substantially spherical ball is disposed adjacent, and electrically connected, to the Van de Graff ball. Preferably the two balls are covered with an insulating plastic shield to decrease corona discharge.

3,518,433 METHODS AND APPARATUS FOR GENERATING FLASH X-RAYS EMPLOYING A THREE ELECTRODE FIELD EMISSION X-RAY TUBE

William Dealey Owen, Tadley, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed June 19, 1967, Ser. No. 646,825
Claims priority, application Great Britain, June 22, 1966, 27,896/66
Int. Cl. H05g 1/22

U.S. Cl. 250-90
A method of generating a flash X-ray pulse comprises applying, in a high vacuum, a high voltage pulse be-

13 Claims

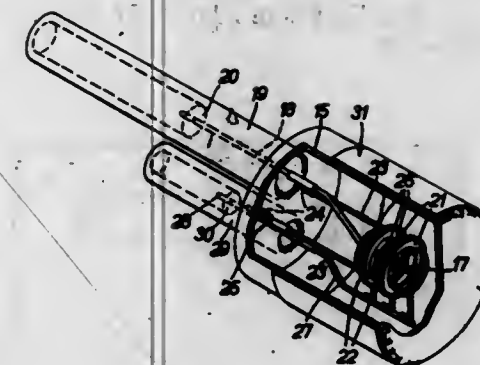
tween a sharp-edged field-emission cathode and an adjacent control electrode, the vacuum being sufficiently high and the pulse duration sufficiently short to cause electrons to be produced by field-emission from said cathode without subsequent vaporization of the cathode and formation of a metallic arc, and simultaneously applying a high-voltage pulse between anode and cathode to accelerate electrons emitted from the cathode to generate X-rays at the anode. Advantages include long life, the

tor is reduced from full voltage as a function of the delay in reapplying the motor-energizing signal.

3,518,435 AUTOMATIC X-RADIATION COLLIMATING APPARATUS RESPONSIVE TO FILM CASSETTE SIZE

Pieter W. Kok, New Milford, N.J., assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1967, Ser. No. 685,448
Int. Cl. G21f 5/04; H01j 35/16
U.S. Cl. 250-105

4 Claims



ability to vary the X-ray energy independently of the X-ray dose, and the ability to tolerate an anode pulse having a negative overvoltage.

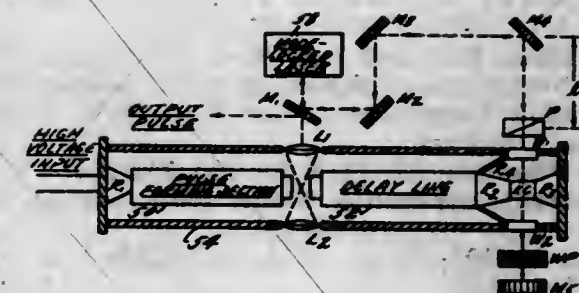
A preferred flash X-ray tube comprises an envelope evacuated to a high vacuum, an anode rod, an annular cathode plate having a sharp inner edge directed towards and coaxial with the anode rod, and a control electrode comprising annular members spaced from each side of the cathode plate at approximately the same radius from the anode as the cathode inner edge.

An apparatus for automatically collimating the X-radiation cone emanating from an X-ray tube head of a radiographic examining apparatus. A film cassette sensor which indicates the size of the particular film cassette being utilized activates a mechanism which increases or decreases a diaphragm opening through which the X-radiation passes to correspond with the size of film cassette indicated. The size of the diaphragm opening determines the X-radiation cone size.

3,518,436 LASER PULSE GENERATOR USING MARX-BANK PULSER

Anthony J. De Maria, West Hartford, and Albert W. Penney, Jr., Glastonbury, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 29, 1967, Ser. No. 671,761
Int. Cl. H04b 9/00
U.S. Cl. 250-199

4 Claims



Apparatus for generating a single, high power laser pulse having time durations as short as 10^{-13} seconds or less in which a fast shutter such as a Kerr cell is inserted in the path of the laser beam, either inside or outside the laser feedback cavity. The laser is simultaneously mode-locked and Q-switched to generate a series of equally spaced pulses. One of the laser pulses is used to trigger the shutter to either open or close it, depending on the configuration, for a time period sufficient to pass only one of the laser pulses from the output of the apparatus.

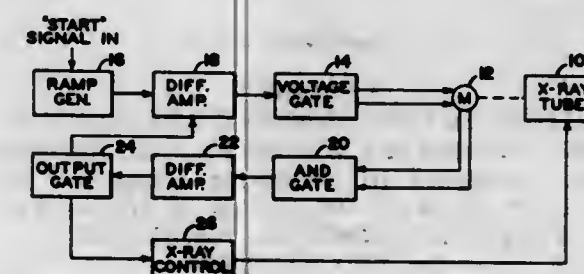
A specific embodiment uses a transmission line pulse generator having a spark gap triggered by one of the laser pulses to trigger the shutter.

Another specific embodiment uses an optically triggered Marx-Bank pulser to trigger the optical shutter.

3,518,434 X-RAY TUBE ROTATABLE ANODE CONTROL CIRCUIT WITH MEANS TO SENSE AND CONTROL ANODE MOTOR CURRENT

Daniel F. Lombardo, Cleveland, Ohio, assignor to Picker Corporation, White Plains, N.Y., a corporation of New York
Filed Mar. 13, 1968, Ser. No. 712,837
Int. Cl. H05g 1/36; H01j 35/10
U.S. Cl. 250-93

25 Claims



In a system having an X-ray tube with a rotatable anode, an alternating current motor drives a rotor that rotates the anode. Current through the motor is monitored and used to control provision of an enable-exposure signal at a predetermined time after proper energization of the motor to permit an X-ray exposure to be made, and to terminate that signal if the motor energization is interrupted. The voltage supplied to the motor is reduced as the motor comes up to speed, and is then regulated at a predetermined level. When a motor-energizing signal is removed and then reapplied at a slightly later time, such as might occur when taking a relatively rapid sequence of X-ray exposures, the restarting voltage applied to the mo-

3,518,437

APPARATUS FOR MEASURING HAZE IN FLOWING LIQUIDS UTILIZING AN OPERATIONAL AMPLIFIER WITH PHOTOSENSITIVE FEEDBACK AND INPUT RESISTORS FOR COMPUTING THE RATIO OF SCATTERED TO DIRECTLY TRANSMITTED LIGHT

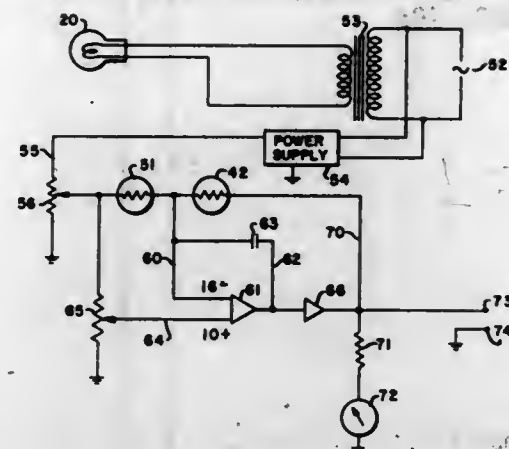
William A. Riggs, Pasadena, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Mar. 28, 1968, Ser. No. 714,656

Int. Cl. H01j 39/12; G01n 21/00, 21/26

U.S. Cl. 250-209

4 Claims



An apparatus for measuring the haze in a flowing fluid using a source of illumination and two light-measuring means. One of the light-measuring means is disposed to measure the light that passes directly through the flowing fluid, while the second light-measuring means is disposed to measure the light that is scattered from the fluid. The light-measuring means are coupled to an operational amplifier that is disposed to operate as a ratio amplifier in order that the ratio of the signals from the two light-measuring means may be measured. The ratio signal is then used as a measurement of the haze in the flowing fluid.

3,518,438

CIRCUIT FOR PHOTOMETERS AND THE LIKE HAVING SENSING AND COMPENSATING DIODES AND UTILIZING POTENTIOMETER FOR SETTING THE CONSTANT OF PROPORTIONALITY BETWEEN THE LIGHT INTENSITY AND THE OUTPUT CURRENT

Cornelis Maria Hart and Arie Sloh, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

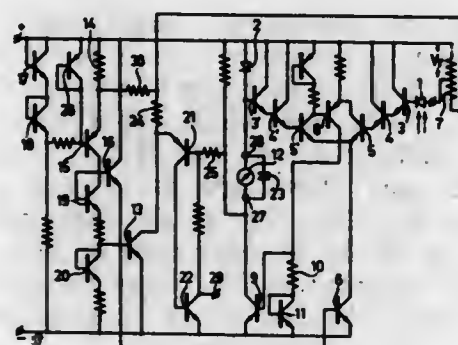
Filed May 22, 1968, Ser. No. 731,126

Claims priority, application Netherlands, June 21, 1967, 6708603

Int. Cl. H01j 39/12; G01j 1/42; G03b 7/02

U.S. Cl. 250-211

3 Claims



A device employing a light sensitive diode providing a logarithmic indication of light level, a reference diode, and a difference amplifier receiving the currents from

each diode for supplying a light dependent current output.

3,518,439

ABSORPTION TESTER HAVING BEAM SPLITTER AND WHEATSTONE BRIDGE WITH POTENTIOMETER BALANCING

Hans Fuhrmann, 2 Pannweg, Hamburg-Langenhorn, Germany

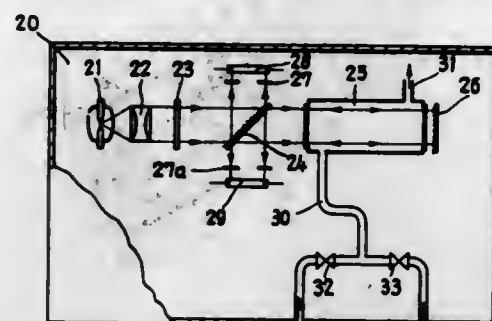
Filed Mar. 6, 1968, Ser. No. 710,851

Claims priority, application Germany, Dec. 19, 1967, F 54,343

Int. Cl. G01n 21/02, 21/06

U.S. Cl. 250-218

6 Claims



Apparatus for the analytical testing of fluids by comparative photoelectric measurement of the transmittances of the fluids, or of the absorption of the fluids in different spectral regions, particularly in the ultra-violet regions, includes a light source for directing light through a cuvette traversed by the fluid and a pair of photoresistors which are connected in a Wheatstone bridge. A beam splitter is positioned in the path of the light rays between the light source and the cuvette, and reflects one partial beam laterally to a first photoresistor and passes another partial beam therethrough to the cuvette. This other partial beam is incident upon the second photoresistor. An adjustable diaphragm is positioned in advance of the first photoresistor and a fixed diaphragm is positioned in advance of the second photoresistor. For transmittance measurements, a fully reflecting mirror is positioned behind the cuvette and reflects the partial beam passing through the cuvette back to the beam splitter which reflects this partial beam laterally to the photoresistor. For absorption measurements, light entering the cuvette is reflected laterally through a window therein to the second photoresistor.

3,518,440

PHOTOELECTRIC SENSING APPARATUS

Charles C. Hanson and Michael Sokolski, Rochester, Minn., assignors to Rochester Datronics, Inc., Rochester, Minn., a corporation of Minnesota

Filed Apr. 26, 1967, Ser. No. 633,880

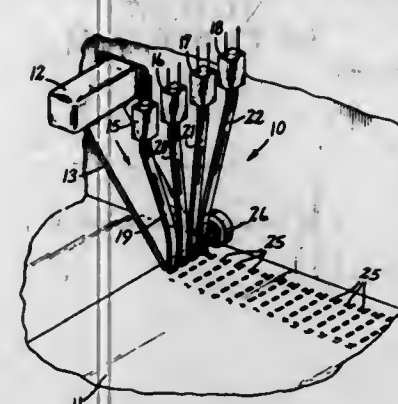
Int. Cl. G08c 9/06

U.S. Cl. 250-219

10 Claims

Apparatus for determining the position of a series of marks on a piece of paper, such as a multiple choice test paper or the like, comparing the positions to a standard sheet having correctly positioned answers thereon, and indicating the incorrectly positioned marks on the test sheet. The apparatus includes four light sensitive means each having light conducting plastic or the like associated therewith and positioned to receive reflected light from the surface of the paper. When a mark passes beneath the light conducting plastic, the light reaching the light sensitive means is substantially reduced and the electrical output of the light sensitive means is substantially reduced. Each of the light sensitive means has a differential amplifier associated therewith which provides an electrical output signal only when the light sensitive means senses a

mark on the paper. One of the light sensitive means also senses periodic timing marks, and the timing signals produced by the amplifier associated therewith are transmitted to a storage unit which, upon the reception of a timing signal, provides an electrical signal indicative of the correct position of the subsequent mark. The outputs of the four amplifiers are coded into binary signals and compared with the output of the storage unit in logic circuitry, the output of which activates indicating units for indicating



ing when a mark is positioned correctly or incorrectly. Circuitry is also included for deactivating the indicating units when two or more marks are present simultaneously, and for placing the desired information in the storage unit by connecting the outputs of the amplifiers thereto.

3,518,441

OPTICAL GAGE FOR MEASURING THE THICKNESS OF A CONTINUOUS WEB

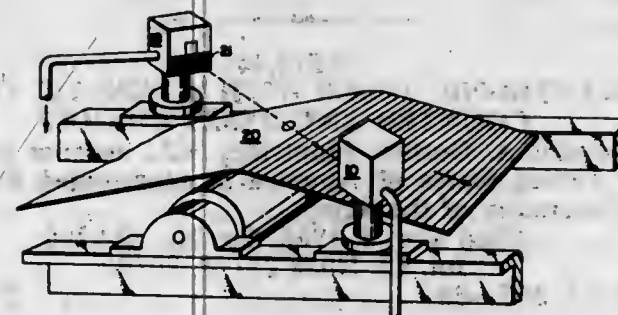
Paul J. Seigm, Bethel, Conn., assignor to Neotec Corporation, Rockville, Md., a corporation of Delaware

Filed Jan. 24, 1968, Ser. No. 700,088

Int. Cl. G01n 21/30

U.S. Cl. 250-219

8 Claims



This disclosure relates generally to an optical gage which utilizes light rays directed across the surface of a longitudinally transported web of sheet material for measuring the thickness of the web by determining changes in position of the surface of the web from a predetermined reference point or plane.

3,518,442

VIDEO PLAYBACK ASSEMBLY WHEREIN THE RECORD DISC HAS OPTICAL RECORDINGS ON BOTH SIDES

Keith O. Johnson, Topanga Canyon, Calif., assignor to Gauss Electrophysics, Inc., Santa Monica, Calif., a corporation of California

Filed June 6, 1968, Ser. No. 735,058

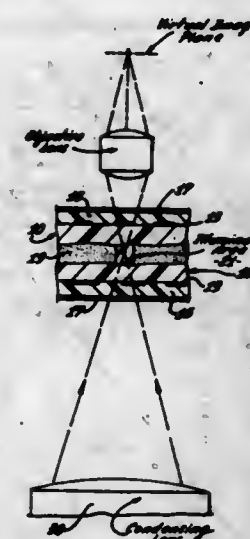
Int. Cl. G01n 21/30; G11b 7/24

U.S. Cl. 250-219

8 Claims

An improved video signal playback assembly is described in the following specification, the assembly being

capable of deriving signals which have been optically recorded on one side of a recording medium, and which does



not respond to signals which may have been optically recorded on the opposite side of the medium.

3,518,443

SYSTEM FOR DETECTING SMALL LIGHT SOURCES IN PRESENCE OF LARGE ONES USING PLURALITY OF DETECTORS

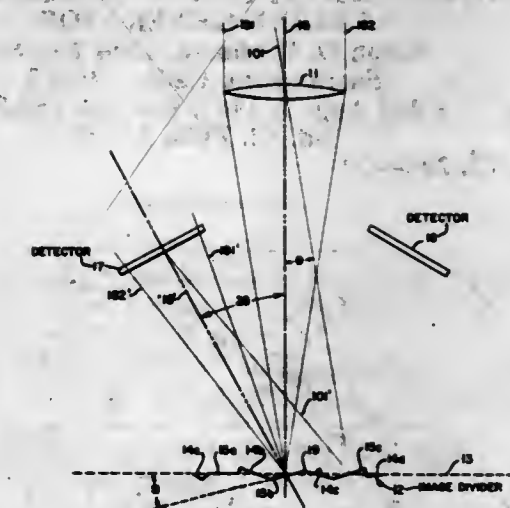
Richard H. Engelmann, Cincinnati, Ohio, assignor to J. Page Hayden, Cincinnati, Ohio

Filed Dec. 7, 1966, Ser. No. 599,752

Int. Cl. H01j 39/12

U.S. Cl. 250-220

15 Claims



This invention relates to systems for detecting small-area light sources in the presence of large-area light sources and for detecting small-area light sources embedded in a large area of background illumination. Briefly the invention includes a plurality of light detectors, means for dividing the optical field into a plurality of sets of elemental areas and for applying respective sets to each of said detectors, and means responsive to unequal outputs from said detectors for indicating the presence of a small light source in the optical field.

3,518,444

CONTROL SYSTEM FOR EXCAVATING MACHINERY

Donald E. Barber, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Filed Oct. 23, 1964, Ser. No. 405,930

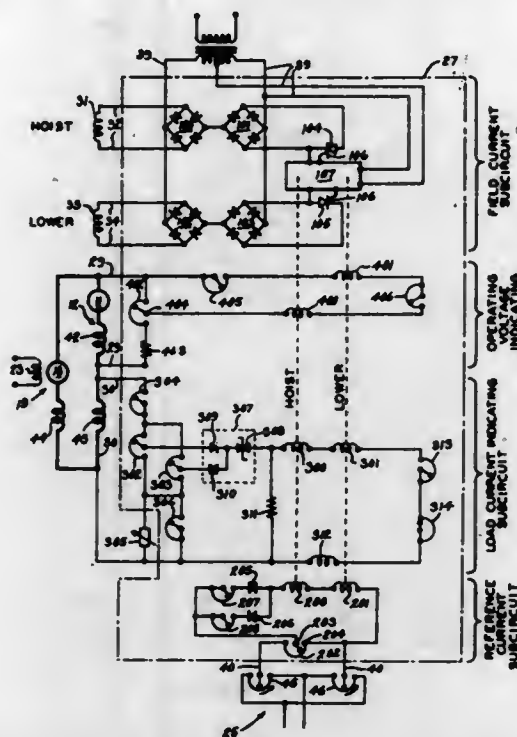
Int. Cl. B60i 11/04; H02k 5/24

U.S. Cl. 290-14

28 Claims

A control for an excavating machine having a generator and a motor for each of the three machine movements

has a set of three interchangeable control circuits. Load current and operating voltage indicating sub-circuits each



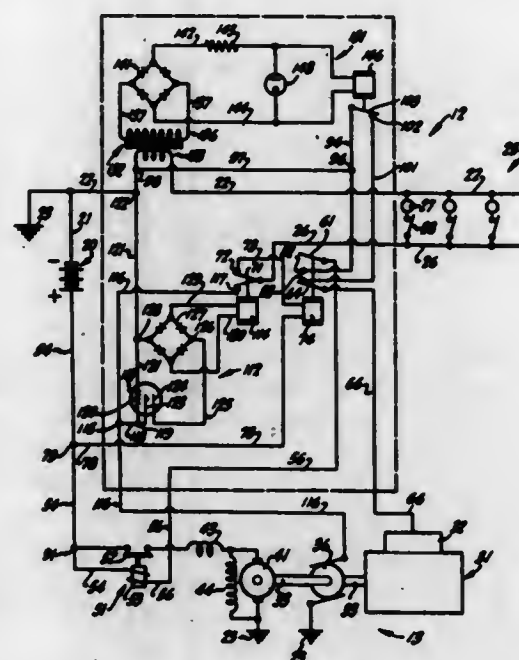
contain a discontinuous current gate. Circuit connections are provided for removal of the discontinuous current gate from circuits which do not require this device.

3,518,445 AUTOMATIC STARTING CONTROL FOR ENGINE-GENERATOR

Ralph D. Wichman, 2554 Taft St.,
Sacramento, Calif. 95815
Filed Aug. 7, 1967, Ser. No. 658,886
Int. Cl. F02n 11/08

U.S. Cl. 290-30

5 Claims



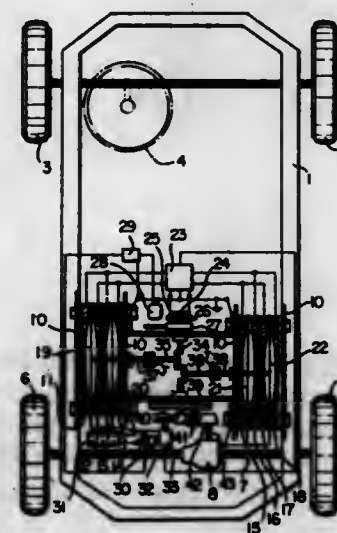
Imposing a predetermined electrical load on the power circuit activates a first relay which serves concurrently to open a magneto-to-ground connection and actuate the cranking solenoid so as to start an internal combustion engine driving an alternator. As full voltage is attained, a time delay relay comes into operation, deactivating the cranking solenoid opening the starting current circuit and closing the magneto-to-ground circuit. Within milliseconds thereafter a transformer-connected circuit, including a rectifier and voltage regulator, actuates a third

relay effective to open the magneto-to-ground connection, thereby allowing the engine and alternator to continue at full output. Removing the load closes the magneto-to-ground circuit and stops the engine.

3,518,446
ELECTROSTATIC ENGINE
Motoyoshi Nakamichi, 1511, 5-chome, Honcho,
Fushimi-ku, Chiba Prefecture, Japan
Filed June 23, 1967, Ser. No. 648,473
Claims priority, application Japan, June 25, 1966,
41/41,047
Int. Cl. B601 11/18

U.S. Cl. 290-45

6 Claims

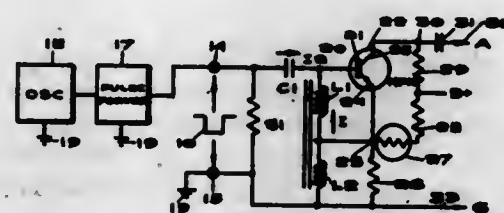


An electrostatic engine comprising a diaphragm interposed between an opposed pair of electrodes. An electromagnetic means is provided to impress a high voltage on the electrodes. The voltage impressed has a frequency tuned to the intrinsic vibrational frequency of the diaphragm, thereby urging the diaphragm to vibrate in resonance. A mechanical means is provided for converting the vibrational movements of the diaphragm into a voluntary movement for the wheels of a vehicle.

3,518,447
**ELECTRONIC TIMER WITH MAGNETIC CORE
COUNTER AND RESET CIRCUIT**
Edward A. Gurlier, Montville, N.J., assignor to the
United States of America as represented by the
Secretary of the Army
Filed Mar. 4, 1966, Ser. No. 534,290
Int. Cl. H03k 25/18, 29/00

U.S. Cl. 307-88

2 Claims



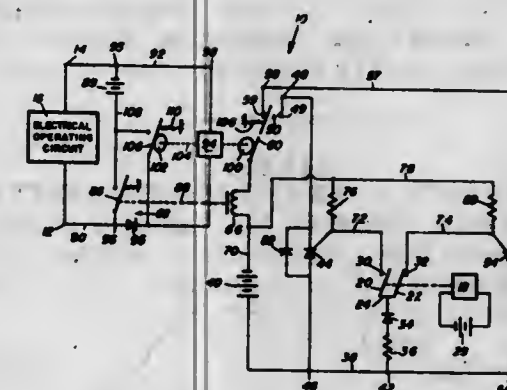
A compact electronic incremental-counter timer with improved and rapid-acting resetting means employing a minimum number of components. A magnetic core, with magnetizing windings thereon, stores an increment of flux for each cycle of a driving source or oscillator. Each cycle is shaped or formed into a pulse, such as a square-wave, and applied through said windings to the core which stores an increment of flux for each pulse until it saturates or goes from positive to negative saturation, and lowers the impedance of the windings from a high to a low value. A storage capacitor in series with the windings and the pulse source is then rapidly charged, and discharges through the

circuit in the opposite direction with sufficient current to rapidly reset the core to positive saturation for starting the next cycle. The pulse source impedance or input impedance of the circuit is low in order to allow a fast and complete discharge of the capacitor, and the latter must be able to store enough energy to reset the core to positive saturation for the next cycle.

3,518,448
INTERMITTENT TIMER CIRCUIT
Leland W. Sprinkle, Springfield, Va., assignor to the
United States of America as represented by the
Secretary of the Interior
Filed Feb. 13, 1969, Ser. No. 798,996
Int. Cl. H02J 13/00

U.S. Cl. 307-114

8 Claims

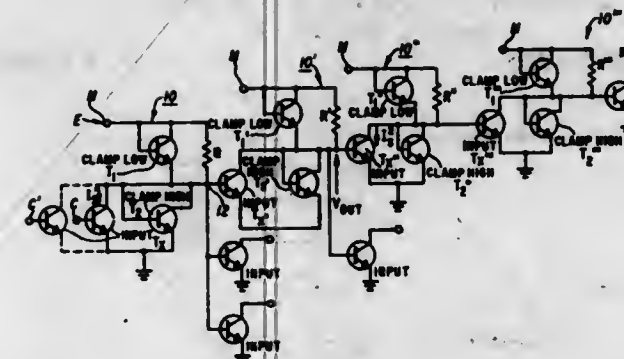


A timer in an electrical circuit moves a first switch between two alternate positions in a programmed sequence. A signal appears at the output terminals of the electrical circuit when a second switch is closed in a position corresponding to that of the first switch. In response to the output signal, the second switch is moved to an alternate position, turning off the output signal. When the timer, in accordance with the programmed sequence, moves the first switch to its alternate position, corresponding to the alternate position of the second switch, the output signal again appears across the timer circuit output terminals. The second switch is then moved to the original position turning off the output signal. The sequence is repeated at intervals determined by the timer program.

3,518,449
INTEGRATED LOGIC NETWORK
David H. Chung, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of
Delaware
Filed Feb. 1, 1966, Ser. No. 524,173
Int. Cl. H03k 19/34

U.S. Cl. 307-215

3 Claims



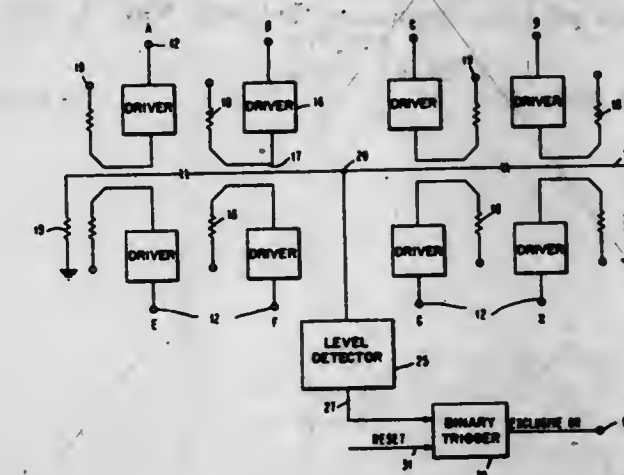
Disclosed are integrated logic networks including a plurality of cascaded logic stages formed within a semiconductor substrate; each of the logic stages have several classes of circuit components with one class formed within respective electrically isolated semiconductor pockets in

the semiconductor substrate, and with the other class formed in spaced relationship within the remaining portion of the substrate.

3,518,450
LOGIC CIRCUIT DIRECTIONALLY COMBINING SINGLE PULSES REPRESENTING LOGIC VARIABLES
Murray H. Bolt and Howard H. Nick, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Jan. 13, 1966, Ser. No. 520,517
Int. Cl. H03k 19/32, 19/168

U.S. Cl. 307-216

6 Claims

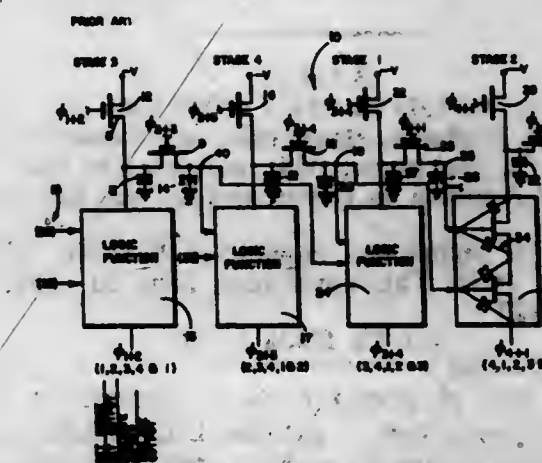


A logic circuit is provided in which pulses representing logical variables are applied to a stripline microwave transmission device by means of directional couplers and are combined in a logical function that is established by the polarity of the pulses and the direction of the coupler from a signal pickoff point on the stripline. An exclusive OR circuit is disclosed.

3,518,451
GATING SYSTEM FOR REDUCING THE EFFECTS OF NEGATIVE FEEDBACK NOISE IN MULTIPHASE GATING DEVICES
Robert K. Booher, Downey, Calif., assignor to North American Rockwell Corporation, a corporation of
Delaware
Filed Mar. 10, 1967, Ser. No. 622,867
Int. Cl. G11c 19/00

U.S. Cl. 307-221

4 Claims



A multiphase gating system which reduces the effects of negative noise which is normally present at the outputs of the stages comprising prior art multiphase gating systems by isolating the outputs of the stages and by charging the remaining inherent capacitance associated with the stages which use the outputs of the other stages either

before or during the time interval that inputs to the other stages are being evaluated. In the present gating system, the output, including the inherent capacitance associated with the output, is isolated from the remainder of the stage while the inherent capacitance associated with the MOS devices comprising a stage is charged.

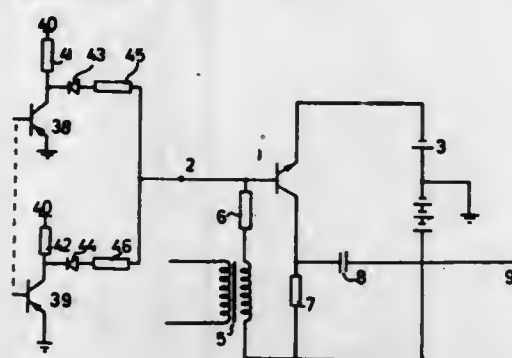
3,518,452 CIRCUIT FOR DETECTING A CURRENT AND A VOLTAGE OF A PREDETERMINED MAGNITUDE

Jacques Dutilleul and Joseph Claes, Mont-sur-Marchienne, Belgium, assignors to Ateliers de Constructions Electriques de Charleroi (ACEC) Societe Anonyme, Charleroi, Belgium.
Filed Nov. 2, 1966, Ser. No. 591,546
Claims priority, application Belgium, Nov. 3, 1965, 671,716

Int. Cl. H03k 5/20

U.S. Cl. 307—235

3 Claims



This disclosure relates to a circuit for measuring a current or a voltage of a predetermined magnitude which comprises at least one amplification element biased by a direct current power source which determines its range of proportional amplification between a cut-off level and a saturation level. A control circuit applies the current or voltage to be measured to the amplification element and determines its working point in the range of proportional application when the current or voltage to be measured is located between the saturation level and the cut-off level of the amplification element. When the magnitude of the current or voltage to be measured is outside the said levels the amplification element is either cut-off or saturated. An alternating current signal having an amplitude less than the difference between the saturation level and the cut-off level of the amplification element is applied to the amplification element and an output detecting circuit is provided for detecting the alternating current output when the current or voltage to be measured is of said predetermined magnitude.

3,518,453 SOLID STATE CHOPPER

Benjamin F. Hoffman, Hyattsville, and Ronald W. Caruthers, Sr., Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Navy.
Substitute for abandoned application Ser. No. 308,045, Sept. 10, 1963. This application June 21, 1966, Ser. No. 562,422

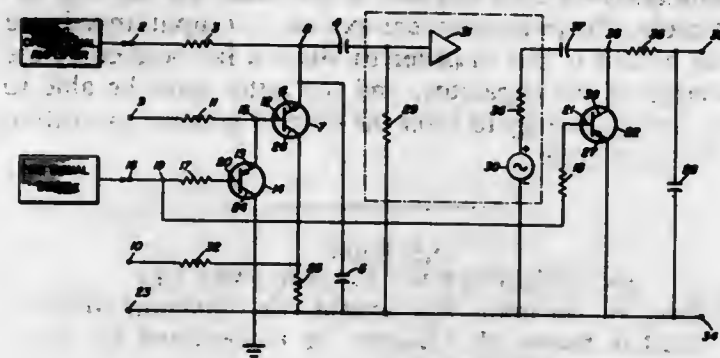
Int. Cl. H03k 17/00

U.S. Cl. 307—240

3 Claims

A solid state chopper for use in conjunction with a compensation amplifier to provide D.C. stabilization. A first transistor, having its emitter connected to the base of a second transistor, and further having its base connected to an A.C. signal source, is provided. When the first transistor is driven into the cut-off state by the positive half-cycle of the A.C. signal source, the second transistor is driven into the saturation state, essentially grounding its emitter which is connected to a node that is resistively connected to a D.C. operational amplifier.

When the first transistor is driven into the saturation state by the negative half-cycle of the A.C. signal source,



the second transistor is driven into the cut-off state and has its base essentially grounded. Thus, the holding of the base of the second transistor near ground potential during the cut-off state eliminates leakage current, switching noise, and D.C. offsets.

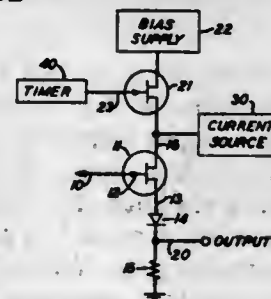
3,518,454 BIDIRECTIONAL TRANSMISSION CIRCUIT

Joseph C. French, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Oct. 20, 1967, Ser. No. 676,798

Int. Cl. H03k 17/66

U.S. Cl. 307—251

10 Claims



A single field effect transistor stage is utilized as an impedance translating network and as a transmission gate. Impedance translation of a primary signal source is accomplished by arranging a field effect transistor in a source follower configuration. Signals may be transmitted from a secondary source to the primary source by forward biasing a junction of the source follower field effect transistor.

3,518,455 PULSE GENERATOR

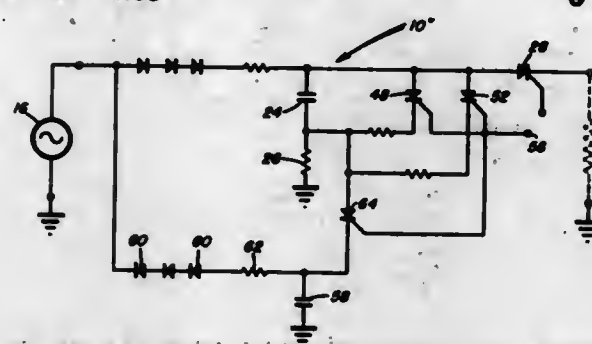
Thomas W. Pearce, Mount Rainier, Arthur K. Hochberg, Ellicott City, and Theodore O. Poehler, Jr., Baltimore, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 11, 1967, Ser. No. 689,358

Int. Cl. H03k 1/18

U.S. Cl. 307—265

8 Claims



A pulse generator for the provision of high-energy short-duration pulses. A capacitor is charged by a D.C. power source and is made to discharge through a load

when a first external pulse triggers a first SCR circuit. When it is desired that the high-energy pulse be turned off, a second and delayed external pulse is caused to trigger a second SCR circuit. When said second SCR circuit is triggered, the energy stored in the capacitor is directed toward a dissipative network and is thereby diverted from the load. The duration of the high-energy pulse can be closely controlled since said duration depends basically upon the delay between the initiation of the first and second external triggering pulses.

3,518,456 APPARATUS FOR REGENERATING TIMER PULSES IN THE PROCESSING OF BINARY INFORMATION DATA

Christian Camille Jules Manduk, Verrieres-le-Buisson, and Christian Gerard Maury, Montrouge, France, assignors to Compagnie des Compteurs, Paris, France, a company of France

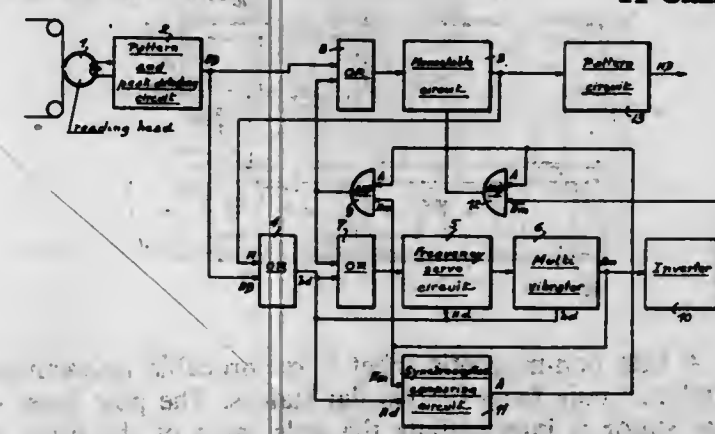
Filed Apr. 21, 1967, Ser. No. 632,627

Claims priority, application France Apr. 28, 1966, 59,435

Int. Cl. H03k 5/00, 4/00

U.S. Cl. 307—269

11 Claims



Apparatus for generating timing pulses in the processing of binary information data comprising a pattern and peak detecting circuit connected to the signal source and followed by a monostable circuit which gives timer pulses to a switch or utilization circuit, characterized in that it comprises a variable frequency multivibrator having a triggering input connected to the output of the monostable circuit and a frequency control input connected to a frequency servo-circuit, the signals coming from said multivibrator being applied on the one hand to the input of the monostable circuit to cause it to trigger in response to an absence of input signals and on the other hand being applied to the input of the frequency servo-circuit.

3,518,457 PUSH-PULL CURRENT SOURCE

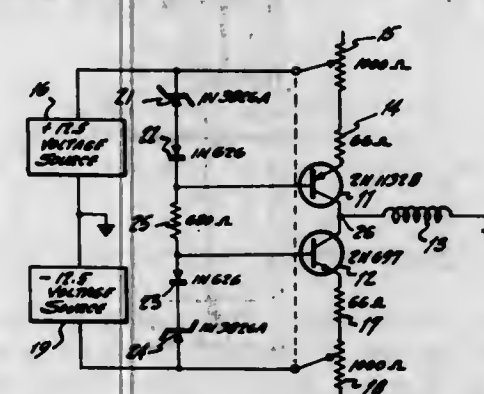
Donald C. Herrmann, Hartsville, Pa., and Lucas J. Bazin, Stratford, N.J., assignors to RCA Corporation, a corporation of Delaware

Filed Mar. 30, 1967, Ser. No. 627,110

Int. Cl. H02j 1/04

U.S. Cl. 307—297

4 Claims



Two opposite conductivity transistors are serially connected together for current flow between opposite polarity

sources of voltage with their collector electrodes connected together and forming a high impedance source of constant current for a load. In series circuit with the transistors are oppositely variable resistors to adjust the magnitude and polarity of the current supplied to the load.

3,518,458 DECOUPLING MEANS FOR INTEGRATED CIRCUIT

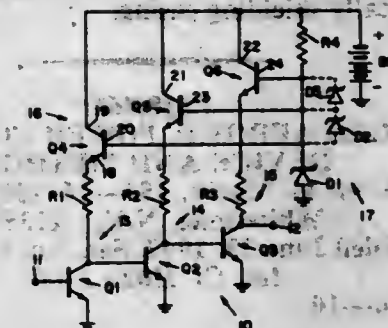
Hans R. Camenzind, Lexington, Mass., assignor to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Filed June 23, 1967, Ser. No. 648,321

Int. Cl. H03k 1/12; H03k 3/04

U.S. Cl. 307—297

4 Claims



Interstage coupling through the power supply of a multistage transistor circuit is prevented by placing a plurality of transistors between the power supply and the individual stages. The bases of these transistors are biased at a constant potential in order to present a constant voltage at the emitters of the transistors. A multiple-emitter transistor may be used in place of the plurality of transistors.

3,518,459 NEGATIVE RESISTANCE MAGNETORESISTIVE DEVICE

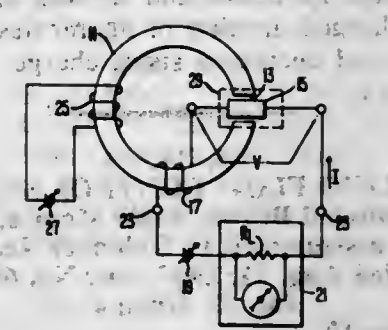
Milton Green, Mystic, Conn., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed June 28, 1967, Ser. No. 650,129

Int. Cl. H03k 3/00

U.S. Cl. 307—309

9 Claims



A device including a magnetoresistive semiconductor for producing a variable negative resistance region at non-cryogenic operating temperatures. The negative resistance region generated is variable as a function of a controlled two component magnetic field applied to the semiconductor. Operation of the device depends on the proper mathematical relationships between various circuit parameters.

3,518,460 ULTRASONIC TRANSDUCER EMPLOYING SUSPENDED PIEZOELECTRIC PLATE

John F. Wood, San Juan, and Carl D. Trench, Guaynabo, Puerto Rico, assignors to Euphonia Corp., Guaynabo, Puerto Rico, a corporation of California

Filed Oct. 30, 1968, Ser. No. 771,751

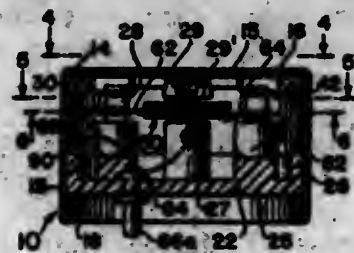
Int. Cl. H01r 7/00

U.S. Cl. 310—3.2

6 Claims

An ultrasonic transducer has a laminated piezoelectric element supported by wires inside a cylindrical electrical-

ly insulative cage. The wires are connected to nodal points of the element by pressure-free solder joints covered with insulative cement. A phasing plug located at



one end of the cage and a reflector plate located at the other end of the cage are joined by spaced posts. The cage and piezoelectric element are enclosed in a protective, electrically shielding casing.

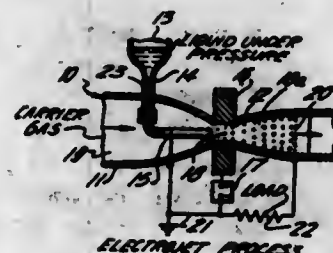
3,518,461 CHARGED AEROSOL POWER CONVERSION DEVICE AND METHOD

Alvin M. Marks, 153-16 10th Ave.,
Whitestone, N.Y. 11357

Filed June 23, 1967, Ser. No. 648,403
Int. Cl. H02n 3/00

U.S. Cl. 310-10

27 Claims



Power conversion devices are disclosed employing charged aerosols capable of efficient power transduction. The charged aerosol comprises a suitable concentration of charged liquid droplets or aggregates in a carrier gas. To achieve highly effective power transduction, the charged liquid droplets or aggregates are controlled to have an optimum ratio of radius to the number of charges. This optimum ratio is derived for various operating conditions. Processes and devices are described for producing charged droplets or aggregates having an optimum ratio, and decreased space charge.

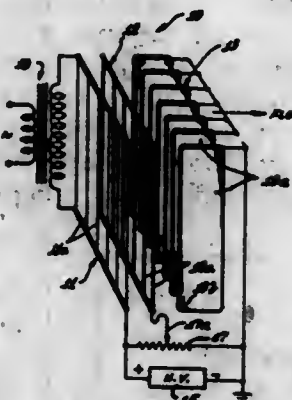
3,518,462 FLUID FLOW CONTROL SYSTEM

Thomas Townsend Brown, Santa Monica, Calif., assignor,
by mesne assignments, to Guidance Technology, Inc.

Filed Aug. 21, 1967, Ser. No. 662,105
Int. Cl. H02n 4/20

U.S. Cl. 310-10

13 Claims



Apparatus for producing fluid flow and for selectively varying the flow rate and pressure of an ionizable, dielectric fluid medium. Three spaced apart electrodes are supported in the fluid medium with a high D.C. voltage im-

pressed across the two outermost electrodes, the D.C. voltage being of sufficient magnitude to produce ionization adjacent one electrode of the outermost pair but being below the voltage level at which arcing between any of the electrodes would occur. The D.C. electrical potential of the third electrode located intermediate the outermost electrode pair is varied to alter the shape of the electrostatic field between the electrodes and thereby vary the quiescent fluid flow rate. A relatively low level A.C. electrical signal may also be applied to the third electrode to modulate the fluid flow and pressure whereby a combined signal amplifier and electro-acoustic transducer is provided.

3,518,463 LOW INERTIA HIGH THRUST VIBRATOR

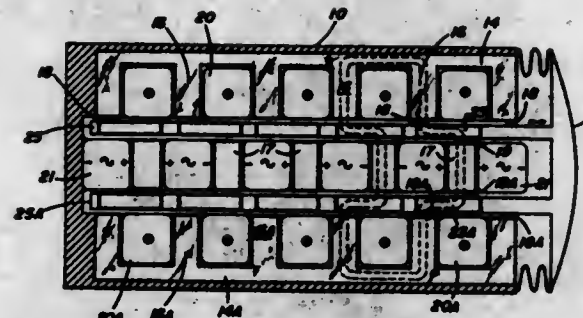
Frank R. Abbott, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 26, 1969, Ser. No. 853,158

Int. Cl. H02k 33/00

U.S. Cl. 310-15

4 Claims



A thin non-magnetic sheet is reciprocable between the coplanar pole faces of two flat stators. The pole faces of one stator is intermediate the pole faces of the other so that iron bars embedded in the sheet will reciprocate between two adjacent poles of the stator as an AC signal is applied. The result is a much reduced mass of reciprocating parts and increased natural frequency of oscillation without reducing the thrust of the vibrator.

3,518,464 ELECTROMAGNETIC DRIVING MECHANISM

Tsuneta Kawakami, Chiba-shi, Hitoshi Ikano, Tokyo, and Masami Sato, Matsudo-shi, Japan, assignors to Kabushiki Kaisha Hitachi Tokai

Filed Dec. 24, 1968, Ser. No. 786,620

Claims priority, application Japan, Dec. 30, 1967,
42/84,837

Int. Cl. H02k 7/06

U.S. Cl. 310-22

11 Claims



Magnetic driving mechanism comprises a driven wheel, a magnetic pole unit having at least three spaced magnetic

poles, and exciting means to oscillate said magnetic pole unit whereby said driven wheel is rotated unidirectionally in a self-starting manner.

3,518,465 ELECTRIC SHAVER

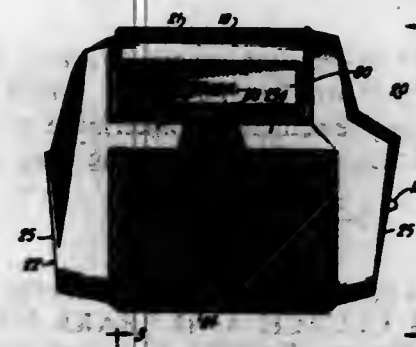
Ivar Jepsen, South Duxbury, Mass., and Leon M. Roszyk, Berwyn, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Application Nov. 21, 1966, Ser. No. 595,658, now Patent No. 3,386,023, dated May 28, 1968, which is a division of application Ser. No. 295,028, July 15, 1963, now Patent No. 3,311,763, dated Mar. 28, 1967. Divided and this application Jan. 8, 1968, Ser. No. 696,175

Int. Cl. H02k 7/14

U.S. Cl. 310-47

4 Claims



Rechargeable battery operated shaver with built-in charging means wherein the cutting mechanism and battery unit are spaced apart a minimum distance substantially equal to diameter of the armature of the motor interposed between them. The terminals which permit the charging unit to be connected to an external source of power are rendered inaccessible by a door member connected to the switch which controls energization of the motor from the battery. Thus, the battery cannot be recharged when the shaver motor is energized.

3,518,466 DYNAMOELECTRIC MACHINE

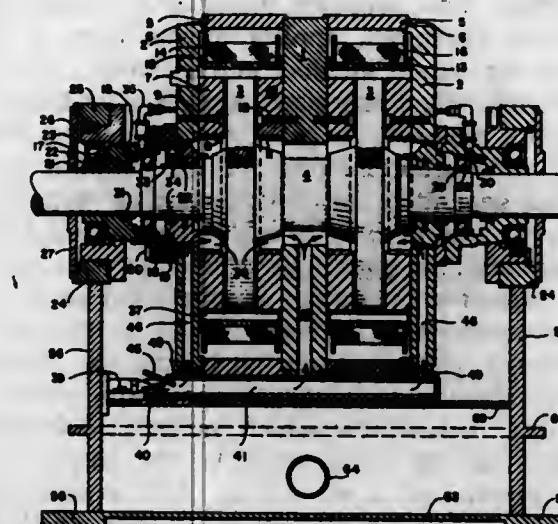
James E. Bunker, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed Aug. 22, 1968, Ser. No. 754,569

Int. Cl. H02k 9/19

U.S. Cl. 310-54

22 Claims



A liquid cooling system for dynamoelectric machines whereby cooling liquid is delivered to the machine for circulation to heated areas without external ductwork connected to the machine. In machines having eddy current conductors of the spinning disc type, the cooling liquid is distributed over the faces of the spinning disc as

a substantially uniform, centrifugally moving film. A built-up box-like base supports and partially houses the machine, with provision for directing free jets of cooling liquid to the stator without mechanical connection thereto.

3,518,467 TOTALLY ENCLOSED FAN-COOLED ELECTRIC MOTOR

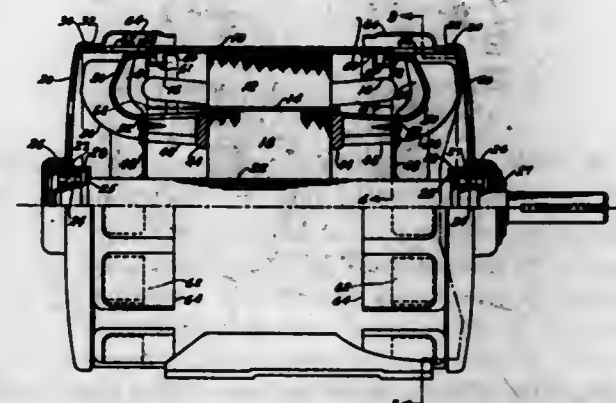
Lawrence W. Wightman, Creve Coeur, Mo., assignor to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri

Filed Nov. 4, 1968, Ser. No. 773,004

Int. Cl. H02k 9/06

U.S. Cl. 310-63

10 Claims



A totally enclosed, fan-cooled, electric motor in which end walls enclosing the rotor and stator rotate with the rotor and have a running seal with the interior surface of a cylindrical casing, in which vented end shields spaced axially outward from the rotating walls and fixed to the casing ends journal the rotor shaft, in which interior vanes on the rotating walls circulate air interiorly, in which exterior vanes on the rotating walls pass ambient air at high velocity over the exterior surfaces of the rotating walls and outwardly through vents in the casing wall, and in which deflectors at both ends direct the air emerging from the casing axially inward over the exterior of the casing.

3,518,468 ELECTRIC MOTOR COOLING CONSTRUCTION

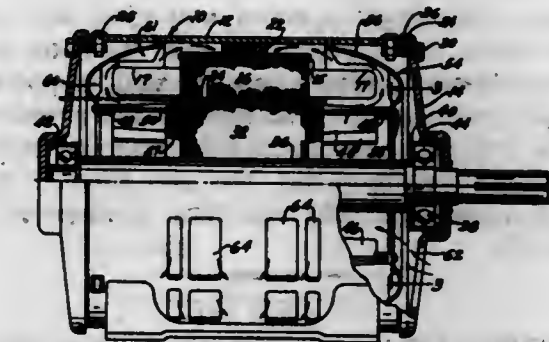
Lawrence W. Wightman, St. Louis County, Mo., assignor to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri

Filed Nov. 14, 1968, Ser. No. 775,724

Int. Cl. H02k 9/06

U.S. Cl. 310-63

2 Claims



An electric motor in which a stator having a circular periphery is fixed at its central portion in a stator shell of larger inside diameter, leaving substantial end portions of the stator spaced from the stator shell, and in which cooling air is caused to flow at high velocity in a circular path over the peripheral surfaces of these stator end portions by large diameter blowers.

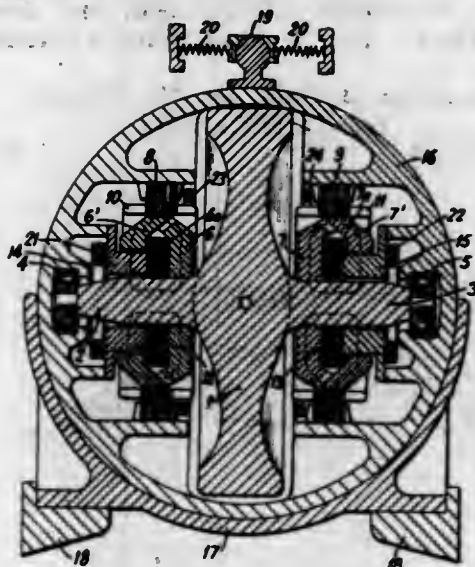
3,518,469

ELECTRICAL DRIVING ARRANGEMENT INCLUDING A FLYWHEEL

Bjarne Storsand, Watt, Switzerland, assignor to Maschinenfabrik Oerlikon, Zurich, Switzerland
 Filed Feb. 7, 1968, Ser. No. 703,708
 Claims priority, application Switzerland, Oct. 18, 1967, 14,658/67
 Int. Cl. H02k 7/02

U.S. Cl. 310—74

5 Claims



An electrical driving arrangement of the type in which a flywheel is driven by electric motors at points where a potential supply is available, and dissipates its energy to drive the motors as generators in between such points, for supply of energy to driving wheels of a vehicle, for example, includes a gas-tight housing for the components of the drive arrangement. Coiless rotors of heteropolar synchronous motors, of a claw-pole design, are mounted on the flywheel shafts, while energizing coils, as well as stator lamination stacks provided with stator coils, are secured to the housing.

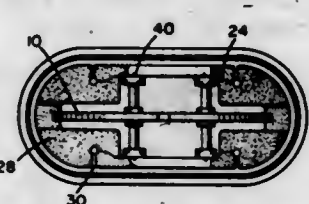
3,518,470

FILTER ASSEMBLY

Antonio Lungo, Middleburg Heights, Ohio, assignor to Clevite Corporation, a corporation of Ohio
 Filed Jan. 13, 1969, Ser. No. 790,557
 Int. Cl. H01v 7/00

U.S. Cl. 310—8.2

4 Claims



There is disclosed a novel mounting and supporting means for a piezoelectric ceramic resonator within an hermetically-sealed filter assembly, said supporting means comprise conductor pins secured to the resonator's electrode at one end and embedded in an insulating elastic, rubber-like structure at the other end, thereby minimizing spurious resonances and variation in insertion loss and bandwidth.

3,518,471

ELECTRIC MOTOR WITH BALL BEARING AND END SHIELD ARRANGEMENT

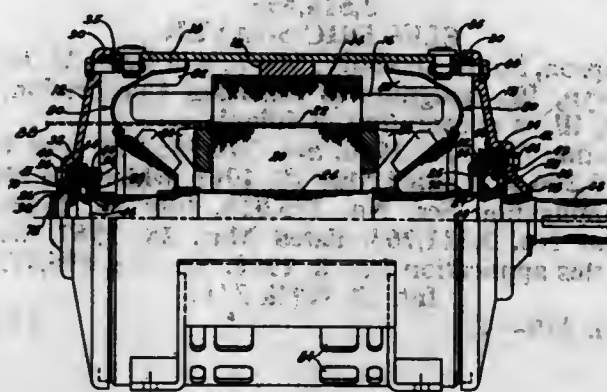
Lawrence W. Wightman, Creve Coeur, and Eugene F. Paul, Overland, Mo., assignors to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri
 Filed Aug. 14, 1968, Ser. No. 752,562
 Int. Cl. H02k 5/16

U.S. Cl. 310—85

5 Claims

A "take apart," ball bearing, electric motor having detachable end shields in which the ball bearings are slip

fitted into locating rings, which rings are in turn loosely fitted into and cemented to the end shields, the concentricity of the rotor in the stator and bearing alignment being established by shimming the air gap and accumu-



lating tolerances in annular spaces between the loosely fitting locating rings and the end shields, which spaces are filled with an adhesive cementing material in soft form and subsequently hardens to fix the locating rings in the end shields.

3,518,472

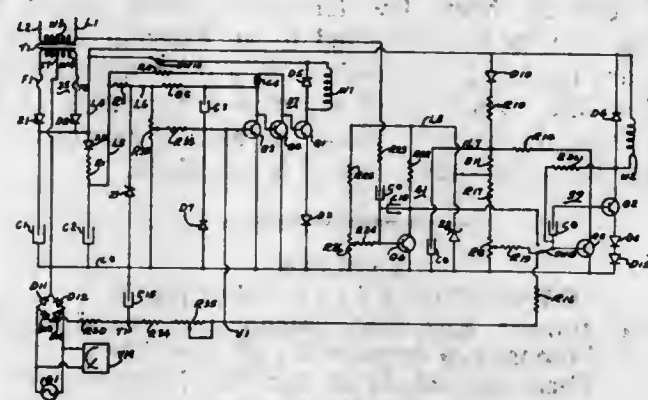
SPEED CONTROL APPARATUS WITH EDDY CURRENT CLUTCH AND BRAKE MEANS

Gerald F. O'Callaghan, Kenosha, Wis., assignor to Eaton Yale & Towne, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Aug. 25, 1967, Ser. No. 663,370
 Int. Cl. H02k 49/04; H02p 15/00

U.S. Cl. 310—95

7 Claims



Apparatus is disclosed for maintaining the speed of the output member of an eddy current coupling at a preselected level. The coupling includes a clutch winding which, when energized, applies torque from a driving member to the output member and includes also a brake winding which, when energized, applies a braking torque to the output member. An A.C. tachometer generator is driven by the output member of the coupling and the A.C. signal generated thereby is rectified and partially filtered to provide a composite feedback signal having a D.C. component, the amplitude of which varies as a function of the speed of the output member, and an A.C. rider wave. This composite feedback signal is mixed with a D.C. reference voltage which represents the preselected speed level thereby to obtain a composite error signal having a D.C. component which varies as a function of the deviation of the actual speed of the output member from the preselected level and an A.C. component the waveform of which has at least one sloped portion. The composite error signal controls a pair of amplifiers which are operated in a switching mode. One of the amplifiers applies a predetermined source voltage across the clutch winding when the composite error signal exceeds a first preselected threshold and the other applies a predetermined source voltage across the brake winding when the composite error signal falls below a second preselected

threshold. Accordingly, the average voltages applied to the windings vary as respective functions of the D.C. component of the composite error signal thereby maintaining the speed of the output member at the preselected level.

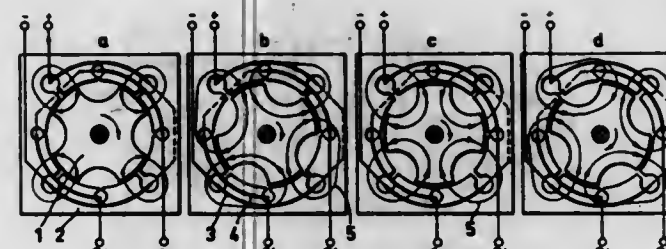
3,518,473

ALTERNATING CURRENT GENERATOR WITHOUT SLIP RINGS AND BRUSHES

Knut Asar Nordebo, 28 Ringvagen, Haparanda, Sweden
 Filed May 24, 1968, Ser. No. 731,834
 Claims priority, application Sweden, June 5, 1967, 7,836/67
 Int. Cl. H02k 17/42

U.S. Cl. 310—168

5 Claims



An alternating current generator includes a multi-poled rotor element and a stator element having the same number of poles as the rotor. No windings are provided on the rotor element, and the stator element is provided with energization windings on the poles which are connected to a source of direct current as well as with power windings in which an alternating current output is produced as the rotor is rotated. The power windings are received in and extend between centrally located slots in the faces of adjacent stator poles and thus are displaced in phase by half a pole pitch as related to the pole windings.

3,518,474

HOMOPOLAR GENERATORS

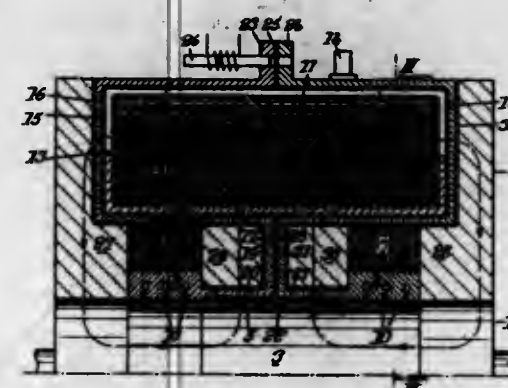
Paul-Henri Rebut, Versailles, and Antoine Torossian, Bourg-la-Reine, France, assignors to The Commissariat a l'Energie Atomique, Paris, France, a French organization

Filed Nov. 8, 1966, Ser. No. 592,843
 Claims priority, application France, Nov. 26, 1965, 40,006

Int. Cl. H02k 31/04, 13/10

U.S. Cl. 310—178

9 Claims



The homopolar generator comprises a rotor and a stator, and is intended to deliver a very high energy pulse (e.g. several megajoules) having a duration of about one second or less. A high power step-up transformer is incorporated into the stator so that the magnetic circuit of the transformer forms part of the magnetic circuit of the stator.

3,518,475

BRUSH AND BRUSH HOLDER ASSEMBLY
 Albert L. Sebok, Tallmadge, and John H. Porter and Everal B. McBroom, Jr., Kent, Ohio, assignors to Ametek, Inc., a corporation of Delaware
 Filed Aug. 15, 1966, Ser. No. 572,565
 Int. Cl. H01r 39/40

U.S. Cl. 310—245

8 Claims



A saddle type constant force feed spring, with end coils seated on outer ends of, and its reaches in longitudinal recesses of, opposed walls of a rectangular guide passage of a brush tube, has a yoke portion transversely seated in a wedge thrusting on V-notch-defining ends of split brush elements. The wedge, side- and end-guided by the passage and end-notched to accommodate connecting respective pig-tails, spaces the reaches from the half-elements so that without interference the inner element ends are slidingly spread against the passage to minimize tilting and simultaneous bounce during operation, thereby increasing brush life.

3,518,476

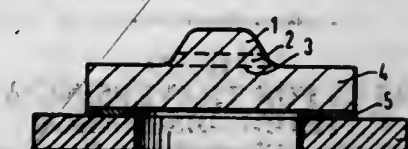
LUMINESCENCE DIODE WITH AN A^{III}B^V SEMICONDUCTOR MONOCRYSTAL AND AN ALLOYED PLANAR P-N JUNCTION

Gunter Winstel and Karl-Heinz Zachauer, Munich, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
 Continuation of application Ser. No. 562,742, July 5, 1966. This application Mar. 11, 1969, Ser. No. 806,327
 Claims priority, application Germany, July 7, 1965, S 98,027

Int. Cl. H01l 7/46

U.S. Cl. 313—108

5 Claims



The invention relates to a luminescence diode comprising an A^{III}B^V semiconductor monocrystal. This diode has an external (-1, -1, -1) face, a dopant electrode, alloy-bonded on said face, and an alloyed recrystallization region extending from said face into said crystal and forming therein a p-n junction of planar configuration throughout. The recrystallization boundaries which are diagonal to the (-1, -1, -1) face and occur during alloying are removed. Also described is the process of making the above diode.

3,518,477

COMPACT COLD CATHODE INDICATOR TUBE

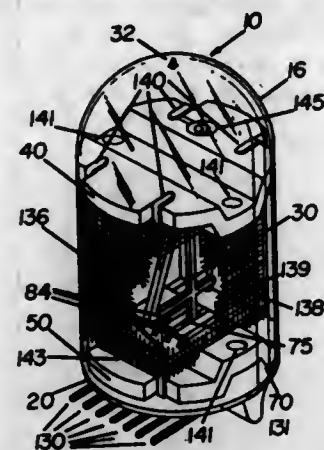
Richard B. Fehnel, Basking Ridge, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
 Filed Sept. 8, 1967, Ser. No. 666,439
 Int. Cl. H01j 7/42

U.S. Cl. 313—109.5

3 Claims

The disclosure is of an indicator tube including large, rugged, insulating plates spaced apart and securing the

tube cathodes between them. The cathodes are held in place by mounting tabs which engage the large-area disks.



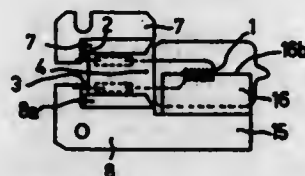
A generally cylindrical anode structure is secured in place between the large-area top and bottom plates, and all parts interlock to form a strong, rigid assembly.

3,518,478 ELECTRIC INCANDESCENT LAMP HAVING AN EXTERNAL SCREEN AND OPERABLE WITH A REFLECTOR

Jacques Bardin, St. Cloud, Yvelines, France, assignor to Fabriques Reunies de Lampes Electriques, Issy-les-Moulineaux, Hauts-de-Seine, France
Filed June 5, 1967, Ser. No. 643,655
Claims priority, application France, June 9, 1966, 64,825
Int. Cl. H01j 5/16

U.S. Cl. 313-117

6 Claims



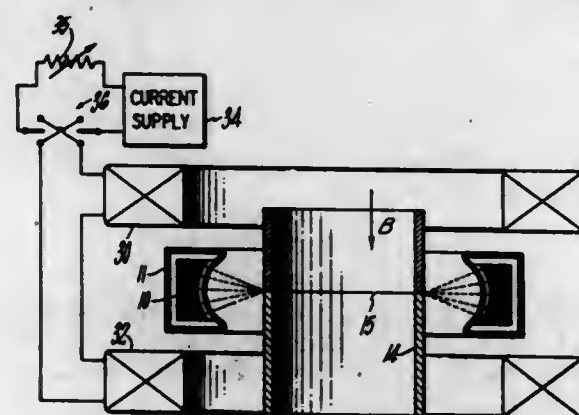
An electric incandescent lamp having current-supply members secured to the sealed portion of the bulb with an external screen extending from at least one of the current-supply members, the screen cooperating with the filament in the bulb and the reflector of the lamp for providing a directed beam.

3,518,479 APPARATUS FOR TRAVERSING A COLD CATHODE DISCHARGE

Edward A. Pinsky, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 27, 1968, Ser. No. 708,655
Int. Cl. H01j 1/50

U.S. Cl. 313-161

7 Claims



An annular cathode structure with a magnetic beam deflection mechanism is described. A plurality of radial electron beams are generated by an annular glow dis-

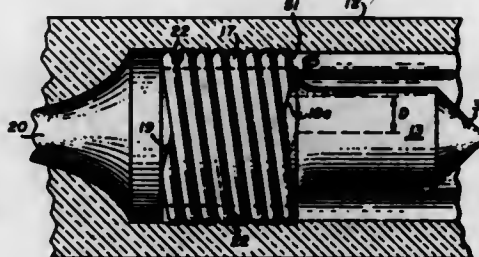
charge cathode, and a uniform magnetic field generated by a pair of coils is directed perpendicular to the electron beams. The direction of the magnetic field may be reversed and the magnitude of the magnetic field may be varied to control the direction and amount of deflection of the beams of electrons.

3,518,480 ARC LAMP CONSTRUCTION

Raymond E. Paquette, Saratoga, Calif., assignor to Gevaert-Agfa N.V., Mortsel, Belgium, a Belgian company
Filed Oct. 24, 1967, Ser. No. 677,565
Int. Cl. H01j 1/96

U.S. Cl. 313-288

15 Claims



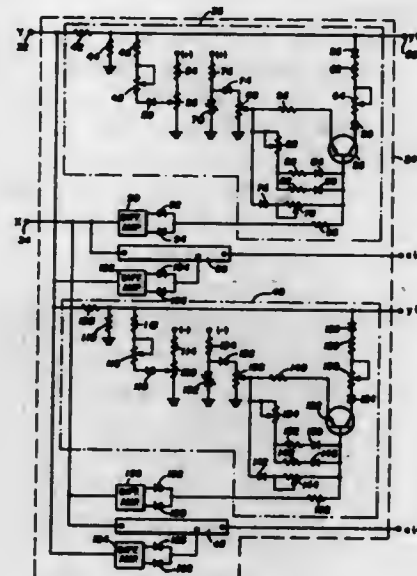
An arc lamp construction in which the lamp envelope portion surrounding the main body portions of the arc electrodes is spaced therefrom to define a cylindrical gap and in which a packing member is disposed in the cylindrical gap to support the electrodes. The packing member is elastic, or radially deformable, to prevent cracking of the envelope as the gap width changes with temperature, and is thermally conductive to allow the transfer of electrode heat across the gap to the envelope.

3,518,481 CATHODE-RAY TUBE LINEARITY CORRECTOR

Fred A. Speaks, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed June 21, 1968, Ser. No. 739,017
Int. Cl. H01j 29/56, 29/72

U.S. Cl. 315-24

15 Claims



A system for correcting the deflection signals coupled to a cathode-ray tube to produce a linear display having four linear modifier circuits. Two of the four circuits are employed to modify the Y-deflection signals and the other two for modifying the X-deflection signals. Basically, the modifier circuits consist of a linear amplifier as a current control device coupled to the absolute value of the second deflection signal. Thus, for correcting the Y-deflec-

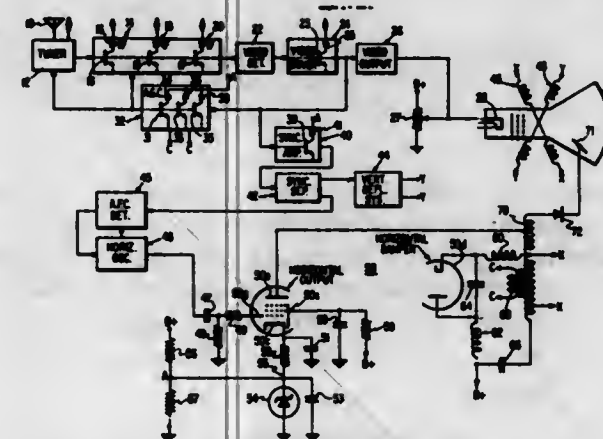
tion signal the current control device would be responsive to the absolute value of the X-deflection signal. When either of the deflection signals varies on-axis, an optional on-axis correcting circuit may be employed. To provide optimum linear correction, a series of breakpoint sections may be paralleled and connected to individual current control devices each responsive to the second deflection signal.

3,518,482 TELEVISION RECEIVER HORIZONTAL DEFLECTION OUTPUT STAGE PROTECTION CIRCUIT AND DIRECT VOLTAGE SUPPLY

Paul C. Wilmarth, Indianapolis, Ind., assignor to RCA Corporation, a corporation of Delaware
Filed Mar. 14, 1969, Ser. No. 807,279
Int. Cl. H01j 29/76

U.S. Cl. 315-27

6 Claims



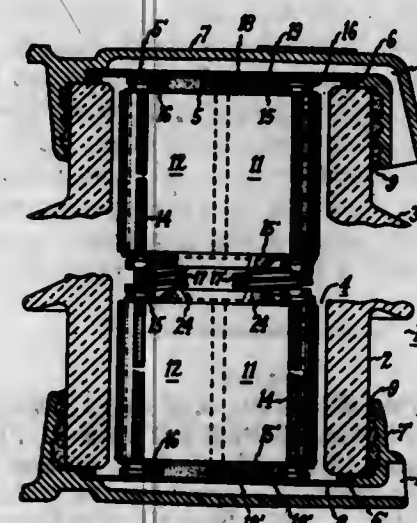
A Zener diode in the cathode circuit of the horizontal deflection output stage of a hybrid television receiver maintains the horizontal deflection output tube anode current at a safe level in the event of loss of input drive signals. The Zener diode also supplies a stabilized direct operating voltage to semiconductor devices in the receiver.

3,518,483 FUSED PRESSURE RELIEF MEANS FOR OVER-VOLTAGE PROTECTIVE DEVICE

William H. Eason, Pittsfield, and Eugene C. Sakshaug, Lanesboro, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 27, 1968, Ser. No. 716,628
Int. Cl. H01t 5/00; H02h 9/06

U.S. Cl. 315-36

11 Claims



A lightning arrester housing having a diaphragm that is adapted to be burned through to vent gas from the housing when an arc terminates on the diaphragm; characterized by having a fusible element electrically connected between the diaphragm and conductive components

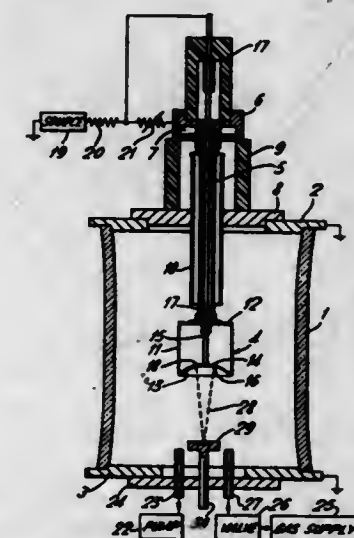
mounted in the housing. When an excessive current of predetermined duration flows through the fusible element, it fuses and forms an arc that terminates on the diaphragm which then rapidly burns through and vents the housing.

3,518,484 HOLLOW CATHODE DISCHARGE DEVICE WITH CONTROL ELECTRODE FOR ELECTRON BEAM FOCUSING

Clifford William Alfred Maskell, Abingdon, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed Dec. 28, 1966, Ser. No. 605,452
Claims priority, application Great Britain Dec. 30, 1965, 55,206/65; Mar. 23, 1966, 12,766/66
Int. Cl. H01j 17/06, 7/24, 17/26

U.S. Cl. 315-111

14 Claims



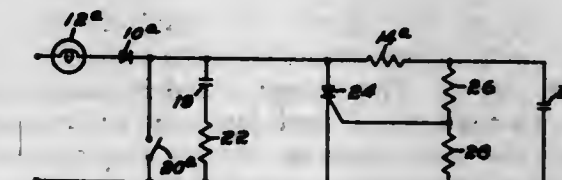
A cold cathode glow discharge device includes an enclosure and means to maintain a gas in said enclosure at a predetermined pressure. A hollow cathode is formed at least partly of wire mesh, and an anode is mounted within said enclosure. The cathode includes an outwardly concave portion having an aperture therein. A further electrode is of a substantially similar outline to the shape of said aperture, said further electrode is positioned in said aperture to define a gap between a peripheral edge of said further electrode and an edge defining said aperture. Electrical potentials are applied to the anode, cathode, and further electrode such that during operation an electric discharge takes place and a stream of electrons passes through said gap to form a hollow beam which converges to a focus at a region outside said cathode.

3,518,485 SWITCH-CONTROLLED DUAL FUNCTION INDICATOR

Douglas B. Leathers, Natick, Mass., assignor, by mesne assignments, to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed Apr. 14, 1967, Ser. No. 631,054
Int. Cl. H01j 1/60

U.S. Cl. 315-129

1 Claim



This application is directed at a controllable dual function indicator (that is capable of a continuous or flashing mode of operation) using an RC circuit or a silicon

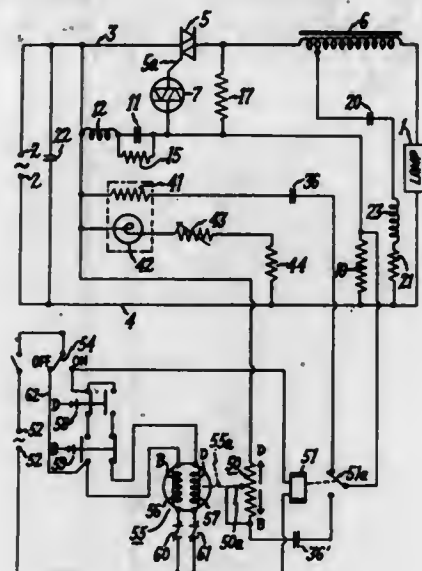
control rectifier circuit. The indicator uses two circuits, one of which includes a switch and a capacitor and which will place the neon bulb into intermittent operation when the switch is closed.

3,518,486

CONSTANT SPEED MOTOR REGULATING LAMP DIMMING CIRCUIT

Robert E. Babcock, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Nov. 20, 1967, Ser. No. 684,314
Int. Cl. G05f 1/00; H05b 37/02
U.S. Cl. 315—194

10 Claims

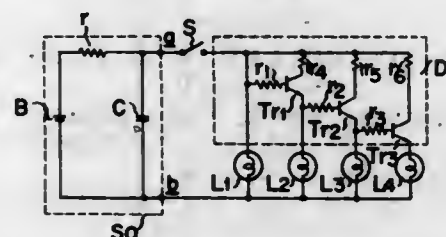


Dimming system for gaseous discharge lamps comprises a dimming control circuit connected to a phase control circuit operating the discharge lamp, the dimming circuit comprising a potentiometer adjusted to selected position by operation of a constant speed motor to allow the arc of the lamp to follow the voltage supplied without extinguishing.

3,518,487

PHOTOFLASHING CIRCUIT DEVICE

Masashi Tanaka, Osamu Nomura, and Hiroyasu Kawamura, Yokohama-shi, and Takayuki Iida, Tokyo, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed Jan. 24, 1968, Ser. No. 700,247
Claims priority, application Japan, Jan. 31, 1967, 42/6,221, 42/6,222
Int. Cl. H05b 37/00
U.S. Cl. 315—232



A plurality of flash lamps are connected in parallel through a synchronizing contact across a capacitor charged from a DC source. The charge stored in said capacitor discharges through one of flash lamps by the momentary closure of the synchronizing contact interlocked with a shutter of a camera and current limiting elements are interposed between adjacent flash lamps to control currents flowing through succeeding flash lamps in response to the impedance variation of a preceding flash lamp before and after ignition thereof when said contact is closed,

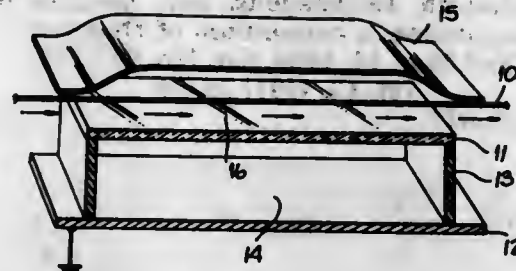
whereby successive ignition of a plurality of flash lamps is completed without use of a mechanical change-over switch.

3,518,488

CORONA DISCHARGE CHARGING OF PARTICLES WHEREIN A POROUS INSULATOR IS DISPOSED BETWEEN THE CORONA ELECTRODES

Michael Michalchik, Setuket, N.Y., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Jan. 2, 1968, Ser. No. 694,996
Int. Cl. H05b; G03g 13/00
U.S. Cl. 317—3

15 Claims



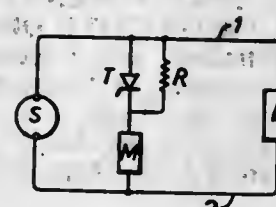
Apparatus and method for electrostatically charging particles. Spaced apart electrodes adaptable to set up corona discharge therebetween are provided and porous insulator is interposed between said electrodes, insulator being of sufficient area to effectively separate corona charge distribution in aerial portions adjacent the opposite surfaces of insulator.

3,518,489

VOLTAGE SUPPRESSION CIRCUIT

John Robin Musham, Lincoln, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Apr. 3, 1968, Ser. No. 718,544
Claims priority, application Great Britain, June 2, 1967, 25,479/67
Int. Cl. H02l 3/22, 9/04
U.S. Cl. 317—16

5 Claims



An overvoltage protection circuit for connection in shunt with a load comprises a fixed resistor in series with a non-linear resistor which is such that its resistance falls sharply when the voltage thereacross exceeds a predetermined value. A voltage breakdown device is connected across the fixed resistor, so that breakdown of said device occurs when the load voltage exceeds a given maximum, thereby causing the non-linear resistance to fall sharply, so that a low resistance protective shunt is formed.

3,518,490

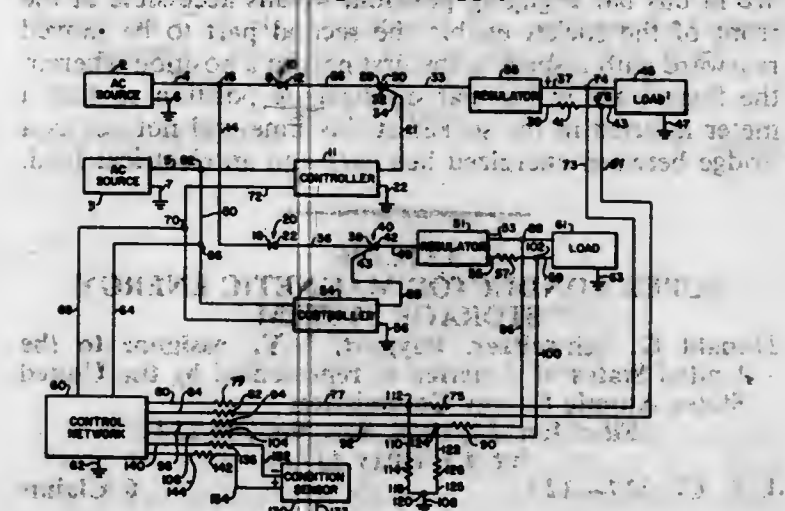
CONTROL NETWORK FOR AN ELECTRICAL SYSTEM HAVING MULTIPLE POWER SUPPLIES

Harry Bell Wattson, Rutherford, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 8, 1967, Ser. No. 622,871
Int. Cl. H02h 3/38, 7/14
U.S. Cl. 317—31

3 Claims

A network for controlling power to a system having multiple positive and negative power supplies and including an arrangement of semiconductor responsive to high and low voltage and current malfunctions in the power

supplies to turn off all power to the system when a malfunction occurs in one power supply. The device is also



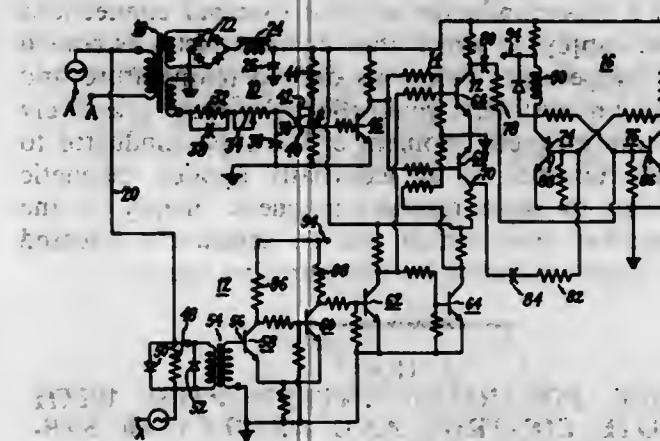
responsive to predetermined external or internal operating abnormalities for turning off all power to the system. Power to the system remains off until the system is reset.

3,518,491

REVERSE POWER FLOW DETECTOR

Clifford L. Downs, Lenox, Mass., assignor to General Electric Company, a corporation of New York
Filed Jan. 29, 1968, Ser. No. 701,418
Int. Cl. H02h 3/26
U.S. Cl. 317—33

7 Claims



A solid state, reverse power flow detector which samples the line voltage and current, once each cycle. The voltage sampling circuit includes a pulse generator providing a voltage pulse of short duration at a given time or phase angle in each cycle. The voltage and current signals are applied to a pair of NOR logic gates so that when the voltage pulse coincides with the current signal one gate will have an output. When the pulses do not coincide, the other gate will have an output. The output from the logic gates is used to set or reset a bistable multivibrator which acts as an output driver stage. In the disclosed circuit, reverse power flow sets the bistable multivibrator to energize a relay to thereby indicate such reverse power flow.

3,518,492

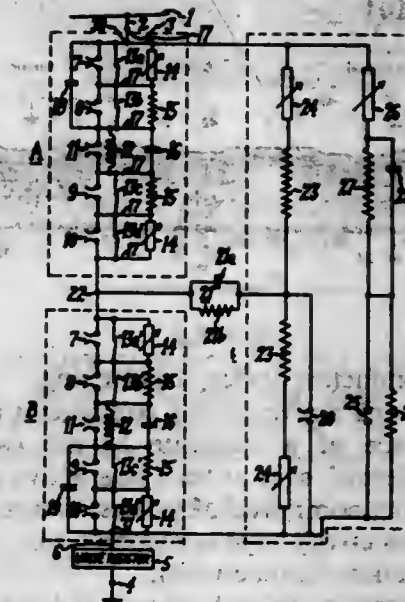
TRIGGERING CIRCUIT FOR SPARK GAP ASSEMBLIES

James S. Kresge and Stanley A. Miska, Jr., Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed May 13, 1968, Ser. No. 728,604
Int. Cl. H02h 9/06
U.S. Cl. 317—68

31 Claims

A plurality of series connected main spark gaps are connected in shunt circuit relation with a voltage grading impedance network which includes a trigger gap that is

connected through frequency responsive coupling means in shunt relation with approximately one-half of the series connected main spark gaps. The trigger gap is operative, as a substantially linear function of a voltage impressed across the series connected gaps, to cause the main gaps



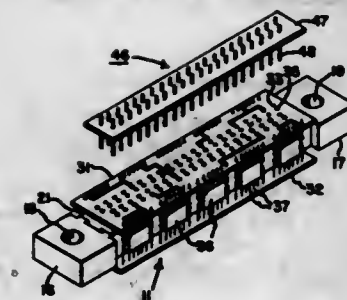
to spark over in cascade fashion. The triggered control network allows use of a large number of main gaps but with a controlled total sparkover very much less than the sum of the sparkover of the individual main gaps, thus, providing a desirably high ratio of recast voltage to sparkover voltage for the main gap series circuit.

3,518,493

ARRANGEMENT FOR MOUNTING AND CONNECTING MICROELECTRONIC CIRCUITS

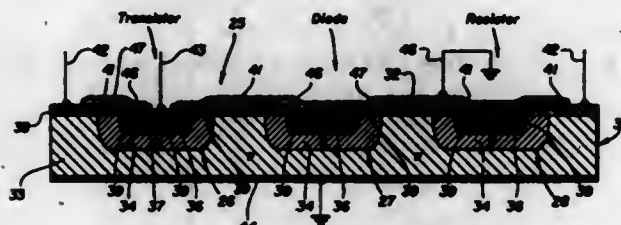
John R. Bathrick, Jr., and Fred A. George, Whitesboro, and Rodman A. Mogle, Chittenango, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 28, 1967, Ser. No. 686,256
Int. Cl. H05k 7/20, 1/14
U.S. Cl. 317—100

4 Claims



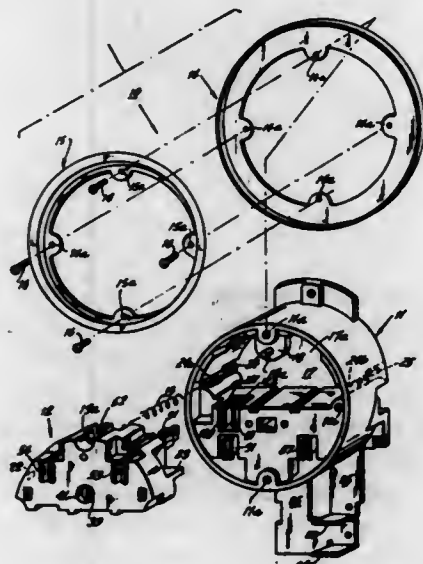
An improved arrangement is disclosed for mounting a plurality of microelectronic circuits in a compact arrangement which dissipates heat and provides electrical connections and interconnections. The microelectronic circuits are positioned in thermal contact against the outer sides of a pair of mutually parallel elongated metal support strips, and electrical connectors extending from these circuits are connected to printed circuit boards respectively extending along the top and bottom edges of the parallel support strips. A connector unit, positioned between the parallel support strips, carries connectors which extend between the top and bottom circuit boards to provide interconnections where desired and which also function as receptacles for connector pins of an external electrical connector plug.

3,518,494
**RADIATION RESISTANT SEMICONDUCTOR
 DEVICE AND METHOD**
 Brian David James, Menlo Park, Calif., assignor to
 Signetics Corporation, Sunnyvale, Calif., a corpo-
 ration of California
 Filed June 29, 1964, Ser. No. 378,829
 Int. Cl. H011 1/14, 3/17
 U.S. Cl. 317-101 14 Claims



1. A semiconductor device, comprising:
 - (a) at least one active circuit component at one principal surface of a substrate having two principal surfaces thereof, said at least one active circuit component being comprised of at least two regions of opposite conductivity type semiconductor material with a P-N junction therebetween,
 - (b) ohmic contacts to each of said at least two regions of opposite conductivity type semiconductor material,
 - (c) a continuous layer of insulating material overlying said at least one active circuit component and said ohmic contacts,
 - (d) a first deposited metallized film integral with and substantially covering the entire top surface of said continuous layer of insulating material, and
 - (e) a second deposited metallized film integral with and substantially covering the other of said principal surfaces of said substrate,
 - (f) said first and second metallized films being maintained at substantially the same potential.

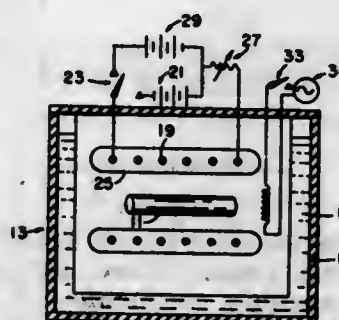
3,518,495
MOLDED METER SOCKET
 James Frank Mescham, Bellmawr, N.J., assignor to I-T-E
 Imperial Corporation, Philadelphia, Pa., a corporation
 of Delaware
 Filed Dec. 30, 1968, Ser. No. 787,702
 Int. Cl. H02b 11/14, 9/00
 U.S. Cl. 317-108 10 Claims



A meter socket is constructed with a first molded part mounting plug-in load contacts and a second molded part mounting plug-in line contacts. The line contacts are connected to bus bar engaging fingers also mounted to the

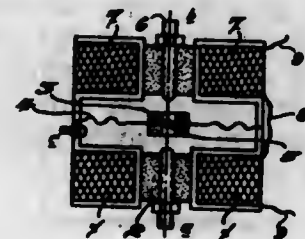
second molded part with the latter being biased toward a location relative to the first mold part wherein the fingers are in bus bar engaging position. Means accessible at the front of the socket enable the second part to be moved rearward with respect to the first part to a position wherein the fingers are in bus bar disengaging position so that a meter inserted in the socket at this time will not act as a bridge between energized bus bars and an electrical load.

3,518,496
**SUPER CONDUCTOR MAGNETIC ENERGY
 STORAGE SYSTEM**
 Donald G. Schweitzer, Bayport, N.Y., assignor to the
 United States of America as represented by the United
 States Atomic Energy Commission
 Filed Jan. 24, 1968, Ser. No. 700,234
 Int. Cl. H01v 11/16
 U.S. Cl. 317-123 6 Claims



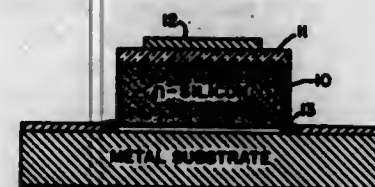
System for selectively storing and releasing magnetic energy in a superconductor without external connections to a power supply, in which the superconductor is cooled to a first temperature below its critical temperature and exposed to an hysteretic magnetic field cycle selectively to reduce the magnetic moment of the superconductor to zero in the absence of an externally applied magnetic field thereby to store residual magnetic energy in the superconductor mass which can be selectively released from the superconductor by the warming thereof.

3,518,497
**BISTABLE POLARIZED INTERRUPTER WITH
 REMOTE CONTROL AND RESPECTIVE SYS-
 TEM OF UTILIZATION**
 Walker Del Picchia, Rua Coran 40, Apt. 1, and Wagner
 Waneck Martins, Rua Itana 153, both of Sao Paulo,
 Brazil
 Filed May 11, 1966, Ser. No. 549,300
 Claims priority, application Brazil, Sept. 21, 1965,
 173,338
 Int. Cl. H01H 47/00
 U.S. Cl. 317-150 3 Claims



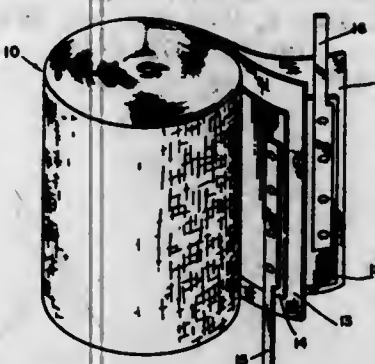
A bistable polarized remote control switch comprises two coils on cores of mild iron, a displaceable switch blade with contact tablets, and structure holding the cores and coils together including ends constituting contact points. The displaceable switch blade has, in a central part, two cores ringed by permanent magnets, one core on each side of the blade and having opposite polarities. Inside each ringed core, on both sides of the blade, a contact tablet is provided for making contact with a contact point.

3,518,498
**HIGH-Q, HIGH-FREQUENCY SILICON/SILICON-
 DIOXIDE CAPACITOR**
 Randolph C. Early, Lynchburg, Va., assignor to General
 Electric Company, a corporation of New York
 Filed Dec. 27, 1967, Ser. No. 693,816
 Int. Cl. H011 3/00
 U.S. Cl. 317-230 8 Claims



A silicon/silicon-dioxide capacitor construction having Q's in the order of 600 to 800 at 10 mHz. is described. The Q's of gold-silicon die-bonded silicon/silicon-dioxide capacitors at frequencies of 10 megahertz were found to be substantially below theoretically attainable Q's at this frequency. Investigation indicated that in die-bonding, a low-grade P-N rectifying junction is formed at the junction of the bulk silicon and the gold-silicon eutectic, substantially reducing the Q of the capacitor at high frequencies. By adding gold/antimony preform to the conductor surface prior to die-bonding, the antimony, acting as an n dopant, prevents the formation of the P-N rectifying junction at the interface.

3,518,499
**ELECTROLYTE FOR ELECTROLYTIC
 CAPACITORS**
 Harold D. Shepherd, Fort Wayne, and Daniel J. Ander-
 son, Indianapolis, Ind., assignors to P. R. Mallory & Co.
 Inc., Indianapolis, Ind., a corporation of Delaware
 Continuation-in-part of application Ser. No. 338,206,
 Jan. 16, 1964. This application Jan. 29, 1968, Ser.
 No. 701,416
 Int. Cl. H01g 9/05
 U.S. Cl. 317-230 11 Claims



An electrolytic capacitor having a pair of electrodes and an electrolyte. The electrodes include at least one electrode composed essentially of a film-forming metal. The electrolyte consists essentially of about 1-46% by weight of an amine salt of maleic acid, the remainder essentially a glycol ether.

3,518,500
FLAT PLATE FEED-THROUGH CAPACITOR
 James C. Jimerson, 1820 Fairhaven Drive 46229; John
 B. Greshamp, 5010 Glen Mar Lane 46226; and Daniel
 J. Anderson, 7412 Graham Road 46250, all of Indian-
 apolis, Ind.
 Filed Mar. 6, 1968, Ser. No. 710,919
 Int. Cl. H01g 9/00, 3/07
 U.S. Cl. 317-230 17 Claims

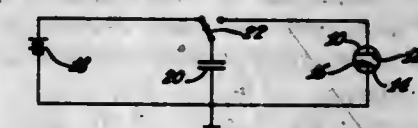
An electrolytic feed-through capacitance device including a plurality of stacked, film-forming metal electrodes. Alternate ones of the electrodes form the anode of the capacitance device and include at least one input tab and

at least one output tab. The remainder of said electrodes form the cathode of the capacitance device and include



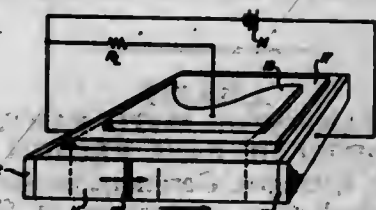
at least one input tab and at least one output tab. A dielectric film overlies the anode electrodes. An electrolyte contacts each of the electrodes.

3,518,501
ELECTROCHEMICAL CELL CIRCUITS
 Thomas B. Bissett, Malibu, and John Brian Murphy,
 Culver City, Calif., assignors to The Bissett-Berman
 Corporation, Santa Monica, Calif., a corporation of
 California
 Filed Mar. 7, 1968, Ser. No. 711,311
 Int. Cl. H01g 9/00
 U.S. Cl. 317-231 22 Claims



This invention is directed to electrical circuits associating an electrochemical cell with a capacitor. Specifically, the invention includes an electrochemical cell, which cell includes a pair of electrodes and with the cell containing an active material for transfer between the electrodes. A capacitor having a particular capacitance value is charged by a voltage source and with the charge on the capacitor determining the transfer of a predetermined charge of active material between the pair of electrodes in the electrochemical cell. The invention includes the association of the capacitor with the electrochemical cell so as to form circuits such as time generating circuits, time delay circuits and readout circuits. In each case, either an electrochemical cell has a particular charge of active material transferred in accordance with the charging of a capacitor or the discharging of a precharged capacitor.

3,518,502
**CURRENT FUNCTION GENERATORS USING
 TWO-VALLEY SEMICONDUCTOR DEVICES**
 Paul W. Dorman, Somerville, and Manikam Shoji, Plain-
 field, N.J., assignors to Bell Telephone Laboratories,
 Incorporated, Murray Hill, N.J., a corporation of New
 York
 Filed Apr. 25, 1968, Ser. No. 724,017
 Int. Cl. H01g 7/00; H011 5/02
 U.S. Cl. 317-231 7 Claims



Currents are derived from an output electrode that is capacitively coupled to the active crystal of a two-valley semiconductor device. With a crystal of uniform configuration and doping and with uniform capacitive coupling, the output waveform is a replica of the configura-

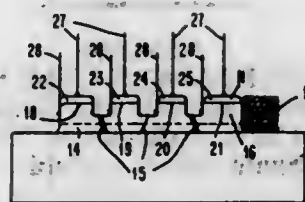
tion of the electrode. Various other effects are attained if non-uniform crystals or dielectric capacitance layers are used.

3,518,503 SEMICONDUCTOR STRUCTURES OF SINGLE CRYSTALS ON POLYCRYSTALLINE SUBSTRATES

Ven Y. Doo, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Mar. 30, 1964, Ser. No. 355,600, now Patent No. 3,335,038, dated Aug. 8, 1967. Divided and this application June 7, 1967, Ser. No. 644,211
Int. Cl. H011 7/36, 5/00

U.S. Cl. 317—234

14 Claims



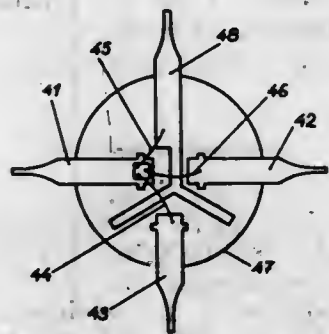
A semiconductor device composed of a polycrystalline ceramic substrate, such as polycrystalline aluminum oxide, having on its surface at least one thin homogeneous single crystal semiconductor film. The single crystal film is in the order of microns in thickness and in the order of hundreds of microns in length and width. An epitaxial layer of semiconductor material of the same conductivity type as the single crystal film is grown over the film. A PN junction is formed in the epitaxial layer by provision of a region of an opposite conductivity in the epitaxial layer.

3,518,504 TRANSISTOR WITH LEAD-IN ELECTRODES

Bernhard Dietrich, Freiburg, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 30, 1967, Ser. No. 679,059
Claims priority, application Germany, Nov. 15, 1966, D 51,549
Int. Cl. H011 1/14

U.S. Cl. 317—234

6 Claims



This invention is for a semiconductive device which has a shielding zone therein and electrodes connected to the base emitter, collector and the shielding zone, at least one of the electrodes is disposed between the other electrodes.

3,518,505 POWER TRANSISTOR WITH PARTICULAR WIDTH OF BASE REGION

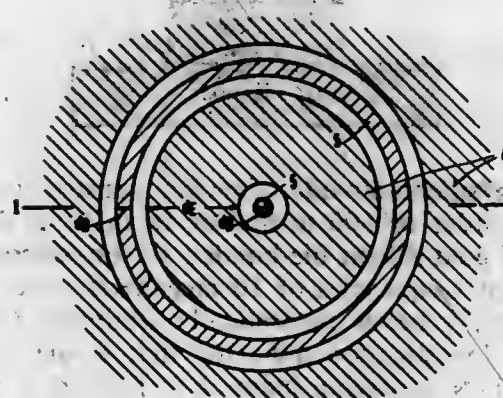
Ottomar Jantsch, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Nov. 3, 1967, Ser. No. 680,563
Claims priority, application Germany, Nov. 10, 1966, S 106,916
Int. Cl. H011 1/14

U.S. Cl. 317—234

4 Claims

The present invention relates to a power transistor with a base region which is bordered by at least one

emitter region and at least one base contact region. Both of these regions are highly doped relative to the base region. Upon these highly doped regions are metallic contact strips. During operation, the density of the load carriers, injected from the highly doped emitter regions into the base region, is high in comparison to the doping density in the base region. Thus the width of the emitter



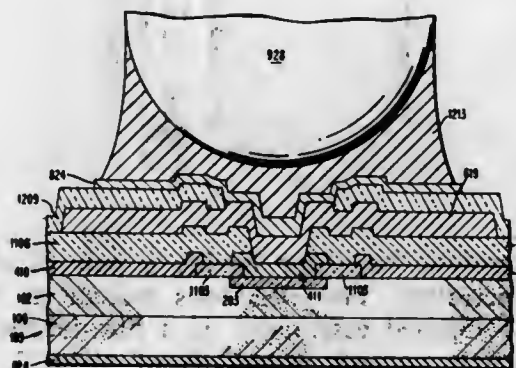
region with respect to the emitter current, the thickness of the base region and the ambipolar diffusion length L of the load carriers in the base region, is optimized and is between 1.6 and 3.2 ($d_p/2L$). In accordance with the present invention, the width of the highly doped base contact regions is from $1/6$ to $1/2$ of the width of the highly doped emitter region.

3,518,506 SEMICONDUCTOR DEVICE WITH CONTACT METALLURGY THEREON, AND METHOD FOR MAKING SAME

Harlan R. Gates, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 6, 1967, Ser. No. 688,466
Int. Cl. H011 1/14

U.S. Cl. 317—234

24 Claims



A semiconductor device having contact metallization thereon designed for high reliability and stability, and capable of high current carrying capacity, comprising a current-distributing metallization layer contacting the active areas of said device through a first insulating layer, a second metallization layer contacting the current-distributing layer through a second insulating layer, a third metallization layer contacting said second metallization layer through a third insulating layer, external contact being made to the third metallization layer. The first two metallization layers may be aluminum, the final layer a series of layers, such as chrome-nickel-gold, and the insulating layers may be SiO_2 .

3,518,507 SEMICONDUCTOR DEVICE HAVING PRESSURE-HELD CONTACTS

Vlastislav Benzonáček, Praha, Jan Pivánek, Jiří Hrdlička, Evžen Kráns, and Zdeněk Smákal, Prague, Czechoslovakia, assignors to CKD Prague, oborový podnik, Prague, Czechoslovakia
Filed Nov. 25, 1968, Ser. No. 778,450
Claims priority, application Czechoslovakia, Nov. 29, 1967, 8,451/67
Int. Cl. H011 1/02

U.S. Cl. 317—234

8 Claims



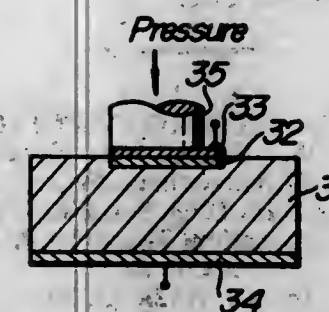
A semiconductor device comprising a semiconductor body having spaced opposite planar surfaces perpendicularly arranged about a central axis, a pair of principal electrodes abutting, respectively, the planar surfaces of the semiconductor body and frame members of dielectric material connected to the periphery of the electrode members to support the same as a unitary device.

3,518,508 TRANSDUCER

Akio Yamashita, Ikeda-shi, and Masaru Tanaka, Toyonaka-shi, Japan, assignors to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
Filed Dec. 1, 1966, Ser. No. 598,296
Claims priority, application Japan, Dec. 10, 1965, 40/76,822
Int. Cl. H011 11/00, 15/00

U.S. Cl. 317—235

4 Claims



A pressure responsive transducer is disclosed. The transducer has a body which is composed of a semiconductive material or an insulating material which have been doped with a deep-level impurity. At least two electrical connections are provided to the body, and a means is provided for applying pressure to the body.

3,518,509 COMPLEMENTARY FIELD-EFFECT TRANSISTORS ON COMMON SUBSTRATE BY MULTIPLE EPITAXY TECHNIQUES

Roger Calkins, Macpherson, Kent, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 4, 1967, Ser. No. 636,161
Claims priority, application Great Britain, June 17, 1966, 27,106/66
Int. Cl. H011 11/14

U.S. Cl. 317—235

4 Claims

A semiconductor structure including insulated-gate field-effect transistors of complementary types in a single semiconductor substrate, wherein the length of the chan-

nel of each transistor is determined by the thickness of an epitaxial layer. This is accomplished by forming a plurality of epitaxial layers of different conductivity types on the substrate, forming recesses exposing edges



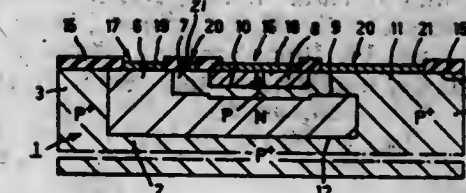
of the epitaxial layers, and disposing insulating material on said edges and gate electrodes on the insulating material. In each transistor so formed one epitaxial layer serves as either the source or drain region while an adjacent layer serves to provide the channel region.

3,518,510 PLANAR TRANSISTOR WITH SUBSTRATE-BASE CONNECTION PROVIDING AUTOMATIC GAIN CONTROL

Jack Stewart Lammie, Watford, England, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 1, 1968, Ser. No. 717,796
Claims priority, application Great Britain, Mar. 31, 1967, 14,774/67
Int. Cl. H011 11/06

U.S. Cl. 317—235

8 Claims



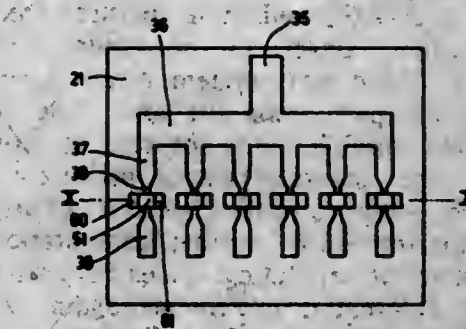
A A.G.C. circuit having a transistor wherein a large portion of the base region, or a region shorted to the base region, encompasses the collector region.

3,518,511 SEMICONDUCTOR DEVICE HAVING AT LEAST ONE CONTACT APPLIED TO A SEMICONDUCTOR MATERIAL OF THE TYPE II-B-VI-A AND METHOD OF MANUFACTURING SUCH DEVICE

Hein Koehne, Emmendingen, Rastatt, Germany, assignor, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 14, 1967, Ser. No. 660,332
Claims priority, application Netherlands, Aug. 17, 1966, 6611537
Int. Cl. H011 3/20

U.S. Cl. 317—237

7 Claims



A semiconductor device, for example, a thin-film field-effect transistor, using a chalcogenide semiconductor with a low resistance ohmic contact thereto of an alloy of (a) gold, (b) indium or gallium, and (c) zinc or cadmium.

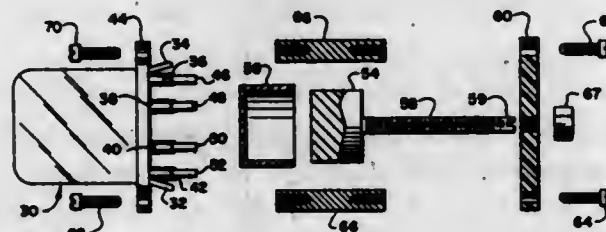
3,518,512

VARIABLE CAPACITOR

Elie J. Robert, Kennebunk, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 6, 1968, Ser. No. 726,896
Int. Cl. H01g 5/16

U.S. Cl. 317-257

4 Claims



The input capacitance of the trigger electrodes of a flashtube is varied to stabilize the flashtube firing. An apparatus for varying the input capacitance consists of a plurality of finger-like conductors, one attached to each of the pins of the flashtube socket, forming one plate of the input capacitor while a metal cylinder positioned concentrically with the plurality of conductors and movable with respect thereto forms the other plate of the input capacitor.

3,518,513

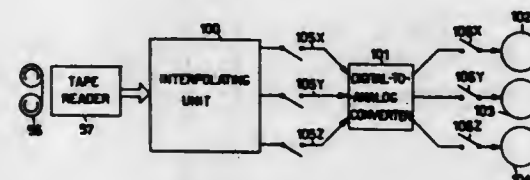
POSITION CONTROL DEVICE COMPRISING AN INTERPOLATING UNIT

Piero Pomella and Luciano Luzzo, Ivrea, Torino, Italy, assignors to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy
Filed Aug. 29, 1966, Ser. No. 575,802
Claims priority, application Italy, Sept. 3, 1965, 20,440/65

Int. Cl. G05b 19/24

U.S. Cl. 318-571

12 Claims



A programmable control system is disclosed suitable to control the feed of a movable machine part along one or more controlled coordinate axes, wherein when the part reaches a previously specified coordinate point, a new coordinate point is specified which is remote from the previous point. The system then cyclically computes and accumulates in registers multiple interpolation increments of motion along the axes proportioned in ratios representing the relative rates of progression along these axes required to arrive at the newly specified coordinate point. These increments are accumulated in separate digital registers, one for each axis, and these registers are coupled to converters which convert the accumulated data into suitable form to drive servo-system means operative to move the machine part along the axes. The system is preset to provide suitable limits for rate of motion, acceleration and other parameters appropriate for the machine operation being controlled. Acceleration and deceleration are performed by further computations made during the systems interpolating cycles involving adding or subtracting differential increments again and again to progressively build up or reduce the size of each subsequent motion increment. In one mode of operation this acceleration continues until one of said preset limits is reached, and the distance to this point is remembered. The system then continues without acceleration until it approaches this distance from the specified arrival point,

at which time it decelerates through similar differential increments. As the final arrival point is approached, the system then sets the specified coordinates thereof into the registers.

3,518,514

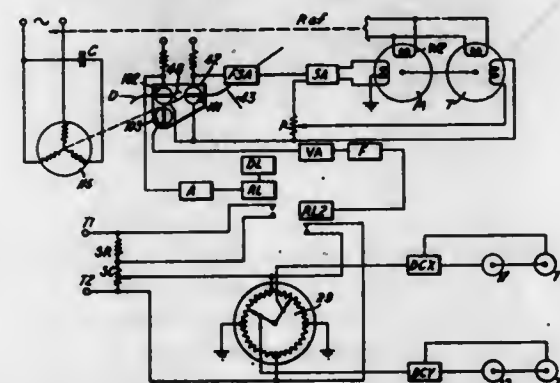
OUTLINE FOLLOWING APPARATUS

Brian Yoxall Moss, Norbury, Surrey, England, assignor to Morfax Limited, a company of Great Britain
Filed July 30, 1968, Ser. No. 748,782
Claims priority, application Great Britain, May 9, 1968, 22,027/68

Int. Cl. G05b 19/04

U.S. Cl. 318-640

6 Claims



An outline following device includes a stop circuit responsive to a lateral marking adjacent to the outline being followed. The device includes a follower head having a rotatable member supporting an oscillatory mount for light-sensitive devices. One or more of such devices serve as the primary control for the follower head so as to impart steering motion to the rotatable member and said steering motion is coupled to co-ordinate drive systems for displacing the follower head around the outline to be followed. The mount includes an additional light-sensitive device which is coupled to a stop circuit which prevents displacement of the follower head in response to the lateral marking.

3,518,515

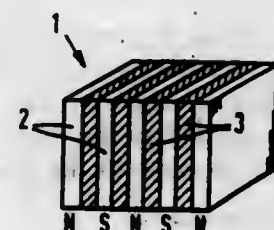
ELECTRONIC DRIVING CIRCUIT

Robert W. Reich, Via Nosedà 8, CH-6977, Ruvigliana, Switzerland
Filed Sept. 10, 1968, Ser. No. 758,818
Claims priority, application Switzerland, Feb. 23, 1968, 2,920/68

Int. Cl. H02k 33/10

U.S. Cl. 318-128

9 Claims



An electronic driving circuit, particularly for time-pieces, comprising a mechanical oscillator, at least one permanent magnet, a transistor, and a coil arrangement for excitation and drive, wherein the permanent magnet consists of a magnet matrix made up of several plates disposed next to one another. The magnet matrix overdriving the coil arrangement generates a chopped direct voltage or an alternating current voltage in the excitation coil which is rectified and applied to the driving coil by means of a resonance amplifier; the latter may be designed with regard to its resonance curve such that with the correct frequency the correct value of the driving current results.

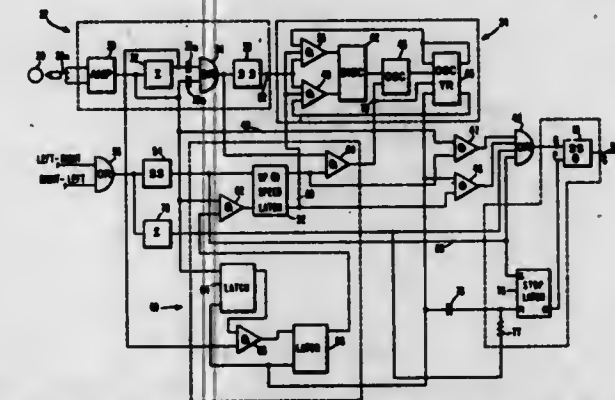
3,518,516

STEPPING MOTOR CONSTANT VELOCITY DRIVE

Joseph P. Pawletko, Eastwell, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 26, 1967, Ser. No. 693,366
Int. Cl. H02p 1/52

U.S. Cl. 318-138

10 Claims



A stepping motor is brought up to speed by a closed loop feedback control system, and is automatically switched to an open loop oscillator control system when it reaches speed.

3,518,517

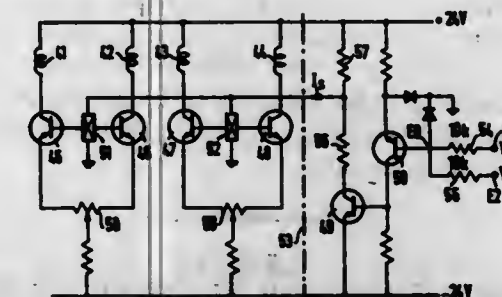
METHOD AND APPARATUS FOR CONTINUOUS REVERSAL OF BRUSHLESS DC MOTORS

Erich Rainer, Nuremberg, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed July 25, 1967, Ser. No. 655,870
Claims priority, application Germany, Aug. 12, 1966, 8 105,331

Int. Cl. H02k 29/00

U.S. Cl. 318-254

6 Claims



A brushless DC motor having motor windings and a control input connected to the motor windings for forward and reverse operation of the motor, is continuously reversed by superimposing an alternating electrical signal upon a direct electrical signal to produce a resultant superimposed electrical signal. The resultant superimposed electrical signal is applied to the control input of the motor in a manner whereby the phase sequence and motor torque for the direction of rotation of the motor is controlled in accordance with the polarity of the arithmetic average magnitude of the resultant electrical signal.

3,518,518

AUTOMATIC FIELD REGULATION FOR A SHUNT FIELD MOTOR FOR REGENERATIVE BRAKING

David E. Ford, Jr., and William J. Hudson, Milwaukee, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Continuation-in-part of application Ser. No. 404,350, Oct. 16, 1964. This application July 26, 1967, Ser. No. 656,302

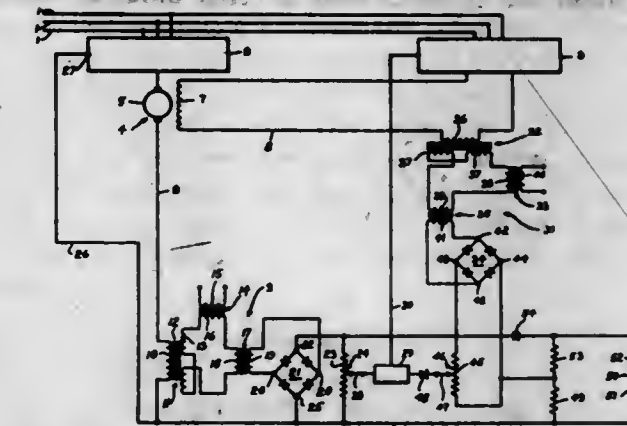
Int. Cl. H02p 5/06

U.S. Cl. 318-308

4 Claims

Four embodiments disclose a shunt field motor with a D-C transformer in the armature circuit and another D-C transformer in the field circuit providing feedback

signals proportional to load and to field flux. A detector compares the feedback signals and transmits an error signal to control field excitation. The first embodiment employs the conductance of a back-biased diode to the



flux feedback to the armature feedback to limit field strengthening; and the third and fourth embodiments employ a Zener diode to limit field strengthening. The second embodiment discloses a controllable excitation source.

3,518,519

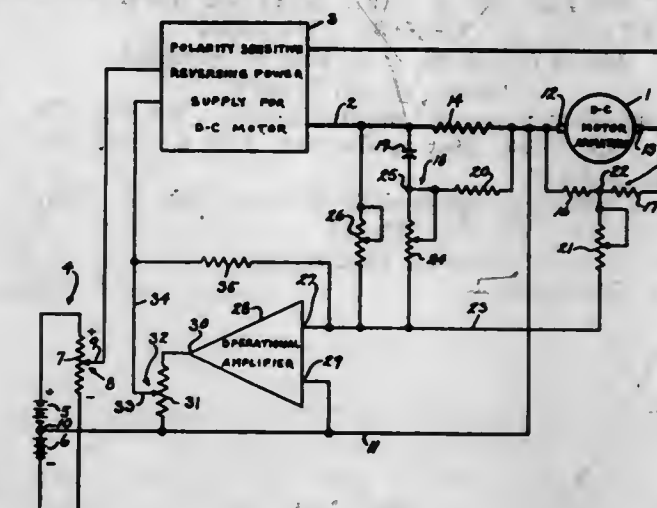
RIPPLE ELIMINATING ARMATURE FEEDBACK D-C MOTOR SPEED CONTROL CIRCUIT

John E. Callan, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 20, 1967, Ser. No. 676,861

Int. Cl. H02p 5/00

U.S. Cl. 318-308

9 Claims



A series resistor and a common base line are connected to one armature terminal of a shunt D-C motor, and a voltage divider is connected across both terminals. Three potentiometers which have ends in common connection to a summing point, are connected, respectively, to the voltage divider, to an R-C differentiating circuit across the series resistor, and to the series resistor. An operational amplifier is connected across the base line and the summing point. The outputs of the operational amplifier and a reference signal source are compared in an armature power supply producing an error signal to control the power supply.

3,518,520

SPEED CONTROL CIRCUITS WITH LINE VOLTAGE COMPENSATION FOR D.C. MOTORS

James V. Molnar, Lake Park, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 1, 1967, Ser. No. 687,199

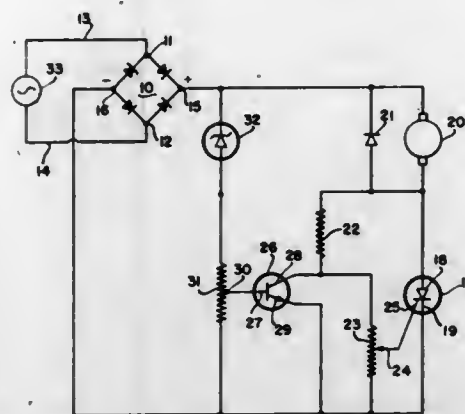
Int. Cl. H02p 7/28

U.S. Cl. 318-331

2 Claims

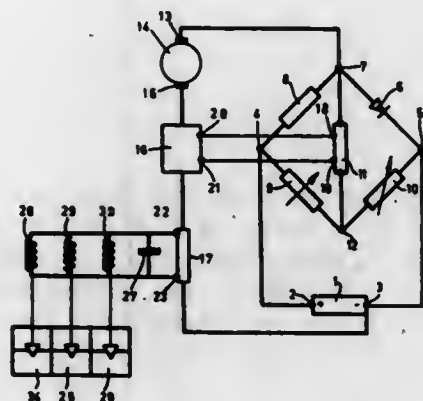
A circuit for controlling the speed of a D.C. motor from a full-wave rectified A.C. voltage source employs a

single SCR having a triggering voltage supplied from a variably tapped resistance voltage divider connected in series with the motor armature across the voltage source. A transistor has its base bias obtained from a resistance divider connected in series with a Zener diode across the



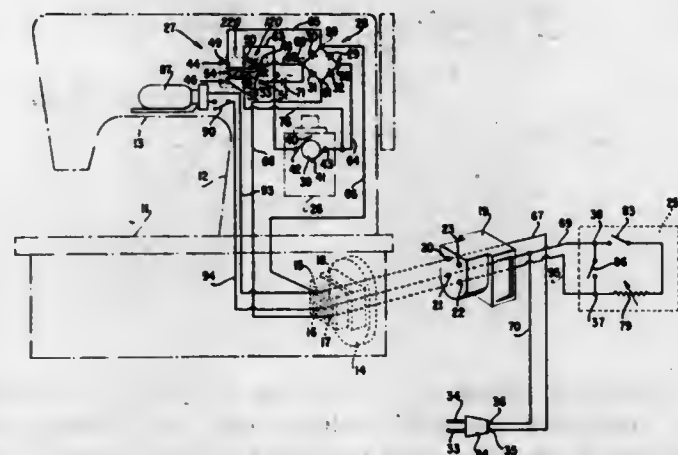
voltage source. The collector-emitter circuit of the transistor is connected to shunt the tapped resistance. Polarity is such that increased positive base bias voltage drives the transistor further into conduction to shunt more current around the tapped resistance and lower the triggering voltage, thus compensating for the increased line voltage.

3,518,521
ELECTRIC CIRCUIT SYSTEM FOR CONTROLLING THE SPEED OF A D.C. MOTOR AND OF AT LEAST ONE ACCESSORY THEREOF
Pierre Gladioux, 1 bis Rue St. Modard, Guise, Aisne, France
Continuation-in-part of application Ser. No. 403,576, Oct. 13, 1964. This application July 6, 1966, Ser. No. 563,115
Claims priority, application France, July 6, 1965, 23,715
Int. Cl. H02p 5/06
U.S. Cl. 318—332



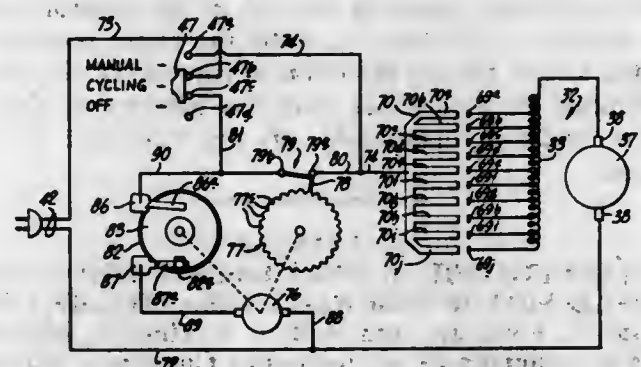
An electric circuit system for controlling the speed of a shunt wound motor and at least one of its accessory such as a manually held dental instrument, includes a Wheatstone bridge fed by a supply of D.C. current, a resistance in one arm of the bridge, the arm being passed by a motor current, means for producing adjustable reference voltage in an arm on the side of a diagonal of the bridge opposite the first arm, an amplifier in the other diagonal of the bridge for amplifying the voltage drop across this diagonal, a regulator controlled by the output of the amplifier and connected in the motor circuit, a detector controlled by the current in the motor circuit and means controlled by the detector for starting the accessory whenever the current rises above a predetermined value.

3,518,522
DUAL VOLTAGE SPEED CONTROL SYSTEMS FOR D.C. MOTORS SUPPLIED FROM A.C. VOLTAGES
Wolfgang Jaffe, Morristown, and Richard E. Wagoner, Denville, N.J., assignors to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 29, 1968, Ser. No. 701,369
Int. Cl. H02p 7/14
U.S. Cl. 318—349



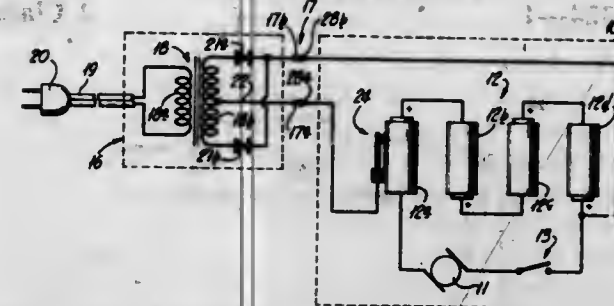
A circuit for controlling the speed of a D.C. motor is adapted to be supplied from either high or low A.C. voltages having a voltage ratio of approximately 2 to 1 and employs a bridge rectifier having its input terminals connected to either of the two A.C. voltages in series with an operator-adjustable resistance speed controller. A two-position d.p.d.t. switch connects the D.C. motor to the bridge rectifier so that, in one position of the switch and with the low A.C. voltage applied, full-wave rectified A.C. voltage is applied to the motor and a capacitor is connected in parallel with the motor. In the other position of the switch and with the high A.C. voltage applied, half-wave rectified A.C. voltage is applied to the motor and the capacitor is isolated from the application of any voltage. This circuit provides substantially the same speed versus controller characteristics for either A.C. voltage application and without any internal modification of the motor and/or controller.

3,518,523
CONTROL MEANS FOR BLENDER OR THE LIKE
Lauren O. Main, Brown Deer, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 12, 1967, Ser. No. 645,331
Int. Cl. H02p 1/04, 5/00, 7/00
U.S. Cl. 318—443



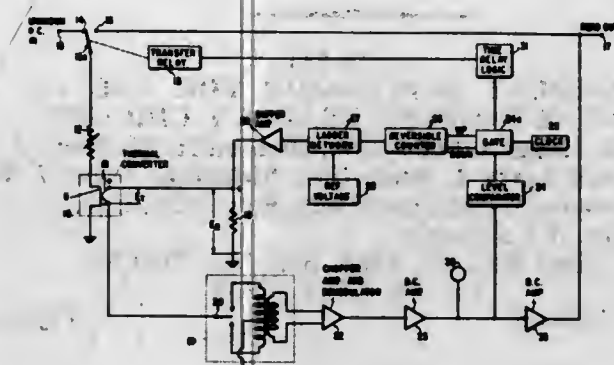
Automatic intermittent mechanical control for a blender whereby the blender motor may be set to cycle and when so set the motor automatically runs for a brief period, then stops, then runs for a brief period, and so on, for a selected predetermined number of cycles, greatly to speed up a chopping or other function performed by the blender.

3,518,524
CORDLESS ELECTRIC APPLIANCE
Leon M. Roszyk, Berwyn, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 3, 1967, Ser. No. 686,647
Int. Cl. H02j 7/00
U.S. Cl. 320—2



Device for quick charging a nickel cadmium battery wherein a temperature sensing means is provided to sense the temperature of the casing of the battery and this temperature sensing means includes a switch connected in series with the circuit comprising the charging source and the battery so that when the temperature reaches a predetermined value the charging of the battery is terminated until the temperature falls below such predetermined value.

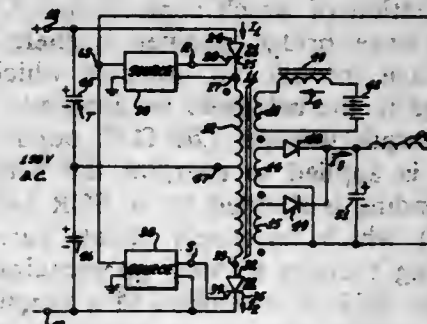
3,518,525
SYSTEM PROVIDING A D.C. VOLTAGE EQUAL TO THE R.M.S. VALUE OF AN UNKNOWN A.C. VOLTAGE
James J. Duckworth, Bridgeport, Norbert Schnog, Westport, and Alfred B. Muller, Trumbull, Conn., assignors to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed July 19, 1968, Ser. No. 746,654
Int. Cl. G01r 5/26
U.S. Cl. 321—1.5



An unknown A.C. voltage is applied to the input heater of a thermal converter and a D.C. voltage appears at the output thereof of a value related to the R.M.S. value of the input voltage. This output voltage is opposed by a reference D.C. voltage incrementally developed across a precision resistor. The error, or difference between these opposed voltages is amplified and applied to a level comparator which operates a gating circuit to command clock signals to operate a reversible pulse counter to count up or down depending on the sense of the error. The counter switches connections between a resistance ladder summing network and a reference voltage to supply an output voltage which varies incrementally for each count. This output voltage is passed through a buffer amplifier and applied to the precision resistor as the reference D.C. voltage opposing the output voltage from the thermal converter. When a voltage balance is reached, the counter stops counting and the voltage produced by the counting process is the fixed value appearing across the precision resistor. A short time after and responsively to the volt-

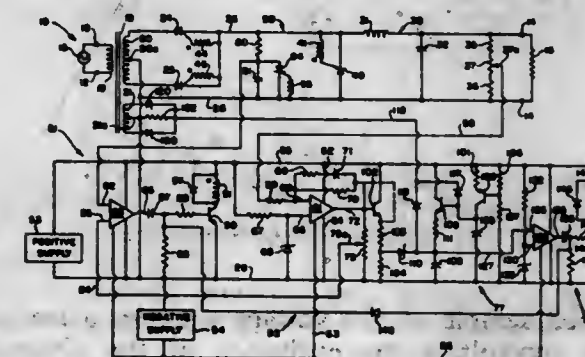
age balance reached as signaled by the counter stopping, a transfer switch is automatically operated to remove the unknown A.C. voltage from the input of the thermal converter and to substitute therefor a variable D.C. voltage obtained from a D.C. amplifier having an input signal equal to the difference between the reference voltage now fixed across the precision resistor and the output voltage of the thermal converter due to the input voltage now supplied by the output of the D.C. amplifier. Thus the D.C. amplifier, by negative feedback servo action, reaches an output level at which the net input is zero. Under these conditions the output of the D.C. amplifier is equal to the R.M.S. value of the original unknown A.C. input voltage.

3,518,526
SWITCHING REGULATOR
Luther L. Genuit, Scottsdale, Ariz., assignor to General Electric Company, a corporation of New York
Substituted for abandoned application Ser. No. 591,204, Nov. 1, 1966. This application Dec. 16, 1968, Ser. No. 786,823
Int. Cl. H02m 1/08, 3/22, 7/44
U.S. Cl. 321—2



A pair of silicon controlled rectifiers, a power transformer and a diode convert a relatively large value of unregulated D.C. voltage to a relatively small value of regulated D.C. voltage.

3,518,527
SCR POWER SUPPLY WITH INHERENT LINE REGULATING FEATURE
Robert E. Russell, Charlottesville, Va., assignor to Basic Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed May 1, 1968, Ser. No. 725,635
Int. Cl. H02m 1/08
U.S. Cl. 321—18



A regulated power supply having phase controlled SCR's in a full wave rectification configuration, being triggered by a modified pedestal-cosine ramp signal and utilizing a third SCR as a type of free-wheeling diode. The third SCR is triggered under control of a filter-input voltage integral system to regulate for variations in the alternating current source voltage.

3,518,528

GENERATOR VOLTAGE REGULATOR WITH REACTOR SENSING MEANS

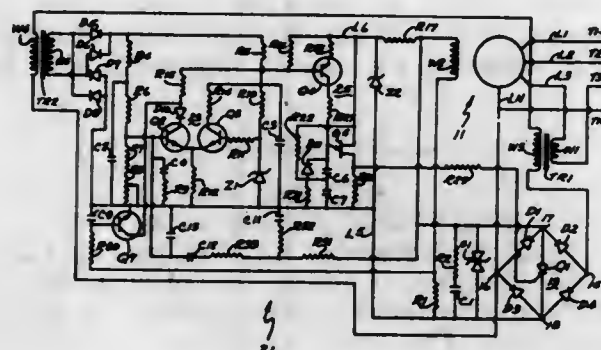
Waldo J. Friedrich, Highland, Ill., assignor to Basler Electric Company, Highland, Ill., a corporation of Illinois

Filed Oct. 20, 1967, Ser. No. 676,758

Int. Cl. H02p 9/30, 9/38

U.S. Cl. 322-25

7 Claims



Apparatus is disclosed for regulating the output voltage of an A.C. generating system having a field winding the D.C. energization of which controls the A.C. output voltage. A full-wave bridge rectifier is energized from the output voltage through an inductor which permits the input voltage to the bridge to be dropped in relation to the system output voltage. The D.C. output from the bridge rectifier is applied to energize the field winding and the field winding is shunted by an SCR (silicon controlled rectifier) which selectively shunts current away from the winding thereby to vary its energization. The duty cycle of the SCR is controlled as a function of the system output voltage thereby to maintain the output voltage at a preselected level.

3,518,529

GENERATOR VOLTAGE REGULATOR

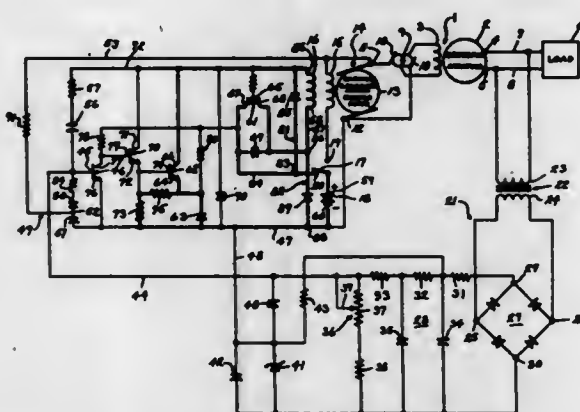
Aloysius W. Pratt, New Carlisle, Ohio, assignor to Kohler Co., Kohler, Wis., a corporation of Wisconsin

Filed Aug. 8, 1967, Ser. No. 659,125

Int. Cl. H02p 9/30

U.S. Cl. 322-28

10 Claims



A rectified sample of line voltage provides a feedback signal for controlling the excitation of the alternator. Cascaded NPN transistors and a PNP transistor on opposite sides of the field winding of the exciter control field current supplied by a battery. An NPN transistor detector receiving the feedback signal controls the cascaded NPN transistors, which control the PNP transistor. The exciter field winding discharges through blocking diodes against battery polarity. The transistor detector is also capacitively coupled to the exciter armature for stabilization and to the exciter field winding for switching efficiency.

3,518,530

ELECTROCHEMICAL PROCESS FOR STUDYING AND DETERMINING THE NATURE OF FLUID-CONTAINING UNDERGROUND FORMATIONS

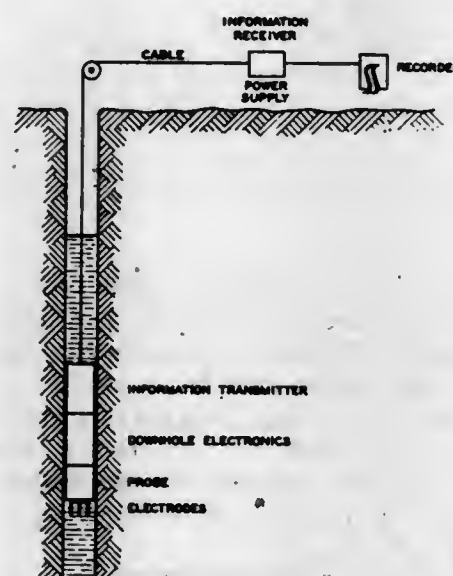
Homer M. Wilson, Houston, Tex., assignor to Petro-lite Corporation, Wilmington, Del., a corporation of Delaware

Filed Oct. 17, 1966, Ser. No. 587,178

Int. Cl. G01v 9/00

U.S. Cl. 324-1

2 Claims



Electrochemical process for studying and determining the nature of fluid-containing underground formations wherein a metal test specimen electrode together with a metal current electrode and a metal reference electrode is lowered through a borehole in said formation, the polarization characteristics of the metal of the test specimen are measured and said polarization characteristics are correlated with the fluids of the formation and said formation generally.

3,518,531

TRANSIENT SUPPRESSOR FOR USE IN MAGNETOMETER READOUT CIRCUITS

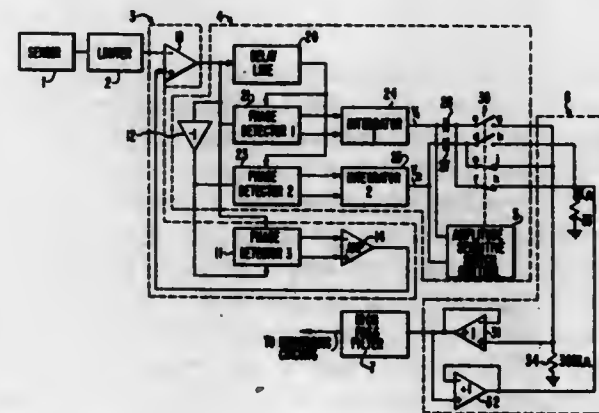
George R. Huggett, Sunnyvale, Richard A. McBride, Palo Alto, and Larry J. Augustine, Mountain View, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Feb. 23, 1968, Ser. No. 707,655

Int. Cl. G01r 33/08

U.S. Cl. 324-5

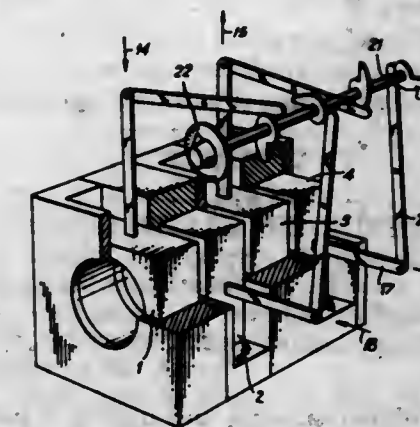
5 Claims



The readout circuit comprises in sequence a limiter, a square wave symmetry control circuit, a frequency discriminator and a transient suppressor. The frequency and amplitude modulated sinusoidal magnetometer signal is translated into square waves by the limiter. Since the amplitude modulation would cause the square waves to be asymmetrical and degrade the performance of the

circuit, the square wave symmetry control circuit generates an error signal which is used to eliminate the effects of amplitude modulation. The frequency discriminator produces an output signal which varies in accordance with the input frequency from the magnetometer. This output signal when plotted against input frequency comprises a ramp or sawtooth, with a period of 1000 Hz., such that the sawtooth repeats for each 1000 Hz. increment of input frequency. A second phase detector produces an identical sawtooth output shifted in frequency by 500 Hz. with respect to the first. A logic switch sensitive to the amplitude of each of the sawtooth waves switches the following circuits between the frequency discriminator outputs to avoid signal distortions which develop at the transition points of the sawtooth waves. A transient suppressor prevents transients from saturating the following filter circuits when different D.C. levels exist on the discriminator outputs at the time of switching. By feeding back the signal being monitored to the output of the unused channel of the frequency discriminator, the same signal is forced to be present on both channels when switching takes place.

ured for the purpose of determination of said properties; some of the coils are centered about individual non-co-



incident axes; the coils are surrounded by the material or the material is surrounded by the coils.

3,518,532

PENNING PUMP POWER SUPPLIES

James English, Crawley, Sussex, England, assignor to Edwards High Vacuum International Limited, Crawley, England, a British company

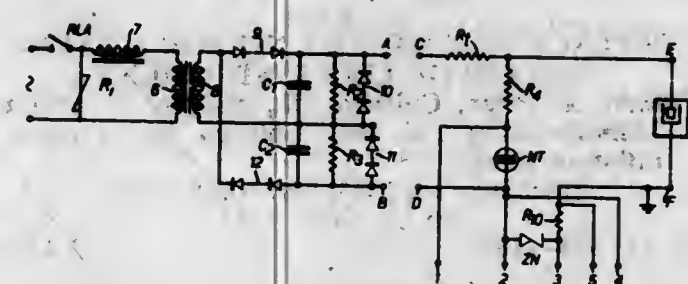
Filed Mar. 7, 1968, Ser. No. 711,316

Claims priority, application Great Britain, Mar. 10, 1967, 11,412/67

Int. Cl. G01n 27/00; H02m 7/10; H01l 13/30

U.S. Cl. 324-33

1 Claim



A Penning pump power supply in which the secondary of the supply transformer is provided with a bridge rectifier voltage doubler circuit. A measuring circuit is interposed between this circuit and the Penning pump for the purpose of measuring the current and voltage conditions of the pump when in use. This circuit also incorporates excess- and surge-current protection devices which serve to disconnect the supply if necessary. The pump current is also limited by providing a high reactance at the transformer. This can be supplemented by placing a thermistor at the pump input.

3,518,533

ELECTROINDUCTIVE SENSING DEVICE WITH ADJUSTABLE COIL

Anders Ingvar Arnelo, Vasteras, Sweden, assignor to Essam Metotest AB, Skutumpah, Sweden

Filed Jan. 20, 1967, Ser. No. 610,511

Claims priority, application Sweden, Feb. 14, 1966, 1,862/66

Int. Cl. G01r 33/12

U.S. Cl. 324-40

1 Claim

A system of probe coils for the non-destructive electroinductive testing of materials wherein the material to be tested is moved in the axial direction of the coils or the coils are moved in the axial direction of the material, in such a way that the electrical characteristics of the coils vary as a function of the properties of the material, the variations of said electrical characteristics being meas-

3,518,534

MAGNETOMETER EMPLOYING DUAL THIN MAGNETIC FILM TRANSDUCERS

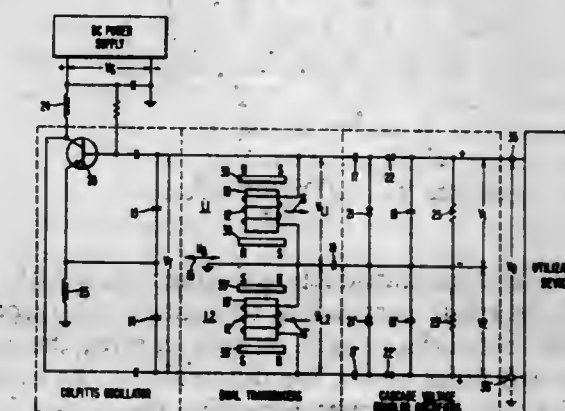
Clifford J. Bader, West Chester, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Dec. 19, 1967, Ser. No. 691,901

Int. Cl. G01r 33/02

U.S. Cl. 324-43

13 Claims



The present disclosure describes a magnetometer or magnetic field sensing device which utilizes a self-controlled oscillator for generating a constant radio frequency voltage, a pair of thin magnetic film transducers sensitive to the magnetic fields applied thereto, and circuits for providing an output signal varying in amplitude and polarity in response to said applied magnetic fields.

3,518,535

THIN FILM GRADIOMETER WITH TRANSDUCER WINDINGS CONNECTED IN SERIES AS PART OF THE RESONANT CIRCUIT OF THE ENERGIZING SOURCE

Wilmer S. Powell, Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Feb. 27, 1968, Ser. No. 709,590

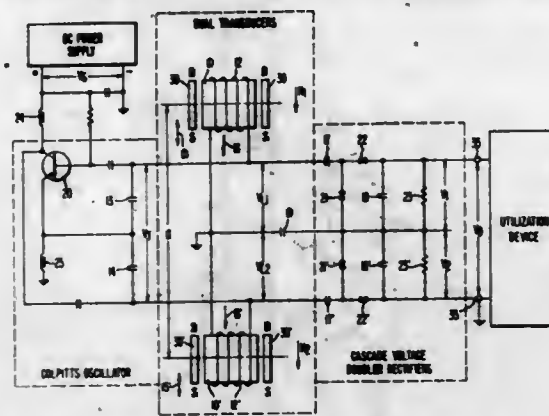
Int. Cl. G01r 33/02

U.S. Cl. 324-43

9 Claims

The present disclosure describes a gradient magnetometer for comparing the magnetic field strengths at two spatially separated points. The magnetometer utilizes a self-controlled oscillator for generating a constant radio frequency voltage, a pair of thin magnetic film transducers magnetically biased to the same sense and circuits

for providing an output signal having an amplitude which is substantially proportional to the magnetic field gradient



and to the transducer spacing and having a polarity corresponding to the sense of the gradient.

3,518,536

MECHANO-ELECTRICAL TRANSDUCTION SYSTEM HAVING A PAIR OF ELECTRICAL SENSING NETWORKS ARRANGED TO BE TRIGGERED ALTERNATIVELY

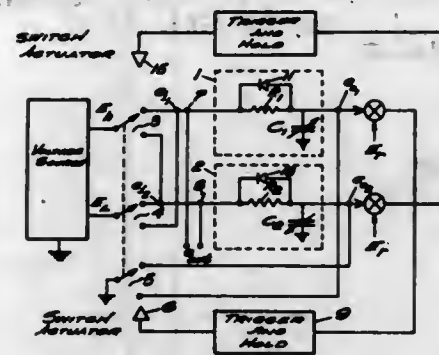
Shih-Ying Lee and Yao T. Li, both of Huckleberry Hill, South Lincoln, Mass. 01773

Filed Nov. 8, 1967, Ser. No. 681,371

Int. Cl. H03k 3/26, 3/281; G01r 27/00

U.S. Cl. 324-57

17 Claims



Mechano-electrical transduction through the use of sensing passive electrical parameters to control the response times of two networks, which in turn control the pulse duration of two pulse trains, the difference in the average values of the two pulse trains providing the output information.

3,518,537

APPARATUS AND METHOD FOR DETERMINING THE CAPACITANCE AND CONDUCTANCE OF CAPACITORS

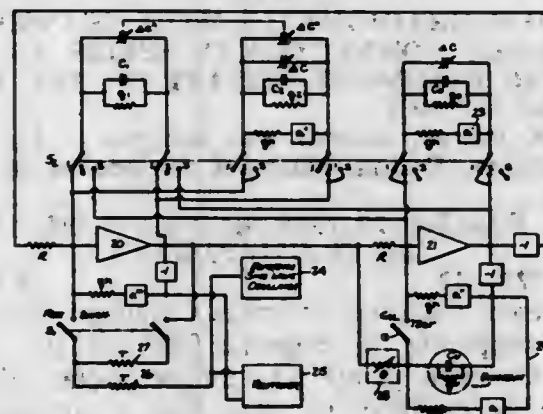
Richard McFee, 481 S. Beech St., Syracuse, N.Y. 13210

Filed Nov. 28, 1967, Ser. No. 686,093

Int. Cl. G01r 11/52, 27/26; H03b 3/04

U.S. Cl. 324-60

16 Claims



A method and the circuitry for determining the capacitance and conductance of an unknown capacitor as a

function of known variables is disclosed. Specifically, an oscillator having at least one stage composed of an integrating operational amplifier and a known effectively lossless feedback capacitor, has the unknown capacitor connected in parallel with the feedback capacitor. This changes the frequency and dampens the oscillation of the oscillator. A variable conductance is then connected across the input resistor to retune the oscillator to the predetermined frequency of oscillation. A conductance connected to a variable gain stage is employed to neutralize the losses of the unknown capacitor. This thereby determines the capacitance of the unknown capacitor as a function of the variable conductance and the conductance of the unknown capacitor as a function of the conductance and variable gain of the feedback loop.

A method and the circuitry for obtaining two substantially equal and substantially lossless ideal capacitors is also disclosed. This is obtained by compensating by means of feedback loops for the conductance of the capacitors and by shimming the capacitors until the capacitors are equal to each other.

The above method and circuit may also be used to determine the value of the capacitors, if the neutralizing conductance and shim capacitance are known.

A method and the circuitry for measuring the change in frequency and amplitude of oscillation of the oscillator is also disclosed. This is obtained by connecting a standard oscillator to the oscillator through a resistive network which dampens the differential oscillation and by measuring the voltage across the resistive network. This voltage will be zero when both oscillators are at precisely the same frequency and amplitude of oscillation.

3,518,538

REPLACEABLE METER UNIT FOR A TACHOMETER OR LIKE INSTRUMENT

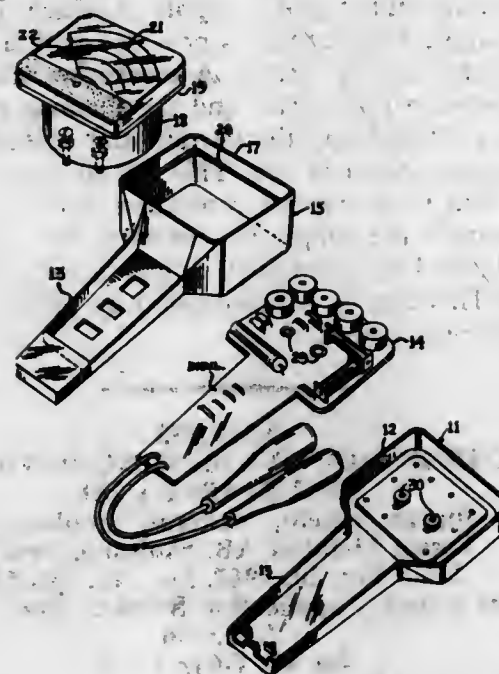
Gilbert A. Pruss, Chicago, Ill., assignor to Milton Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois

Filed June 16, 1967, Ser. No. 646,662

Int. Cl. G01p 3/42

U.S. Cl. 324-169

2 Claims



A tachometer or like instrument having a replaceable meter unit mounted within a holder, which holder and meter unit are detachably connected in assembled relation by conductor screws incorporated as a part of the electric circuit of the meter unit and the circuit of the instrument panel of the tachometer.

3,518,539

TIME ANALYZERS FOR COUNTING-RATE CHANGE MEASUREMENT

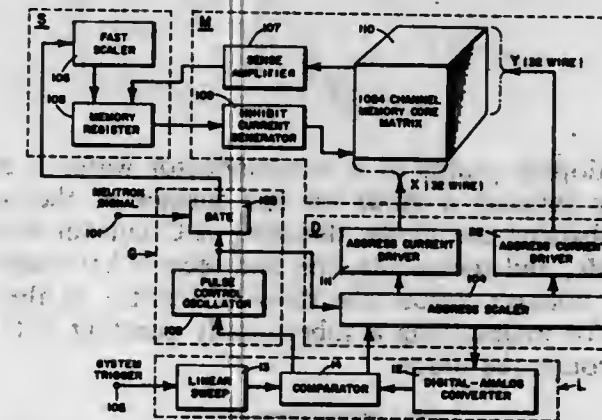
Noboru Amano, Mito-shi, and Hirotsuka Sasaki, Hirakata-shi, Japan, assignors to Japan Atomic Energy Research Institute, Tokyo, Japan, and Matsushita Electric Industrial Co., Ltd., Osaka, Japan, both corporations of Japan

Continuation-in-part of application Ser. No. 355,326, Mar. 27, 1964. This application June 26, 1967, Ser. No. 648,855

Int. Cl. G01r 23/16, 27/02

U.S. Cl. 324-77

5 Claims



A time analyzer for counting-rate change measurement including a delay circuit for delaying, by different time lengths for successive repetitions, zero time signals which are repeatedly produced in synchronism with the start of each repetition of sequential phenomena to be measured, a gate circuit triggered by the output of the delay circuit for passing input signals therethrough during a constant channel time width, a high-speed scaler circuit for counting the input signals that pass through the gate and correspond to the phenomena to be measured, and a memory device having a plurality of addresses for storing the count of the input signals for respective time intervals in respective addresses corresponding to channels on the time axis and determined by the triggering of the gate circuit.

3,518,540

FREQUENCY MEASURING APPARATUS HAVING A VARIABLE TIME BASE

Eric Roberts, London, England, assignor, by mesne assignments, to Rolls-Royce Limited, Derby, England, a British company

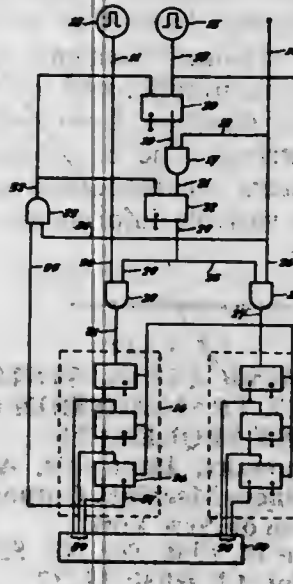
Filed July 6, 1967, Ser. No. 651,463

Claims priority, application Great Britain, July 8, 1966, 30,681/66

Int. Cl. G01r 23/00

U.S. Cl. 324-79

2 Claims



The disclosure of this invention pertains to apparatus wherein an unknown frequency is measured by simul-

taneously counting cycles of the unknown and cycles of a known frequency. The counting is started by the end of the cycle of the unknown frequency in which a start signal is given, and the counting is stopped by the end of the cycle of the unknown frequency in which the count of the known frequency reaches a constant. Thereby the time taken by the counting is substantially constant.

3,518,541

DIGITAL PHASE MEASURING SET

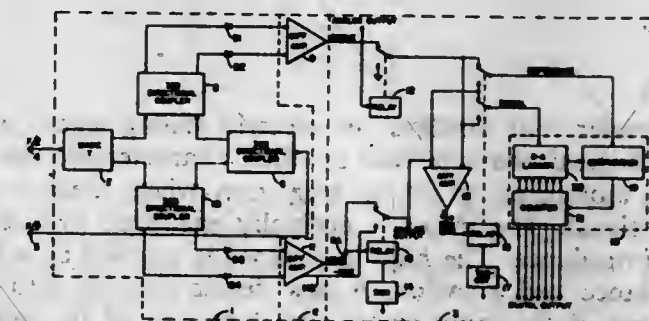
John S. Travia, Watertown, Barton E. Salkins, Jr., Chelmsford, and Leonard S. Rubin, Framingham, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Aug. 9, 1968, Ser. No. 751,548

Int. Cl. G01r 25/02

U.S. Cl. 324-84

2 Claims



A system wherein two signals, of the same frequency, but phase-shifted with respect to each other, are applied to a phase bridge. The phase bridge consists of an arrangement of 3 db directional couplers, diodes, and a magic-T. The diodes provide detected outputs, which outputs are fed into differential amplifiers. The differential amplifiers provide three outputs, one proportional to the sine of the phase shift, another proportional to the negative of the sine of the phase shift, and the third proportional to the cosine of the phase shift. One of the amplifier outputs, after processing in accordance with its sign, is applied to the reference input of an analog-to-digital converter, and another output, after similar processing, is applied to the converter signal input. The converter provides a digital output representative of phase-shift.

3,518,542

BRIDGEWIRE CURRENT DETECTOR

Hunter L. Harris, Las Cruces, N. Mex., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 18, 1968, Ser. No. 713,694

Int. Cl. G01r 5/26

U.S. Cl. 324-106

2 Claims



A bridgewire current detector of great stability and high sensitivity for use in conducting electromagnetic

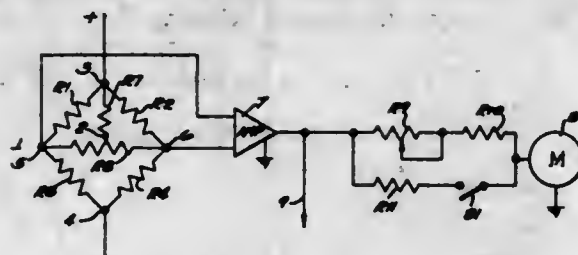
radiation hazard tests on missile systems utilizing electro-explosive initiators.

3,518,543

DEVICE FOR SETTING A METER TO TRUE ZERO
Robert S. Reams, Brookfield, Wis., assignor to General Electric Company, a corporation of New York
Filed Oct. 8, 1968, Ser. No. 765,797
Int. Cl. G01r 15/08, 1/02

U.S. Cl. 324-115

2 Claims



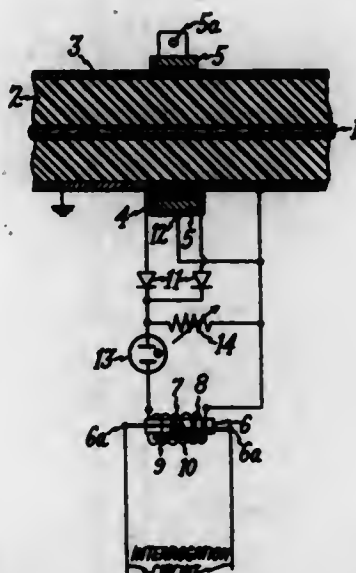
A meter that displays the electric analog signal of a physiological characteristic or other characteristic that is being monitored is set to true zero when there is no input signal. The meter is normally energized through a high impedance. The high impedance is shunted by a low impedance and a switch. A new device enables zero adjustment of the input signal and operation of the switch while adjustment is being made. Switching the low impedance into the meter circuit effects increased meter sensitivity during adjustment. Changing sensitivity causes the meter to deflect momentarily if true zero has not been attained. The eyes can perceive deflection better than they perceive a steady departure from zero.

3,518,544

FAULT DETECTION CIRCUIT FOR SHIELDED CABLE TERMINATIONS
Henry N. Tachick, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 5, 1967, Ser. No. 688,035
Int. Cl. G01r 19/16

U.S. Cl. 324-127

7 Claims



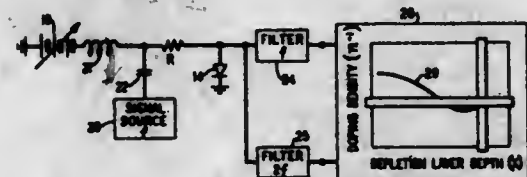
A monitoring circuit for detecting a fault current of predetermined magnitude in an insulated electric power distribution conductor characterized by including a voltage responsive electric breakdown device electrically connected with current indicating means and operable to pass current to the indicating means only when the predetermined magnitude of current in the insulated conductor is reached or exceeded.

3,518,545
METHODS AND APPARATUS FOR MEASURING SEMICONDUCTOR DOPING PROFILES BY DETERMINING SECOND HARMONIC CONTENT

John A. Copeland III, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed Apr. 25, 1968, Ser. No. 724,169
Int. Cl. G01r 31/26

U.S. Cl. 324-158

24 Claims



The doping profile of a semiconductor wafer is measured by forming a diode on one surface of the wafer, reverse-biasing the diode, directing A-C current through the diode, and measuring first and second harmonic frequency voltages across the diode. Circuitry is also disclosed for maintaining a substantially constant A-C current through the diode.

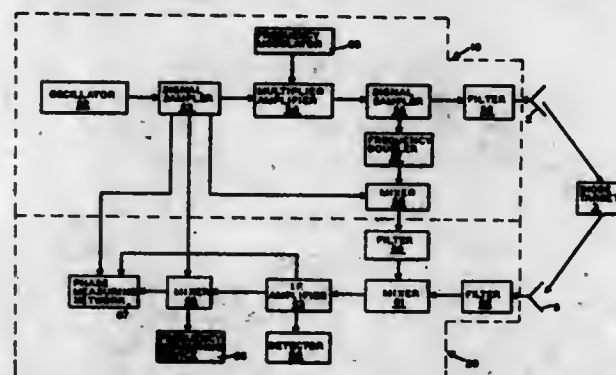
3,518,546

HARMONIC COMMUNICATION AND NAVIGATION SYSTEM

Harry A. Augenblick, Mountain Lakes, and John G. Vogler, Convent Station, N.J., assignors to Microlab/FXR, Livingston, N.J., a corporation of New Jersey
Filed Dec. 12, 1966, Ser. No. 600,894
Int. Cl. H04b 7/14, 1/38, 1/50

U.S. Cl. 325-8

15 Claims



A harmonic communication and navigation system that includes one or more non-linear elements, and a carefully shielded and filtered transmitter and receiver to permit detection of the harmonics generated by the non-linear elements. A sampled transmitter and heterodyned receiver makes the system insensitive to frequency shift and a plurality of non-linear elements are arranged so as to produce maximum reradiated harmonic field intensity in the exact direction from which the fundamental frequency arrived. The harmonics generated by the non-linear elements are modulated to permit transmission of fixed and variable information from said elements to the receiver.

3,518,547

DIGITAL COMMUNICATION SYSTEM EMPLOYING MULTIPLEX TRANSMISSION OF MAXIMAL LENGTH BINARY SEQUENCES

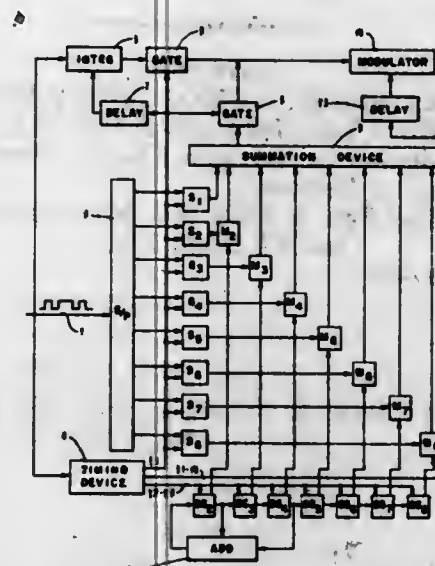
Richard F. J. Filipowsky, Huntsville, Ala., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed June 14, 1966, Ser. No. 557,471
Int. Cl. H03k 13/32

U.S. Cl. 325-42

13 Claims

A digital communication system wherein each elemental message portion is encoded into one of a predeter-

mined set of orthogonal quasi-random binary sequences and wherein a plurality of such sequences are linearly superposed for transmission. The transmitter station having a shift register PN sequence generator, a plurality of



input circuits, a plurality of multipliers and a superposing means. The receiving station having a shift register PN sequence generator, multipliers and integrators for recovering the transmitted information.

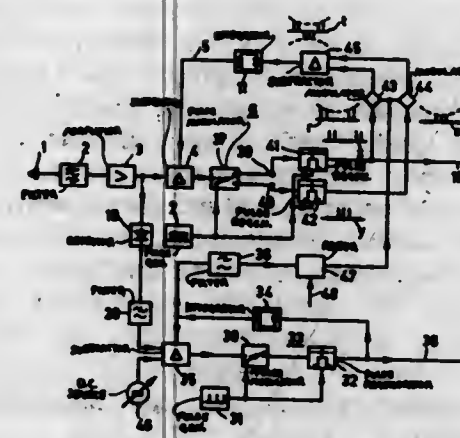
3,518,548

PULSE DELTA MODULATION TRANSMISSION SYSTEM HAVING SEPARATELY TRANSMITTED LOW-FREQUENCY AVERAGE LEVEL SIGNAL

Johannes Anton Grootes and Karel Riemens, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 16, 1967, Ser. No. 683,602
Claims priority, application Netherlands, Nov. 22, 1966, 6616394

U.S. Cl. 325-38

10 Claims



A pulse delta modulation system in which an average level control voltage controlled by the average level of the signals is transmitted by a separate transmitting device, for example another delta modulation system. The energy content of the pulses applied to the local receiver of the first delta modulation system is modulated by the separate transmitting device. Thus the amplitude and frequency of the pulses varies with the average level of the modulating signal, reducing quantizing noise for low level signals and the bandwidth required for transmission. At the remote receiver, the received average level signal is used to modulate the energy content of the regenerated pulses.

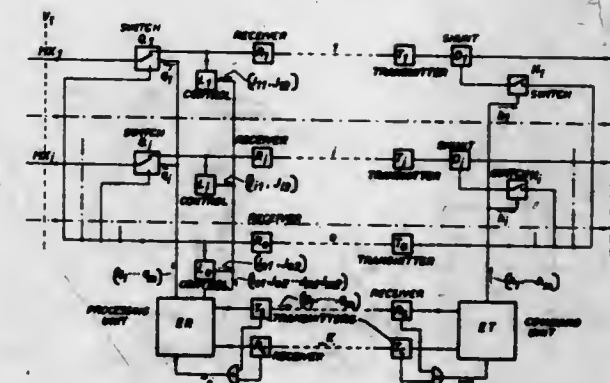
3,518,549

AUTOMATIC PROTECTION SWITCHING SYSTEM FOR COMMUNICATION CHANNELS

Luigi Sarat, Milan, Italy, assignor to Societa Italiana Telecomunicazioni S.p.A.
Filed Oct. 24, 1963, Ser. No. 504,443
Claims priority, application Italy, May 6, 1963, 10,355/63

U.S. Cl. 325-56

7 Claims



A work-reserve switching system is provided for a plurality of communication channels which include a plurality of working channels and a reserve channel. There are a transmitter and a receiver for each channel; and when a fault condition develops at any working channel receiver, a fault indication signal is given which substitutes the transmitter and receiver of the reserve channel for the transmitter and receiver of the faulty working channel.

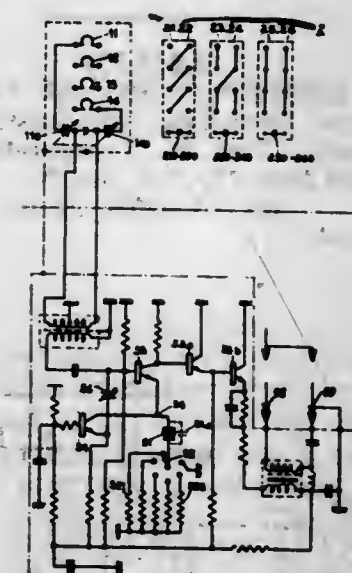
3,518,550

SELECTIVE LOOP ANTENNA SYSTEM FOR RECEIVERS

Albert Bonbonleix and René Chaze, Paris, France, assignors to CSF-Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed June 28, 1966, Ser. No. 561,097
Claims priority, application France, July 2, 1965, 23,248

U.S. Cl. 325-375

6 Claims



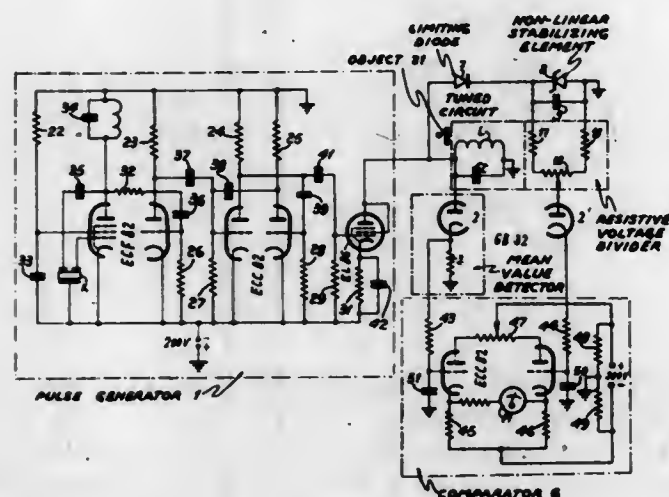
A loop antenna system for reception of high frequency waves, ensuring a very high signal-to-noise ratio in a frequency range of several octaves, comprises a loop of a number of turns which can be connected in series or in parallel, a highly selective preamplifier stage having a feedback circuit comprising a piezoelectric crystal and, inside the loop and in the immediate vicinity thereof, a ring of ferrite rods parallel to the loop axis.

3,518,551
CIRCUIT ARRANGEMENT FOR MEASURING THE DAMPING OF AN OSCILLATION
 Bohdan Carniol and Rudolf Styblo, Prague, Czechoslovakia, assignors to Tesla narodni podnik, Prague, Czechoslovakia

Filed Feb. 8, 1968, Ser. No. 704,161
 Claims priority, application Czechoslovakia, Feb. 16, 1967, 1,132/67
 Int. Cl. G08b 13/26

U.S. Cl. 328—5

10 Claims

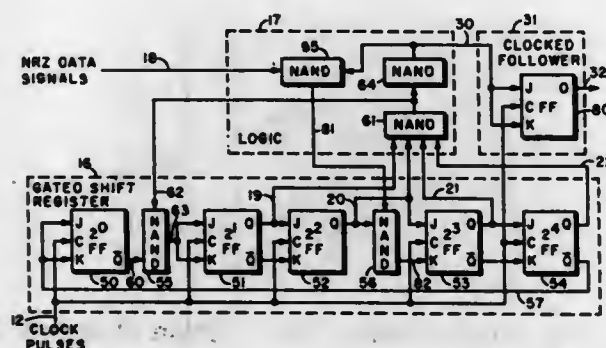


In a circuit for measuring the damping of an oscillation, a limiting diode connected to a source of free oscillations limits the peak of such oscillations to a determined magnitude. A non-linear stabilizing Zener diode connected to the limiting diode provides a cutoff voltage having the determined magnitude for blocking the limiting diode to limit the peak of the free oscillations to such magnitude. A mean value detector connected to the source of oscillations provides a voltage proportional to the mean value of the envelope of the oscillations. A resistive voltage divider connected to the Zener diode provides a voltage proportional to the peak value of the oscillations. A comparator connected to the mean value detector and to the resistive voltage divider compares the magnitudes of the voltages provided thereby.

3,518,552
MULTI-FREQUENCY SIGNAL GENERATION
 Earl F. Carlow, Scottsdale, Ariz., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
 Filed Mar. 27, 1968, Ser. No. 716,633
 Int. Cl. H03k 21/00

U.S. Cl. 328—43

11 Claims



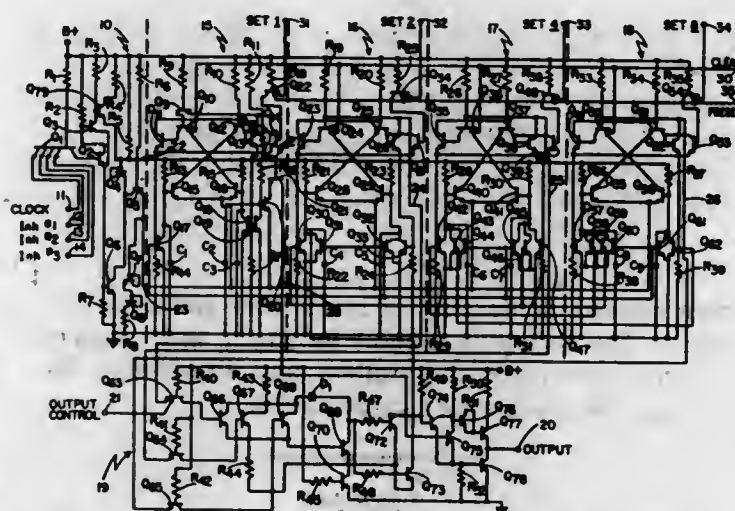
A clock driven shift-register counter consists of a chain of interconnected J-K flip-flops with gating means interposed between selected ones of the flip-flops in the chain. Such gating means are jointly controlled by an

input data signal and the state of the shift-register counter. Depending upon the data input, the modulus of the counter is selectively altered such that the counter output signal varies in frequency in accordance with the changing modulus of the counter.

3,518,553
PROGRAMMABLE FREQUENCY DIVIDER
 Shu-Kuang Ho, Chelmsford, and John J. Kardash, Acton, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
 Filed Feb. 8, 1968, Ser. No. 703,974
 Int. Cl. H03k 21/32

U.S. Cl. 328—48

12 Claims



Frequency divider circuit including four bistable stages arranged to count down through a recurring sequence of ten or sixteen combinations of operating states in response to trigger pulses. The bistable stages can be set to any of the ten or sixteen combinations prior to count-down. The circuit includes an output section which produces an output signal when the bistable stages have counted down to either a combination of operating states designating a "2" or a combination designating a "0," the particular combination being controlled by control signals.

Three decade frequency divider circuits are cascaded and additional circuitry is included to provide a divider arrangement which can be programmed to divide by any number up to 999. By employing control signals from the "hundreds" and "tens" divider circuits to the "units" divider circuit the arrangement starts re-setting the dividers to the programmed number when the "hundreds" and "tens" divider circuits are at the "0" designated combination of operating states and the "units" divider circuit reaches the "2" designated combination of operating states during a countdown. Thus, the arrangement is placed in condition to count down again immediately after an output pulse is produced indicating completion of a countdown.

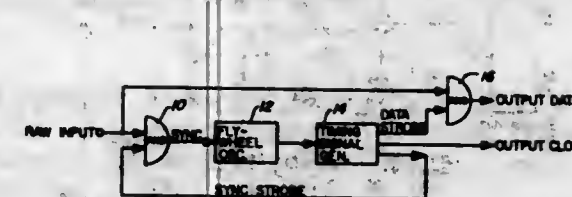
3,518,554
DETECTION OF DOUBLE TRANSITION RECORDING
 Andrew Gabor, Bedford, Mass., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
 Filed May 22, 1967, Ser. No. 640,126
 Int. Cl. H03k 3/02, 5/20

U.S. Cl. 328—63

12 Claims

A technique for detecting double transition recorded data which is substantially insensitive to any local phase shift of the input pulses, e.g. such as may occur due to pulse recording at high densities, but which responds rapidly to velocity fluctuations of the medium bearing the record. Input pulses, which are well behaved with

respect to phase shift, are derived at least once for each readout of a predetermined number of successive data strobing pulses. The resultant synchronizing pulses are then employed to control the timing in the generation



of the aforesaid strobing pulses, as well as of output clock cells, all other pulses being excluded by the use of suit-pulses. The strobing pulses further gate the input pulses to derive output data pulses whose utilization is effected by means of the output clock pulses.

3,518,555
PULSE TRAIN DETECTORS
 John A. Konotchick, Jr., Hudson, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
 Filed Dec. 7, 1967, Ser. No. 688,714
 Int. Cl. H03k 5/20

U.S. Cl. 328—110

24 Claims



Apparatus is herein disclosed for detecting and sorting pulse trains having predetermined pulse repetition frequencies (PRF's) from a multiple signal environment.

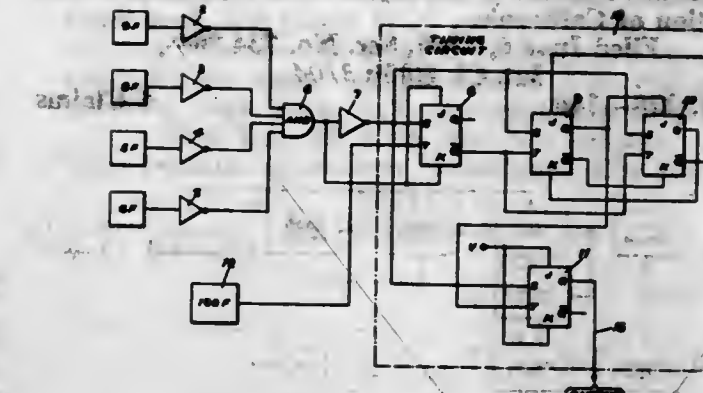
The apparatus includes a plurality of shift registers coupled together at predetermined bits thereof by coincidence gates for correlating pulse trains having constant pulse repetition intervals (PRI's) which fall within a predetermined PRF range determined by the number of bits in the shift registers and the number of bits of the shift registers which are not coupled to other ones of the shift registers. The disclosure also illustrates coupling out from the one of the shift registers pulse trains having a specific PRF, that is separating pulse trains according to their PRF.

3,518,556
MULTIPULSE DETECTOR FOR HARMONICALLY RELATED SIGNALS
 Christian Fredrik Holmboe, Bekkestua, Norway, James F. De Lorme, Irvington, N.J., and Rolf Gunnar Sommerud, Strommen, Norway, assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Delaware
 Filed Aug. 31, 1966, Ser. No. 576,297
 Int. Cl. H03d 13/00

U.S. Cl. 328—133

6 Claims

A frequency detector for detecting the lowest common frequency of a plurality of harmonically related signals comprising an arrangement of inverting amplifiers coupled to the input signals, an AND gate coupled to the inverting amplifiers for generating a coincidence pulse when the input signals are in coincidence, and an arrangement of multivibrators in the form of a counter

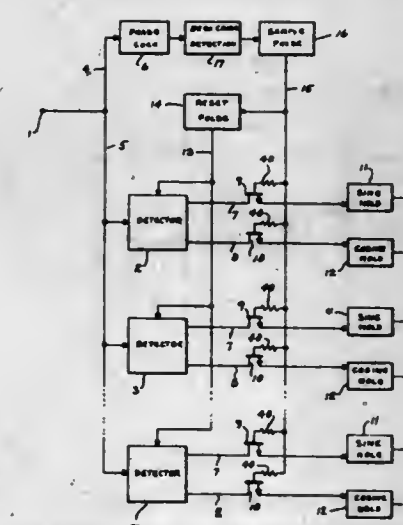


when the duration of the coincidence pulse exceeds a predetermined value.

3,518,557
CIRCUIT FOR DETECTION OF SINE AND COSINE PULSES
 Henning F. Harms, Leopoldsdorfer, near Karlsruhe, Austria, and David J. Nowak, West Allis, and Pierre E. Schmid, Whitefish Bay, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
 Filed June 12, 1967, Ser. No. 645,447
 Int. Cl. H03b 27/00

U.S. Cl. 328—139

5 Claims



A circuit for detecting the polarity or presence of orthogonal sine and cosine pulses superimposed on one another that includes a number of similar detector circuits, each detector circuit having: an electronic adder that combines an incoming signal with a feedback signal, a first electronic integrator joined to the output of the electronic adder which produces a signal output when cosine pulses to be detected are present, a second electronic integrator connected to the output of the first electronic integrator which produces a signal output when sine pulses to be detected are present, and a feedback from the output of the second electronic integrator to the electronic adder for combining a feedback signal with the incoming signal as aforesaid. The disclosure also shows the relation of control circuits to the detector circuits for sampling the output signals and synchronizing the detector circuits with the pulses of incoming sine and cosine information.

3,518,558

SIGNAL RATE CONVERTER

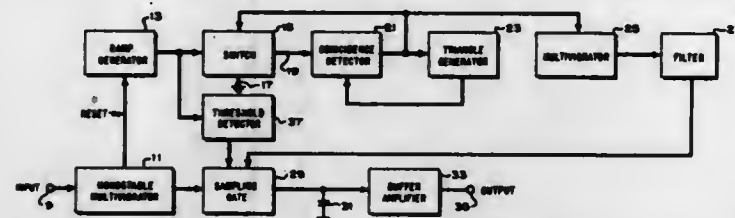
Arthur Miller, Brookline, Gerard R. Patrick, Winchester, and Daniel D. Stranberg, Arlington, Mass., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed June 6, 1968, Ser. No. 734,904

Int. Cl. H03b 3/04

U.S. Cl. 328—140

5 Claims



The time interval between successive signal events is converted to a frequency which decreases with time and which generates an analog signal that is sampled upon recurrence of the next signal event to provide an output that is directly proportional to the repetition rate of signal events.

3,518,559

PRECISION PHASE-AMPLITUDE DEMODULATOR USING TWO PAIRS OF TRANSISTORS WITH ISOLATION BETWEEN EACH PAIR

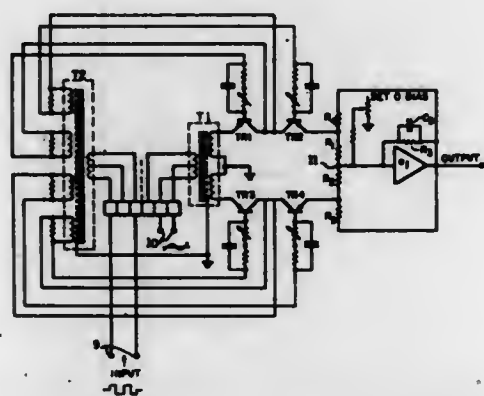
John L. Kulp, Palo Alto, Calif., assignor, by means assignments, to the United States of America as represented by the Secretary of the Army

Filed Dec. 11, 1967, Ser. No. 700,340

Int. Cl. H03d 1/06

U.S. Cl. 329—101

5 Claims



An apparatus for obtaining accuracy greater than 0.1% in the demodulation of an AC carrier. Four transistors form two switches which are connected to an amplifier through a resistance. The amplifier output is fed back to the output of each switch. The isolation of the two switches from each other and from the load produces the desirable consequences.

3,518,560

DETECTOR FOR BIPOLAR BINARY SIGNALS WITH DISTORTION CORRECTION CAPABILITY

Michel Louis Avignon, Neuilly-sur-Seine, France, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 26, 1967, Ser. No. 678,278

Claims priority, application France, Nov. 3, 1966, 82,287

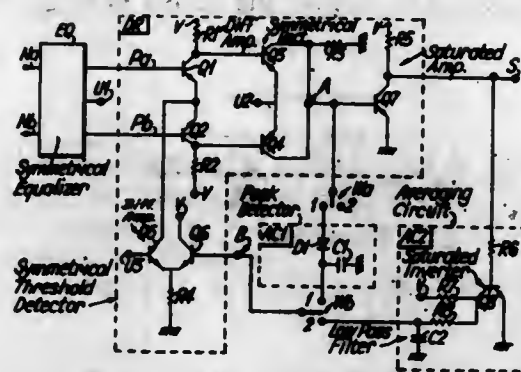
Int. Cl. H03d 1/06; H03k 5/20

U.S. Cl. 329—104

10 Claims

A differential amplifier having a threshold level and a symmetrical detector detects the bipolar pulses and delivers single polarity pulses. A feedback circuit responds to the delivered pulses to control the threshold level to overcome distortion in the bipolar signals. The feedback

circuit includes a peak detector to maintain a constant ratio of signal amplitude to threshold level, or a pulse



shaper and low pass filter to maintain the width of the output pulses constant.

3,518,561

BALANCED FM DETECTOR WITH VARIABLE RESISTANCE LOADS

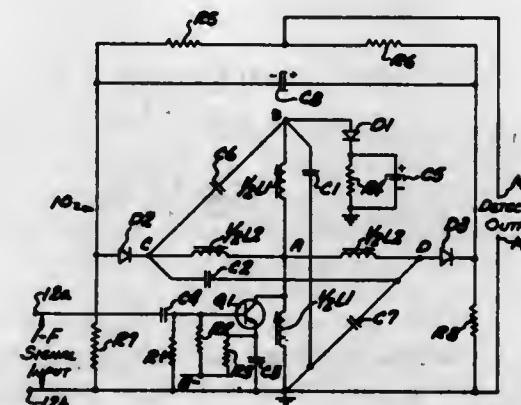
Laurel Raymond Lind, Auburn, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware

Filed June 13, 1966, Ser. No. 557,102

Int. Cl. H03d 3/10, 3/26; H04b 1/62

U.S. Cl. 329—130

10 Claims



A balanced, FM ratio detector is disclosed having a pair of coupled resonant circuits each having means for varying its effective load resistance with changes in the input signal amplitude.

3,518,562

HIGH IDLER DIODE PARAMETRIC AMPLIFIER

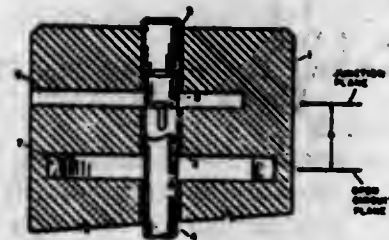
Peter Lombardo, Huntington Station, N.Y., Edmund Moley, Murray Hill, N.J., and James Wheelahan, Hauppauge, N.Y., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Oct. 14, 1968, Ser. No. 767,123

Int. Cl. H03f 7/00

U.S. Cl. 330—4.9

5 Claims



A parametric amplifier using a varactor diode which is self resonant at some frequency other than the idler frequency. The diode is artificially resonated to the idler by

placing an idler filter in the signal line at a point such that the portion of the line between the filter and the diode transforms the high impedance of the filter to a reactance equal and opposite to that of the diode at the idler frequency.

3,518,563

ELECTRONIC SYNCHRONIZATION APPARATUS

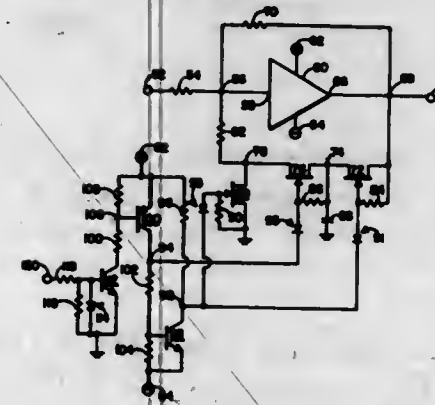
Frank W. Ainsworth, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Nov. 16, 1967, Ser. No. 683,593

Int. Cl. H03f 1/36

U.S. Cl. 330—9

7 Claims



An amplifier circuit which normally produces a proportional output signal which may be temporarily reduced to a low level to minimize transients which would otherwise occur when the amplifier output is connected to further electrical apparatus.

3,518,564

LOW LEVEL, LOW OFFSET, HIGH FREQUENCY PREAMPLIFIER CHOPPER CIRCUIT

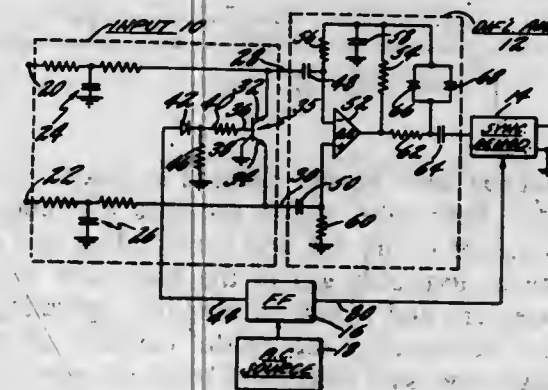
John E. Games, Granby, Richard F. Loch, Hartford, and James P. Towey, Stafford Springs, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Apr. 22, 1968, Ser. No. 723,043

Int. Cl. H03f 3/38, 3/00

U.S. Cl. 330—10

1 Claim



A DC chopper input to an AC differential amplifier utilizes a double emitter solid state switch in which each of the differential inputs is connected to a corresponding emitter of the switch, the switch shorting the inputs together in a differential fashion. The differential amplifier includes balanced AC input impedance for maximum common mode rejection as well as feedback amplitude limiting clamping means. The circuit can be driven from any suitable AC source over a wide range of frequencies, even in the order of magnitude of 10 kh.

3,518,565

CIRCUIT INCLUDING A COUPLING NETWORK FOR POWER AND NOISE MATCHING A COMMON BASE TRANSISTOR

Heiko Bruchmans and Willem Jacob Luitjen, Emmenagel, Eindhoven, and Gerrit Wolf and Adalbertus Hermannus Jacobus Nijveen van Dijkma, Nijmegen, Netherlands, assignors, by means assignments, to U.S. Philips Corporation, New York, N.Y., a corporation of Delaware

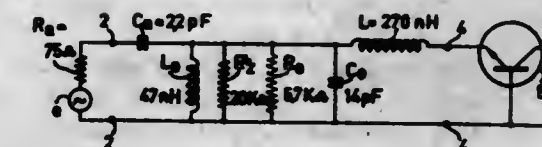
Filed Dec. 28, 1966, Ser. No. 605,486

Claims priority, application Netherlands, Dec. 30, 1965, 6517121

Int. Cl. H03M 3/04

U.S. Cl. 330—31

14 Claims



A coupling network is provided between a pair of input terminals, which may be connected to an antenna, and a common base transistor. The network includes a parallel resistive network, and a transformation network that inverts the transistor resistance. The network provides power matching for the input, and noise matching for the transistor. The parallel network may include a resonant circuit. The transformation network may be comprised of a series reactance of one kind and a shunt reactance of the opposite kind.

3,518,566

AUDIO SYSTEM WITH MODIFIED OUTPUT

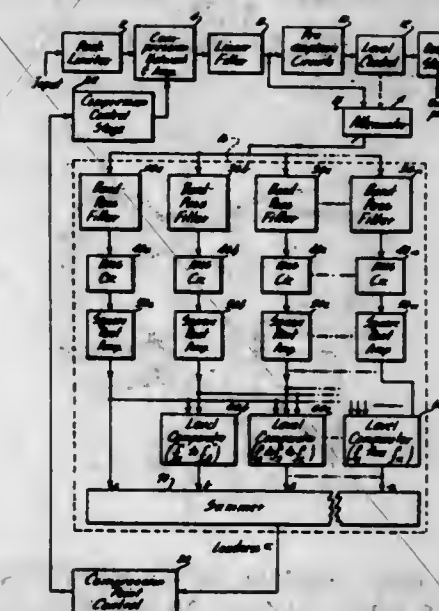
Seymour Vogel, Mount Pleasant, S.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 21, 1968, Ser. No. 777,813

Int. Cl. H03g 5/06, 7/00

U.S. Cl. 330—144

3 Claims



An adjustable feedback circuit including an adjustable loudness sensing network controls the attenuation of various signal components in the input to an audio system selectively while a frequency sensitive circuit in the system output may accentuate certain components, the total result being a selectively modified audio output.

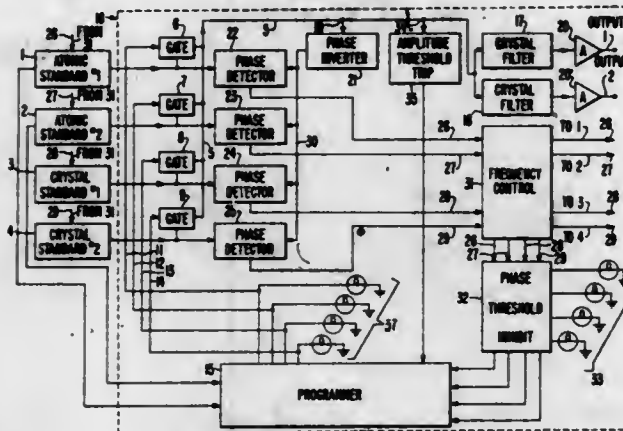
3,518,567

SEQUENTIAL FREQUENCY COMBINER FOR FREQUENCY STANDARD SYSTEMS

Alan L. Helgeson, Los Altos Hills, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Continuation-in-part of application Ser. No. 600,501, Dec. 9, 1966. This application Aug. 5, 1968, Ser. No. 750,393

Int. Cl. H03b 3/04; H03k 17/00 U.S. Cl. 331-2 6 Claims



A sequential frequency combiner for plural frequency standards is disclosed. In the frequency combiner the outputs from the plural frequency standards are maintained in a phase locked relationship with one of the standards which operates as the master. The master provides the output of the combiner. This combiner also includes circuits for monitoring the master standard and for sequentially changing masters upon a failure of the acting master standard. Such an improved frequency combiner is especially useful in, but not limited in use to, a world wide system of frequency standards employed for tracking, commanding, and communicating with manned space craft.

3,518,568

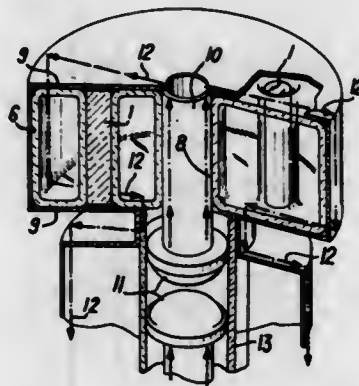
ELECTRICALLY ENERGIZED DEVICE FOR PUMPING CRYSTAL LASERS HAVING THE LASER CRYSTALS WITHIN A HOUSING CONTAINING AN IONIZABLE GAS

René Merard, 20 Residence du Parc, 91 Massy, France

Filed Feb. 27, 1967, Ser. No. 618,622

Claims priority, application France, Mar. 11, 1966, 53,206

Int. Cl. H01s 3/09 U.S. Cl. 331-94.5 2 Claims



A crystal laser pumping device comprising a transparent enclosure which contains an ionizable gas, cavities located within said enclosure and each containing a laser crystal, an electrically conductive casing surrounding said enclosure and having the shape of a cylindrical ring, and means for releasing electric energy within said casing, said released energy having the effect of ionizing said gas and creating a plasma which is also subjected to a pinch effect.

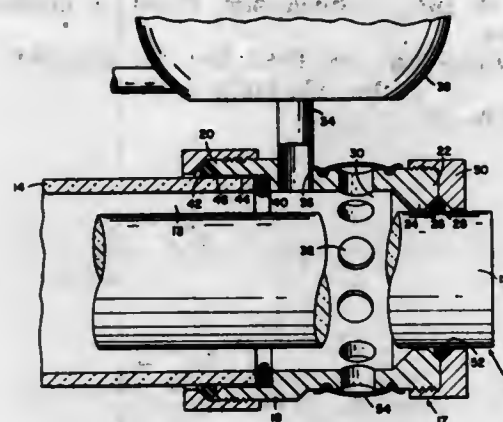
3,518,569

CIRCULATING LIQUID CLADDING SYSTEM FOR LASER RODS

William F. Otto, Huntsville, and William B. McKnight, Somerville, Ala., assignors to the United States of America as represented by the Secretary of the Army

Filed Aug. 9, 1968, Ser. No. 751,585

Int. Cl. H01s 3/00 U.S. Cl. 331-94.5 7 Claims



A fixture for supporting a laser rod in a high energy laser system. The laser rod is mounted concentrically in a transparent tube and a sheath of liquid is interposed between the rod and the tube. End seals provided with means for compensating for water expansion, due to the heating of the rod, is provided to prevent leakage. The end seals are provided with an inlet and an outlet which lead to a reservoir for circulation of the liquid.

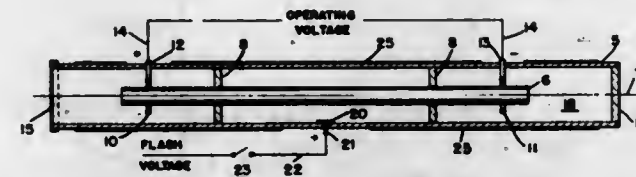
3,518,570

LASER EXCITER SYSTEM

William A. Dittich, Willow Grove, Pa., assignor to the United States of America as represented by the Secretary of the Army

Continuation of application Ser. No. 357,335, Apr. 3, 1964. This application June 2, 1969, Ser. No. 831,268

Int. Cl. H01s 3/05 U.S. Cl. 331-94.5 1 Claim



A solid-rod laser crystal element is located in a sealed translucent flash tube which provides excitation means and a resonant cavity for and surrounding said element. A charge of ionizable gas in the flash tube around the crystal element and a pair of ring-like operating-voltage electrodes surrounding the crystal element are provided in the flash tube, said electrodes being arranged in spaced relation to each other along the crystal element and connected with external insulated supply terminals for receiving operating voltage. A light-reflective electrically-conductive coating is provided on the outer surface of the flash tube and connected as a trigger element to receive a high flash voltage with respect to one of the inner electrodes, thereby to flash the charge and permit ionizing current to flow therethrough between the electrodes and to reflect light inwardly from the outer surface. One end of the flash tube is provided with a lens or window for translating the light output from the laser element externally of the casing in a beam.

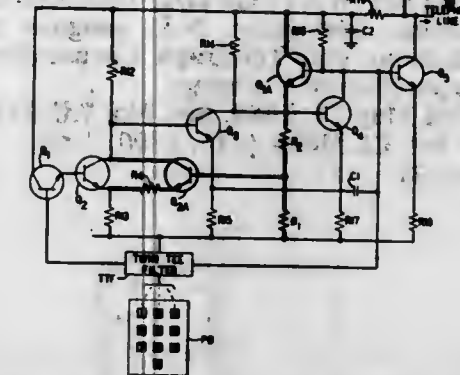
3,518,571

MULTIFREQUENCY SIGNAL GENERATOR

David Feldman, Springfield, and Tadikonda N. Rao, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed July 3, 1968, Ser. No. 743,188

Int. Cl. H03b 5/26 U.S. Cl. 331-109 15 Claims



A conventional transistor oscillator circuit is made wholly compatible with integrated circuit technology by employing a limiter circuit utilizing circuit components that can be incorporated in the monolithic chip containing the amplifier. Limiting is achieved by the utilization of a negative feedback path employing a uniquely connected network of resistors and transistors.

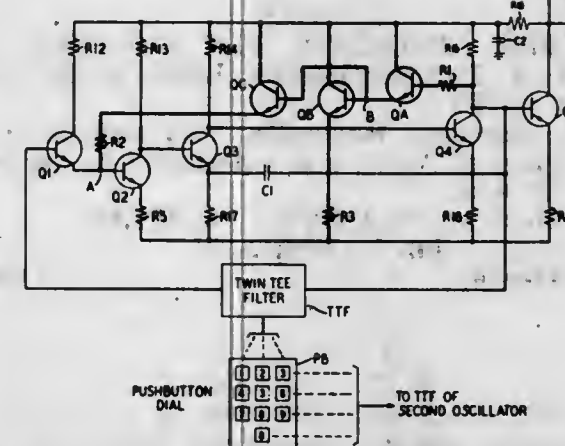
3,518,572

MULTIFREQUENCY SIGNAL GENERATOR

Tadikonda N. Rao, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed July 4, 1968, Ser. No. 743,142

Int. Cl. H03b 5/26 U.S. Cl. 331-109 9 Claims



A conventional transistor oscillator circuit is made wholly compatible with integrated circuit technology by employing a limiter circuit utilizing circuit components that can be incorporated in the monolithic chip containing the amplifier. Limiting is achieved by comparing A.C. signals in two identical subcircuits.

3,518,573

OSCILLATOR WITH MULTIRESONATOR CRYSTAL FEEDBACK AND LOAD COUPLING

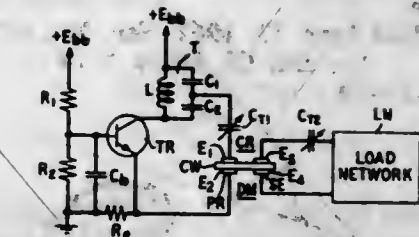
Warren L. Smith, Allentown, Pa., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Continuation-in-part of application Ser. No. 572,944, Aug. 17, 1966. This application Sept. 3, 1968, Ser. No. 756,909

Int. Cl. H03b 5/36 U.S. Cl. 331-116 9 Claims

The white noise "pedestal" in crystal controlled oscillator circuits is reduced by forming a secondary resonator on the crystal body of a primary resonator that tunes the

circuit's oscillator loop, coupling the two resonators through the crystal body, and connecting the secondary resonator to a given load network. The coupling between



the resonators is controlled by mass-loading of the crystal body to confine the energy arriving at the load network to one desired frequency band.

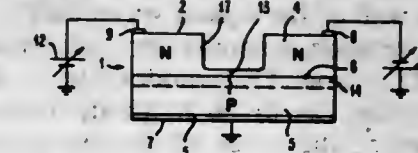
3,518,574

INJECTION LASER DEVICE

Richard F. Rutz, Cold Spring, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 1, 1964, Ser. No. 364,194

Int. Cl. H01s 3/18 U.S. Cl. 332-7.51 10 Claims



The GaAs injection laser has a continuous P-N junction. One contact is made to the P region and two or more individual contacts to electrically isolated portions of the N region. The P region is at one potential and opposite polarity signals are applied to the N region contacts. A negative signal applied to an N region contact forward biases the junction and can produce lasing along the junction. The operation is modulated by applying a positive signal to another one or more of the N region contacts to reverse bias the junction in the vicinity of those contacts.

3,518,575

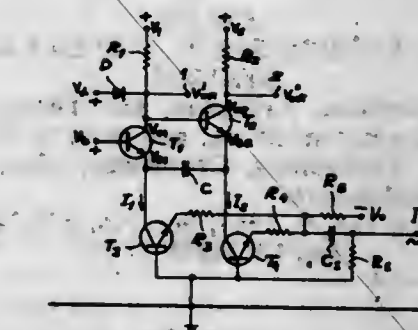
FREQUENCY MODULATOR WITH TRANSISTOR MULTIVIBRATOR

Ezio Cottatellucci, Milan, Italy, assignor to Societa Italiana Telecomunicazioni Siemens S.p.A., Milan, Italy, a corporation of Italy

Filed July 27, 1967, Ser. No. 656,486

Claims priority, application Italy, Aug. 26, 1966, 19,622/66

Int. Cl. H03k 3/282, 3/08 U.S. Cl. 332-14 9 Claims



Frequency modulator having alternately conductive stages of a transistor multivibrator connected in series with respective constant-current devices, preferably also transistors, whose conductivity is controlled by an applied biasing voltage, the emitters of the two multivibrator stages being interconnected through a condenser whose charging voltage triggers the switchover of the multivibrator upon attainment of a predetermined level of either polarity.

3,518,576

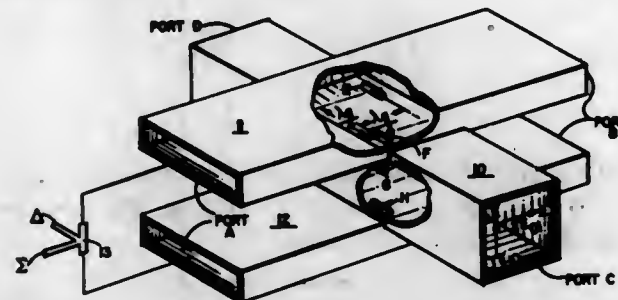
CROSSED GUIDE DIRECTIONAL COUPLER

Jerry A. Algeo, Buena Park, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 27, 1967, Ser. No. 649,166
Int. Cl. H01p 5/14

U.S. Cl. 333-10

6 Claims



A directional coupler feed for cooperation with a square waveguide, which directionally couples a preselected one of the TE_{01} and TE_{10} modes (while suppressing higher modes) from a crossed feed to the square cross-section waveguide. The crossed feed comprises two commonly-excited, mutually-parallel rectangular waveguides, a broadwall of each of which is crossed with and coupled to an opposite wall of the square waveguide in a mutually phased-spaced relation, whereby the components of one of the induced TE_{01} and TE_{10} modes are in substantially anti-phase relation (as to be mutually suppressed) and the components of the other of the two modes are substantially in-phase.

3,518,577

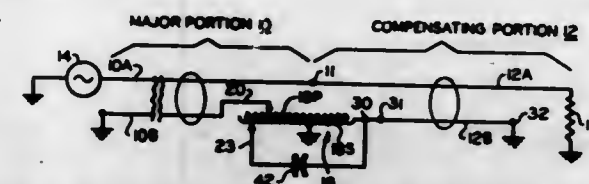
RADIATION PROTECTED CABLES

Walter Baum, Nuremberg, Germany, assignor to Baum Elektrophysik G.m.b.H., Nuremberg, Germany, a corporation of Germany

Filed July 25, 1969, Ser. No. 844,889
Int. Cl. H04b 3/28

U.S. Cl. 333-12

11 Claims



A radiation protected communication cable having a portion which is armored or sheathed with ferrous metal over at least a part of its length, together with a conductor associated with one part of the cable and applied in a compensating phase to the other part of the cable which is so sheathed.

3,518,578

SIGNAL COMPRESSION AND EXPANSION SYSTEM

Alan V. Oppenheim, Arlington, and Thomas G. Stockham, Jr., Lexington, Mass., assignors to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts

Filed Oct. 9, 1967, Ser. No. 673,740
Int. Cl. H04b 1/64

U.S. Cl. 333-14

11 Claims



The dynamic range of a complex input signal is compressed or expanded by first converting the complex input signal into the logarithm thereof, altering the amplitude relationship between different frequency components

of the converted complex signal and converting the altered converted complex signal into a signal which is the anti-logarithm thereof. The manner in which the different frequency components of the converted complex signal are altered determines whether the final anti-logarithm signal is a compressed or expanded equivalent of the input signal.

3,518,579

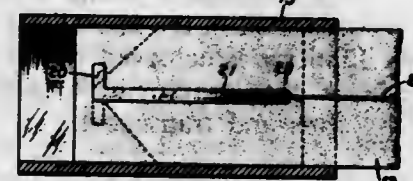
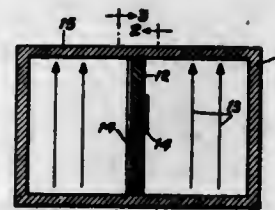
MICROSTRIP WAVEGUIDE TRANSDUCER

Murray Hoffman, Livingston, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Delaware

Filed May 29, 1968, Ser. No. 732,943
Int. Cl. H01p 1/16, 3/00, 1/00

U.S. Cl. 333-21

8 Claims



A waveguide transducer is provided in which a microstrip printed circuit board is located in the central plane of the waveguide in parallel to the electric field of a wave introduced therein. A broadband dipole is located on said microstrip to transduce the power of the wave into the microstrip.

3,518,580

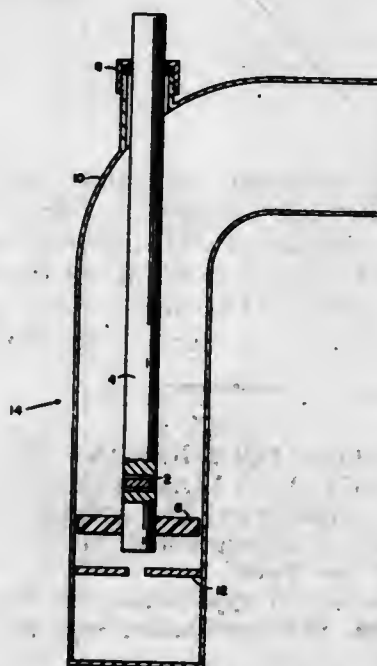
DEVICE FOR ADJUSTING THE COUPLING BETWEEN A TRANSMISSION LINE AND RESONANT CAVITY

Richard L. Hartman, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

Filed Oct. 24, 1967, Ser. No. 677,805
Int. Cl. H01p 5/04

U.S. Cl. 333-24

3 Claims



A device for adjusting the coupling between a micro-wave transmission line and resonant cavity wherein a dielectric rod having a conductive pin through its axis is rotated or moved axially in a waveguide.

3,518,581

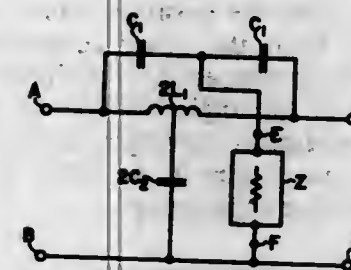
ALL-PASS DELAY EQUALIZER NETWORK

Brian Hughes, Carleton Place, Ontario, and Frederick T. Halsey, Ottawa, Ontario, Canada, assignors to Northern Electric Company Limited, Montreal, Quebec, Canada

Filed Sept. 21, 1967, Ser. No. 669,513
Int. Cl. H03h 7/04; H04b 3/14

U.S. Cl. 333-28

4 Claims



A compensating impedance for substantially reducing the variation in attenuation across the pass band of a filter, or the area of maximum phase shift in a delay equalizer network, each of the unbalanced type. The compensating impedance, which has a resistive component, is connected between the centre of a series component in the network and the common conductor.

3,518,582

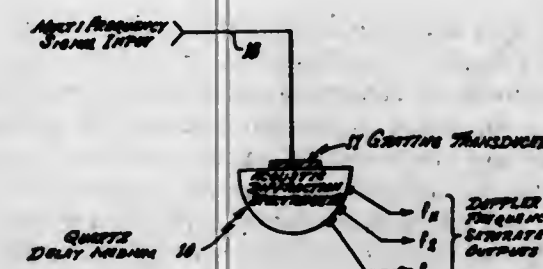
ACOUSTIC DIFFRACTION SPECTROMETER AND METHOD OF FABRICATION THEREOF

Frank A. Pizzarello, Santa Ana, and John Beny Harrington, Los Alamitos, Calif., assignors to the United States of America as represented by the Secretary of the Air Force

Filed June 21, 1968, Ser. No. 739,015
Int. Cl. H03h 7/30, 9/00; H01v 7/00

U.S. Cl. 333-30

6 Claims



The method of fabricating an acoustic device to provide an acoustic device being capable of discriminating a multiple frequency input with the acoustic device having a periodic array of CdS transducers which operates to displace a given R-F frequency through a particular angle in an acoustic media.

3,518,583

BROAD RANGE FREQUENCY SELECTIVE ULTRA-HIGH FREQUENCY IMPEDANCE DEVICE

Hiroshi Yumoto, Tokyo, Tatsuo Kudo, Kawasaki-shi, Yuki Ito, Tokyo, and Hidenobu Komizo, Kawasaki-shi, Japan, assignors to Fujitsu Limited, Kawasaki, Japan, a Japanese corporation

Filed Sept. 28, 1966, Ser. No. 582,610
Claims priority, application Japan, Sept. 30, 1965, 40/61,104

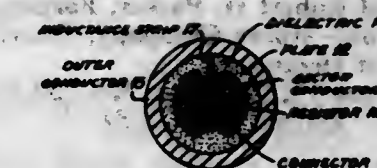
Int. Cl. H03h 7/14; H01p 3/06

U.S. Cl. 333-73

8 Claims

An impedance device for connection in an ultra-high frequency transmission line comprises a printed circuit which includes a thin dielectric plate and extremely small

dimensioned resistance, capacitance and inductance components on the plate in resonant circuit connection functioning as a filter in a very broad range of frequencies



up to a very high frequency. The printed circuit is electrically connected into the ultra-high frequency transmission line.

3,518,584

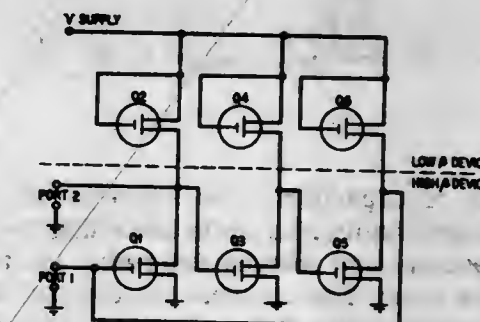
GYRATOR CIRCUIT UTILIZING A PLURALITY OF CASCADED PAIRS OF INSULATED-GATE, FIELD EFFECT TRANSISTORS

John A. Miller, Lawrence Harbor, and Donald H. Nash, Colts Neck, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed July 25, 1968, Ser. No. 747,650
Int. Cl. H03h 7/44, 11/00

U.S. Cl. 333-80

7 Claims



The fabrication of a gyrator circuit by fully integrated monolithic chip technology is made possible by utilizing a combination of substantially identical cascaded pairs of solid state unipolar devices.

3,518,585

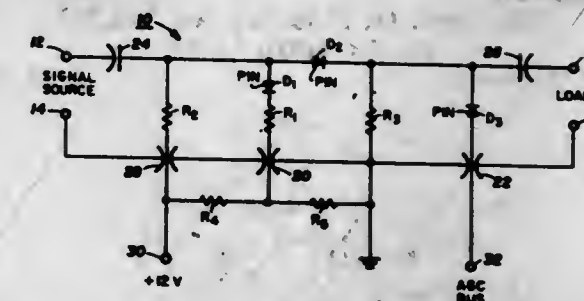
VOLTAGE CONTROLLED A.C. SIGNAL ATTENUATOR

Donald L. Wilcox, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Dec. 30, 1966, Ser. No. 606,386
Int. Cl. H01p 1/22

U.S. Cl. 333-81

6 Claims



Disclosed are voltage controlled, A.C. signal attenuators including diodes which are advantageously suitable for use as an automatic gain control in a television receiver, for example, or for attenuating any UHF or high frequency signals. These novel attenuators, when incorporated in a television receiver, (1) substantially eliminate pole-shifting distortion by permitting the RF and IF amplifiers to be operated at one biaspoint, (2) protect the amplifier from overload by pre-amplification attenuation of the incoming signals, (3) improve system cross-modulation, (4) permit use of field effect transistors, and (5) assure minimum degradation of the amplifier noise figure.

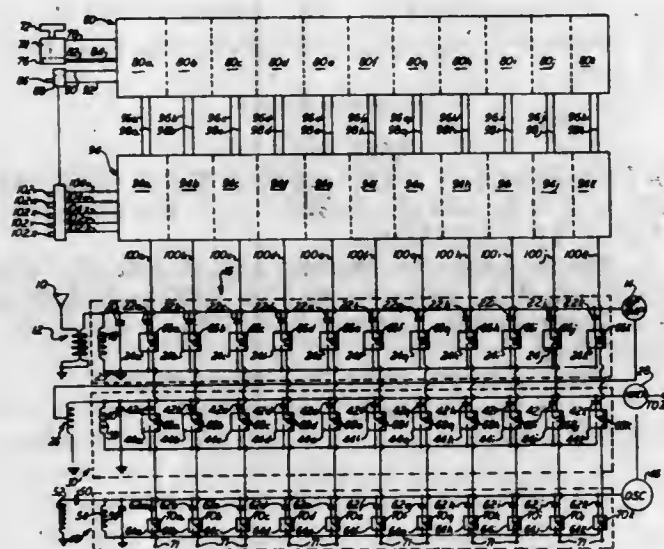
3,518,586
ELECTRONIC TUNING DEVICE UTILIZING BINARY COUNTERS AND MEMORY SYSTEM
 Ole K. Nilsson, Bensenville, Ill., and Ronald J. Freimark, Allen Park, and Robert H. Parker, Farmington, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed June 17, 1968, Ser. No. 737,763

Int. Cl. H03J 5/32

U.S. Cl. 334-7

13 Claims



Increments of capacitance are switched into and out of the resonant circuits of a radio according to the states of binary counters and thereby determine the tuned frequency of the radio. The counters are coupled to a pulse generator controlled by the radio manual tuning knob and add or subtract the pulses received therefrom depending on the direction the knob is turned. A memory system is actuated by the radio push buttons to switch the increments of capacitance according to the states of storage elements. In place of the increments of capacitance, the capacitance of hyper-abrupt junction diodes is continuously varied by a voltage analogous to the binary sense of the counters.

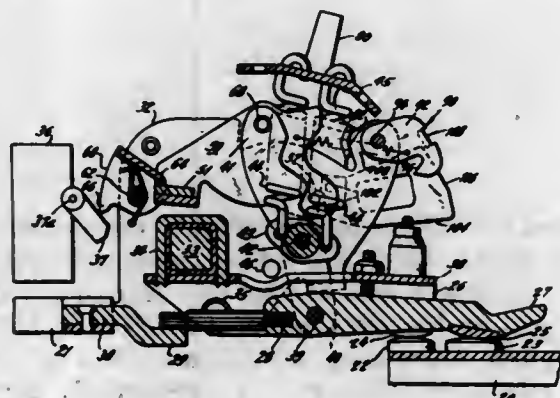
3,518,587
CIRCUIT BREAKER HOLD OPEN LATCH RELEASE MEANS
 William A. Huggins, Lansdowne, Pa., assignor to I-T-E Imperial Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Sept. 16, 1968, Ser. No. 762,215

Int. Cl. H01H 75/02

U.S. Cl. 335-46

8 Claims



A circuit breaker having a hold-open latch pivotable into position for engaging one of a pair of cooperating

contacts and holding the same apart from the other cooperating contact; the latch having a cam follower thereon; a circuit breaker operating handle movable between an "on" position where the cooperating contacts are in engagement and an "off" position, where the cooperating contacts are out of engagement; said operating handle having a latch release means comprising a cam surface secured to the handle, which surface engages the cam follower as the operating handle approaches the "on" position, and moves the cam follower and the hold-open latch away from the position which supports the one contact away from the other cooperating contact; the cam surface being shaped and positioned to engage the cam follower at an angle oblique to the direction in which the cam surface is moving when the cam surface first engages the cam follower, in order to reduce the shock of initial abutting engagement.

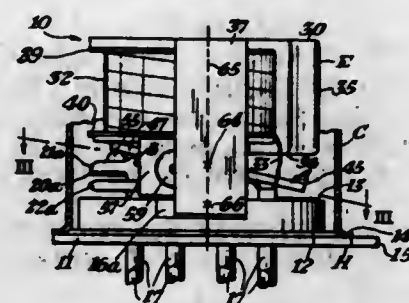
3,518,588
MICROMINIATURE RELAY
 Roscoe A. Norton, Jr., Batesburg, S.C., assignor to Westinghouse Air Brake Company, Swissvale, Pa., a corporation of Pennsylvania

Filed June 4, 1968, Ser. No. 734,307

Int. Cl. H01H 67/02

U.S. Cl. 335-124

18 Claims



A hermetically sealed microminiature relay which is all-welded and requires no adjustment after final assembly. The relay includes an electromagnetic and a pivotal armature which is journaled in jeweled bearings for defining a first fixed air gap and a second variable air gap for selectively altering the drop-out to pick-up current ratio of a given relay, and contains a contact arrangement having a plurality of fixed contacts and at least one movable contact actuated by the movement of the armature for performing the transfer switching functions of the relay.

3,518,589
ELECTROMAGNETIC CONVERSION RELAY
 Gerard N. Koehler, 11 Rue des Glorindes, Saint-Cloud, Hauts-de-Seine, France

Filed Apr. 12, 1968, Ser. No. 720,839

Claims priority, application France, Apr. 20, 1967, 103,481

Int. Cl. H01H 45/02, 50/64

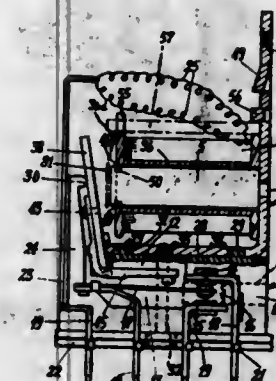
U.S. Cl. 335-132

5 Claims

An electromagnetic conversion relay of the multiple-contact draw-out type comprising a single yoke which is formed by a sectional member having at least two flanges and on which are mounted on the one hand a core-coil-moving armature assembly and on the other hand stationary and movable contacts actuated by the armature. The contacts are grouped together so as to form at least one contact unit comprising an insulating base traversed by a set of terminals of the plug-in or screw-connector type, at least some of said terminals being connected to contacts carried by the base and housed therein with the con-

tact-strips. The contact unit is mounted on the outer face of one of the flanges of said sectional member. The assembly consisting of core, coil and moving armature

its thermoplastic insulating coating and the remaining force merges adjacent convolutions so that they become bonded together after cessation of the pulsing current and cooling of the coil.



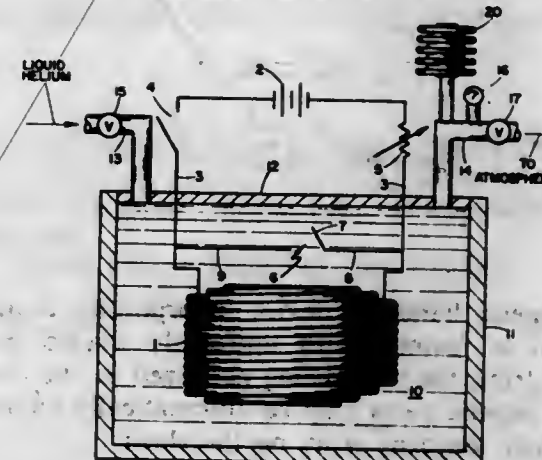
3,518,591
SUPERCONDUCTING MAGNET AND METHOD OF OPERATION
 Jacob L. Zar, North Andover, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Sept. 6, 1967, Ser. No. 665,789

Int. Cl. H01F 7/22

U.S. Cl. 335-216

4 Claims



which is associated with at least one contact unit is mounted on the inner face of another flange of said sectional member.

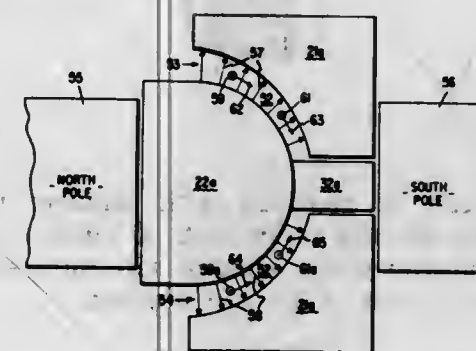
3,518,590
DEFLECTION YOKE AND APPARATUS FOR ITS FABRICATION UTILIZING A MAGNETIC RAMMING TECHNIQUE
 Josef Gross, Princeton, and William Henry Barkow, Pennsauken, N.J., assignors to RCA Corporation, a corporation of Delaware

Filed Feb. 12, 1969, Ser. No. 798,601

Int. Cl. H01F 5/00

U.S. Cl. 335-213

12 Claims



Each coil of at least one pair of coils to be diametrically disposed about the cylindrical neck and flared bulb sections of a cathode ray tube have the longitudinal active conductors located on opposite sides of a window opening with those conductors adjacent the window opening having substantially the same configurations as the sides of the window opening. All of the longitudinal conductors are disposed such that they closely fill the coil arbor cavity. The apparatus by which such a coil is fabricated includes a pair of male and female members mated together to form a cavity with a window block extending between the members to divide the cavity into two equal compartments and into which a plurality of convolutions of wire are wound to be formed into the desired coil configuration. The male and female members are magnetized to produce a magnetic field in both cavity compartments which is normal to the cavity forming surfaces of the male and female members. The window block is preferably of non-magnetically permeable material so that, when the coil is pulsed with current, an electromagnetic ramming force is produced on all of its conductors constraining all of the longitudinal side conductors to move toward the window block, thus completely filling both cavity compartments with the convolutions of the coil. The pulsing current heats the wire to soften

A method of and apparatus for operating superconducting magnets wherein the magnet is immersed in liquid helium disposed in a dewar and the dewar is closed to the surrounding atmosphere and the pressure therein maintained at a pressure greater than the critical pressure of liquid helium and preferably in the range of 2-3 atmospheres.

3,518,592
HOLDING RELAY WITH OPERATING CHARACTERISTICS WHICH REMAIN CONSTANT WITH FLUCTUATIONS OF TEMPERATURE
 Werner Bosch, Munich, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

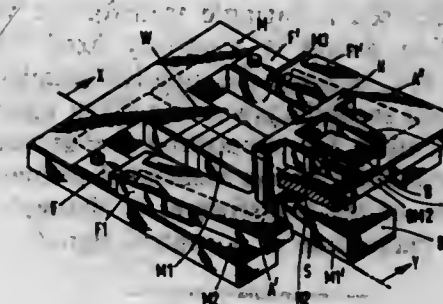
Filed Mar. 13, 1968, Ser. No. 712,802

Claims priority, application Germany, Apr. 27, 1967, S 109,576

Int. Cl. H01F 7/08

U.S. Cl. 335-234

13 Claims



A holding relay which has operating characteristics that remain unchanged with temperature fluctuations comprising a magnetic structure which has an armature supported by springs. A principal permanent magnet is attached to the main magnetic structure of the relay and an auxiliary permanent magnet is attached to the armature. The principal and auxiliary magnets are magnetized in a direction transverse to the main magnetic field of the magnetic circuit.

3,518,593

MAGNETIC HANDLING DEVICE

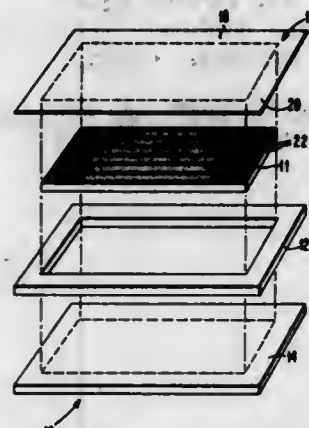
Bradley P. Hall, San Jose, Calif., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Feb. 26, 1968, Ser. No. 708,336

Int. Cl. H01f 7/20

U.S. Cl. 335—285

9 Claims



A magnetic handling device incorporates a magnetic sheet that is formed with uniformly spaced magnetic zones or strips, the sheet being polarized in one direction, so that magnetic parts may be automatically aligned in a substantially uniform array on the sheet.

3,518,594

TRANSFORMER HAVING VARIABLE NUMBER OF TURNS

William Kelvin Bottomley, Hamilton, Scotland, assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

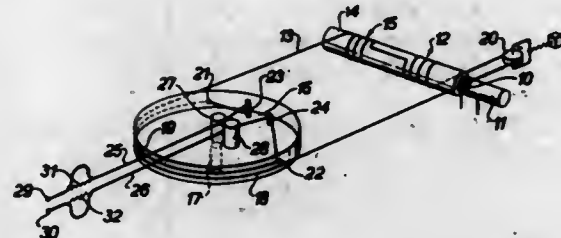
Filed Nov. 13, 1967, Ser. No. 687,082

Claims priority, application Great Britain, Nov. 16, 1966, 51,324/66

Int. Cl. H01f 21/04

U.S. Cl. 336—15

9 Claims



There is disclosed a variable transformer wherein the primary winding means is relatively fixed while means are provided for varying the relative number of turns in the associated secondary winding. That means includes a rotatable member for supporting the secondary winding in close proximity to the associated primary winding. The turns ratio of the transformer is changed in accordance with the magnitude of a control signal.

3,518,595

VARIABLE INDUCTOR

Samuel Lee Dawson and Norman Darrel Folkner, Los Angeles, Calif., assignors to Wyle Laboratories, El Segundo, Calif., a corporation of California

Filed Oct. 21, 1968, Ser. No. 768,985

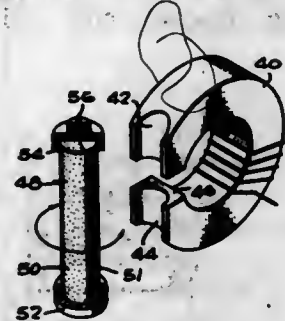
Int. Cl. H01f 21/06

U.S. Cl. 336—134

6 Claims

Variable inductors which have high stability and resist influence by external magnetic fields, comprising a toroidal core with an air gap, and an armature of ferromag-

netic material which can be moved into the gap to bridge it, or out of the gap. A coil wound about the toroidal



core displays an inductance which depends upon the position of the armature.

3,518,596

COIL WIRE FASTENING DEVICE AND METHOD

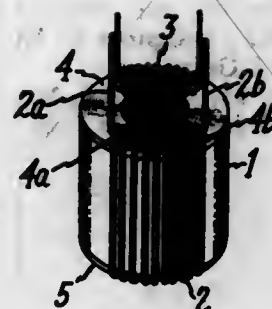
Edwin A. Connell, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York

Filed July 29, 1968, Ser. No. 748,325

Int. Cl. H01f 15/10

U.S. Cl. 336—192

10 Claims



Toroidal coil is provided with annular insulating washer having slit tabs under each of which a wire turn is inserted and over which adjacent wire turns are wound for securing the ends of the coil winding.

3,518,597

MANUAL MOTOR STARTER

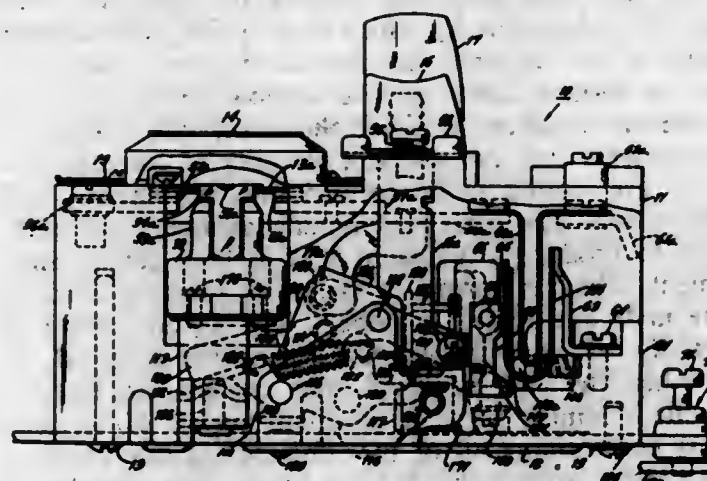
Elwood T. Pitz, Grosse Pointe Farms, Frank W. Kuey, Birmingham, and Gustav Witzmann, Detroit, Mich., assignors, by mesne assignments, to I-T-E Imperial Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Apr. 29, 1968, Ser. No. 725,044

Int. Cl. H01h 3/12, 9/04, 71/16

U.S. Cl. 337—46

7 Claims



A push-button operated three-phase motor starter is provided with means for increasing the latch biasing force

in the off position of the starter to prevent unwanted unlatching when the starter is subject to mechanical shock. An add-on fourth pole unit is provided for the starter constructed with cover holding spring clips of conducting material held in position by the terminal clamping screws of the add-on unit. A shock mounting means for securing the starter within an enclosure is constructed with its elements captive on the screw which mates with a threaded aperture in a wall of the enclosure. A pivoted jogging selector mounted to the enclosure cover selectively operates a cantilever spring into and out of an operative position with respect to the start control of the starter.

The enclosure cover is dust-tight and is provided with push buttons in alignment with the starter push buttons with a cover mounted diaphragm formed to lightly bias the cover mounted push buttons toward the starter push buttons to provide a positive indication of the positions of the starter push buttons. A locking rod slidably mounted to the enclosure cover is operable to a blocking position with respect to the stop button and is held in this position by a lock to prevent unauthorized operation of the starter.

3,518,598

SNAP ACTION ELECTRIC SWITCH

Hans Jacobs, Schaumburg Township, Cook County, Ill., assignor to C. E. Nichol & Co., Chicago, Ill., a corporation of Illinois

Continuation-in-part of application Ser. No. 597,045, Nov. 25, 1966. This application Mar. 11, 1968, Ser. No. 711,953

Int. Cl. H01h 61/06

U.S. Cl. 337—135

6 Claims



A snap action electric switch comprising a flexible snap acting metallic contact carrying vane with vane biasing means and longitudinally expansible pull wire means overlying the opposite surfaces of the vane and tensioned to flex the contact carrying portion of the vane in opposite directions between two positions in response to alternate heating and cooling of the pull wire.

3,518,599

BOX FOR CARTRIDGE FUSES WITH FUSE EJECTOR

Claude Pascal Lanux, Mantes-la-Ville, Yvelines, France, assignor to La Telemecanique Electrique, Nanterre, Hauts-de-Seine, France, a French body corporate

Filed Jan. 30, 1969, Ser. No. 795,188

Claims priority, application France, Feb. 5, 1968, 138,661

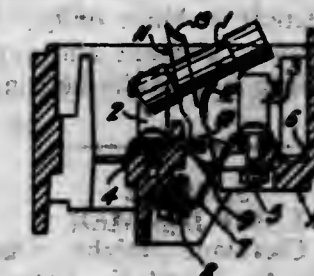
Int. Cl. H01h 85/00, 85/02, 85/22

U.S. Cl. 337—186

6 Claims

An improved fuse box for cartridge fuses is provided with an ejector lever which is fitted to the face of the fuse box at a point between the fuse contact clips and is arranged to fit within the fuse cavity in the box while taking

up any minimum of additional space. The lever is arranged so that upward movement of the free end of the lever



causes corresponding upward pivoting movement of the fuse.

3,518,600

PROTECTOR FOR ELECTRIC CIRCUITS

Angelo Urani, St. Louis, Mo., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Feb. 4, 1969, Ser. No. 796,520

Int. Cl. H01h 85/22, 85/14

U.S. Cl. 337—201

12 Claims



A sleeve of insulating material encases and insulates a female connector which is connected to a conductor and which normally telescopes over a male connector on one end of a fuseholder, and a boot of insulating material normally encases and insulates the connection between that female connector and that conductor. That boot and that sleeve of insulating material will remain with that female connector whenever that female connector releases that male connector, and will thereby continue to encase and insulate that female connector and that conductor.

3,518,601

CONTROL DEVICE HAVING AN IMPROVED ONE-PIECE MOUNTING BRACKET

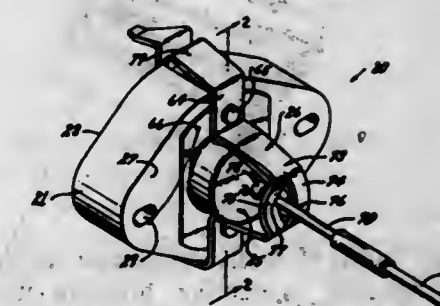
Hugh J. Tyler, Santa Ana, Calif., and Dennis H. Wolfe, Youngwood, Pa., assignors to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware

Application Feb. 9, 1967, Ser. No. 614,996, now Patent No. 3,410,972, dated Nov. 12, 1968, which is a division of application Ser. No. 403,039, Oct. 12, 1964, now Patent No. 3,316,375, dated Apr. 25, 1967. Divided and this application Aug. 14, 1968, Ser. No. 752,619

Int. Cl. H01h 37/36; G01k 1/22

U.S. Cl. 337—327

6 Claims



A thermostatically operated electrical switch construction wherein a movable contact is carried by an L-shaped flexible member and is moved toward a stationary contact by an expansible and contractible power element,

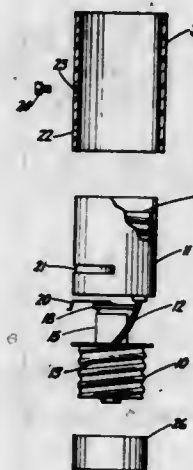
the contacts being electrically interconnected to terminal means having tension loops therein to positively maintain the contact interconnecting portions in fixed position relative to the housing of the switch construction. The switch construction includes unique bracket means for mounting the power element and capillary tube of the temperature sensing bulb to the housing of the switch construction.

3,518,602 LAMP DIMMER

Joseph B. Richey, Cleveland Heights, Ohio, assignor of one-fourth jointly, to Ernest R. Vargo and Louis E. Vargo, both of Cleveland, Ohio
Filed May 29, 1968, Ser. No. 733,035
Int. Cl. H01c 13/00

U.S. Cl. 338—73

2 Claims



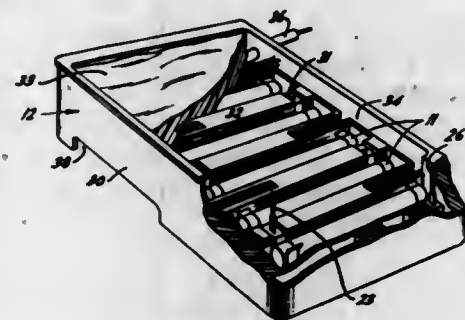
A lamp dimmer controlled by a rotatable sleeve surrounding the lamp socket. More particularly a lamp dimmer having a male lamp bulb base, a lamp socket, a sleeve surrounding the socket, and a lamp dimming circuit including a variable element such as a resistor, wherein the variable element is provided with a radially extending control arm which engages a slot in the sleeve in order to be controlled thereby.

3,518,603 RESISTIVE VOLTAGE DIVIDER

Buran I. Keppta, Jr., Norristown, Pa., and William A. West, Woodbury, N.J., assignors to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 29, 1969, Ser. No. 829,046
Int. Cl. H01c 1/02, 1/16

U.S. Cl. 338—260

6 Claims

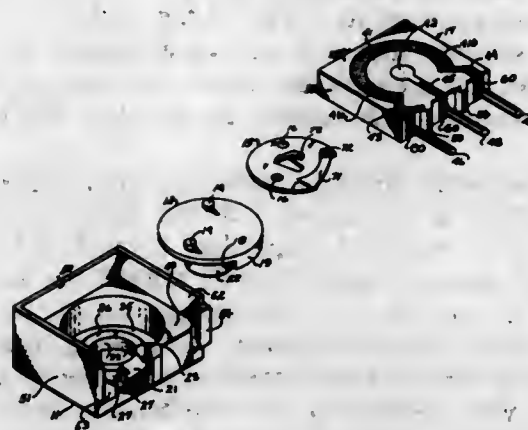


A high voltage, multi-element resistance string packaged in an arc-resistant protective housing filled and sealed with potting compound. The package is so designed as to maximize the resistance to arcing. There is provision, under certain over-voltage conditions, for inducing a controlled arc to chassis and thus for protecting associated electronic equipment.

3,518,604
ELECTRICAL COMPONENT
Thomas R. Beaver and John D. Van Benthuysen, Elkhart, Ind., assignors to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Feb. 12, 1968, Ser. No. 704,843
Int. Cl. H01c 9/02

U.S. Cl. 338—164

12 Claims

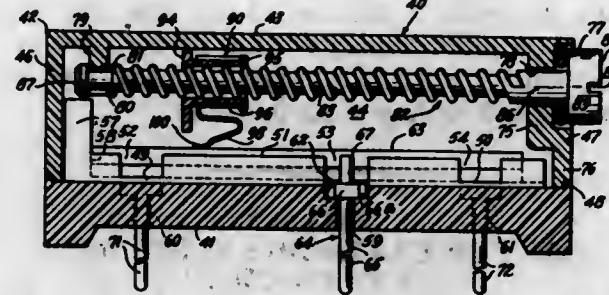


Barrel portion of a control operating means is rotatably supported in an aperture formed in a wall of a component housing. Flared portion of barrel extends around periphery of the aperture to provide sliding bearing surface, thrust bearing, and dust seal. Body portion of operating means limits the degree of insertion of barrel portion in the aperture. Base abutting surfaces formed in the housing, flanges integral with the housing, and standoffs formed on a wall of the housing cooperate to precisely locate the base relative to the housing. The standoffs on the housing and standoffs on the base operate to space the component from a mounting board. Terminations anchored in the base may include snap-in mounting means for facilitating mounting of the component on a circuit board. Cementitious material may be used to improve the seal between the base and the housing of the control. Reference is made to the claims for a legal description of the invention.

3,518,605
POTENTIOMETERS
William D. Kirkendall, Dalton, Pa., assignor to Weston Instruments, Inc., Newark, N.J., a corporation of Delaware
Filed Feb. 5, 1968, Ser. No. 702,913
Int. Cl. H01c 5/02, 17/00

U.S. Cl. 338—183

13 Claims



In electrical devices, particularly miniaturized potentiometers, including a housing, an electrical component contained within the housing, and a conductive lead element extending through a wall of the housing and connected to the electrical component, the housing is made in two thermoplastic parts, one of which includes an opening which accommodates the lead element and has a transversely enlarged portion opening toward the interior

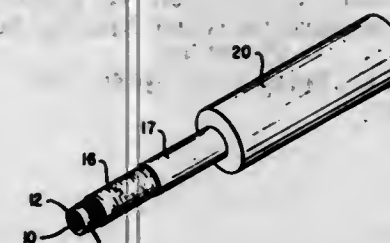
of the housing. The lead element has an enlargement accommodated by the enlarged portion of the opening. The other housing part includes a wall portion which extends across the enlarged portion of the opening. The two housing parts are fused together, as by sonic welding, and the fused thermoplastic material surrounds a portion of the enlargement of the lead element, locking the enlargement in place.

3,518,606 IGNITION CABLE WITH TERMINAL CONSTRUCTION

Robert A. Barker, Port Huron, Mich., assignor to Eltra Corporation, Toledo, Ohio
Filed June 27, 1968, Ser. No. 740,732
Int. Cl. H01c 3/00, 1/06, 1/16

U.S. Cl. 338—270

7 Claims

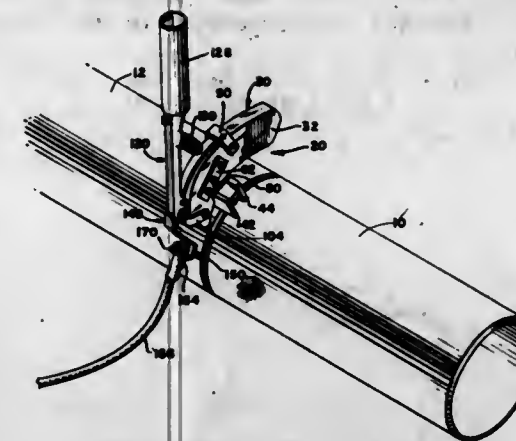


A method and means for connecting a resistance wire wound ignition cable to a terminal which is suitable for mass production which provides an encasing for the wound conductor of elastomeric or polymeric conducting material covered in turn with a release agent to allow ready removal of the outer insulating cover on the production line, the uncovered portion being bent back over the insulating cover and clamped against the insulating cover by a terminal ferrule.

3,518,607
SAFETY GROUND DEVICE
Richard F. Reel, Rte. 3, Box 36, Bastrop, La. 71220
Filed Apr. 12, 1968, Ser. No. 720,879
Int. Cl. H01r 11/30

U.S. Cl. 339—12

10 Claims



A main body of electrical insulating material has a magnetic attaching means pivotally secured thereto and urged in one direction by a first spring. A handle means is pivotally connected to the body means and urged in another direction by a second spring and is insulated from the attaching means. An electrical connection means is carried by the end of the handle means for connection to a ground cable. The lower end of the electrical connection means is beveled to fit in a welding groove defined by adjacent workpieces to make good electrical contact, and the position of the connection means relative to the handle means is adjustable.

3,518,608
TELEMETRY DRILL PIPE WITH THREAD ELECTRODE
Michael N. Papadopoulos, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Oct. 28, 1968, Ser. No. 770,963
Int. Cl. E21b 1/06; H01r 3/04

U.S. Cl. 339—16

7 Claims

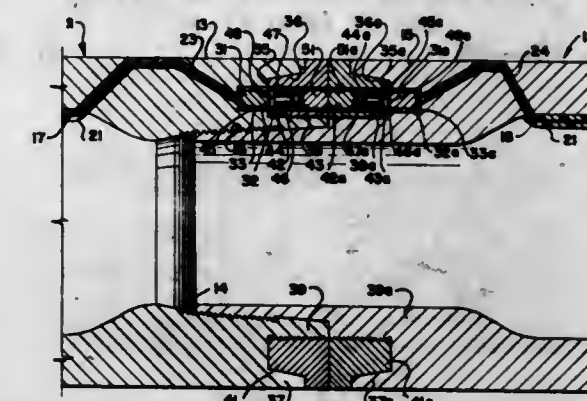


Drill pipe constructed of a plurality of pipe sections attachable to one another in an end-to-end manner by means of cooperating threaded connector means. Each section has associated therewith insulated electrical conductor means running along substantially the full length thereof and connected at each end to electrode means which comprise a portion of the threaded connector means. When the pipe sections are attached together, the electrode means of adjacent sections are in cooperative engagement, thereby providing an electrical path along the full length of the drill pipe string.

3,518,609
TELEMETRY DRILL PIPE WITH RING-CONTROL ELECTRODE MEANS
John E. Fontenot, Jr., Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Oct. 28, 1968, Ser. No. 771,180
Int. Cl. H01r 3/04; E21b 1/06

U.S. Cl. 339—16

7 Claims



Drill pipe is constructed of a plurality of pipe sections attachable to one another in an end-to-end manner by means of cooperating threaded connector means. Each section has associated therewith insulated electrical conductor means running along substantially the full length thereof and operatively associated at each end with electrode means which comprise electrically insulated inserts positioned in operative association with contact rings threadably engaged to the remainder of the pipe section at the box and pin ends thereof. When the pipe sections are attached together the electrode means of adjacent

sections are in cooperative engagement, thereby providing an electrical path along the full length of the drill pipe string.

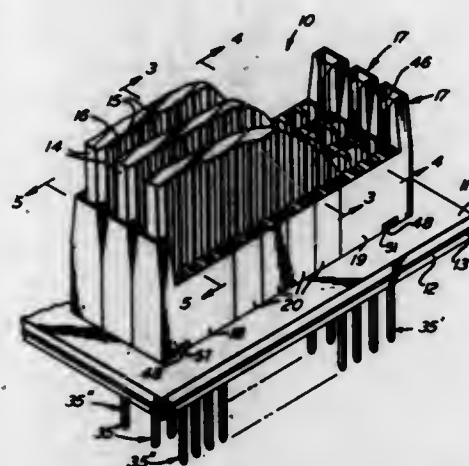
3,518,610

VOLTAGE/GROUND PLANE ASSEMBLY

David S. Goodman, Doylestown, and Leslie M. Borsuk, Philadelphia, Pa., and Frederick T. Inacker, Los Alamitos, Calif., assignors to Elco Corporation, Willow Grove, Pa., a corporation of Delaware
Filed Mar. 3, 1967, Ser. No. 620,481
Int. Cl. H05k 7/04; H01r 25/06

U.S. Cl. 339—17

14 Claims



An electrical contact that must pass through a pair of superposed insulated metal plates is electrically and mechanically connected to a selected one of the plates by means of a metallic bushing whose length is no less than the thickness of the plates. The bushing, which is mechanically connected to the contact, makes an interference fit with a mounting hole in the selected plate. Aligned with the mounting hole in the selected plate is a larger sized clearance hole in the other plate such that the metallic bushing passes through the other plate without making electrical contact therewith. With this arrangement, bushings of identical size can be used regardless of which plate the contact is to be electrically connected to.

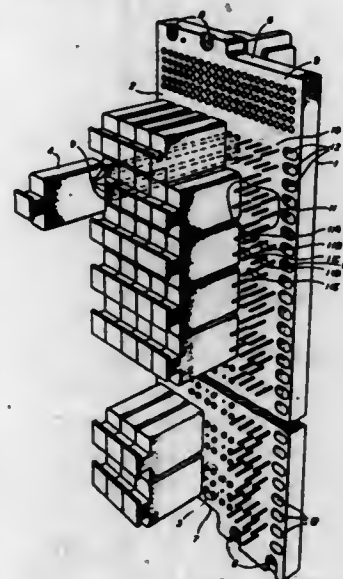
3,518,611

CONNECTOR FOR TELEPHONE MAIN DISTRIBUTING FRAME

Stanley C. Shores, Jr., Baltimore, Md., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed July 10, 1968, Ser. No. 743,801
Int. Cl. H01r 25/06

U.S. Cl. 339—18

10 Claims



A multipair connector block for use in telephone central offices as the interface between feeder cables and

central office equipment is disclosed. The block consists of a mounting panel with large area, consisting of most of its face, devoted to the mounting in vertical array of protector units. Adjacent this area is a vertical array of forward-facing square wire cross-connect terminals which provide time-saving jumper connections. A fanning strip is cast integrally with the panel edge next to the cross-connect terminals. The cross-connect field pattern consists of a 4-4-2 pin count repeated for each row of five protectors and simplifies jumper terminal identification.

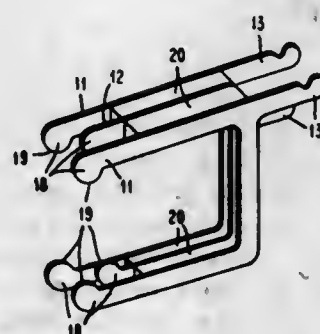
3,518,612

CONNECTOR ASSEMBLY

John P. G. Dunman, Romney, and John G. Axford, Winchester, England, assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed June 22, 1967, Ser. No. 648,133
Claims priority, application Great Britain, Aug. 6, 1966, 35,309/66

Int. Cl. H01p 3/08; H05k 1/04
U.S. Cl. 339—19

2 Claims



A connector assembly comprising a plurality of conducting elements interleaved with insulating elements, each conducting element being adapted to be connected to a respective pair of conductors, and all the elements being designed and relatively positioned to maintain the desired impedance between selected adjacent conductors.

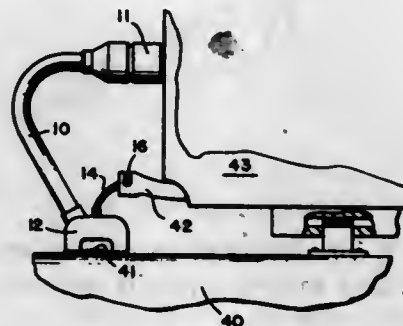
3,518,613

MISSILE UMBILICAL CABLE

Louis Alpert, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 27, 1968, Ser. No. 716,651
Int. Cl. H01r 13/62

U.S. Cl. 339—45

2 Claims



An umbilical adapted to interconnect a missile and launcher prior to launch and having a mechanical linkage interconnecting the missile and launcher to cause automatic disengagement of the umbilical from the missile upon launch in the absence of shearing forces and consequent destruction of the interconnecting pins or electrical components.

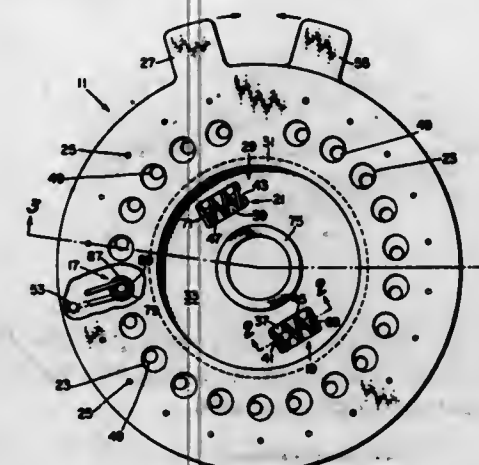
3,518,614

RECEPTACLE DEVICE

Richard A. Nyberg, San Francisco, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 26, 1968, Ser. No. 779,165
Int. Cl. H01r 13/62

U.S. Cl. 339—74

6 Claims



A receptacle or socket having a plurality of coiled springs that are attached to and positioned between a pair of spaced apart rotatable plates. Each of the coiled springs have an inner cylindrical region for receiving the connector pins of photomultiplier tubes or the like that are inserted through openings in one of the rotatable plates. When the rotatable plates are rotated with respect to each other in one direction the diameters of the inner region of the coiled springs are simultaneously increased and when rotated in the other direction the diameters are decreased. When the diameters are increased this permits easy insertion of the tube connector pins. After the tube pins are inserted into the coiled springs, a spring bias element causes rotation of the plates to decrease the diameter of the coiled springs to tightly grip the connector pins. Release of the connector pins is achieved by rotating the plates against the spring bias element to increase the diameter of the coiled springs and permit easy removal of the connector pins.

3,518,615

ELECTRICAL CONNECTOR ASSEMBLY

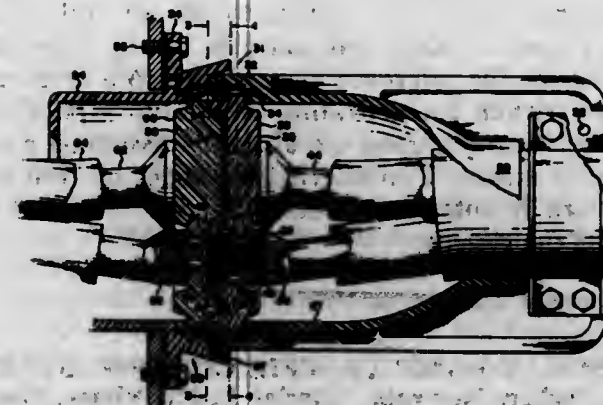
Harry P. Sparkes, Pacific Palisades, and Douglas F. Bowman and Anthony J. Pasateri, Jr., Canoga Park, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Apr. 17, 1967, Ser. No. 631,475

U.S. Cl. 339—94

Int. Cl. H01r 13/58, 23/52

6 Claims



A rugged electrical connector assembly having mating terminal sub-assemblies, wherein grouped conductor leads, in each sub-assembly, are physically isolated from each other according to their electrical phase relationship. As the terminal sub-assemblies are mated, the engagement of mounting plates disposed upon each sub-assembly

act to remove moisture from the surface of the plates, thus creating a high resistance break in any possible electrical arcing path. Terminal heads on leads disposed within the housings are embraced by a segmented sleeve and arranged to resist mechanical failure due to vibration.

3,518,616

MOTOR LEAD CONNECTOR BOX

John G. Lewis, Dellwood, Mo., assignor to Emerson Electric Co., St. Louis, Mo., a corporation of Missouri
Filed July 1, 1968, Ser. No. 741,774
Int. Cl. H01r 13/58

U.S. Cl. 339—107

6 Claims



An electrical connector box for mounting on an electric motor casing. The box having a base portion to be entered into a cutout in the motor casing and a floor covering the casing cutout, the box further including a plurality of narrow elongated compartments open at one end for receiving soft insulated end portions of power supply leads and the walls defining the compartments having projecting barb elements to preclude axial movement of supply leads entered therein. The floor portion in each compartment having an elongated V-shaped opening therein for receiving and retaining by wedging action the end portion of a bare motor field winding to be connected to a power supply lead, the box further including a hinged cover and the complete device being formed as an integral casting of synthetic thermoplastic material.

3,518,617

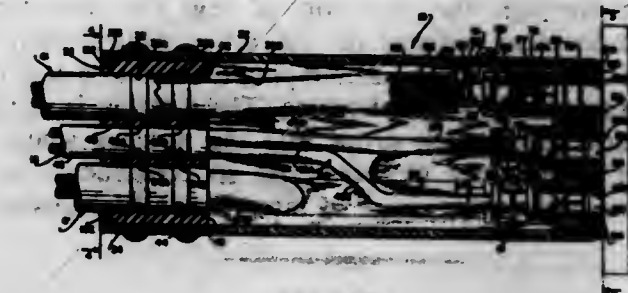
ELECTRICAL CONNECTORS

Melvin B. Bosworth, Glendale, Douglas F. Bowman, Canoga Park, Harry P. Sparkes, Pacific Palisades, and Clarence A. Young, Burbank, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Continuation-in-part of application Ser. No. 525,531, Feb. 7, 1966. This application Nov. 17, 1967, Ser. No. 683,959

U.S. Cl. 339—107

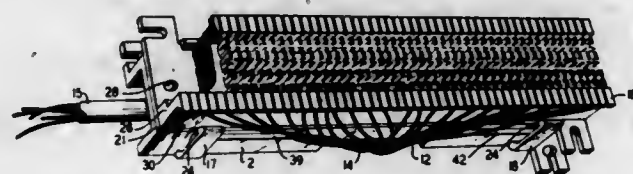
Int. Cl. H01r 13/58

13 Claims



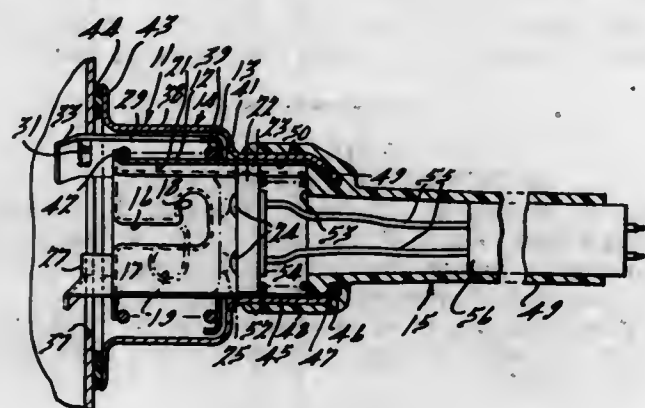
An electrical connector assembly wherein a plurality of channeled housings for receiving and retaining current-conducting cables are abutted in mating relation. A casing surrounds and holds the housings in position and inhibits their removal. Current-conducting contact pins attached to cables leading through the housing channels electrically couple the contact pins to selected output terminal pins via a plurality of conductive sleeve assemblies.

3,518,618
TELEPHONE TYPE CONNECTOR BLOCK AND MOUNTING BRACKET
 Robert A. Swanson, Towson, Md., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
 Filed Mar. 21, 1968, Ser. No. 714,995
 Int. Cl. H02b 1/04
 U.S. Cl. 339-125 6 Claims



A telephone type connector block and mounting bracket combination is shown in which the bracket receives the block with snap-on arms. The bracket legs constitute a cable run so that the space adjacent bracket and block is free for jumper wires. The connector block retaining plate is slide-mounted onto the block. The brackets are fastened in vertical rows at termination points, such as key telephone closets, and the blocks readily snap mount into or unsnap from the brackets.

3,518,619
LAMP SOCKET
 Don L. De Lano, Mount Clemens, Mich., assignor to Vare Corporation, New York, N.Y., a corporation of Delaware
 Filed Aug. 19, 1968, Ser. No. 753,409
 Int. Cl. H02b 1/02
 U.S. Cl. 339-127 8 Claims

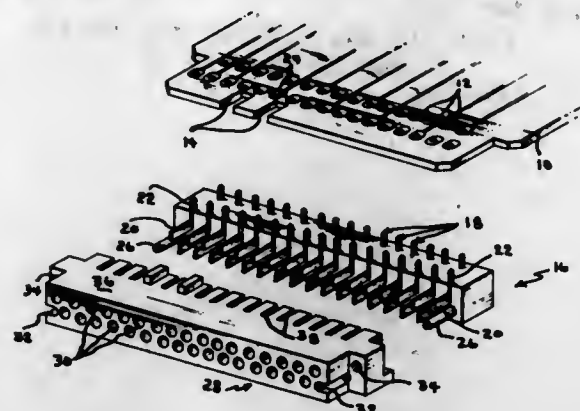


The socket is so constructed as to be applied to a lamp housing through the insertion of legs on the former through locating notches on the latter which when the socket is rotated, applies a clamping tension to a seal ring on a flange of the socket housing. The rotation is stopped by vertical tabs which drops into the notches when the filament is properly oriented and so constructed as to accommodate a wide range of lamp panel thicknesses.

3,518,620
CONNECTOR KEYING DEVICE
 Dale Nelson Bushy, York, and Robert Linn Showman, Hershey, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
 Filed Apr. 11, 1968, Ser. No. 720,641
 Int. Cl. H01r 13/64; H05k 1/18
 U.S. Cl. 339-184 4 Claims

The disclosure relates to an electrical connector device having plural male and female connecting members on separate connector portions, the connector portions being molded to prevent polarization error, one of the portions

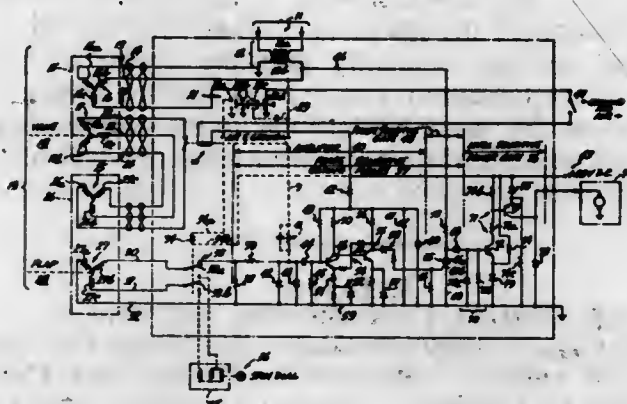
carrying an apertured printed circuit board with cut out areas, the connector also including selectively positionable keying means for mating with the cut out areas on



the printed circuit boards whereby only pre-selected male and female portions with accompanying apertured printed circuit boards can be interconnected.

ERRATA
 For Classes 340-5 thru 340-18 see:
 Patent Nos. 3,518,675 thru 3,518,679

3,518,621
AIRCRAFT STALL WARNING SYSTEM
 John E. Collett, Bellevue, and Rudolph P. Host, Seattle, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
 Filed Dec. 27, 1966, Ser. No. 604,751
 Int. Cl. B64c 13/10, 17/00
 U.S. Cl. 340-27 5 Claims



An aircraft stall warning system wherein flap and air vane controlled synchros phase shift an alternating current reference signal in response to lift air foil attitude to form a control signal that controls, by the phase shift, the amount of the reference signal gated to a level-sensitive power switch for activating preferably a pilot's column shaker warning upon the aircraft's assuming a critical angle of attack. Two alternative modes of "fail safe" testing work in integral relationship with "built-in" bias inherent in the system.

3,518,622
EXPRESSWAY RAMP TRAFFIC CONTROL SYSTEM
 John L. Barker, Norwalk, Charles L. Du Vivier, Darien, John R. Odion, Wilton, and Ludwig R. Pallat, Stamford, Conn., assignors to Lee Corporation, Waltham, Mass., a corporation of Delaware
 Filed Apr. 14, 1967, Ser. No. 631,071
 Int. Cl. G08g 1/08, 1/065
 U.S. Cl. 340-36 9 Claims

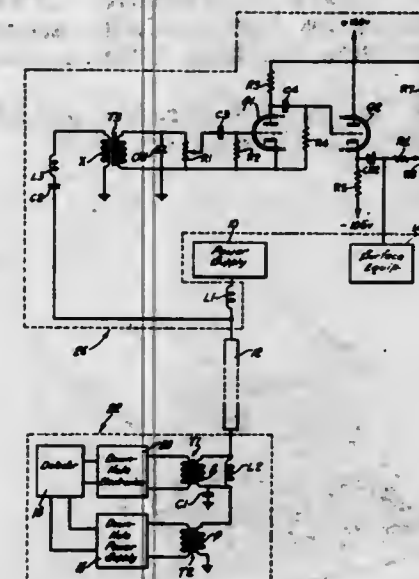
A system for controlling entrance of vehicles onto a limited-access roadway from an entrance ramp. The em-

pirical capacity of the roadway is modified to reflect traffic conditions on the roadway. The traffic volume or demand upstream of the entrance ramp is subtracted from this modified capacity to give available capacity. When the time integral of the available capacity indicates



that there is sufficient room on the roadway for another vehicle, a traffic signal adjacent the entrance ramp signals for a vehicle to enter the highway. This normal system operation is modified to accommodate extremely congested or extremely light traffic conditions.

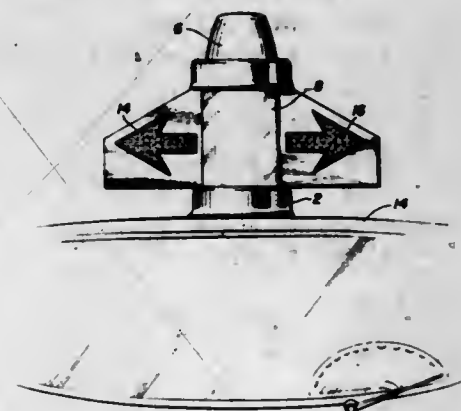
3,518,623
WELL LOGGING SYSTEM
 Obie M. Langford, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
 Filed Apr. 24, 1967, Ser. No. 633,248
 Int. Cl. G01v 1/22, 1/40, 5/00
 U.S. Cl. 340-18 1 Claim



A system for logging a borehole traversing earth formations wherein a logging tool, or sonde, connected to an end of an electrical cable traverses the borehole; the tool, or sonde, containing nuclear or radioactivity logging apparatus such as, for example, a scintillation detector including a photomultiplier and associated circuitry for generating output information signals representing at least one parameter (e.g., nature of subsurface formations or strata) within the traversed portion of the borehole. A 60 cycle AC power supply at the earth's surface sends power down the cable to provide the input power necessary for driving the logging apparatus. Concurrently, the information signals are sent up through the cable in superimposed relation with the AC power supply voltages. At the earth's surface there is also provided a network, or circuitry, which presents a low impedance to the information signals and a high impedance to the AC power supply voltages. Afterward, the isolated information signals are amplified,

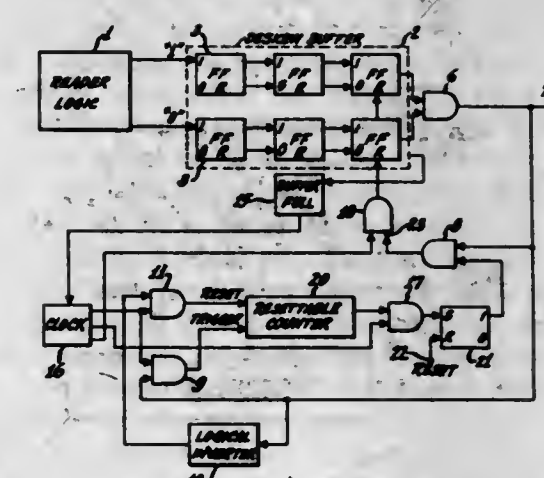
clipped and delivered to signal, or pulse, analyzing equipment in correlative relationship to the depth of the sonde in the borehole.

3,518,624
COMBINATION SIGNAL LIGHT FOR MOTOR VEHICLES
 Ernest H. Smith, Jr., 600 Lincoln St., Worcester, Mass. 01605
 Filed Oct. 18, 1967, Ser. No. 676,230
 Int. Cl. B60q 1/26, 1/34
 U.S. Cl. 340-87 7 Claims



This invention relates generally to a combination signal light for motor vehicles and in particular to a combination signal light mounted on the roof of a motor vehicle as an indication to other drivers and pedestrians in front, in back or on either side of the vehicle the present and intended movement of the vehicle.

3,518,625
DEAD TRACK HANDLING
 Julius Agn, Pennsauken, N.J., assignor to RCA Corporation, a corporation of Delaware
 Filed Feb. 24, 1967, Ser. No. 618,505
 Int. Cl. G11c 29/00
 U.S. Cl. 340-146.1 7 Claims



This invention relates to a digital data record playback apparatus which is arranged to sense the presence of an omission, or error, in a reproduced digital signal. The sensed error is arranged to inhibit further operation of the playback apparatus and to provide a signal for subsequent error-correcting apparatus.

3,518,626

MAGNETIC MEMORY SWITCHING DEVICE, PARTICULARLY FOR TELEPHONY
Bernard Jean-Jacques Cancell, Paris, and Albert Regnier, Issy-les-Moulineaux, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

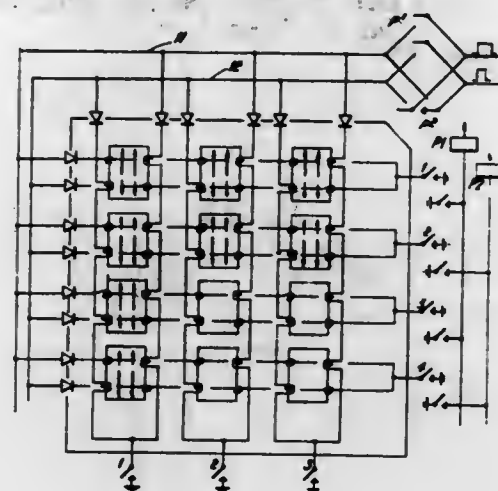
Filed Oct. 31, 1966, Ser. No. 595,297

Claims priority, application France, Nov. 12, 1965, 38,110

Int. Cl. H04q 9/00

U.S. Cl. 340-166

2 Claims



A switching matrix uses glass reed contacts arranged in rows and columns. The crosspoints in alternate rows have their windings and core structures arranged to present alternate magnetic polarities so that stray flux cannot operate adjacent crosspoints.

3,518,627

COUPLING SYSTEM FOR ELEMENTAL PANEL ARRAY

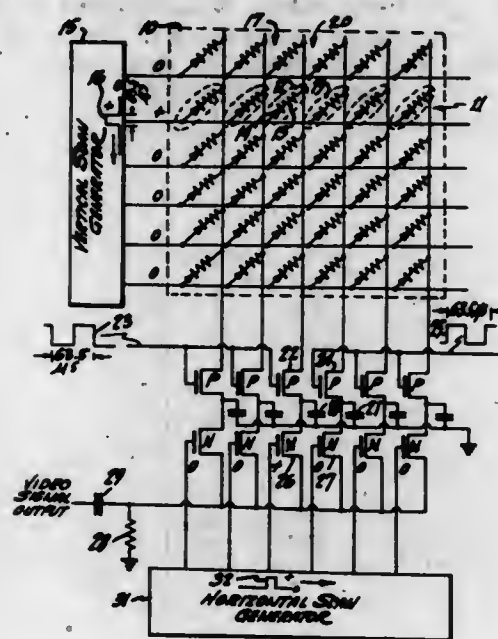
John E. Meyer, Jr., Trenton, N.J., assignor to RCA Corporation, a corporation of Delaware

Filed Mar. 23, 1967, Ser. No. 625,476

Int. Cl. H04q 3/02

U.S. Cl. 340-166

3 Claims



First a left-hand and then a right-hand group of half of the discrete elements in a row of the array are concurrently coupled for one half of a predetermined time period respectively to individual storage means associated with the respective columns of the array elements and all of the individual storage means are sequentially coupled to external apparatus once during said predetermined time period.

SYSTEMS AND METHODS FOR COMMUNICATING WITH A PLURALITY OF REMOTE UNITS

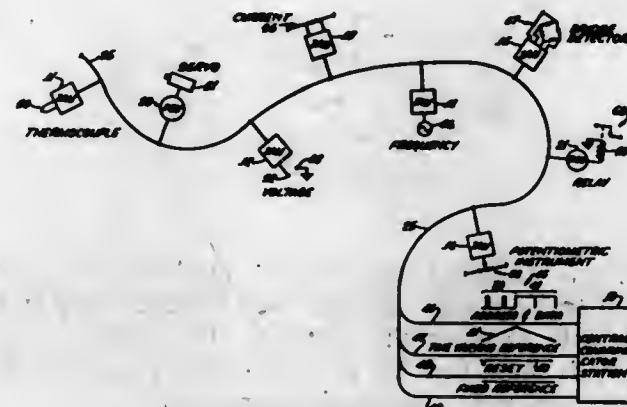
George J. Giel, Los Angeles, Robert D. Villwock, Glendora, and Lawrence S. Smith, Alhambra, Calif., assignors to Electronic Specialty Company

Filed Nov. 10, 1966, Ser. No. 593,531

Int. Cl. H04q 9/00

U.S. Cl. 340-167

22 Claims



This invention relates to a communication system which includes a central communicator station and a plurality of remote units each of which serves a predetermined system function. The units are all connected to the central station by a single, time-shared communications cable.

3,518,630

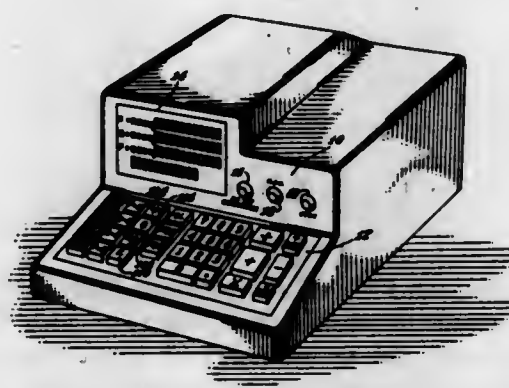
RECIRCULATING MEMORY TIMING
Stanley P. Frankel, Los Angeles, Calif., assignor to Computron Corporation, Oakland, Calif., a corporation of California

Filed Feb. 6, 1964, Ser. No. 342,881

Int. Cl. G11c 21/00, 21/02

U.S. Cl. 340-172.5

12 Claims



A delay line memory is disclosed in which temperature compensation is made unnecessary by provision of an inter-controlled counter-multivibrator combination for operating the delay line. The multivibrator is metastable—that is, conditionally monostable, its astability being dependent upon detection of the first pulse to emerge from the delay line.

The first pulse, though a marker pulse, is indistinguishable from the data pulses except that at the time of its arrival the counter is at a given count and the multivibrator is in its stable state. To guard against blocked operation caused by multivibrator entry into the stable state before any data pulses are recorded in the memory, an RC circuit is used to reestablish the astable or "free running" condition, spontaneously, if this does not occur within respective time limits.

3,518,630

DATA PROCESSING SYSTEM INCLUDING PLURAL MEMORY CONTROLLERS

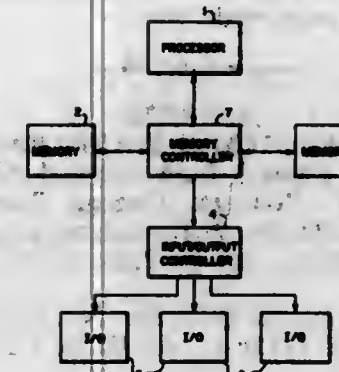
David L. Bahrs, Liverpool, N.Y., and John F. Couleau, Richard L. Ruth, and William A. Shelly, Phoenix, Ariz., assignors to General Electric Company, a corporation of New York

Filed June 3, 1966, Ser. No. 555,165

Int. Cl. H04j 5/00

U.S. Cl. 340-172.5

8 Claims



A data processing system incorporating a processor, a plurality of memories, an input/output controller and connected input/output device, and a plurality of memory controllers. Communication among the subsystems is provided exclusively through the memory controllers to coordinate the execution of operations and the transfers of operation among the subsystems.

3,518,631

ASSOCIATIVE MEMORY SYSTEM WHICH CAN BE ADDRESSED ASSOCIATIVELY OR CONVENTIONALLY

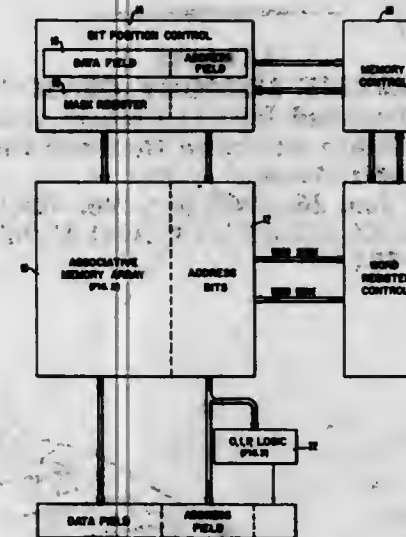
Arwin B. Lindquist, Wilbur D. Pricer, and Robert R. Seeber, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Jan. 13, 1967, Ser. No. 609,873

Int. Cl. G11c 7/00, 15/00

U.S. Cl. 340-172.5

5 Claims



An associative memory matrix having a writable portion made up of bi-stable memory cells and a read-only portion made up of mono-stable memory cells. The memory may be used as a conventional memory by placing an address in the address field of an entry register, masking out all other bits and performing a match interrogation with the unmasked bits. Since the contents of the address portion (read-only memory) of

each stored word are unique, the interrogation results in a single match at the location containing the address sought.

Included is a circuit for determining whether no match, one match, or a multiple match has occurred.

3,518,632

DATA PROCESSING SYSTEM UTILIZING STORED INSTRUCTION PROGRAM

Ronald Threadgold and Orran Terence Pate, Liverpool, England, assignors to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company

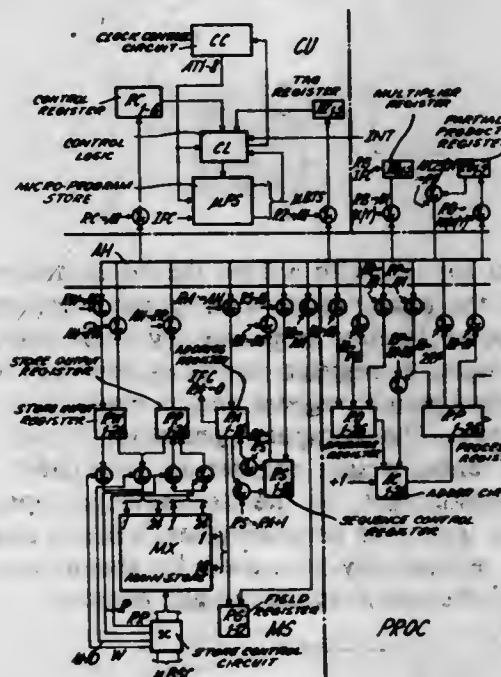
Filed May 25, 1967, Ser. No. 641,204

Claims priority, application Great Britain, June 2, 1966, 24,595/66

Int. Cl. G06f 9/16

U.S. Cl. 340-172.5

3 Claims



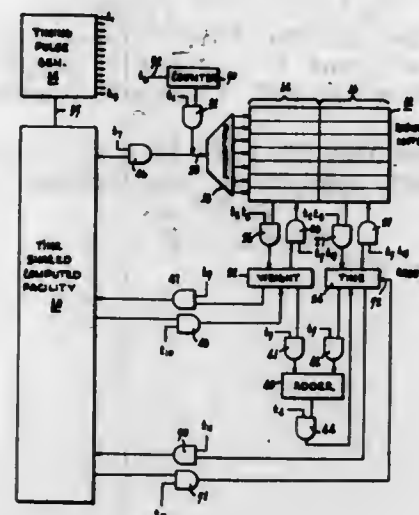
A micro-programme controlled data processing device comprises a main store, a control unit and a plurality of functional units, the main store and the various units being interconnected by a data highway, to which access is obtained by controlling gate circuits in the outputs and inputs of registers associated with the main store and the various units. The gate circuits are controlled by micro-bits obtained from a micro-programme store within the control unit and derived by the micro-programme store from a function code portion of an instruction word read out of the main store, the instruction word also including a portion which normally defines the main store location from which data is to be withdrawn or into which data is to be placed but it can also define other locations. The instruction word also includes an indirect address tag and an address modification tag. The micro-bits obtained from the micro-programme store are gated with clock-controlled timing pulses so that they are active on the main store and other units at specific times within an 8-slot instruction cycle, one slot period being equal to one-quarter of the cycle time of the main store so that two access operations may be performed on the main store in each cycle. One access operation may be used to extract the next programme instruction word and the other to extract the working data defined by the address section of the instruction word. Certain operations require more than one instruction cycle for their completion and one of the micro-bits obtained from the micro-programme store is effective on control logic to provide another series of micro-bits for the next instruction cycle. Iterative operations are similarly controlled.

3,518,633 WEIGHTED TIME ACCOUNTING IN TIME SHARED COMPUTER

John E. Croy, Cherry Hill, N.J., assignor to RCA Corporation, a corporation of Delaware
Filed Feb. 7, 1968, Ser. No. 703,670
Int. Cl. H04j 3/00

U.S. Cl. 340—172.5

1 Claim



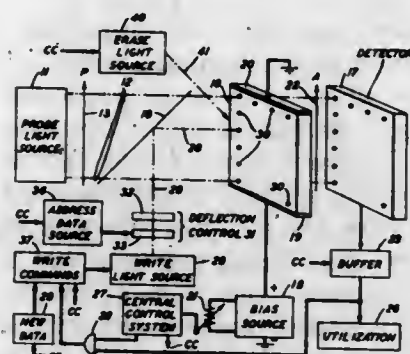
A system for use with a time shared computer to keep account of the total rental value of the component parts of a computer facility employed by each one of many computer users. A register matrix is provided which includes a rental weight register and an elapsed time register for each user. The computer processor varies the contents of a rental weight register in accordance with the varying employment of the computer components by a respective user. The contents of each user's elapsed time register is periodically increased by the amount of the contents of the user's rental weight register.

3,518,634 OPTICAL MEMORY WITH PHOTOACTIVE MEMORY ELEMENT

Albert A. Ballman, Woodbridge, Pascal V. Lenz, Warren Township, Somerset County, and Edward G. Spencer, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York
Filed June 16, 1967, Ser. No. 646,635
Int. Cl. G11c 13/04

U.S. Cl. 340—173

28 Claims



A body of bismuth germanium oxide in an electric field is flooded by monochromatic light, a narrow beam of multichromatic light is controllably deflected to strike selected regions of the body collinearly with the multichromatic light. The simultaneous application of electric field and multichromatic light enhances optical activity in the region of the body illuminated by such multichromatic light. The domain of enhanced optical activity

produced by such coincidence persists after removal of the multichromatic light. Optical polarization filters in the path of the monochromatic light cooperate with domains of enhanced optical activity in the body of bismuth germanium oxide to produce on a detector a projection of the pattern of domains thus formed. Domains are erased by applying an intense multichromatic side light or by sharply reducing the electric field. Domain persistence is increased by a magnetic field perpendicular to the electric field. Ferroelectric enhancement of domain formation is also employed.

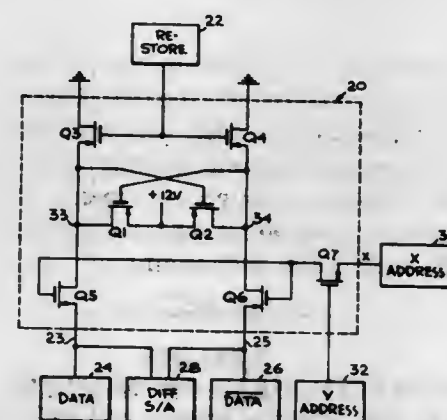
3,518,635 DIGITAL MEMORY APPARATUS

Robert H. Cole, Canoga Park, Samuel Nisim, Malibu, and George V. Podraza, Canoga Park, Calif., and Robert Feuer, Wayne, N.J., assignors to The Bunker-Ramo Corporation, Canoga Park, Calif., a corporation of Delaware

Filed Aug. 22, 1967, Ser. No. 662,457
Int. Cl. G11c 11/40; H03k 3/286

U.S. Cl. 340—173

13 Claims



A low power digital memory comprised of a matrix of memory cells suitable for fabrication by large scale integrated circuit techniques. Each memory cell is comprised of field effect transistors, preferably metal oxide semiconductors. A plurality of cells are fabricated on a single monolithic chip and are interconnected for coincident signal addressing. Power is conserved by periodically pulsing load transistors rather than biasing them continuously on.

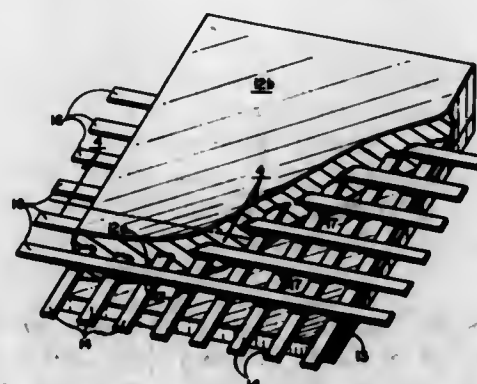
3,518,636 FERRITE MEMORY DEVICE

George R. Pulliam and John L. Archer, Anaheim, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

Filed Jan. 26, 1965, Ser. No. 428,158
Int. Cl. G11c 11/14; H01f 10/02

U.S. Cl. 340—174

7 Claims



A ferrite memory device comprising first and second crossed arrays of conductors embedded in a layer of single crystal ferrite. In a preferred embodiment, the ferrite is epitaxially disposed on a monocrystalline substrate. The

device may be fabricated by chemical vapor phase deposition of a first layer of single crystal ferrite epitaxially on a single crystal substrate, depositing a first set of conductors on the layer, providing insulation over portions of the conductors, depositing a second array of conductors crossing said first conductors at the insulated portions thereof, and depositing additional single crystal ferrite atop the original layer so as to substantially embed the conductors in monocrystalline ferrite.

3,518,637 MAGNETIC DEVICE FOR STORING ANALOG INFORMATION

Richard C. Woodbury, Stanford, Calif., assignor to Research Corporation, New York, N.Y., a non-profit corporation of New York

Filed May 25, 1965, Ser. No. 459,797

Int. Cl. G11c 27/00, 11/06, 7/00

U.S. Cl. 340—174

9 Claims



A magnetic device capable of storing analog information and being nondestructively read. The device consists of a conductive magnetic medium, e.g. a length of tape, having a preferred axis of magnetization. The medium will have a remanent state characterized by a net magnetization in either of two opposite directions along the preferred axis which net magnetization can have a magnitude anywhere between zero and saturation. By setting up a drive current in the medium which flows along the preferred axis, a resulting magnetizing force perpendicular to the preferred axis will be developed which tends to rotate the magnetic vector from the preferred axis. Consequently, there will be a change in magnetic flux along the preferred axis which change can be recognized by a sense winding. The amount and direction of flux change along the preferred axis is respectively related to the magnitude and directions of the remanent state.

3,518,638 MAGNETIC CORE MEMORY MATRIX WIRING REARRANGEMENT

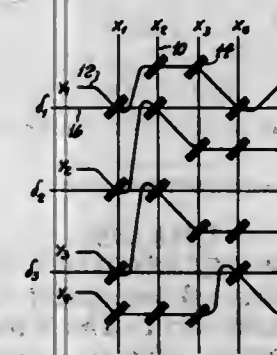
Richard J. Petschaner, Edina, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Jan. 11, 1966, Ser. No. 520,306

Int. Cl. G11c 5/08, 11/06, 5/02

U.S. Cl. 340—174

4 Claims



A method for reducing the mutual inductance of a magnetic core memory matrix of the type having at least two sets of orthogonal coincident-current drive lines (the X- and Y-drive lines) and one set of special purpose

drive lines (the delta-drive lines) which are simultaneously activated. The X- and Y-drive lines link all cores in orthogonal sets of straight lines and the delta-drive lines link the cores in accordance with some predetermined ordering rule in curved lines. The method consists of straightening out the delta lines so that they become orthogonal to the lines of one of the other two sets of drive lines, the remaining set now constituting the curved set.

3,518,639 MAGNETIC MEMORY ELEMENTS WITH STACKED MAGNETIC LAYERS

Ernst Feldtkeller and Karl-Ulrich Stein, Munich, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany

Filed Apr. 14, 1966, Ser. No. 542,701

Claims priority, application Germany, Apr. 15, 1965, S 96,580

Int. Cl. G11c 11/14

U.S. Cl. 340—174

3 Claims



A magnetic memory matrix employs individual memory elements which comprise a plurality of superimposed multilayer magnetic elements, the layers of which are separated from one another of magnetically conducting, non-magnetic interlayers, these multilayer combinations being insulated from one another and from control conductors by insulating layers. The order of stacking the various components is such that in different embodiments the magnetic layers are remote from one another or near one another to determine the completeness of formation of magnetic ring closures, the more complete the ring closure, the greater the reduction of the demagnetizing field.

3,518,640 MAGNETIC MEMORY WITH NOISE- CANCELLATION SENSE WIRING

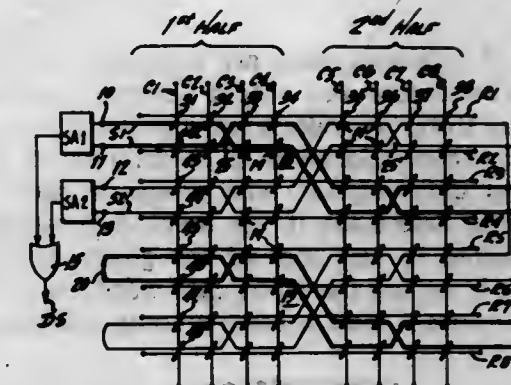
Francis D. Cassidy, Townsend, Mass., assignor to RCA Corporation, a corporation of Delaware

Filed Jan. 19, 1967, Ser. No. 610,279

Int. Cl. G11c 5/08, 7/02

U.S. Cl. 340—174

2 Claims



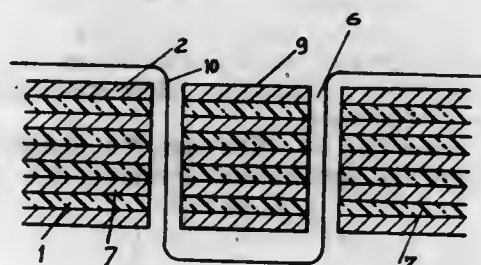
A sense winding arrangement in a row and column array of memory elements any one of which can be accessed by coincident pulses on one row conductor and one column conductor. Two sense windings are employed in an interleaved criss-cross arrangement which reduces disturbances from half-selected memory elements along the one selected row conductor and the one selected column conductor. A sense output from either one of the sense windings is used as the output from the array.

3,518,641
LAMINATED LAYER FERROMAGNETIC MEMORY AND LOGICAL CIRCUIT ELEMENTS
 Victor Chapal de Chanteloup, Paris, France, assignor to CSF-Compagnie Generale de Telegraphie Sans Fil, a corporation of France

Filed Apr. 12, 1967, Ser. No. 630,363
 Claims priority, application France, Apr. 19, 1966, 58,142

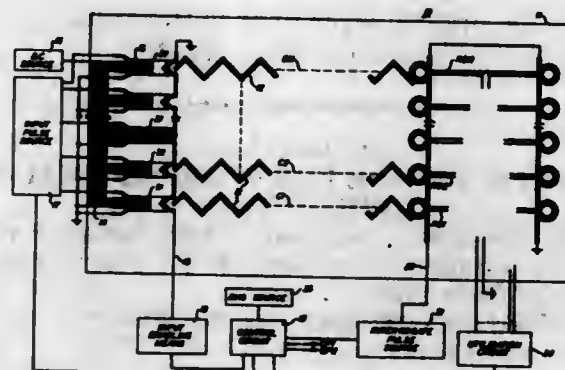
Int. Cl. G11c 11/12
 U.S. Cl. 340—174

1 Claim



Ferromagnetic element comprising a laminated structure made of alternating dielectric and ferromagnetic layers, and at least two holes forming a leg, around which are wound the control wires.

response to magnetic fields rotating in the plane of the sheet. Propagation channels for domains are defined in the sheet by overlays of repetitive geometries in which pole patterns change in response to the rotating field in a



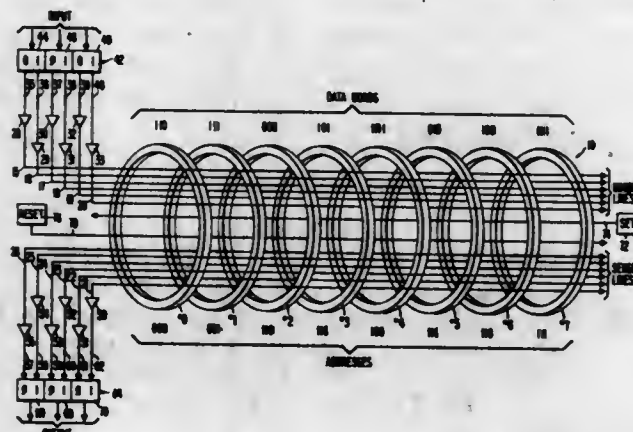
manner to attract domains along respective channels. Domains may be moved, in the absence of propagation wiring, in only selected channels by controlling the magnitude of a field in the plane of the sheet in the direction of propagation.

3,518,642
MAGNETIC ASSOCIATIVE MEMORY
 Richard M. Shelton, Conshohocken, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 4, 1967, Ser. No. 672,843
 Int. Cl. G11c 15/00

U.S. Cl. 340—174

2 Claims



A group of magnetic cores are uniquely threaded with input data conductors and output address conductors so that each core stores its address and a particular data word. A data word whose address is to be determined is placed into an input data register. The group of cores is then interrogated to determine if the input data word in the register is stored in any core of the group. If a core is found which is storing the input data word the address of the particular core is read out into an output address register.

3,518,643
MAGNETIC DOMAIN PROPAGATION ARRANGEMENT
 Anthony J. Pernecki, Martinsville, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed May 3, 1968, Ser. No. 726,454
 Int. Cl. G11c 19/00, 11/16

U.S. Cl. 340—174

9 Claims

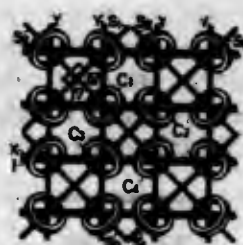
The propagation, in a magnetic sheet, of single wall domains of essentially constant diameter is realized in

3,518,644
CORE MATRIX PLANE
 Seiichi Kobayashi, Michihiko Torii, and Hiroichi Sakoda, Washizu, Shizuoka Prefecture, Japan, assignors to Fuji Denki Kagaku Kabushiki Kaisha, Tokyo, Japan, a corporate body of Japan

Filed July 29, 1968, Ser. No. 748,506
 Claims priority application Japan, Dec. 6, 1967, 42/181,962

Int. Cl. G11c 5/02, 5/08, 11/06
 U.S. Cl. 340—174

7 Claims



A memory storage device for computers and information retrieval systems includes a frame in which vertical Y wires are crossed with horizontal X wires and two sense wires. Annular shaped bistable ferrite cores are threaded by the X and Y wires at their cross-points. The sense wires are threaded at substantially right angles to each other, through the memory cores, forming diagonal wiring. The sense wire in one direction is strung above the X, Y and inhibit wires and the sense wire in the other direction is strung below them.

3,518,645
RANDOM ACCESS DATA STORE
 Merton C. Leinberger, Inglewood, and Richard T. Peters, Torrance, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Continuation of application Ser. No. 15,147, Mar. 15, 1960. This application Nov. 25, 1964, Ser. No. 415,565
 Int. Cl. G11b 3/30, 23/12

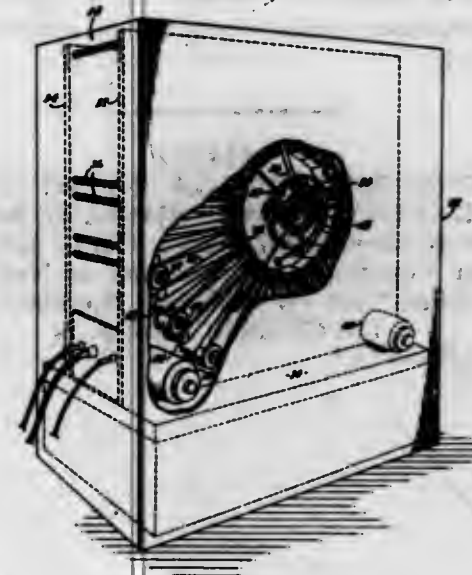
U.S. Cl. 340—174.1

3 Claims

A quasi-random access data store is disclosed which provides for access to any selected one of a plurality of

tape loops having parallel data tracks by selectively positioning a multi-record head at scanning stations disposed

retractably mounted on a cartridge support in the storage apparatus to facilitate the lateral tape loading and is movable to an advanced transducing position at which it ac-



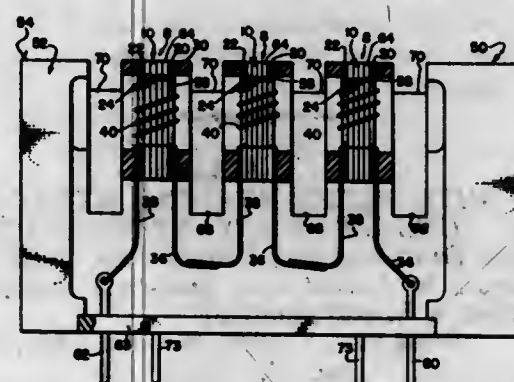
to position respective tape loops for cooperation with the multi-record head.

3,518,646
TRANSDUCER WITH CONDUCTIVE GAP MATERIAL

Eugene Sakasegawa, Los Angeles, Calif., assignor, by mesne assignments, to United Control Corporation, Redmond, Wash., a corporation of Delaware
 Filed Feb. 11, 1966, Ser. No. 526,826

Int. Cl. G11b 5/12, 5/42, 5/44
 U.S. Cl. 340—174.1

2 Claims



The disclosure provides a method for constructing a transducer wherein the thin gap member utilized as a conductor for a bias signal may be readily coupled to the source of the bias signal. The method of construction allows a plurality of gap members to be readily connected into a single conductive path.

3,518,647
LATERALLY LOADED TAPE MECHANISM WITH RETRACTIBLE BACK AND EDGE GUIDES
 John A. Altonji, Syosset, and Joseph G. Valiana, Levittown, N.Y., assignors to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York

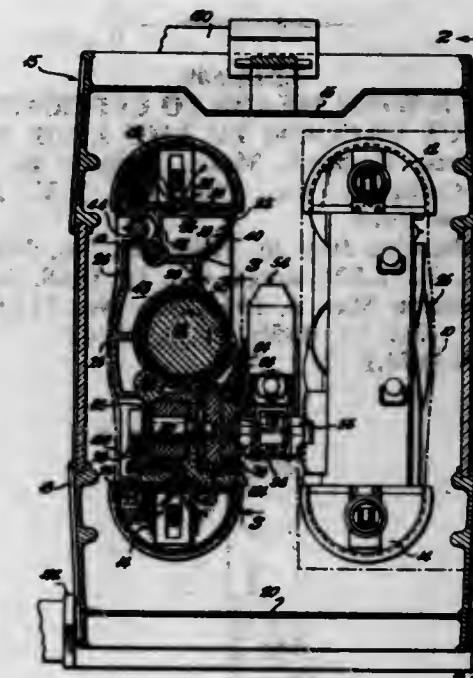
Filed Sept. 22, 1966, Ser. No. 581,257

Int. Cl. G11b 15/62, 15/66

U.S. Cl. 340—174.1

17 Claims

A tape guide apparatus for high speed information storage and retrieval apparatus of the type in which cartridge contained storage tapes are loaded laterally into position relative to a transducing head. The guide apparatus is

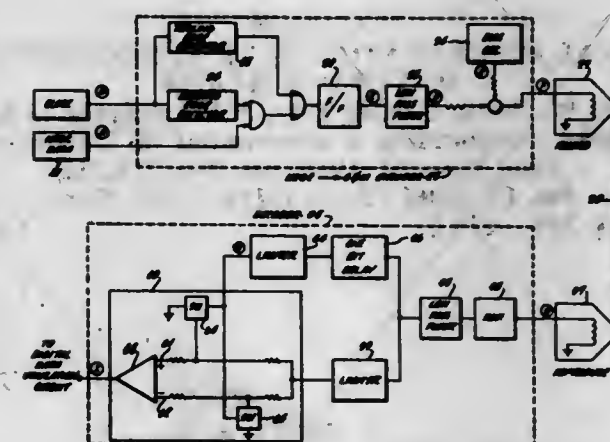


curately guides the tapes relative to a transducing head as they move longitudinally relative thereto in the conduct of transducing operations.

3,518,648
HIGH DENSITY RECORD AND REPRODUCE SYSTEM
 Kermit A. Norris, Azusa, Calif., assignor, by mesne assignments, to Subscription Television, Inc., New York, N.Y., a corporation of Delaware
 Filed Nov. 7, 1966, Ser. No. 592,458
 Int. Cl. G11b 5/00, 5/02, 5/06

U.S. Cl. 340—174.1

21 Claims



High density methods and apparatus for storing and recovering digital data on a magnetic medium are disclosed. A continuous signal represents binary data by level crossings, or signal transitions, at bit cell boundaries with the presence or absence of an additional signal transition respectively defining one or the other of two bit types. The data-containing continuous signal is linearly, or nonsaturably, stored on a magnetic medium in the form of continuous flux variations. During data recovery a transducer responds to the continuous flux variations so as to restore them to a data-representing signal. The

restored signal is delayed by a one-bit cell delay interval. Both the delayed and nondelayed signals are compared with each other free of any clock signal, and signal similarities or signal differences, respectively, are employed for restoring the original binary data.

3,518,649

TAPE DRIVE WITH MEANS TO INTERMITTENTLY CONNECT VACUUM TO TWO LOOP BOXES

Andrew Gabor, Bedford, Mass., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York

Original application July 28, 1964, Ser. No. 385,727, now Patent No. 3,378,826, dated Apr. 16, 1968. Divided and this application Mar. 8, 1968, Ser. No. 711,660

Int. Cl. B65h 17/28, 17/42

U.S. Cl. 340-174.1

3 Claims



The specification and drawings disclose a pair of vacuum pockets on either side of a continuously rotating capstan. These pockets respectively draw a tape loop into engagement with the capstan and pull the loop out of engagement with the capstan.

3,518,650

SIGNAL COMPARATOR HAVING DISTRIBUTED PLAYBACK HEADS

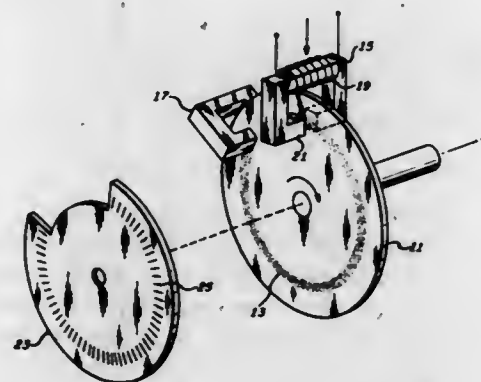
Edward W. Stark, Garden City, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Mar. 22, 1968, Ser. No. 715,215

Int. Cl. G06f 15/34; G11b 21/00, 5/02

U.S. Cl. 340-174.1

1 Claim



A signal correlator having a magnetic recording material disposed annularly on a rotating disc. A recording

head records incoming binary information on the magnetic material. Individual sensing elements are inductively coupled to the magnetic material and distributed uniformly around the annulus. The individual sensing elements are connected together so as to be in additive series relationship when energized in accordance with a desired code.

3,518,651

HOMING CONTROL FOR FLYING HEAD OF MAGNETIC SURFACE STORAGE SYSTEM

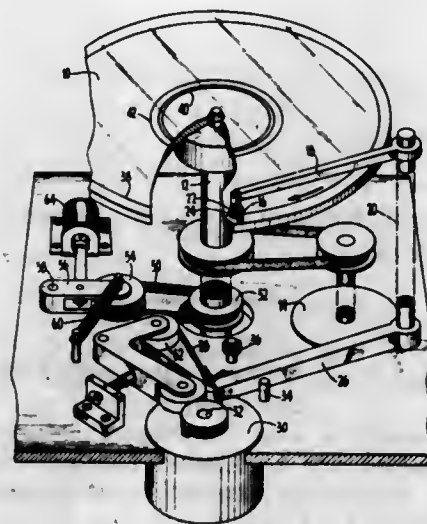
Ronald B. Keeney, San Leandro, Calif., assignor to The Singer Company, a corporation of New Jersey

Filed Mar. 10, 1969, Ser. No. 805,557

Int. Cl. G11b 5/40, 5/54

U.S. Cl. 340-174.1

5 Claims



In a magnetic disc record system wherein the flying head settles onto the disc at a home position when the disc stops, the momentum of the disc is applied through a friction drive for homing the head, particularly upon power failure.

3,518,652

REMOTE METER READING ATTACHMENT UTILIZING ROTARY SWITCHES

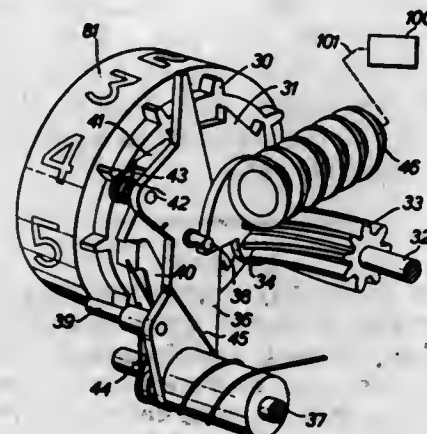
Diamond Dransfield and Patrick Bass, London, England, assignors to United Gas Industries Limited, London, England, a British company

Filed Dec. 7, 1967, Ser. No. 688,791

Int. Cl. G01r 13/04

U.S. Cl. 340-177

9 Claims



An attachment for a meter by means of which the meter reading may be read remotely from the meter includes a rotary switch for each digit wheel of the meter

having a number of possible positions each corresponding to a number on the digit wheel, the switches being mechanically intercoupled, means to couple the switches to a drive from the metering mechanism and electrical connections from the switches to a remote location in order to provide information concerning the position of each switch at the remote location.

3,518,653

CONSTANT SURVEILLANCE ALARM SYSTEM

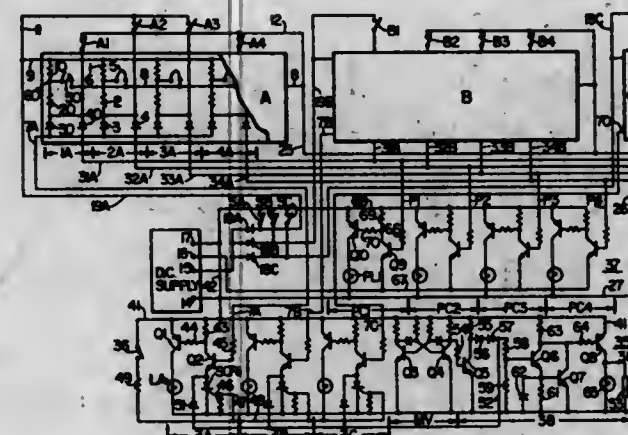
Alan E. Thomas, Milford, Conn., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware

Filed Aug. 10, 1967, Ser. No. 659,716

Int. Cl. G08b 25/00

U.S. Cl. 340-213.1

10 Claims



Electrical circuitry uses only semiconductor devices for monitoring the condition of a plurality of alarm points at each of a number of zone stations. The monitoring is done at a central station. The circuitry at the central station includes alarm point and zone station identifying circuits providing a visual indication of the zone and alarm point in alarm. An audible alarm circuit is also included which is energized via the zone identification circuits to provide an audible alarm indicative of an alarm point moving to its alarm position. The operation of the audible alarm circuit via an energized zone identifying circuit can be terminated allowing audible alarm circuit to be subsequently energized via another zone identifying circuit in response to an alarm point in another zone moving to the alarm position.

3,518,654

METHOD AND APPARATUS FOR DETECTING A CONDITION

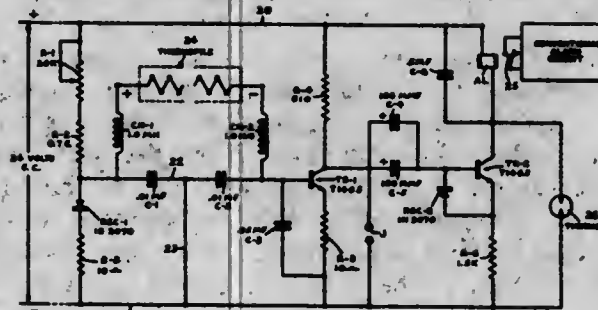
Theo N. Vassil, Flushing, N.Y., assignor to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey

Filed May 16, 1967, Ser. No. 638,900

Int. Cl. G08b 13/26, 17/06

U.S. Cl. 340-228

10 Claims



A method and apparatus for improving the stability, speed of response and reliability of electrical protection systems. A quantity representative of the second deriva-

tive with respect to time of a measurable phenomenon is monitored to give warning of the occurrence of an undesirable condition.

3,518,655

SECURITY DEVICES

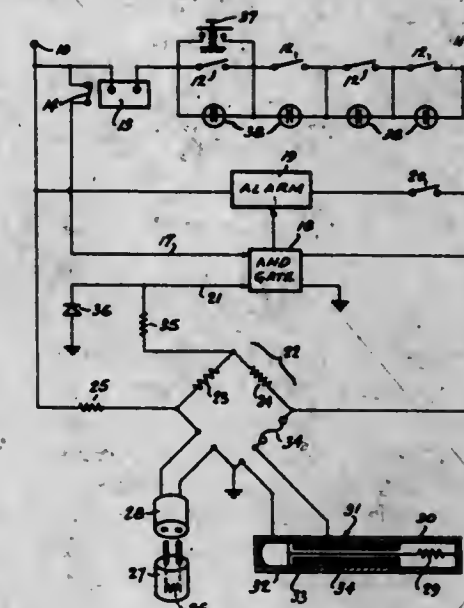
Benno B. Seal, 4742 St. James St. W., Montreal, Quebec, Canada

Filed July 20, 1966, Ser. No. 566,496

Int. Cl. G08b 13/08

U.S. Cl. 340-274

8 Claims



An alarm operated by the opening of a door or window contact simultaneously with unbalance in a bridge that can be balanced by use of the correct "key" in the form of a predetermined resistor. The combination can be changed by plugging in a different resistance in another arm of the bridge. The bridge circuit can also be used as part of an electrical lock without the alarm.

3,518,656

REMOTELY CONTROLLED HIGH ENERGY DISCHARGE DRIVE CIRCUIT

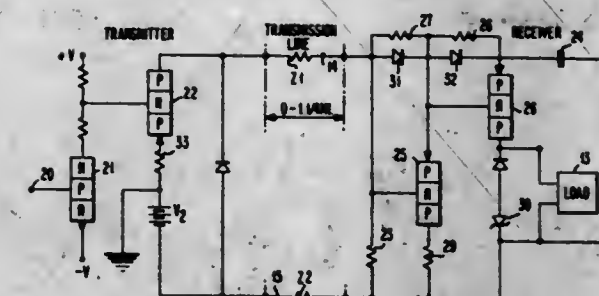
Robert L. Schauf, Boulder, Colo., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Apr. 7, 1967, Ser. No. 629,124

Int. Cl. H04m 11/00

U.S. Cl. 340-310

8 Claims

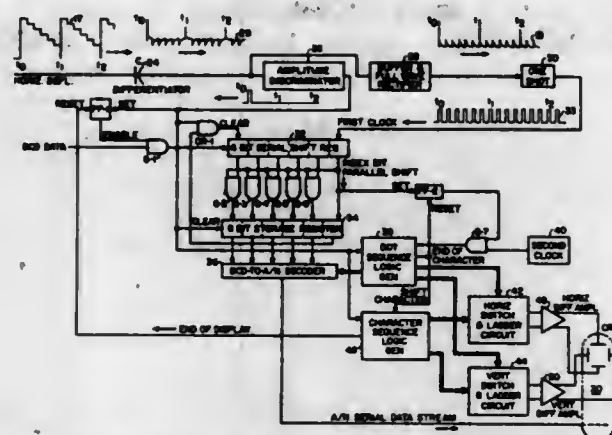


A controlled transistorized circuit that enables the transmission of high energy pulses to a remotely located load through the medium of charging a capacitor in a RC circuit configuration at a receiving terminal. Then remotely controlled switching discharges the capacitor into a load such as a print actuating solenoid of a printing device.

3,518,657
PULSE CODE TO ALPHA/NUMERIC TRANSLATOR
 Alfred W. Zinn, Monsey, N.Y., and Sol Gruber, North Caldwell, N.J., assignors to Singer-General Precision, Inc., a corporation of Delaware
 Filed Nov. 1, 1966, Ser. No. 591,185
 Int. Cl. G06F 5/00

U.S. Cl. 340—324

12 Claims



The computer provides two signals to the logic system, a staircase sawtooth waveform, and a BCD data stream. The staircase waveform is converted into a first stream of clock pulses and fed to a shift register for clocking in the BCD data one line at a time. The data line is then parallel shifted into a second register and a second clock is simultaneously enabled. The data in the second register is made available to a decoder which contains suitable logic circuitry for converting the BCD information into alpha/numeric data which, in turn, is used to intensify the appropriate spots in a $P \times Q$ dot matrix on the face of a CRO. In order to provide an intensify signal or a not intensify signal for each dot position in the matrix, additional gating signals are applied to the decoder from a dot sequence generator which receives its timing signals from the second clock. In the time it takes to load the shift register with a single BCD line, the second clock pulses $P \times Q$ times to generate a complete character raster on the CRO. The intensified dots in the raster thus form a display of the alpha/numeric character corresponding to the BCD data line in the second register.

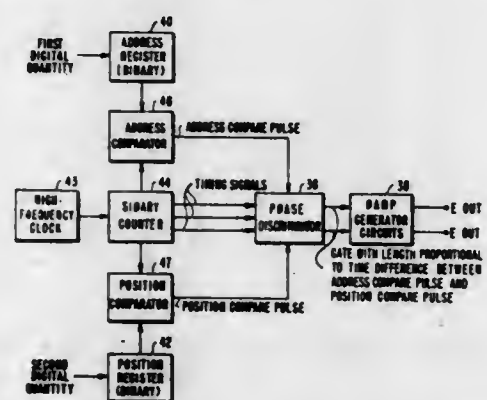
3,518,658
DIGITAL COMPARISON-TO-ANALOG SIGNAL CONVERTER
 Robert J. Black, Los Gatos, and Frank J. Sordello, San Jose, Calif., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 16, 1964, Ser. No. 418,602

Int. Cl. H03k 13/02

U.S. Cl. 340—347

15 Claims



A system for generating an analog signal to control a movable mechanism, such as a movable transducer in a random access memory, responds to digital representations of actual and desired positions by generating a series

of reference pulses and a series of time varying pulses having substantially the same frequency but phase relationships determinative of positional error. The time intervals between successive pairs of pulses are used to generate signals of appropriate amplitude and sense to move the transducer to its desired position.

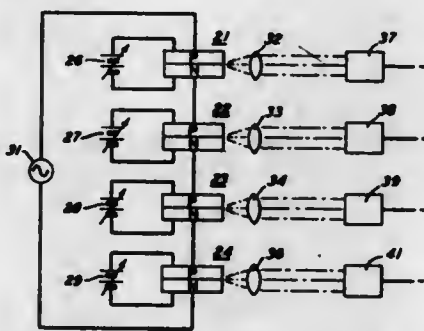
3,518,659
HIGH SPEED LIGHT SWITCH
 Alan G. Chynoweth, Summit, and William L. Feldmann, Bernardsville, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 19, 1965, Ser. No. 472,870

Int. Cl. H03k 13/02

U.S. Cl. 340—347

1 Claim

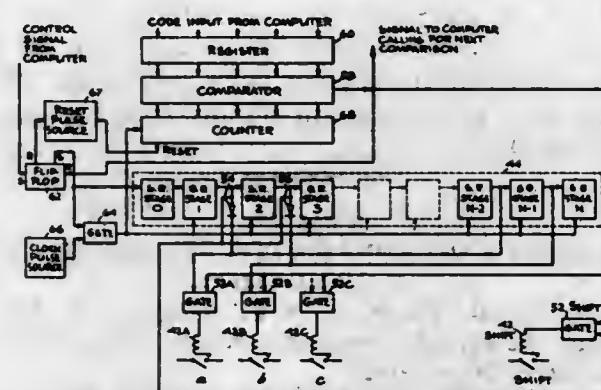


Disclosed herein is a tunnel diode arranged for optical switching at microwave rates.

3,518,660
ENCODER
 James P. Nicklas, Woodland Hills, Calif., and Robert H. Stotz, Boston, Mass., assignors to B-R Corporation, a corporation of Delaware
 Original application Nov. 29, 1962, Ser. No. 240,842, now Patent No. 3,291,910, dated Dec. 13, 1966. Divided and this application June 8, 1966, Ser. No. 565,362
 Int. Cl. H03k 13/02

U.S. Cl. 340—347

4 Claims

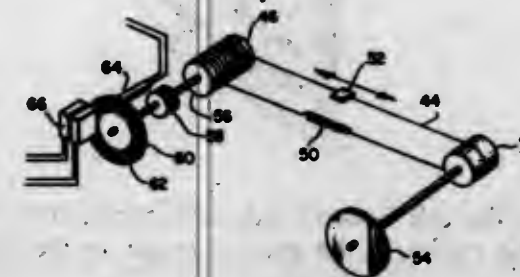


Apparatus for converting different symbols each manifested by a different physical representation, such as a typewriter key, into a desired electrical code using a shift register having stages associated with respective ones of the symbols to be converted. The shift register is shifted in synchronism with an output counter which counts in the desired output code. When the shift register stage which is set in accordance with the symbol to be converted is shifted out of the shift register, the counting of the output counter is terminated, the count then indicated thereby being the required output code for the signal being converted. The invention also provides for terminating the counting of the output counter only in response to the shifting out of the second of two set stages of the shift register so as to permit conversion of a symbol which may have two possible forms, such as the upper and lower cases of a typewriter key.

3,518,661
LINEAR MOTION CONVERTER
 Sidney A. Wingate, Concord, Mass., assignor, by mesne assignments, to Itt Corporation, Lexington, Mass., a corporation of Delaware
 Filed Sept. 9, 1966, Ser. No. 578,403
 Int. Cl. H03k 13/02

U.S. Cl. 340—347

10 Claims

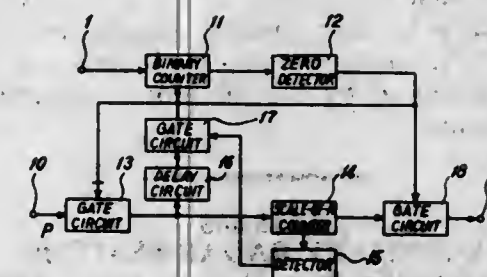


Apparatus for measuring linear movement along two perpendicular axes on a flat table. A relatively heavy carriage is straddled across the table for movement along a first axis. The carriage is connected by a cabling system to a rotary encoder which gives an indication of the movement of the carriage along the first axis. A relatively light reticle plate is mounted for movement on the carriage along a second axis which is perpendicular to the first axis. The reticle plate is coupled by a second cabling system to a second linear encoder which yields an indication of movement along the second axis. The difference in the moments of inertia of the relatively heavy carriage and the relatively light reticle plate is compensated for by connecting a flywheel to the reticle plate such that linear motion of the reticle plate is converted into the rotary motion of the flywheel. This equalizes the forces required to move the carriage along the first axis and the reticle plate along the second axis. Each cabling system has an endless loop cable which is wrapped for several turns around a drum with a helical track in its periphery which is mounted on each encoder shaft.

3,518,662
DIGITAL TRANSMISSION SYSTEM USING A MULTILEVEL PULSE SIGNAL
 Yukio Nakagawa, Tokyo-to, and Kitaro Amano and Chiechi Ohta, Yokohama-shi, Japan, assignors to Kokusai Denhin Denwa Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company of Japan
 Filed Sept. 23, 1966, Ser. No. 581,554
 Claims priority, application Japan, Sept. 27, 1965, 40/58,659; Jan. 17, 1966, 41/2,266
 Int. Cl. G06f 5/02; H03k 13/24

U.S. Cl. 340—347

4 Claims



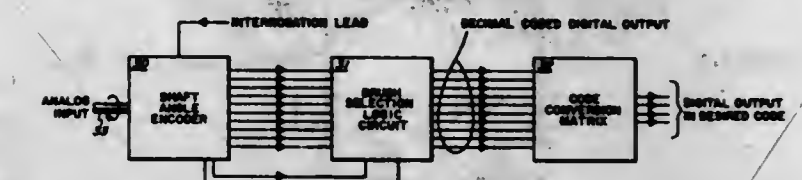
A digital transmission system using a multilevel signal comprising coding means for converting a binary coded signal to be transmitted into a multilevel pulse signal each code word of which is composed of a predetermined number of code elements to transmit the converted multilevel pulse signal into a transmission medium, where each plus element of the code word, as well as each minus element of the code word assumes a level selected from

a plurality of possible levels, and an algebraic sum of levels of the code elements included in each of the code words is substantially equal to zero.

3,518,663
SHAFT ANGLE ENCODER WITH BRUSH SELECTION LOGIC CIRCUITRY
 Rocco R. Oddo, Brooklyn, N.Y., and Frederick H. Joplin, Sparta, N.J., assignors to Singer General Precision, Inc., a corporation of Delaware
 Filed Sept. 29, 1967, Ser. No. 671,679
 Int. Cl. G08c 9/08

U.S. Cl. 340—347

12 Claims

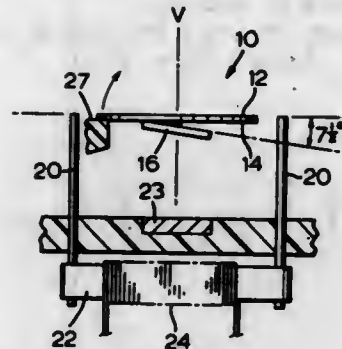


An analog-to-digital code converter of the shaft angle encoder type is provided wherein analog input information in the form of an input shaft angle is converted into an unambiguous digital output in any desired code. The analog information is first converted into a decimal coded digital output by a shaft angle encoder and then converted into the desired code by a simple diode code conversion matrix. A separate shaft angle encoder or "decade" is employed for each digit of the decimal coded "word" output of the analog-to-digital code converter.

The described shaft angle encoder portion of the converter comprises a rotatable coded drum having electrically conductive segments which are adapted to be energized by a first or "interrogation" track on the drum to permit both static and dynamic interrogation, with either a continuous or pulsed interrogation signal. Ten output brushes are spaced around the periphery of the drum at 36° intervals and are energized with a make-before-break operation by a conductive segment in a second track on the drum to provide decimal coded electric output signals representing the analog drum positions. A brush selection logic circuit comprising ten AND gates and a flip-flop circuit is utilized with the shaft angle to provide unambiguous decimal coded output signals. Each AND gate has a first input connected to one of the ten output brushes and a second input connected to one of the outputs of the flip-flop circuit, so that the first stable operating state of the flip-flop energizes the second inputs of alternate AND gates and the second stable operating state energizes the second inputs of the remaining AND gates. Auxiliary brush and conductive segment means providing a break-before-make operation in a third track on the drum are utilized to control the inputs to the flip-flop, so that the flip-flop is triggered from one stable state to the other as the drum is rotated through the ten angular positions defined by the output brushes.

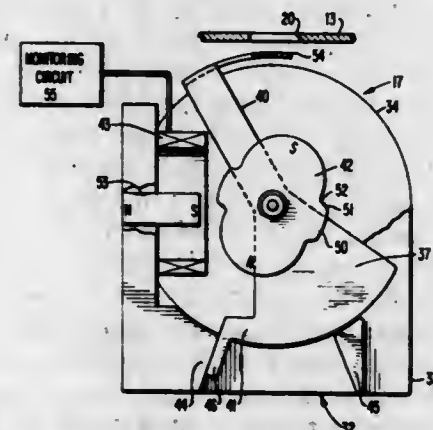
By virtue of this arrangement, there will be no drum position at which more than one AND gate has an output or at which no AND gate has an output, thereby insuring unambiguous decimal coded output information. In one embodiment of the invention, the auxiliary brush and conductive segment means of the third track on the drum take the form of ten auxiliary brushes alternately connected to the "set" and "clear" inputs of the flip-flop and a single conducting segment arranged to energize the auxiliary brushes. In another embodiment of the invention, this arrangement is replaced by two auxiliary brushes connected to the set and clear inputs of the flip-flop and ten conductive segments arranged in a "staggered" pattern in the third track, so that five segments energize each auxiliary brush. The disclosure also illustrates diode conversion matrices for converting the decimal coded output from the shaft angle encoder into binary code decimal, Gray and Gray-excess 3 codes.

3,518,664
MAGNETICALLY ACTUABLE VISUAL DISPLAY SURFACE WITH MAGNETIC BIAS
 Maurice K. Taylor, Weston, Ontario, Canada, assignor, by mesne assignments, to Ferranti-Packard Limited, Toronto, Ontario, Canada
 Filed July 18, 1966, Ser. No. 566,115
 Int. Cl. G08b 5/24, 5/30
 U.S. Cl. 340—373 6 Claims



Magnetically actuable pivotally mounted visual elements having two alternative positions are controlled in accord with the directions of two resultant exterior magnetic fields alternatively applicable. Each resultant field results from the resolution of one sense of a reversible magnetic field and of a non-reversing bias field.

3,518,665
ROTOR DRIVE MECHANISM FOR TWO-POSITION INDICATING INSTRUMENT
 David A. Bristol, Lynnfield, Mass., assignor to General Electric Company, a corporation of New York
 Filed July 17, 1968, Ser. No. 745,559
 Int. Cl. G08b 5/14
 U.S. Cl. 340—373 2 Claims

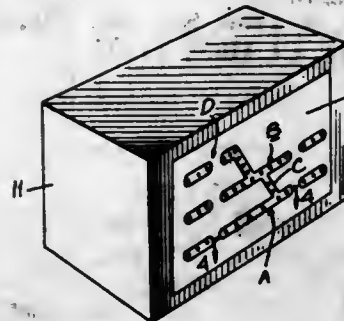


A magnetic drive mechanism for an indicating device. A planar magnet is mounted for rotation to drive an indicating device between two positions. The magnet is elongated along its polar axis. Transverse extensions of the magnet are juxtaposed to a return magnet to obtain a substantially uniform rotor driving torque during rotation between the two positions.

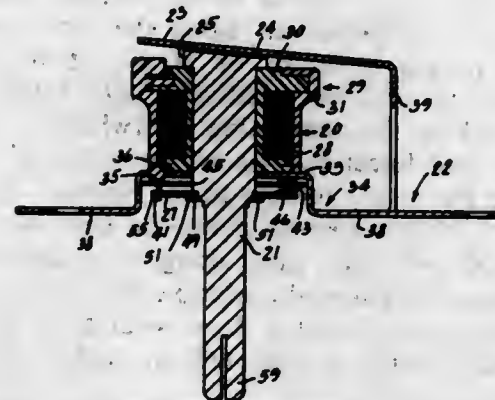
3,518,666
MIMIC DIAGRAM PANEL FOR RAILWAYS HAVING LIGHT PIPING
 Robert E. Heggstad, Croton-on-Hudson, N.Y., assignor to Puleo Electronics Inc., New York, N.Y., a corporation of New York
 Filed June 26, 1968, Ser. No. 740,198
 Int. Cl. G08b 5/00
 U.S. Cl. 340—380 6 Claims

A mimic diagram panel assembly for railway and other indicating systems in which representations of railway track networks or other layouts are selectively indicated by luminous points disposed on the panel at spaced positions in a linear series along the various paths defining the network. Each series of points is coupled by a group of light-conductive cables to a common light cell, such that when the cell is activated, light therefrom is distributed by the cables to the several points in the associated series.

tions in a linear series along the various paths defining the network. Each series of points is coupled by a group of light-conductive cables to a common light cell, such that when the cell is activated, light therefrom is distributed by the cables to the several points in the associated series.



3,518,667
ADJUSTABLE BUZZER WITH MANUAL ADJUSTMENT OF LEVELS OF SOUND
 John W. Hanna, Wheaton, William R. McCarty, Jr., Skokie, and Paul A. Dolter, Roselle, Ill., assignors to Eaton Yale & Towne Inc., a corporation of Ohio
 Filed Nov. 27, 1968, Ser. No. 779,350
 Int. Cl. G10k 9/12
 U.S. Cl. 340—388 6 Claims

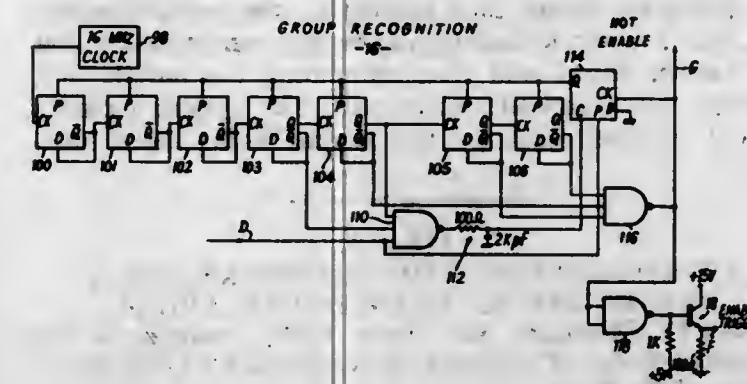


Adjustable buzzer having a pole piece adjustable about its own axis to discrete positions. A vibrator and an end of a pole piece to which a vibrator is intermittently attracted for the production of sound are so angled with respect to the axis of the pole piece that adjustment of the pole piece about its axis adjusts the space between the vibrator and the end of the pole piece and therewith the sound produced by the vibrator. An angularly movable detent washer, which incidentally holds the pole piece against a coil unit and the coil unit against a mounting bracket, engages a fixed detent plate in such a way as to be capable of discrete angular positions with respect thereto and is attached to the pole piece so as to cause the same to have discrete angular positions with respect to the vibrator, whereby the loudness of the buzzing sound produced by the vibrator is adjusted in discrete increments.

3,518,668
SECONDARY RADAR SYSTEMS
 Geoffrey George Woolvin, Harlow, Essex, England, assignor to A. C. Cossor Limited, Harlow, Essex, England
 Filed Mar. 12, 1969, Ser. No. 806,608
 Claims priority, application Great Britain, Mar. 11, 1969, 13,747/69
 Int. Cl. G01s 9/56
 U.S. Cl. 343—6.3 7 Claims

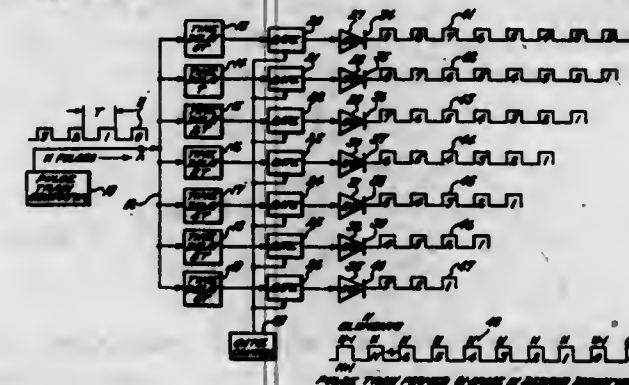
In a secondary radar transponder the received interrogation pulse group is recognised by comparing this group with a comparison group which is generated with the correct widths and spacings in response to the first received pulse. Error pulses are generated where the two

groups do not match and the error pulses are integrated. The interrogation group is accepted only if the requisite number of pulses (e.g. four pulses in Mode 4, to which



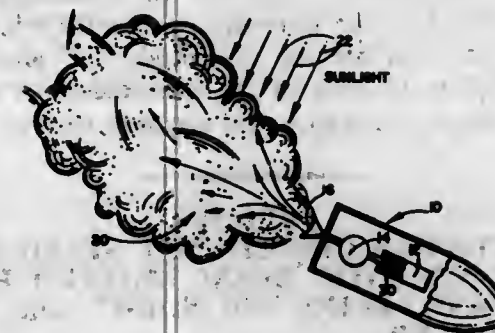
the invention is particularly applicable) are received and counted without the integrated signal level exceeding a predetermined threshold.

3,518,669
TIME SCANNED ARRAY RADAR
 George J. Vogel, Bloomsdale, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
 Filed Sept. 20, 1968, Ser. No. 761,109
 Int. Cl. G01s 9/02; G01q 3/26
 U.S. Cl. 343—16 2 Claims



A time scanned array radar in which an array is steered by generating a series of pulses which have their relative phase and their interpulse spacing accurately controlled.

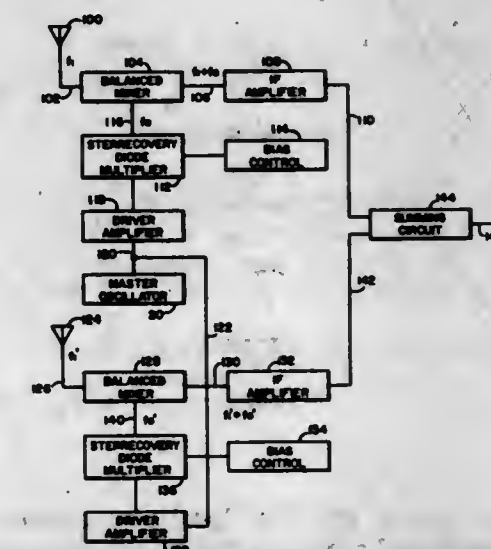
3,518,670
ARTIFICIAL ION CLOUD
 Arnold Miller, Fullerton, Calif., assignor to North American Rockwell Corporation
 Filed Sept. 23, 1967, Ser. No. 670,348
 Int. Cl. H01q 15/18
 U.S. Cl. 343—18 10 Claims



Apparatus and method for producing in the ozone layer an artificial ion cloud having sufficient electron density to reflect electromagnetic waves. Ablative coated microspheres of lithium hydride, sodium hydride, butyl lithium, or ethyl cesium are released through a nozzle in a vehicle passing through the stratosphere. The coatings ablate and the exposed compounds photoionize at the ozone layer ambient temperature to produce an ion

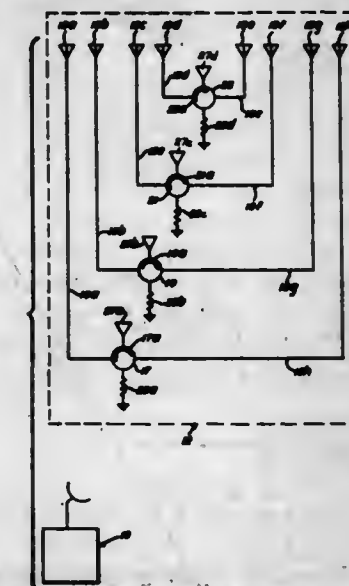
cloud. As charge is neutralized, reionization occurs by light absorption producing a long lifetime cloud. Typically, a cloud of 2.1×10^{10} cubic feet of ionized gas having a charge density of 10^6 electrons/cm.³ may be produced with 0.8 pound of lithium hydride.

3,518,671
ELECTRONICALLY SCANNABLE PHASE ARRAY RECEIVER
 Jorgen Aasted, San Diego, and Peter H. Kufft, La Jolla, Calif., assignors to Ryan Aeronautical Co., San Diego, Calif.
 Filed Oct. 31, 1966, Ser. No. 590,563
 Int. Cl. H04b 7/04; H01q 3/26
 U.S. Cl. 343—100 6 Claims



An electronically scannable phase array receiver in which a single master oscillator supplies a frequency output to a plurality of antennas, with each antenna having a single step recovery diode frequency multiplier that in response to a DC bias and the master oscillator signal, supplies a given phase shifted signal to a mixer at the antenna that is multiplied in frequency.

3,518,672
RADAR TRANSPONDER
 John T. Zimmer, Harvard, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
 Filed Feb. 28, 1969, Ser. No. 803,268
 Int. Cl. H01q 1/00, 1/28
 U.S. Cl. 343—100 1 Claim



A radar transponder system utilizing an active radar beacon and a retrodirective antenna in which interrogating signals are received by such beacon, amplified and reradiated in a beam which is always directed back to the

source of the interrogating signals. The amplifier in the radar beacon is so disposed that interfering signals generated within the radar beacon are damped to prevent ripples or unwanted oscillations in the reradiated signals.

3,518,673

ANTENNA SYSTEM FOR ILS LOCALIZERS

Ole Petter Håkensen, Nairobi, Kenya, assignor to Sintef, Trondheim, Norway

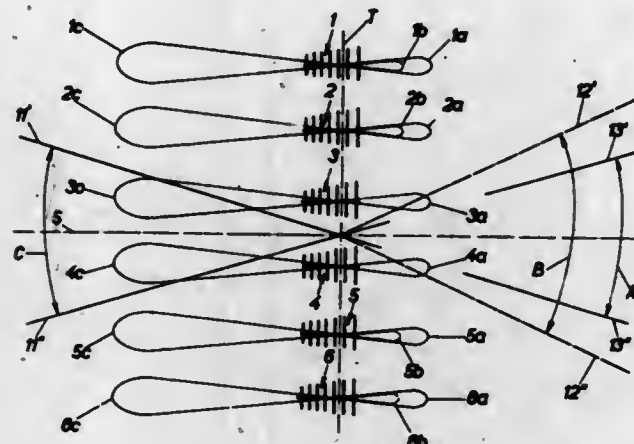
Filed June 4, 1968, Ser. No. 734,423

Claims priority, application Norway, June 8, 1967, 168,528

Int. Cl. G01s 1/16; H01q 11/10

U.S. Cl. 343-108

7 Claims



Antenna system for ILS localizers adapted to have sufficient backward radiation for course information backwardly from the runway, with different course sector widths forwardly and backwardly, the elementary antennas of the system having different front-to-back ratios.

3,518,674

MOBILE UNIT LOCATING SYSTEM

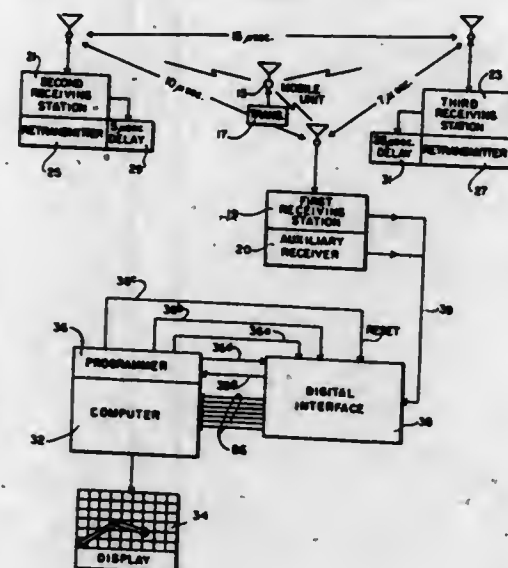
Donovan L. Moorehead, Reno, Nev., and Dan W. Patterson, Red Bank, N.J., assignors to Urban Scientific Corp., a corporation of New York

Filed Feb. 13, 1969, Ser. No. 798,968

Int. Cl. G01s 5/06

U.S. Cl. 343-112

10 Claims



A system for locating mobile units in a surveillance area where the mobile unit periodically transmits a pulse signal and plural receivers at mutually-spaced known locations receive the pulse signals and relay pulses based thereon to a computer means either by wire or by radio paths, different delays of known magnitudes being introduced into the relay paths so as to stagger the reception

of pulses at the computer means in such a way that the pulses arriving from the different receivers always arrive in a prescribed sequence and never overlap each other, the computer means thus identifying the various receivers, and further including means for compensating out the known delays and then computing the mobile unit location by hyperbolic techniques. The system includes special interface circuitry for accomplishing these functions.

3,518,675

APPROXIMATING THE NETWORKS FOR A BEAMFORMING TRANSDUCER ARRAY

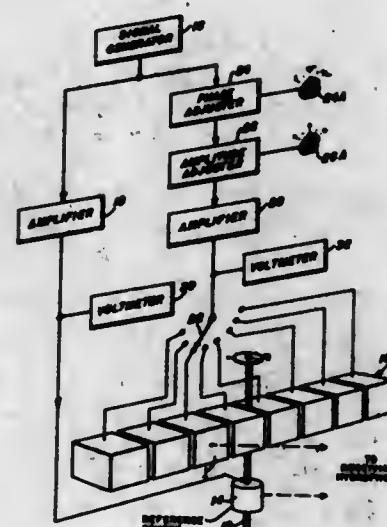
Robert D. Sherheim, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 25, 1969, Ser. No. 882,074

Int. Cl. H04b 11/100

U.S. Cl. 340-5

4 Claims



To form a beam with an array of transducers, the amplitude and phase of the movement of the radiating faces must have precise values with respect to the values of amplitude and phase of the faces of the other transducers. An empirical method for easily and reliably obtaining the complex numbers corresponding to the voltages, E, and/or the currents, I, for driving the transducers of an array comprises first, mounting a reference transducer on the axis of rotation of the array. A wave is transmitted from the reference transducer to a remote hydrophone, the amplitude being fixed at some arbitrary amplitude. Then the same wave is transmitted from one of the transducers (the *i*th) of the array to the hydrophone, and the phase of that wave is adjusted until the pressure wave at the remote hydrophone is zero. By repeating this process for each of the transducers of the array, a set of complex numbers is obtained which makes it possible to calculate the magnitude and phase of the driving function to each of the transducers of the array for producing the desired sound pressure pattern or beam.

3,518,676

APPARATUS FOR DIRECTIONAL STABILIZATION OF AN ACOUSTIC BEAM EMITTED FROM A SHIPBORNE ECHO SOUNDING OR SONAR TRANSDUCER

Bjorn Kirknes, Horton, Norway, assignor to Simonsen & Mustad A.S., Horton, Norway

Filed May 2, 1969, Ser. No. 821,285

Claims priority, application Norway, May 2, 1968, 1,698

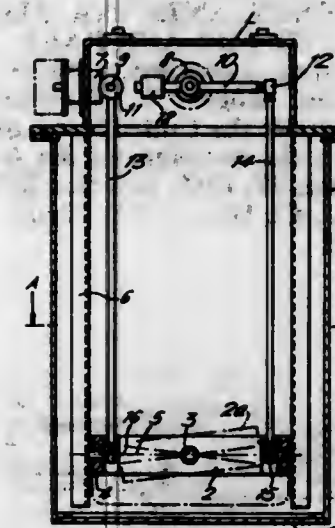
Int. Cl. G01s 9/66; B63b 45/08

U.S. Cl. 340-5

3 Claims

To achieve a directional stabilization of the acoustic beam emitted from a shipborne sonar or echo sounding transducer with respect to the pitching and rolling of the

ship in the sea, the transducer is mounted in a cardanic suspension inside a liquid filled chamber and below the water line of the ship, the rotation angles about the cardanic suspension axes being controlled by a pair of servo systems localized outside the chamber at a sub-



stantial vertical distance from said transducer suspension. For the transfer of relevant torques from the servo systems to said cardanic suspension axes, the output shafts of said systems are linked to the cardanic suspension by means of radial arms and essentially vertical connecting rods.

3,518,677

ELECTRIC MARINE CABLE

Eugene F. Florian, Houston, Tex., assignor to Mark Products, Inc., Houston, Tex.

Filed Sept. 16, 1968, Ser. No. 762,284

Int. Cl. G01v 1/38

U.S. Cl. 340-7

7 Claims



A marine electric cable is disclosed for towing through water for the detection of underwater sound. The cable includes a central core of flexible material to provide the cable with tensile strength. A plurality of sound detectors are spaced along the central core and conductors are provided to connect the sound detectors to a recorder. This assembly is encased in an outer sheath of flexible material, which is filled with a gelatinized material, having good sound transmitting qualities.

3,518,678

METHOD OF DYNAMICALLY EQUALIZING THE GAIN OF SEISMIC SIGNALS

Philip L. Lawrence and Jack T. Nipper, Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

Continuation of application Ser. No. 656,722, July 28, 1967. This application Nov. 5, 1968, Ser. No. 788,366

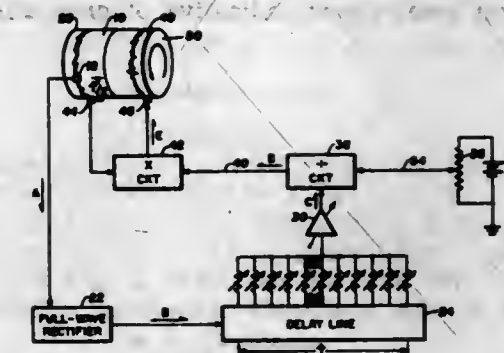
Int. Cl. G01v 1/28

U.S. Cl. 340-15.5

2 Claims

The specification discloses a method of dynamically equalizing a recorded seismic signal for variations in gain other than those due to subsurface geology. First, there is generated a control function representative of a moving average or other smoothed version of the absolute value of a seismic signal to be equalized. Then the amplitude of

this seismic signal is dynamically adjusted by amounts related to the inverse of the generated control function.



Both analog and digital techniques of implementing the method are disclosed.

3,518,679

WELL LOGGING SYSTEM EMPLOYING THREE-CONDUCTOR LOGGING CABLE

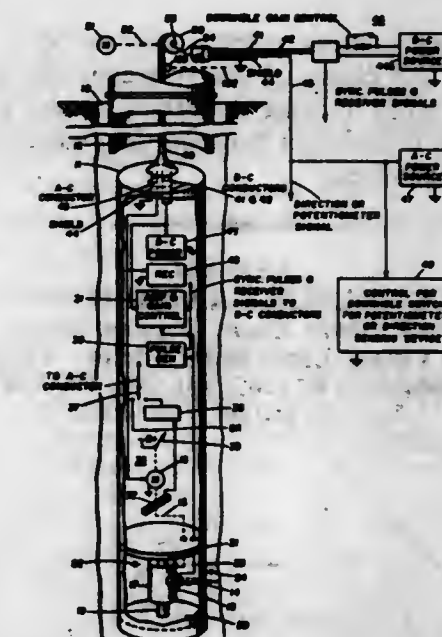
Willet F. Baldwin, Dallas, and Vasek R. Slover, Irving, Tex., assignors to Mobil Oil Corporation, a corporation of New York

Filed Apr. 22, 1969, Ser. No. 818,259

Int. Cl. G01v 1/22, 1/40

U.S. Cl. 340-18

3 Claims



The specification discloses a shielded, three-conductor logging cable for transmitting signals and power between the surface and an acoustic logging tool. D-C power is applied downhole by way of two conductors and the shield, while A-C power is applied downhole by way of the third conductor and the shield. The received signals from the acoustic transducer and sync pulses are transmitted uphole by way of the first two conductors, while a cyclic control signal, which may be indicative of direction, is transmitted uphole by way of the third conductor.

3,518,680

CARRIER PHASE LOCK APPARATUS USING CORRELATION BETWEEN RECEIVED QUADRATURE PHASE COMPONENTS

Gerald K. McAniff, Orange, Calif., assignor to North American Rockwell Corporation

Filed Oct. 2, 1967, Ser. No. 672,346

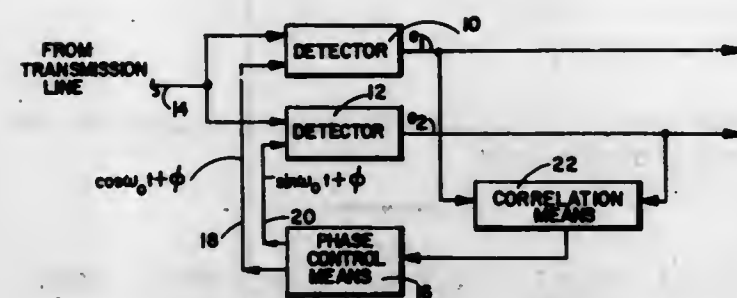
Int. Cl. H04b 1/12, 1/16

U.S. Cl. 343-205

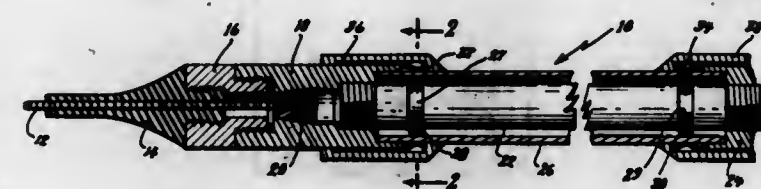
Apparatus for eliminating cross-channel interference in a quadrature transmission system having in-phase and

quadrature detectors. Correlation means detects the degree of correlation between the output signals from the in-phase and quadrature detectors and provides in response thereto an error signal indicative of cross-channel inter-

ference. Phase control means, responsive to the error signal, shifts the phase of the reference phase signals to the detectors so as to cause the cross-channel interference, and hence the correlation between the detector output signals, to be minimized.

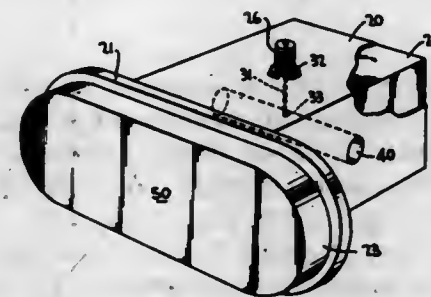


3,518,682
HIGH FREQUENCY ANTENNA TERMINATION UNIT FOR AIRCRAFT
Robert W. Gowall, Leominster, Sidney Rosenthal, Winewton, and Roger W. Whidden, Dedham, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed June 17, 1968, Ser. No. 737,676
Int. Cl. H01q 1/28, 11/02
U.S. Cl. 343-705 5 Claims



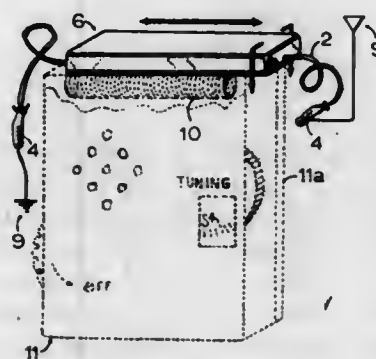
A wire antenna termination unit having a cylindrically-shaped resistor mounted between two end pieces which are connected by means of a dielectric rod passing through the cylinder; the end pieces are provided with spring fingers for providing electrical contact and holding the resistor in place and covers prevent electrical discharge into the atmosphere.

3,518,683
DIELECTRIC-LOADED ANTENNA WITH MATCHING WINDOW
Howard S. Jones, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 9, 1967, Ser. No. 681,689
Int. Cl. H01q 1/40, 13/00
U.S. Cl. 343-705 7 Claims



A microwave waveguide antenna with a matching dielectric window that is a monolithic structure and is greatly reduced in size from previous antennas. A single block of dielectric material is shaped to conform to the inner dimensions of a standard waveguide antenna whose dimensions are reduced by a factor that is determined by the constant of the dielectric being used. The same block is also shaped to form a window at the end of the waveguide. The dielectric is then plated with a metallic coating of the required thickness leaving the front of the window unplated so that the signal can radiate through it. The input to the waveguide is connected by any of the well-known methods. By using a dielectric material that has high temperature resistance the antenna can be inserted directly in the heat shield or surface of an atmosphere re-entry type vehicle. Control of the direction of

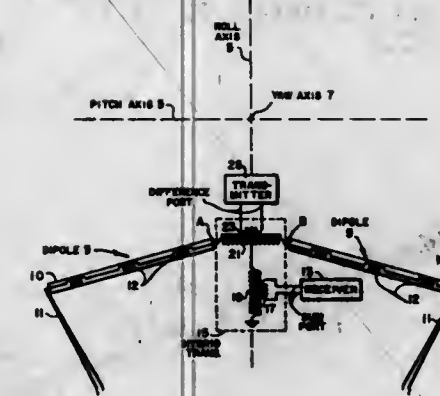
3,518,681
BACK-COUNTRY RADIO BOOSTER
Paul Edwin Klepe, Riggins, Idaho
(113 Village Lane, Boise, Idaho 83702)
Filed Apr. 6, 1965, Ser. No. 445,985
Int. Cl. H01q 1/24, 7/06
U.S. Cl. 343-762 3 Claims



The back-country radio booster of this invention consists of a small induction coil of about 100 turns of magnet wire whose windings are positioned near the ferrite-rod antenna system of a broadcast-band AM radio receiver in a relationship that minimizes detuning of the ferrite-rod standard coils when the induction coil is interconnected with a large antenna and ground system, and that maximizes signal induction to the ferrite rod. In preferred embodiment, the windings of the induction coil are in doughnut form and are positioned adjacent and at right angles to the windings of the ferrite-rod standard coils. When, at a geographical site remote from broadcasting stations; the user connects the terminals

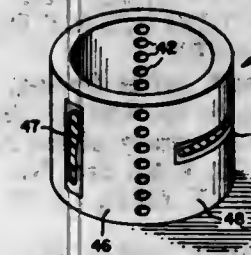
radiation of the antenna and increased gain can be achieved by an antenna using multiple waveguide cavities with a single window which is constructed in the same manner.

3,518,684
DUPLEX ANTENNA SYSTEMS FOR AIRCRAFT TRANSCEIVERS
Helmut Brueckmann, Little Silver, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 20, 1968, Ser. No. 706,811
Int. Cl. H01q 1/28, 1/52
U.S. Cl. 343-705 6 Claims



This antenna system comprises a V-shaped dipole extending outwardly from either side of the aircraft. The dipole elements are provided with series loading coils. Wires extend from the ends of the dipole rearwards toward the aircraft tail. The antenna is connected to a transmitter via the difference port of a hybrid transformer and to a receiver via the sum port thereof. The wires provide capacitive end-loading for the dipole and also serve as signal pickup means for the receiver. The hybrid provides isolation between the transmitter and receiver, permitting simultaneous operation thereof.

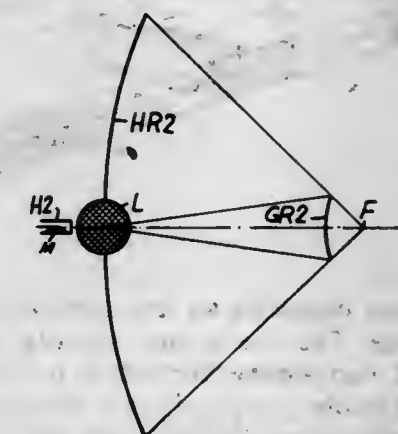
3,518,685
PROJECTILE WITH AN INCORPORATED DIELECTRIC-LOADED CAVITY ANTENNA
Howard S. Jones, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 28, 1968, Ser. No. 716,792
Int. Cl. H01q 1/28, 13/00, 13/10
U.S. Cl. 343-708 7 Claims



A projectile having a telemetry system built-in which requires an antenna which is structurally incorporated in the outside casing of the projectile. A dielectric is coated with a thin layer of copper and is shaped to the dimensions of a cavity waveguide antenna. The coated dielectric is cylindrically shaped to conform to the wall structure of the projectile. The dielectrically loaded waveguide cavity antenna has sufficient structural strength

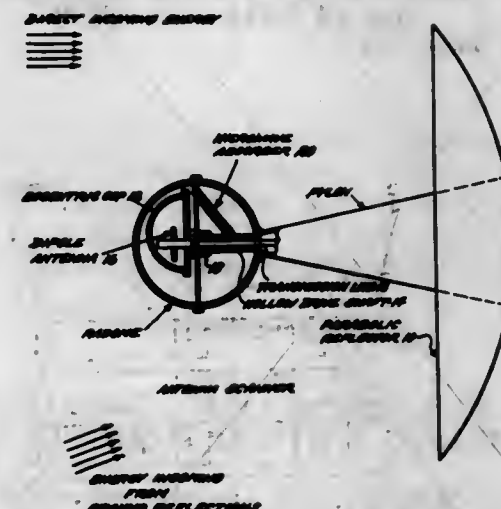
to act as the wall structure of the projectile or as a portion of the wall structure. The metal coating on the dielectric is cut or etched away to expose a dielectric window on the exterior of the projectile so that the signal may be transmitted from the antenna to a receiver.

3,518,686
CASSEGRAIN ANTENNA WITH DIELECTRIC LENS MOUNTED IN MAIN REFLECTOR
Hans Siebecker, Leimen, near Heidelberg, Germany, assignor to Elektro G.m.b.H. & Co., Heidelberg, Germany
Filed Aug. 4, 1967, Ser. No. 658,399
Claims priority, application Germany, Aug. 5, 1966, E 32,224
Int. Cl. H01q 19/10, 19/12
U.S. Cl. 343-755 8 Claims



An antenna arrangement facilitating use of a signal source of smaller than conventionally required size due to the placing of a dielectric body between a signal source and a counter-reflector associated with a parabolic antenna, the dielectric body preferably being of a rotationally symmetrical shape.

3,518,687
MICROWAVE ANTENNA SIDE LOBE AND BEAM REDUCTION APPARATUS
Konstantin K. Pocs, North Chelmsford, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Dec. 9, 1966, Ser. No. 600,672
Int. Cl. H01g 3/12, 19/12
U.S. Cl. 343-761 4 Claims



A microwave antenna side lobe and beam reduction apparatus having a tuned microwave absorbent material positioned between the rotatable eccentric cup and the antenna reflector for absorbing proportionately more of the incoming R-F energy from a downward direction than from the upward direction.

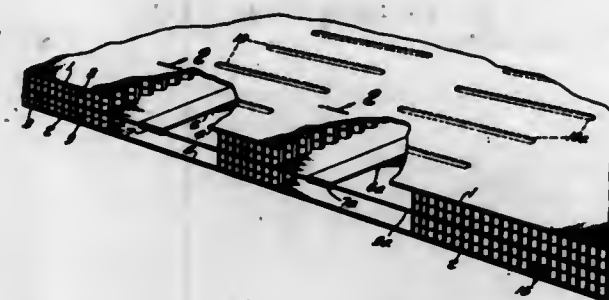
3,518,688 MICROWAVE STRIP TRANSMISSION LINE ADAPTED FOR INTEGRAL SLOT ANTENNA

Gordon R. Staybeldt, Los Angeles, Delmer L. Thomas, Westminster, and Beverly J. Todd, Chatsworth, Calif., assignors to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland

Continuation of application Ser. No. 509,005, Nov. 22, 1965. This application Sept. 15, 1969, Ser. No. 858,199
Int. Cl. H01q 1/40, 13/10

U.S. Cl. 343-771

3 Claims



This disclosure describes an improved microwave strip transmission line. The line is mechanically rugged, readily sealed, and inexpensive compared to prior art strip lines of comparable electrical and environmental performance. Copper clad plastic sheets are used as outer sheets with their copper layers facing internally. Non-conductive honey-comb provides the separation material internally, thereby placing most of the internal electrical field in air. A single or double center strip is supported on an additional parallel plastic sheet by said honey-comb material symmetrically between the outer sheets. Acting as a transimmission line, the device can be an antenna array with its own transimmission line feed by merely etching appropriately located slots in one or both of said outer copper layers. The outer plastic sheets remain closed as sealed "windows" over the slots.

3,518,689 FREQUENCY-SENSITIVE CROSS-SCANNING ANTENNA

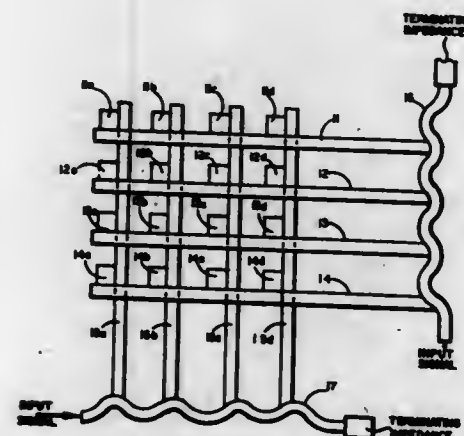
Jerry A. Algeo, Buena Park, and Jerome C. Hill, Fullerton, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

Filed Mar. 6, 1967, Ser. No. 621,007

Int. Cl. H01q 3/26, 13/00

U.S. Cl. 343-778

3 Claims



A dual-mode electronically-scanning antenna comprising a matrix array of radiating elements, the rows of which matrix are fed by a first frequency-scanned feed

and the columns of which are fed by a second frequency-scanned feed, whereby two separately controlled, mutually-angled, cross-scanning beams may be simultaneously provided. If desired, such beams may be linearly polarized in mutually orthogonal planes of polarization.

3,518,690 BOOM AND FEED LINE CONSTRUCTION FOR MULTIELEMENT ANTENNA

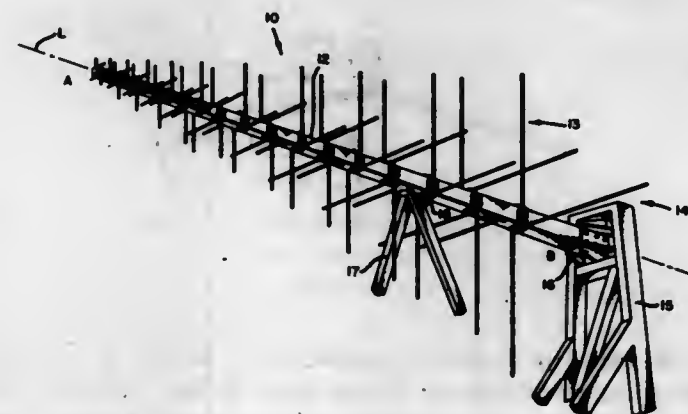
William F. Schick and William R. LaValley, Los Altos, Calif., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Dec. 1, 1966, Ser. No. 598,251

Int. Cl. H01q 1/22, 11/10

U.S. Cl. 343-792.5

11 Claims



A boom for supporting the radiator elements of a log periodic antenna is constructed as a unitary tubular structure comprising two or more flat or angled conductor strips electrically insulated from each other. The elements are directly mechanically and electrically connected to the flat surfaces of the strips which conduct electrical energy between the elements and external feed lines. The dimensions of strips may change uniformly over the length of the antenna to provide a tapered boom. The strips are mechanically interconnected by electric insulators and have a predetermined spacing between adjacent edges for optimum line impedance. Feed lines within the boom are connected to the plates so as to provide a balanced feed for the elements on opposite sides of the boom.

3,518,691 TRANSITION STRUCTURE FOR BROADBAND COUPLING OF DIELECTRIC ROD ANTENNA TO COAXIAL FEED

Richard H. Hallendorf, Silver Spring, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Apr. 23, 1968, Ser. No. 723,479

Int. Cl. H01q 13/00

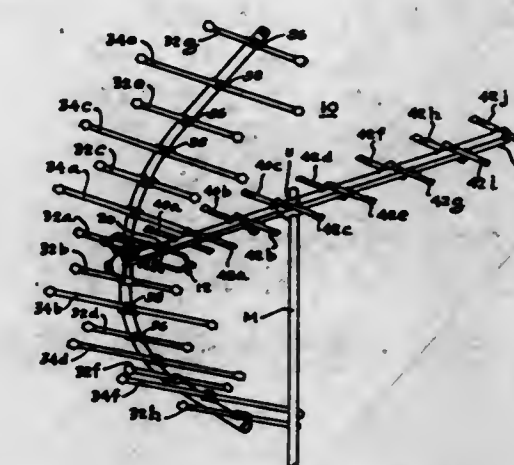
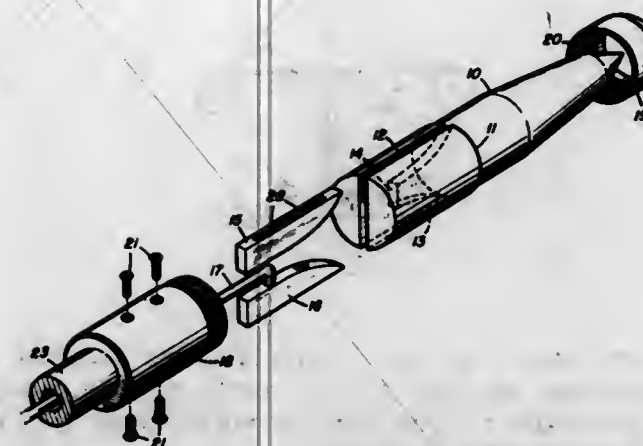
U.S. Cl. 343-785

7 Claims

The present invention relates to a so-called current loop transition structure for exciting a TE₁₁ mode in a double ridge, dielectrically loaded circular waveguide from a colinear, end-fire coaxial system, for application to a waveguide or dielectric rod antenna system. Generally speaking, the transition structure of the present invention comprises: a pair of tapered metallic members which mate with similarly tapered slots in the dielectric rod member of the waveguide; a central conductor member which is connected to the central conductor of the coaxial system and which has a substantially 90° bend at one end, for connection to one of the tapered metallic

members and so that it abuts the dielectric rod member of the waveguide at the center thereof; and, a cylindrical conductive housing member which surrounds the dielectric rod member, in contact with the tapered metallic

members with additional antenna structures covering other frequency ranges such as the very high frequency range. The antenna includes a multi-element reflector system of interspersed half and full wave resonant elements



members, and forms the outer wall of the waveguide. The proposed structure is also designed such that the dielectric rod member is securely held in place and is therefore particularly adapted for antenna use on high speed missiles, for example.

arranged in a paraboloidal-shaped configuration about a split-element folded dipole serving as the collector element, which dipole has tuned feeder stubs associated therewith.

3,518,692 ORTHOGONAL ANTENNA SYSTEM WITH MULTIPLE CHANNELS

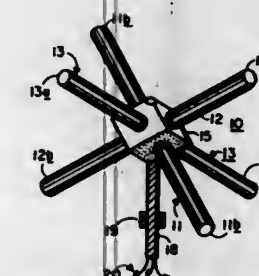
John A. Kuecken, Pittsford, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware

Filed Aug. 25, 1967, Ser. No. 663,396

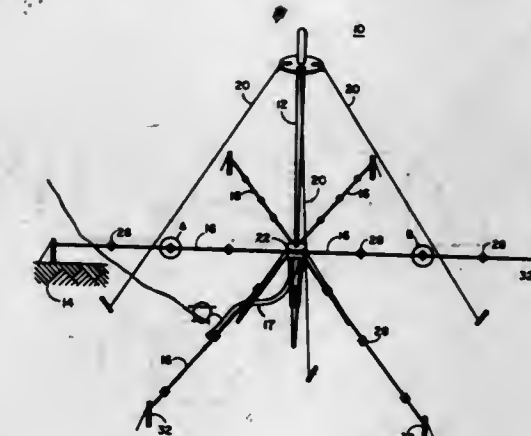
Int. Cl. H01q 21/26

U.S. Cl. 343-797

6 Claims



An orthogonal antenna system is described comprised of three orthogonally disposed center-fed dipole radiators, each of which intersects a horizontal plane at an equal angle. Because of this symmetry, the system provides for a high degree of mutual isolation between the radiators. Each radiator may also be coupled to its signal source by means of a hybrid device which also aids in radiator isolation.



An antenna system having a vertical radiating element and a plurality of ground plane arms forming a ground plane. The conductive length of each of the arms is adjustable so as to steer or adjust the radiation pattern of the vertical radiating element to a desired shape.

3,518,693 ULTRA HIGH FREQUENCY TELEVISION ANTENNA

John R. Winegard and Carey W. Sheldy, Burlington, Iowa, assignors to Winegard Company, Burlington, Iowa, a corporation of Iowa

Filed June 10, 1968, Ser. No. 735,604

Int. Cl. H01q 9/16, 21/12, 19/12

U.S. Cl. 343-802

13 Claims

An improved television antenna effective for coverage of the ultra high frequency range and suitable for com-

3,518,695 ANTENNA ARRAY MULTIFREQUENCY AND BEAM STEERING CONTROL MULTIPLEX FEED

Klaus G. Schroeder, Dallas, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Sept. 7, 1967, Ser. No. 666,162

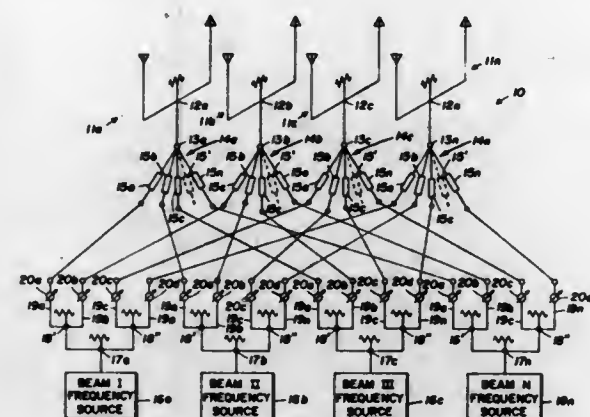
Int. Cl. H01q 3/26, 1/50

U.S. Cl. 343-854

9 Claims

An antenna array multifrequency multiplex feed system forming a number of different frequency signals into simultaneously transmitted discrete beams from an antenna array. This uses a plurality of combiner circuits

each having a sum port output connection to a separate antenna array section individually associated therewith.



Each combiner circuit also includes a plurality of signal input connections with a plurality of different signal frequency sources.

3,518,696

BIOLOGICAL ELECTRICAL PHENOMENON RECORDING INSTRUMENT

Miyaji Tomota, Mitsutoshi Mori, Kenichi Tokunaga, Eisuke Etoh, and Eisuke Abe, Tokyo, Japan, assignors to Kabushiki Kaisha Yokogawa Denki Saisakusho (Yokogawa Electric Works, Ltd.), Tokyo, Japan, a corporation of Japan.

Filed Sept. 24, 1968, Ser. No. 761,917

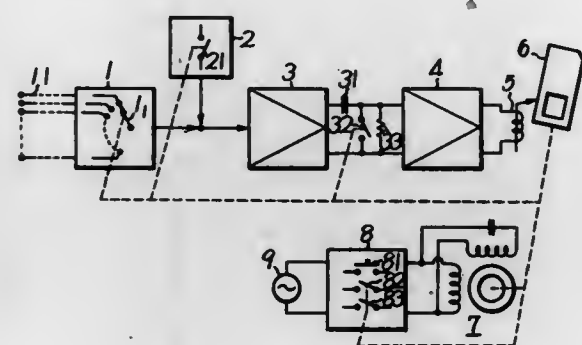
Claims priority, application Japan, Sept. 30, 1967,

42/62,920

Int. Cl. G01d 9/38; A61b 5/04

U.S. Cl. 346-23

6 Claims



A biological electrical phenomenon recording instrument having a recording member consisting of an information recording film and an information part supporting the film and capable of being mechanically decoded, recording pen means, means for supplying the pen means with information to be recorded on the film, and means for moving the recording member relative to the pen means.

3,518,697

MATERIAL TESTER AND RECORDER

George D. Martens, Brookfield Center, Conn., assignor to Automation Industries, Inc., El Segundo, Calif., a corporation of California

Filed Dec. 18, 1967, Ser. No. 691,497

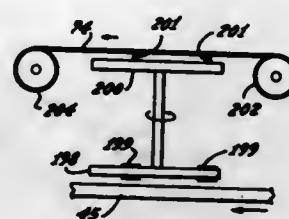
Int. Cl. G01n 23/18, 29/04

U.S. Cl. 346-33

1 Claim

This application discloses a nondestructive material tester for producing a so-called C-scan recording of the test results. The test system includes a search unit having

rotating transducers which scan the workpiece along a series of closely spaced arcuate paths whereby a wide band on the workpiece may be inspected. A recorder includes markers such as pens which scan along similar



arcuate paths. The search unit and the recorder are synchronized whereby the test results may be recorded in a one-to-one relation with the workpiece so as to provide an undistorted recording.

3,518,698

IMAGING SYSTEM

Benjamin Kazan, Pasadena, and Arthur W. Vance, Corona Del Mar, Calif., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Sept. 29, 1966, Ser. No. 582,911

Int. Cl. G11b 9/08, 7/06; G03g 5/02

U.S. Cl. 346-74

10 Claims



This application relates to an imaging system utilizing a conductive pin matrix for redistributing charge on a charged dielectric surface which is placed in contact therewith. Conductivity between adjacent pins, and therefore, charge redistribution is controlled by means of a field-effect semiconductor layer and an electric field applied thereto, said field functioning to modify the conductivity of the electrical path between adjacent pins through the field-effect semiconductor layer.

3,518,699

SCANNING APPARATUS FOR DRIVING AN ELECTROSTATIC RECORDING STRUCTURE

Charles S. Mitchell, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed Oct. 23, 1967, Ser. No. 677,316

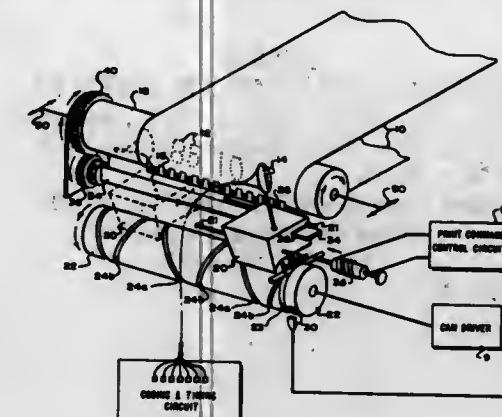
Int. Cl. G01d 15/06; H04n 1/16

U.S. Cl. 346-74

14 Claims

A cam follower is supported for being driven back and forth across an electrosensitive recording sheet as it follows a rotatable helical cam. An electrode structure is coupled to the cam follower for selectively discharging current into the recording sheet to print a line of alpha-

numeric characters thereon as the follower is driven across the recording sheet in one direction from an idle position. The cam follower helps to turn the electrodes into an



an operative position when recording is to occur. The recording sheet is advanced to the position of a new line as the following is driven across the recording sheet in the opposite direction back to the idle position.

3,518,700

QUADRUPLE MODULATION RECORDING SYSTEM

Noboru Kimura, Gardena, and Pat E. Evans, Torrance, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Jan. 4, 1968, Ser. No. 695,652

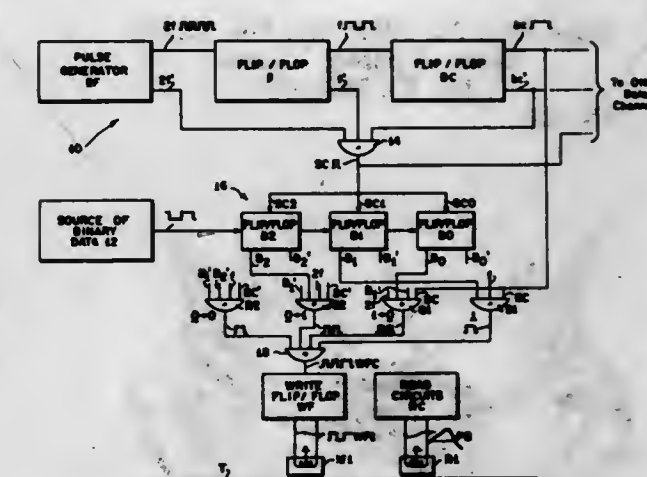
Int. Cl. G11b 5/02, 5/04

U.S. Cl. 346-74

7 Claims

A recording system is provided in which binary signals are converted to a coded signal for providing a self-clocked record signal having a low-frequency com-

ponent within the wavelength resolution characteristics of a magnetic record medium and containing both the data and clock-timing signals; and a high-frequency quadruple modulation component which is beyond the resolution characteristics of the magnetic record medium. The coded signals are formed individually for each binary digit by a logical circuit selectively gating high-



and low-frequency signals according to the binary bit pattern including both prior and subsequent digits in a series of digits. The low-frequency component of the record signal contains the data, and the quadruple modulation is effective to control the magnetization excursions in the record medium to produce uniform amplitude variations of the magnetically recorded signal to prevent peak-shift in the reproduction thereof.

DESIGNS

JUNE 30, 1970

217,893

BRASSIERE

Mack Spetalnik, Weehawken, N.J., assignor to Malden-form, Inc., New York, N.Y., a corporation of New York

Filed Dec. 31, 1968, Ser. No. 15,156

Term of patent 7 years

Int. Cl. D2-02

U.S. Cl. D2-24



217,894

HOCKEY HELMET

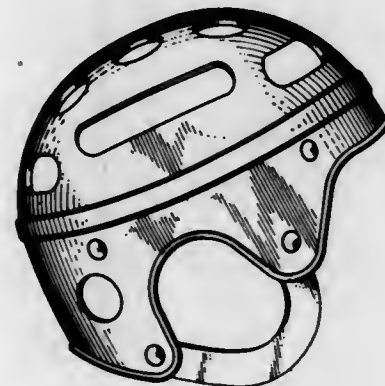
Stanley Mikita, Elmhurst, and George Dan, Glenview, Ill., assignors to Stan Mikita Enterprises, Inc., Chicago, Ill., a corporation of Illinois

Filed Dec. 13, 1968, Ser. No. 14,963

Term of patent 14 years

Int. Cl. D2-03

U.S. Cl. D2-231



217,895

FASTENER FOR WELT LOOP HOSE OR SIMILAR ARTICLE

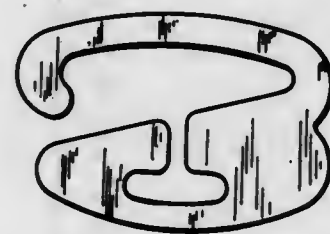
Aaron Burleson, Burlington, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware

Filed Nov. 22, 1968, Ser. No. 14,595

Term of patent 14 years

Int. Cl. D2-08

U.S. Cl. D2-409



217,896

WRENCH OR SIMILAR ARTICLE

James M. Sexauer, White Plains, N.Y., assignor to J. A. Sexauer Mfg. Co., Inc., White Plains, N.Y., a corporation of New York

Filed June 20, 1969, Ser. No. 17,787

Term of patent 14 years

Int. Cl. D8-02

U.S. Cl. D8-29



217,897

BOTTLE

Edward H. Lawton, Toledo, Ohio, assignor to Owens-Illinois, Inc., Toledo, Ohio, a corporation of Ohio

Filed Mar. 5, 1969, Ser. No. 16,039

Term of patent 14 years

Int. Cl. D9-01

U.S. Cl. D9-1



217,898

BOTTLE

Edward H. Lawton, Toledo, Ohio, assignor to Owens-Illinois, Inc., Toledo, Ohio, a corporation of Ohio

Filed Mar. 5, 1969, Ser. No. 16,065

Term of patent 14 years

Int. Cl. D9-01

U.S. Cl. D9-1



JUNE 30, 1970

U. S. PATENT OFFICE

1028

217,899

BOTTLE

Edward H. Lawton, Toledo, Ohio, assignor to Owens-Illinois, Inc., Toledo, Ohio, a corporation of Ohio

Filed Mar. 5, 1969, Ser. No. 16,067

Term of patent 14 years

Int. Cl. D9-01

U.S. Cl. D9-38



217,900

DISPENSING PILL PACKAGE OR SIMILAR ARTICLE

Burton J. Gray, Valley Forge, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

Filed July 17, 1968, Ser. No. 12,800

Term of patent 14 years

Int. Cl. D9-99

U.S. Cl. D9-184



217,901

CRATE FOR MILK BOTTLES OR THE LIKE

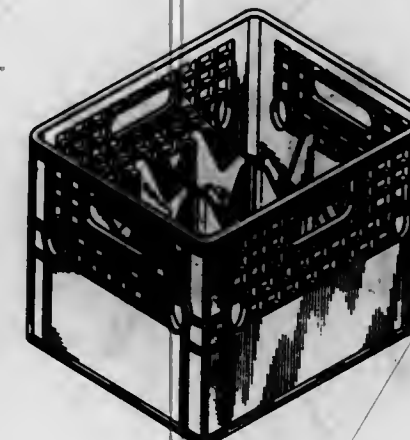
Houston Rehrig, Pasadena, Calif., assignor to Rehrig Pacific Company, Los Angeles, Calif., a corporation of California

Continuation-in-part of design application Ser. No. 12,986, Aug. 1, 1968. This application Apr. 30, 1969, Ser. No. 16,954

Term of patent 14 years

Int. Cl. D9-04

U.S. Cl. D9-177



217,902

DISPENSING CAP FOR A CONTAINER

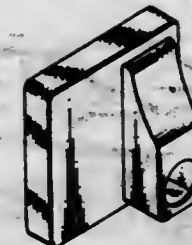
Frank W. Deromski, 11009 Morrison St., North Hollywood, Calif. 91601

Filed Dec. 16, 1968, Ser. No. 14,967

Term of patent 14 years

Int. Cl. D9-02

U.S. Cl. D9-275



217,903

DISPENSING CAP FOR A CONTAINER

Frank W. Deromski, 11009 Morrison St., North Hollywood, Calif. 91601

Filed Dec. 16, 1968, Ser. No. 14,992

Term of patent 14 years

Int. Cl. D9-02

U.S. Cl. D9-275



217,904

ORNAMENTAL SHUTTER

Cyril L. Johnston, Arlington Heights, Ill., assignor to Leslie Building Products, Inc., Franklin Park, Ill., a corporation of Delaware

Filed May 29, 1969, Ser. No. 17,422

Term of patent 14 years

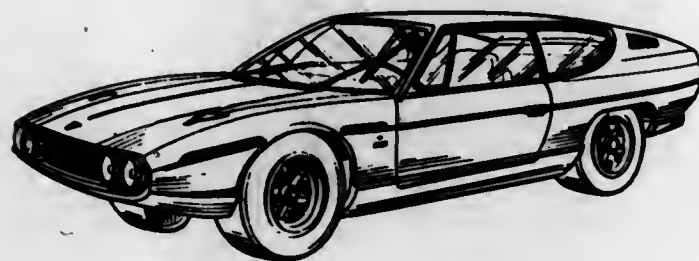
Int. Cl. D25-02

U.S. Cl. D13-1



217,905
AUTOMOBILE
Ferruccio Lamborghini, Via Provinciale 15,
Cento, Italy
Filed Nov. 25, 1968, Ser. No. 14,778
Claims priority, application Italy June 19, 1968
Term of patent 7 years
Int. Cl. D12-08

U.S. Cl. D14-3



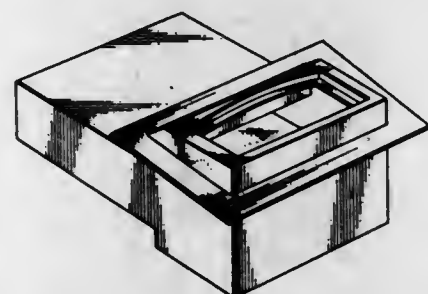
217,906
SNOWMOBILE
Logan W. Johnson, Hopkins, Minn., assignor to Boatel
Company, Inc., Mora, Minn., a corporation of Minne-
sota
Filed Aug. 1, 1969, Ser. No. 18,510
Term of patent 14 years
Int. Cl. D12-13

U.S. Cl. D14-24



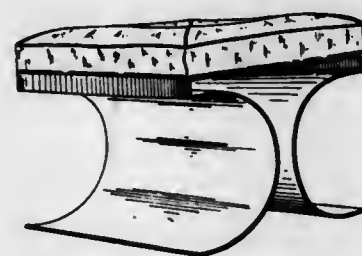
217,907
**COMBINED TRUNK AND STORAGE TANK
FOR AUTOMOBILES**
Frank W. Derenski, 11009 Morrison St.,
North Hollywood, Calif. 91601
Filed Dec. 16, 1968, Ser. No. 14,991
Term of patent 14 years
Int. Cl. D12-14

U.S. Cl. D14-27



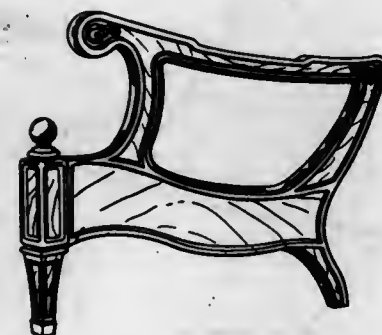
217,908
SEAT OR THE LIKE
Michel Boyer de Rebeval, 14 Rue Montmartre,
Paris, France
Filed Mar. 19, 1969, Ser. No. 16,318
Claims priority, application France Oct. 24, 1968
Term of patent 14 years
Int. Cl. D6-09

U.S. Cl. D15-8



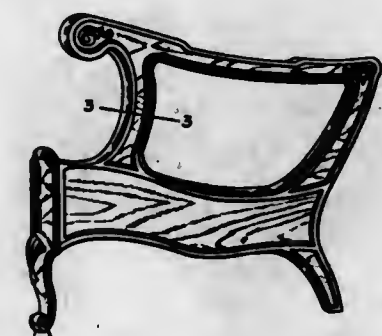
217,909
**END STANDARD FOR A CHAIR OR
SIMILAR ARTICLE**
Edward W. Harman, Newton, N.C., assignor to Dresden
Lounge Co. Inc., Maiden, N.C., a corporation of North
Carolina
Filed Apr. 14, 1969, Ser. No. 16,714
Term of patent 14 years
Int. Cl. D6-01

U.S. Cl. D15-8



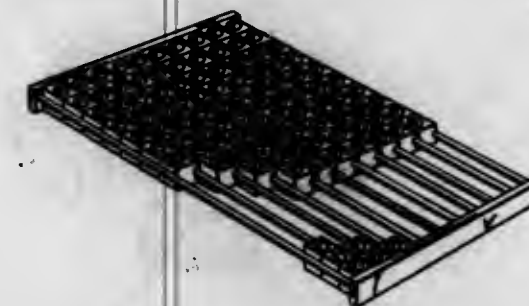
217,910
END STANDARD FOR A SOFA OR THE LIKE
Edward William Harman, Newton, N.C., assignor to
Dresden Lounge Co. Inc., Maiden, N.C., a corporation
of North Carolina
Filed May 15, 1969, Ser. No. 17,155
Term of patent 14 years
Int. Cl. D6-01

U.S. Cl. D15-8



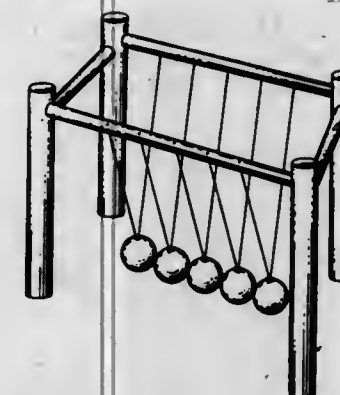
217,911
ABACUS
Willy Harold, 4 Birnauerstrasse,
8 Masich 13, Germany
Filed Feb. 24, 1969, Ser. No. 15,877
Claims priority, application Germany Aug. 21, 1968
Term of patent 14 years
Int. Cl. D19-08

U.S. Cl. D25-1



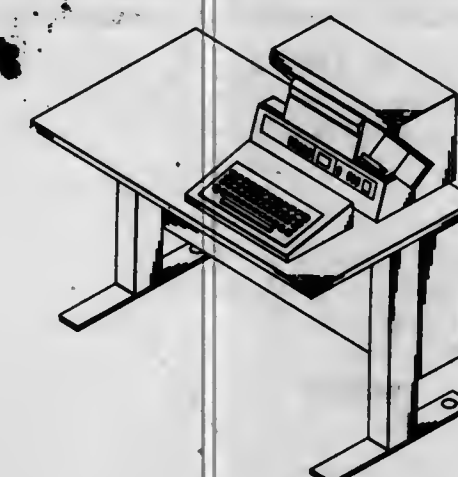
217,912
SCIENTIFIC DEMONSTRATION APPARATUS
Lee Trippett, Eugene, Ore., assignor to Scientific
Demonstrators, Inc., Eugene, Ore., a corporation
of Oregon
Filed June 18, 1968, Ser. No. 12,399
Term of patent 14 years
Int. Cl. D19-08

U.S. Cl. D25-1



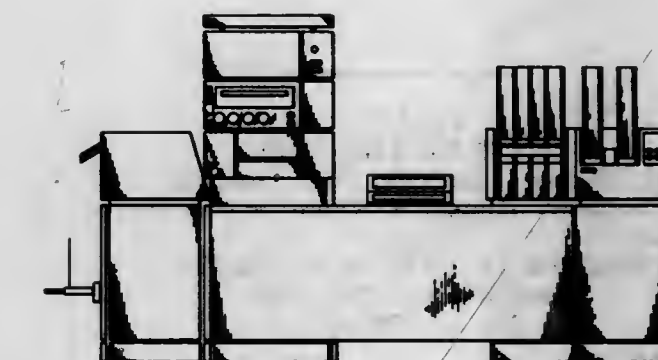
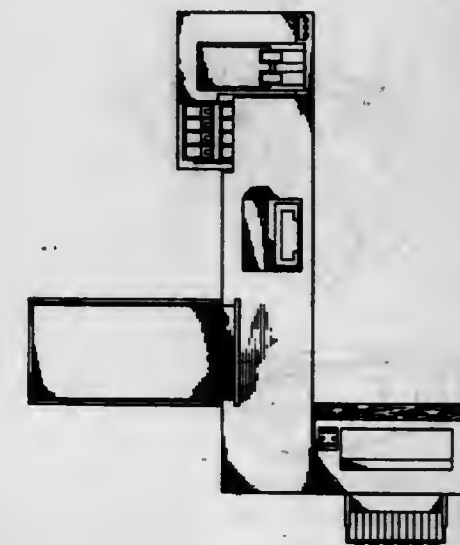
217,913
KEYPUNCH FOR DOCUMENT CARDS
Wayne L. Aderman, Zumbro Falls, Minn., Douglas C.
Antonelli, Raleigh, N.C., and Dennis P. Butterbaugh,
James R. Hammer, and Richard J. Ullmer, Rochester,
Minn., Edward R. Wiener, Endicott, N.Y., and Frank
Wilkey, Jr., Rochester, Minn., assignors to Interna-
tional Business Machines Corporation, Armonk, N.Y.,
a corporation of New York
Filed July 9, 1969, Ser. No. 18,139
Term of patent 14 years
Int. Cl. D14-02

U.S. Cl. D26-5



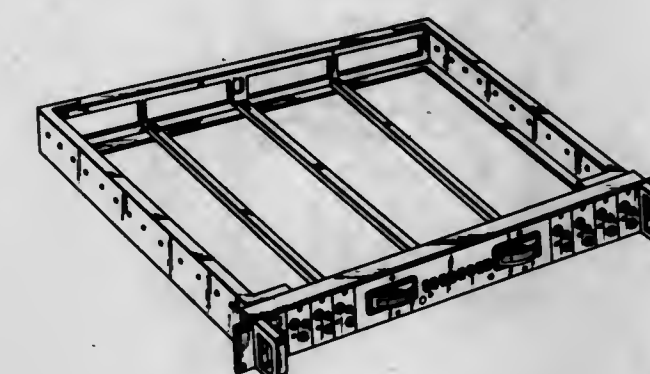
217,914
**COMBINATION COMPUTER, ON-LINE KEY-
BOARD, MULTIFUNCTION DOCUMENT
CARD UNIT AND PRINTER**
Roger E. Abernathy, Boca Raton, Fla., and Wayne L.
Aderman, Zumbro Falls, Theodore F. Dunnington,
Oronoco, and Francis A. Goplen, Zumbro Falls, Minn.,
Edward R. Wiener, Vestal, N.Y., and Frank Wilkey,
Jr., Rochester, Minn., assignors to International Busi-
ness Machines Corporation, Armonk, N.Y., a corpora-
tion of New York
Filed July 29, 1969, Ser. No. 18,454
Term of patent 14 years
Int. Cl. D14-02

U.S. Cl. D26-5



217,915
METERED POWER SUPPLY RACK ADAPTER
Edward Brenner, Commack, Marvin L. Price, South Ozone
Park, and Benjamin Shmurak, Lynbrook, N.Y., assign-
ors to Lambda Electronics Corporation, Huntington,
N.Y., a corporation of New York
Filed Aug. 15, 1969, Ser. No. 18,692
Term of patent 14 years
Int. Cl. D14-99

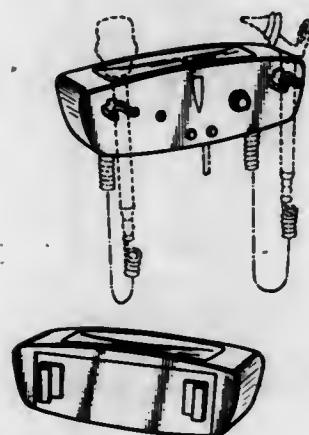
U.S. Cl. D26-1



217,916
WALL-MOUNTED TRANSFORMER FOR
DIAGNOSTIC INSTRUMENTS
 Lew F. Allyn, Skaneateles, N.Y., assignor to Welch
 Allyn, Inc., Skaneateles Falls, N.Y., a corporation
 of New York

Filed May 9, 1968, Ser. No. 11,875
 Term of patent 14 years
 Int. Cl. D13-02; D24-02

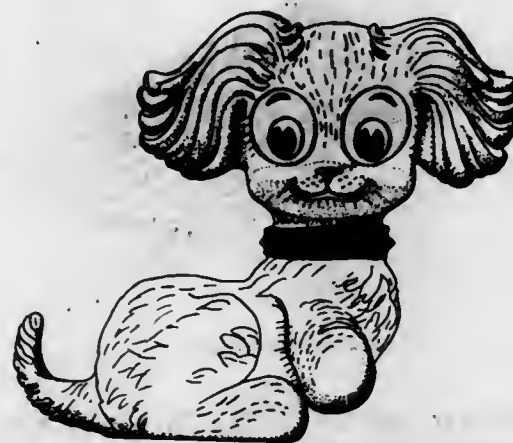
U.S. Cl. D26-15



217,918
TOY ANIMAL FIGURE
 Don A. Winton, Pasadena, Calif., assignor to J. L.
 Prescott Company, Passaic, N.J., a corporation of
 New Jersey

Filed July 22, 1969, Ser. No. 18,297
 Term of patent 14 years
 Int. Cl. D21-02

U.S. Cl. D34-2



217,919
TOY ANIMAL FIGURE
 Don A. Winton, Pasadena, Calif., assignor to J. L.
 Prescott Company, Passaic, N.J., a corporation of
 New Jersey

Filed July 22, 1969, Ser. No. 18,314
 Term of patent 14 years
 Int. Cl. D21-02

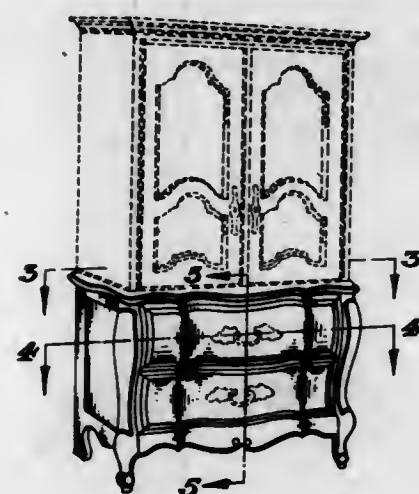
U.S. Cl. D34-2



217,917
CHEST OR THE LIKE
 Richard M. Chapin, Charlotte, N.C., assignor to C. B.
 Atkin Company, Knoxville, Tenn., a corporation of
 Tennessee

Filed Oct. 14, 1968, Ser. No. 13,974
 Term of patent 3½ years
 Int. Cl. D6-01

U.S. Cl. D33-6



217,920
TOY ANIMAL FIGURE
 Don A. Winton, Pasadena, Calif., assignor to J. L.
 Prescott Company, Passaic, N.J., a corporation of
 New Jersey

Filed July 22, 1969, Ser. No. 18,337
 Term of patent 14 years
 Int. Cl. D21-02

U.S. Cl. D34-2



217,921
COMBINED PUZZLE AND WHIRLING TOY
 Simon Gompes and Herman Schepker, both of Nieuwe
 Keizersgracht 58, Amsterdam, Netherlands
 Filed Mar. 5, 1969, Ser. No. 16,042
 Claims priority, application Great Britain Feb. 5, 1969
 Term of patent 14 years
 Int. Cl. D21-02

U.S. Cl. D34-15



217,922
CLOCK
 Allan Weinstein, % London Time Ltd., 2900 W. Peterson
 Ave., Chicago, Ill. 60645
 Filed Apr. 17, 1969, Ser. No. 16,797
 Term of patent 14 years
 Int. Cl. D10-01

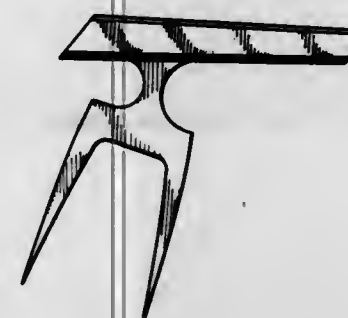
U.S. Cl. D42-7



217,923
CARVING FORK OR THE LIKE
 Clayton A. Laughlin, Minneapolis, Minn., assignor to
 Arthur Salm Inc., Chicago, Ill., a corporation of
 Illinois

Filed May 26, 1969, Ser. No. 17,334
 Term of patent 14 years
 Int. Cl. D7-03

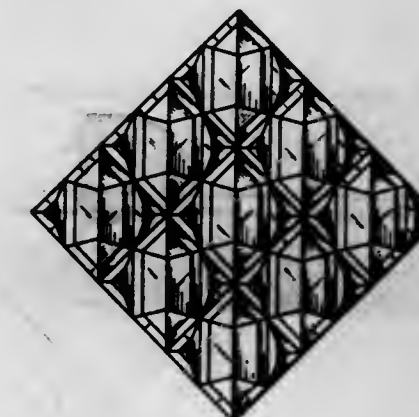
U.S. Cl. D44-29



217,924
TRANSPARENT COVERING PANEL FOR
LIGHT FITTINGS
 Friedrich Clostermann, Hagen, and Hans-Joachim
 Richter, Noheln-Hasten, Germany, assignors to
 Trilux-Lenze KG, Noheln-Hasten, Germany, a
 firm

Filed Apr. 29, 1969, Ser. No. 16,945
 Term of patent 14 years
 Int. Cl. D26-06

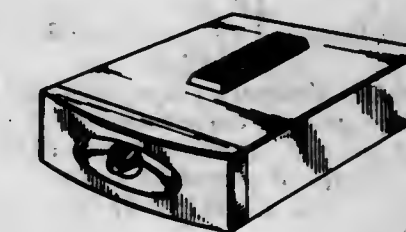
U.S. Cl. D48-16



217,925
FLASHLIGHT
 Alwin J. Stabel II, New Brighton, Minn., assignor to
 Arthur Salm Inc., Chicago, Ill., a corporation of
 Illinois

Filed Jan. 6, 1969, Ser. No. 15,229
 Term of patent 14 years
 Int. Cl. D26-04

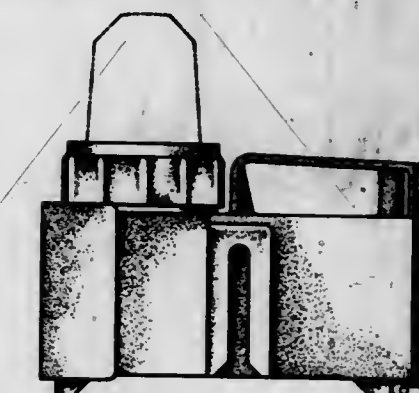
U.S. Cl. D48-24



217,926
HOUSING FOR A PORTABLE LIGHT UNIT
 Manfred Elsele, Philadelphia, Glenn Saul, Ambler, and
 George H. Stoner, Warminster, Pa., assignors to Elco
 Corporation, Willow Grove, Pa., a corporation of Dela-
 ware

Filed Jan. 31, 1969, Ser. No. 15,582
 Term of patent 14 years
 Int. Cl. D26-04

U.S. Cl. D48-24



217,927

VEHICLE LICENSE PLATE LIGHT

John F. Stahl, Bridgeport, and Edward J. Nitsch, Camillus, N.Y., assignors to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
 Filed Oct. 18, 1968, Ser. No. 14,074
 Term of patent 14 years
 Int. Cl. D12—99

U.S. Cl. D48—32

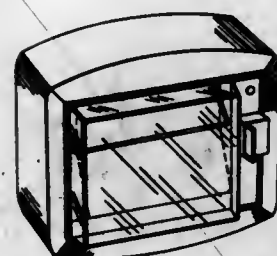


217,929

COMBINED DISPLAY AND COIN CONTROLLED DISPENSING CABINET FOR NEWSPAPERS

Ronald W. Yeo, 604 Iris, Corona Del Mar, Calif. 92625
 Filed Sept. 18, 1968, Ser. No. 13,591
 Term of patent 14 years
 Int. Cl. D20—01

U.S. Cl. D52—3



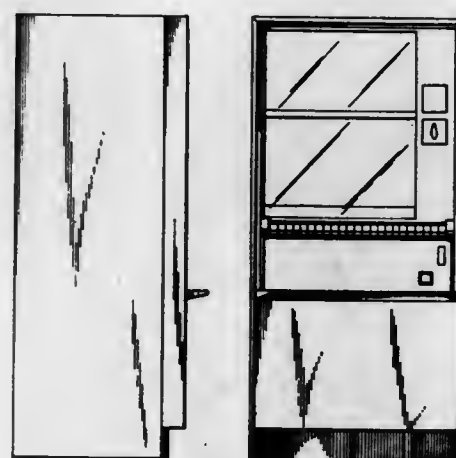
217,930

VENDING MACHINE CABINET

Walter L. Koch, Caldwell, and Kerry A. Day and George R. Huyler, Parsippany, N.J., assignors to Rowe International, Inc., Whippany, N.J., a corporation of Delaware

Filed Nov. 1, 1968, Ser. No. 14,271
 Term of patent 14 years
 Int. Cl. D20—01

U.S. Cl. D52—3



217,928

FLOOR POLISHER DISPENSER OR SIMILAR ARTICLE

Arthur M. Felske, Westport, Conn., assignor to General Electric Company, a corporation of New York
 Filed June 26, 1969, Ser. No. 17,902
 Term of patent 14 years
 Int. Cl. D15—07

U.S. Cl. D49—17

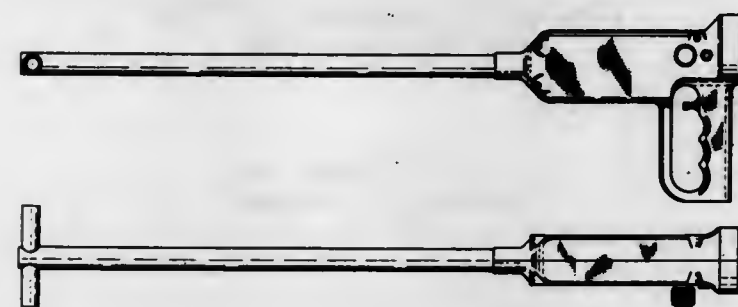


217,931

APPARATUS FOR LOCATING AND TRACING CONDUCTIVE STRUCTURES

Thomas G. Humphreys, Jr., 2245 Pine Crest Drive, Birmingham, Ala. 35216
 Filed Nov. 7, 1968, Ser. No. 14,349
 Term of patent 14 years
 Int. Cl. D10—11

U.S. Cl. D52—6

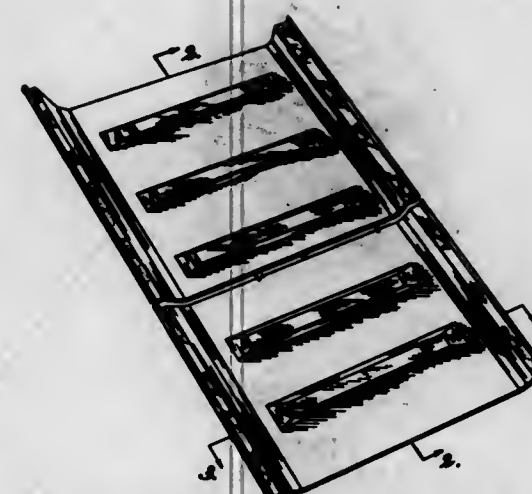


217,932

BUILDING ROOF PANEL

Norman A. Bellem, Kansas City, James W. Harter, Independence, and Paul E. Swain, Grain Valley, Mo., assignors to Butler Manufacturing Company, a corporation of Missouri
 Filed Mar. 17, 1969, Ser. No. 16,270
 Term of patent 14 years
 Int. Cl. D25—01

U.S. Cl. D54—2



217,934

GRINDING MILL INSULATOR AND COOLER

James T. Morgan, 1020 S. 12th St., Allentown, Pa. 18103
 Filed May 7, 1968, Ser. No. 11,811
 Term of patent 14 years
 Int. Cl. D15—10

U.S. Cl. D55—1



217,935

STRINGED MUSICAL INSTRUMENT

Walter J. Pelensky, 19C Mannheim Gardens, Philadelphia, Pa. 19144
 Filed May 6, 1969, Ser. No. 17,024
 Term of patent 14 years
 Int. Cl. D17—03

U.S. Cl. D56—1



217,933

SPOON OR SIMILAR ARTICLE OF FLATWARE

Frank K. Guodace, Meriden, Conn., assignor to International Silver Company, Meriden, Conn., a corporation of Delaware

Filed Apr. 23, 1969, Ser. No. 16,858
 Term of patent 14 years
 Int. Cl. D7—03

U.S. Cl. D54—12



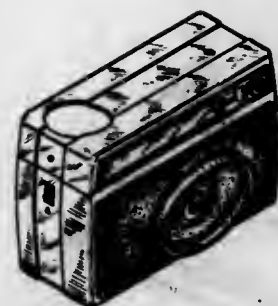
217,936
STRINGED MUSICAL INSTRUMENT
 Walter J. Pelensky, 19C Manheim Gardens,
 Philadelphia, Pa. 19144
 Filed May 6, 1969, Ser. No. 17,028
 Term of patent 14 years
 Int. Cl. D17-03

U.S. Cl. D56-1



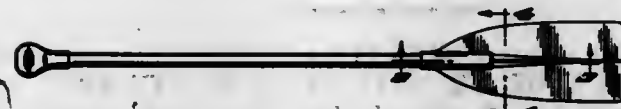
217,938
CAMERA
 Robert E. Bourke, Weston, Conn., assignor to GAF
 Corporation, New York, N.Y., a corporation of
 Delaware
 Filed May 22, 1969, Ser. No. 17,275
 Term of patent 14 years
 Int. Cl. D16-01

U.S. Cl. D61-1



217,939
CANOE PADDLE
 Robert A. Nichols, 613 3rd St. SW.,
 Faribault, Minn. 55021
 Filed Dec. 3, 1968, Ser. No. 14,776
 Term of patent 14 years
 Int. Cl. D12-14

U.S. Cl. D71-1



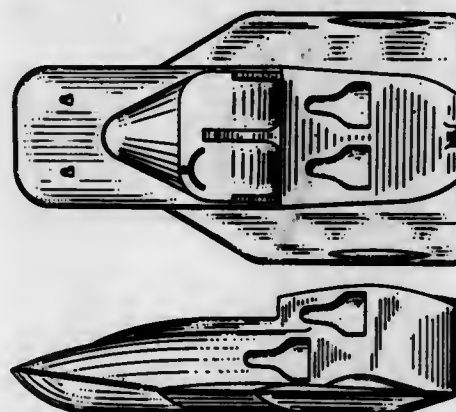
217,937
STRINGED MUSICAL INSTRUMENT
 Walter J. Pelensky, 19C Manheim Gardens,
 Philadelphia, Pa. 19144
 Filed May 6, 1969, Ser. No. 17,032
 Term of patent 14 years
 Int. Cl. D17-03

U.S. Cl. D56-1



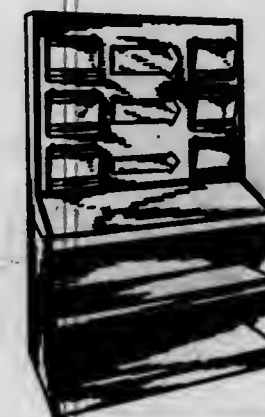
217,940
AMPHIBIOUS VEHICLE BODY
 Bernard Michael Flaherty, 2271 Horseshoe Drive,
 Birmingham, Mich. 48010
 Filed Mar. 24, 1969, Ser. No. 16,421
 Term of patent 3½ years
 Int. Cl. D12-13

U.S. Cl. D71-1



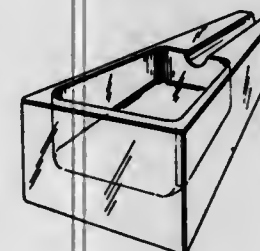
217,941
BATTERY DISPLAY MERCHANDISER
 Harry M. Channing, Wyomissing, Pa., assignor to General
 Battery Corp., Reading, Pa., a corporation of New
 York
 Filed Dec. 19, 1968, Ser. No. 15,063
 Term of patent 14 years
 Int. Cl. D6-01

U.S. Cl. D80-9



217,942
ASHTRAY
 Nicholas P. Angelakos, Brooklyn, N.Y., assignor to
 Lancaster Colony Corporation, a corporation of
 Delaware
 Filed Aug. 8, 1969, Ser. No. 18,600
 Term of patent 14 years
 Int. Cl. D27-03

U.S. Cl. D85-2



217,943
BOOT TREE
 Frederick Francis Dunkelmann, Desborough, England
 Filed Aug. 12, 1968, Ser. No. 13,110
 Claims priority, application Great Britain Mar. 21, 1968
 Term of patent 14 years
 Int. Cl. D4-02

U.S. Cl. D86-10



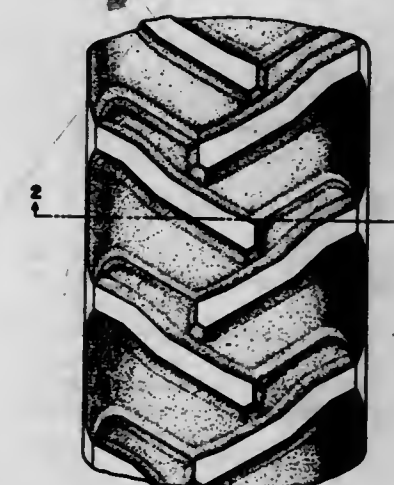
217,944
BOOT TREE
 Frederick Francis Dunkelmann, Desborough, England
 Filed Feb. 19, 1969, Ser. No. 15,836
 Claims priority, application Great Britain Jan. 4, 1969
 Term of patent 14 years
 Int. Cl. D4-02

U.S. Cl. D86-10



217,945
TIRE
 Ronald P. Petroff, Barberton, Ohio, assignor to The
 Goodyear Tire & Rubber Company, Akron, Ohio,
 a corporation of Ohio
 Filed Apr. 22, 1968, Ser. No. 11,550
 Term of patent 14 years
 Int. Cl. D12-14

U.S. Cl. D90-20



217,946
COMBINED HOT-COLD DRINK AND SNACK
MACHINE

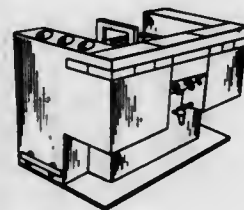
David M. Adams, 2053 English Road Village
Huntsville, Ala.

Filed Nov. 21, 1968, Ser. No. 14,577

Term of patent 14 years

Int. Cl. D15-12

U.S. Cl. D94-3



217,947
DISPENSER VALVE AND SPOUT

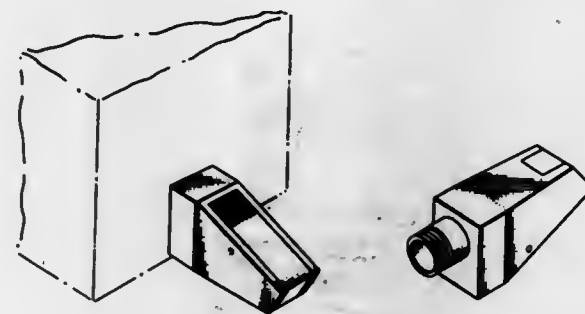
Frank W. Derenski, 11009 Morrison St.,
North Hollywood, Calif. 91601

Filed Dec. 16, 1968, Ser. No. 14,990

Term of patent 14 years

Int. Cl. D15-99

U.S. Cl. D94-3



LIST OF PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Aasted, Jorgen, and Kafitz, Peter H., to Ryan Aeronautical Co. Electronically scannable phase array receiver. 3,518,671, Cl. 343-100.
- AB Akerlund & Rousing: See—
Jeppesen, Torsten, Holmstrom, Kjell Ingavr, and Dilot, Rolf Magne, 3,518,144.
- Abbott, Frank R., to United States of America, Navy. Low inertia high thrust vibrator. 3,518,463, Cl. 310-15.
- Abe, Eisuke: See—
Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke 3,518,696.
- Abrahamsen, Thomas C., to RCA Corporation. Multiple font keyboard. 3,517,792, Cl. 197-98.
- Acheson Industries, Inc.: See—
Stock, Arthur J., and Hunter, Frank M., 3,518,116.
- Adamovske strojirny, narodni podnik: See—
Bohac, Frantisek, 3,517,614.
- Adams, Glenn N., to Canadair Limited. Propeller control mechanism. 3,518,022, Cl. 416-27.
- Adams, J. D., Co.: See—
Adams, James D., 3,517,834.
- Adams, James D., to Adams, J. D., Co. Building component stacking system. 3,517,834, Cl. 214-7.
- Adank, Kurt, to Geigy Chemical Corporation. Substituted 5-carbonyl- or 5-thiocarbonyl-dibenzo [b,f.] azepines. 3,518,268, Cl. 260-268.
- Adey, George R., and Souder, Wilmer, Jr., to Denton Plastic Products Corporation. Method for continuously making pearlescent plastic sheeting. 3,518,333, Cl. 264-70.
- Adler, Franklin P. Slack adjuster for railway car brakes. 3,517,786, Cl. 188-200.
- Adolph Saurer Ltd.: See—
Dubs, Gustav, 3,517,704.
- Aerofall Mills Limited: See—
Cornford, Arthur S., 3,517,566.
- Aeroquip Corporation: See—
Holden, Edward F., 3,517,649.
- McCracken, Donald G., 3,517,952.
- Agfa-Gevaert Aktiengesellschaft: See—
Raufer, Walter, 3,517,597.
- Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann, 3,517,595.
- Agin, Julius, to RCA Corporation. Dead track handling. 3,518,625, Cl. 340-146.1
- Aidlin, Samuel S., and Aidlin, Stephen H. Automatic apparatus for orienting and feeding bottles and the like. 3,517,796, Cl. 198-33.
- Aidlin, Stephen H.: See—
Aidlin, Samuel S., and Aidlin, Stephen H. 3,517,796.
- Aikens, Wallace R., to Gulton Industries, Inc. Light fixture fastening means. 3,517,853, Cl. 220-31.
- Ainsworth, Frank W., to Honeywell Inc. Electronic synchronization apparatus. 3,518,563, Cl. 330-9.
- Air Reduction Company, Incorporated: See—
Mathews, Howard Hume, 3,518,401.
- Akashi, Tsuneo: See—
Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo 3,518,198.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo 3,518,199.
- Alban, John M. Elastic type projectile projecting device. 3,517,657, Cl. 124-20.
- Albert, Harry Elmer, to Pennwalt Corporation. Inhibiting popcorn polymer formation with tertiary amino hydroxy benzene compound. 3,518,320, Cl. 260-666.5
- Albertson, Victor N., to Johnson Engine Works Company, The. Two cycle engine. 3,517,652, Cl. 123-65.
- Alexander, John A., to United States of America, Army. Process for controlled sub-micron dispersions in alloys. 3,518,106, Cl. 117-71.
- Alexandrino, Victor M., and Guardiola, Jose Harold Acevedo. Machine for harvesting sugar cane. 3,517,489, Cl. 56-17.
- Algeo, Jerry A., to North American Rockwell Corporation. Crossed guide directional coupler. 3,518,576, Cl. 333-10.
- Algeo, Jerry A., and Hill, Jerome C., to North American Rockwell Corporation. Frequency-sensitive cross-scanning antenna. 3,518,689, Cl. 343-778.
- Allan, George Graham: See—
Freeman, Harlan G., Baxter, Gene F., and Allan, George Graham 3,518,159.
- Allen, Merton, and Schrom, Edward C., to General Electric Company. Rupture of adhesive bonds. 3,517,674, Cl. 134-1.
- Allen-Bradley Company: See—
Callan, John E., 3,518,519.
- Ford, David E., Jr., and Hudson, William J., 3,518,518.
- Harmuth, Henning F., Nowak, David J., and Schmid, Pierre E., 3,518,557.
- Allied Chemical Corporation: See—
Laird, William F., and Rosenstein, Nathan, 3,517,892.
- Spatz, Sydney M., and Sugarman, Meyer L., 3,518,038.
- Swanson, Eugene A., Harlacher, William H., and Dulin, Grady N., Jr., 3,517,412.
- Allis-Chalmers Manufacturing Company: See—
Williams, James Curtis, 3,517,972.
- Alpert, Louis, to United States of America, Navy. Missile umbilical cable. 3,518,613, Cl. 339-45.
- Alpha Metals, Inc.: See—
Manko, Howard H., 3,517,439.
- Alsgaard, Richard W., to Dow Corning Corporation. Method for retarding water evaporation. 3,518,047, Cl. 21-60.5
- Alston, Terence G., to Union Oil Company of California. Use of fatty acid salts in the sulfoxidation process. 3,518,299, Cl. 260-513.
- Altermatt, Rudolf, Entschel, Roland, and Muller, Curt, to Sandoz Ltd., also known as Sandoz A.G. Basic monoazo dyes containing an N-methylpyridinium, 2- or 4-dimethylene group. 3,518,247, Cl. 260-156.
- Altonji, John A., and Vaiana, Joseph G., to Potter Instrument Company, Inc. Laterally loaded tape mechanism with retractible back and edge guides. 3,518,647, Cl. 340-174.1
- Amano, Kitsutaro: See—
Nakagome, Yukio, Amano, Kitsutaro, and Ohta, Chuichi 3,518,662.
- Amano, Noboru, and Sasaki, Hirotaka, to Japan Atomic Energy Research Institute, and Matsushita Electric Industrial Co., Ltd. Time analyzers for counting-rate change measurement. 3,518,539, Cl. 324-77.
- Amendola, Marco: See—
Gandolfi, Carmelo, and Amendola, Marco 3,518,255.
- America Dry Milk Institute, Inc.: See—
Swanson, Arthur M., 3,518,090.
- American Bitrite Rubber Co., Inc.: See—
Slosberg, David K., Nakonieczny, Edward M., and Smith, Merrill M., 3,518,153.
- American Can Company: See—
Balocca, Alfred Edward, 3,517,475.
- American Cyanamid Company: See—
Hagy, Robert W., Morgan, Zeulon V., and Northcraft, Robert L., 3,518,207.
- Martell, Michael Joseph, and Ross, Adma Schneller, 3,518,306.
- Miller, Bernard, 3,518,279.
- American District Telegraph Company: See—
Vassil, Theo N., 3,518,654.
- American Home Products Corporation: See—
Dobson, Thomas A., and Davis, Martin A., 3,518,263.
- Wei, Peter H. L., and Bell, Stanley C., 3,518,254.
- American Safety Equipment Corporation: See—
Michelson, Irving, 3,517,672.
- Ametek, Inc.: See—
Sebok, Albert L., Porter, John H., and McBroom, Everal B., Jr., 3,518,475.
- Ammco Tools, Inc.: See—
Kushmuk, Walter P., and Bogaerts, Leo C., 3,517,558.
- AMP Incorporated: See—
Bushey, Dale Nelson, and Showman, Robert Linn, 3,518,620.
- Mueller, Arthur Llewellyn, and Trimble, John Omer, 3,517,702.
- Rueger, Herman, and Keller, Joseph Richard, 3,517,981.
- Trimble, John Omer, and Mueller, Arthur Llewellyn, 3,518,359.
- Ampex Corporation: See—
Chicchi, Erlando M., 3,518,082.
- Anaconda American Brass Company: See—
Fitzmaurice, Thomas F. G., 3,517,536.
- Anchor Enterprises Corporation: See—
Toth, Louis, 3,517,472.
- Andelin, John Philip, and Moody, Jay H., to B-D Laboratories, Inc. Diagnostic sputum collection system. 3,518,164, Cl. 195-127.
- Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A., to United States of America, Air Force. Method and apparatus for suppressing contrails. 3,517,505, Cl. 60-39.5
- Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A., to United States of America, Air Force. Apparatus for suppressing contrails. 3,517,512, Cl. 60-264.
- Anderson, Daniel J.: See—
Shepherd, Harold D., and Anderson, Daniel J. 3,518,499.
- Jimerson, James C., Greskamp, John B., and Anderson, Daniel J. 3,518,500.

Anderson, Gerald L., to Dresser Industries, Inc. Insulating pipe union. 3,517,950, Cl. 285-52.

Anderson, Robert M. Extracorporeal heart. 3,518,033, Cl. 417-478.

Anderson, Ronald L.: See—
Reeser, Earl M., and Anderson, Ronald L. 3,517,711.

Anderson, Thomas W.: See—
Kistner, Charles R., and Anderson, Thomas W. 3,517,473.

Andreatch, Anthony J.: See—
Villiers-Fisher, John F., and Andreatch, Anthony J. 3,518,071.

Andrews, Edward George David, and Oldfield, Harry, to Rolls-Royce Limited. Bi-propellant rocket engine. 3,517,511, Cl. 60-259.

Andrews, George Inglis, Groszek, Aleksander Jerzy, and Witheridge, Rodney Ernest, to British Petroleum Company Limited, The. Oleophilic graphite and heavy metal sulphides in composites and bearings. 3,518,186, Cl. 252-12.

Andrich, Ekkehard, to U.S. Philips Corporation, mesne. Heating device. 3,518,407, Cl. 219-229.

Anello, Anthony Peter. Self positioning rotatably mounted simulated golf ball. 3,517,938, Cl. 273-197.

Angelo Guala di Piergiacomo E Roberto Guala & C. S.A.S.: See—
Guala, Piergiacomo, 3,517,847.

Anthony, Ralph J., Larson, Clarence E., and Gates, Robert H., to Martin-Marietta Corporation. Pipe machine. 3,517,424, Cl. 25-31.

Anzai, Shiro: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru 3,518,238.

Anzini, Renato, to Pasbrig, Max. Connector for electrical conductors. 3,517,420, Cl. 24-126.

Apikos, Dominic A., to Atlantic Richfield Company. Strippable wax coating compositions. 3,518,215, Cl. 260-280.5

Appleton, Jamie F. Tone control for stringed musical instruments. 3,518,353, Cl. 84-1.15.

Appleton Mills: See—
Helland, Howard M., 3,517,819.

Archer, John L.: See—
Pulliam, George R., and Archer, John L. 3,518,636.

ARHCO, Inc.: See—
Hurst, Alan R., 3,518,158.

Ariga, Hajime, and Murase, Isao, to Nissan Jidosha Kabushiki Kaisha. Device for interrupting idle fuel circuit of a carburetor. 3,517,653, Cl. 123-97.

Arizona Chemical Company.: See—
Wheelus, Charles Glenn, 3,518,214.

Armstrong Rubber Company, The: See—
Brown, Ellsworth R., 3,517,720.

Arnelo, Anders Ingvar, to Essem Metotest AB. Electroinductive sensing device with adjustable coil. 3,518,533, Cl. 324-40.

Aronson, Robert R., to Electric Fuel Propulsion, Inc., mesne. Floor interconnecting battery cells. 3,518,127, Cl. 136-134.

Arrowhead Engineering Corporation: See—
Wagner, James H., 3,517,541.

Asami, Naoto: See—
Takahashi, Shuichiro, and Asami, Naoto 3,517,413.

Ashmole, Patrick John: See—
Britten, Colin G., and Ashmole, Patrick John 3,518,023.

Askew, Gerald Hamilton, to U.S. Philips Corporation, mesne. Apparatus for synchronizing master and slave television sync generators. 3,518,374, Cl. 178-69.5

Associated Electrical Industries Limited: See—
Musham, John Robin, 3,518,489.

Asti, Adolph Reynol, to Redwood Food Packing Company, mesne. Pome fruit juice containing pulp. 3,518,093, Cl. 99-105.

Ateliers de Constructions Electriques de Charleroi (ACEC): See—
Bouchat, Andre, 3,517,527.

Dutilleul, Jacques, and Claes, Joseph, 3,518,452.

Ateliers de la Motobecane, Societe Anonyme: See—
Jaulmes, Eric, 3,517,655.

Ateliers Heuze, Malevez et Simon Reunis Societe Anonyme: See—
Dryon, Jacques Max Charles, 3,517,869.

Atkin, Sydney: See—
Strelzoff, Samuel, Warsaw, Abe, Villiers-Fisher, John F., and Atkin, Sydney 3,518,073.

Atlantic Richfield Company: See—
Apikos, Dominic A., 3,518,215.

Gzemski, Felix C., and Taylor, Robert C., 3,518,101.

Rowley, Paul Robert, 3,517,739.

Atlas Chemical Industries, Inc.: See—
Martin, Graham D., 3,517,616.

Atlee, John S. Men's underwear. 3,517,666, Cl. 128-159.

Auburn Plastics, Inc.: See—
Jacobson, Earl H., 3,518,148.

Auerbach, Guenther, Benz, Jakob, and Wehrli, Walter, to Sandoz Ltd., also known as Sandoz A.G. Monoazo pyrimidyl containing dyes. 3,518,246, Cl. 260-154.

Augenblick, Harry A., and Vogler, John G., to Microlab/FXR. Harmonic communication and navigation system. 3,518,546, Cl. 325-8.

Augustine, Larry J.: See—
Huggett, George R., McBride, Richard A., and Augustine, Larry J. 3,518,531.

Aumayer, Hansruedi, Jensen, Otto, and Kesselring, Fritz, 1/2 each to I-T-E Imperial Corporation, and Siemens Aktiengesellschaft. Gas blast circuit breaker having series-connected movable nozzle contacts. 3,518,388, Cl. 200-148.

Auto Specialties Manufacturing Company: See—
Grams, Ronald Lynn, 3,517,911.

Automatic Telephone & Electric Company Limited: See—
Threadgold, Ronald, and Pate, Orran Terence, 3,518,632.

Automation Industries, Inc.: See—
Martens, George D., 3,518,697.

Avco Corporation: See—
Orner, John W., 3,517,548.

Willmann, Donald F., 3,517,567.

Zar, Jacob L., 3,518,591.

Avignon, Michel Louis, to International Standard Electric Corporation. Detector for bipolar binary signals with distortion correction capability. 3,518,560, Cl. 329-104.

Axford, John G.: See—
Dunman, John P. G., and Axford, John G. 3,518,612.

Ayer, James E., to United States of America, Atomic Energy Commission. Method of making combination fuel rods. 3,517,431, Cl. 29-420.5

Babbin, Saul A., and Mohr, Alfred V., to Pennwalt Corporation. Aerosolized inhalator dispenser. 3,517,667, Cl. 128-173.

Babcock, Robert E., to General Electric Company. Constant speed motor regulating lamp dimming circuit. 3,518,486, Cl. 315-194.

Babel, Louis, to Societe Metallurgique d'Imphy. Apparatus for continuously casting and refining a metal in a bottomless mold. 3,517,727, Cl. 164-250.

Babunovic, Momir, to Barry-Wehmiller Company. Reversible container handling apparatus. 3,517,794, Cl. 198-31.

Bach, Lloyd G., to Bendix Corporation, The. Tube closure device. 3,517,907, Cl. 251-5.

Badcock, David Norman William, to Kango Electric Hammers Limited. Portable electric percussion tools. 3,517,755, Cl. 173-117.

Bader, Clifford J., to Burroughs Corporation. Magnetometer employing dual thin magnetic film transducers. 3,518,534, Cl. 324-43.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: See—
Petersen, Harro, Bille, Heinaz, and Ruemens, Wilhelm, 3,518,043.

Baer, Charles A., to Mallory, P. R., & Co., Inc. Apparatus for making metal alloy resistors. 3,517,644, Cl. 118-49.

Bahrs, David L., Couleur, John F., Ruth, Richard L., and Shelly, William A., to General Electric Company. Data processing system including plural memory controllers. 3,518,630, Cl. 340-172.5

Bainter, Huston K., and Nerem, Marvin E., to Winnebago Industries, Inc. Method of making a multisided structure. 3,517,427, Cl. 29-155.

Baker Oil Tools, Inc.: See—
Leutwyler, Kurt, and Falanga, John C., Jr., 3,518,027.

Baker Perkins Inc.: See—
Temple, Hiram E., 3,517,835.

Baldwin, Brian E., and Karlinski, Herbert E., to Pennwalt Corporation. Abrading apparatus. 3,517,461, Cl. 51-12.

Baldwin, Willett F., and Slover, Vasek R., to Mobil Oil Corporation. Well logging system employing three-conductor logging cable. 3,518,679, Cl. 340-18.

Ballman, Albert A., Lenzo, Pascal V., and Spencer, Edward G., to Bell Telephone Laboratories, Incorporated. Optical memory with photoactive memory element. 3,518,634, Cl. 340-173.

Balmes, Mark E., Sr., to General Fire Extinguisher Corporation. Dry chemical fire extinguishing system. 3,517,746, Cl. 169-9.

Balocca, Alfred Edward, to American Can Company. Method of packaging. 3,517,475, Cl. 53-22.

Bango, Joseph, Jr.: See—
Slater, Keith, 3,518,058.

Banase, George, to National Manufacturing Co. Door stop. 3,517,408, Cl. 16-72.

Barbee, John P.: See—
Wright, Robert R., Barbee, John P., and Kucera, Clement M. 3,517,953.

Barber, Donald E., to Bucyrus-Erie Company. Control system for excavating machinery. 3,518,444, Cl. 290-14.

Barber-Colman Company: See—
Kohlbeck, Orin J., and Sweger, Russell P., 3,517,881.

Bardin, Jacques, to Fabriques Reunies de Lampes Electriques. Electric incandescent lamp having an external screen and operable with a reflector. 3,518,478, Cl. 313-117.

Barke, John L., Du Vivier, Charles L., Odion, John R., and Pallat, Ludwig R., to Lee Corporation. Expressway ramp traffic control system. 3,518,622, Cl. 340-36.

Barker, George E., to Monsanto Company. Resistive-type temperature-to-current transducer. 3,517,556, Cl. 73-362.

Barker, Robert A., to Eltra Corporation. Ignition cable with terminal construction. 3,518,606, Cl. 338-270.

Barkow, William Henry: See—
Gross, Josef, and Barkow, William Henry 3,518,590.

Baron, Robert R.: See—
Welch, Dean E., and Baron, Robert R. 3,518,305.

Barringer, Anthony Rene, and Schock, Josef Pep, to Barringer Research Limited. Spectrometer. 3,518,002, Cl. 356-97.

Barringer Research Limited: See—
Barringer, Anthony Rene, and Schock, Josef Pep, 3,518,002.

Barry-Wehmiller Company: See—
Babunovic, Momir, 3,517,794.

Barson, Fred, Kuehn, Richard T., and Palmer, Myron D., to International Business Machines Corporation. Method for etching an opening in an insulating layer without forming pinholes therein. 3,518,084, Cl. 96-36.2

Barth, Bruce P., to Union Carbide Corporation. Method of plating polyarylene polyethers, polycarbonate of polyhydroxyethers and the resulting articles. 3,518,067, Cl. 29-195.

Bartlett, Charles M.: See—
Truchelut, George B., and Bartlett, Charles M. 3,518,000.

Bartley, Wilbur E., and Wigman, Harry W., to Harnischfeger Corporation. Weighing bottom block. 3,517,761, Cl. 177-147.

Basic Incorporated: See—
Russell, Robert E., 3,518,527.

Basler Electric Company: See—
Friedrich, Waldo J., 3,518,528.

Bass, Patrick: See—
Dransfield, Desmond, and Bass, Patrick 3,518,652.

Bassett, Raymond F., to Parkwood Homes, Inc. Knock-down mobile home assembly. 3,517,962, Cl. 296-23.

Batenburg, B. M. A.: See—
Visser, Christian 3,517,514.

Bathrick, John R., Jr., George, Fred A., and Mogle, Rodman A., to General Electric Company. Arrangement for mounting and connecting microelectronic circuits. 3,518,493, Cl. 317-100.

Baum Elektrophysik GmbH: See—
Baum, Walter, 3,518,577.

Baum, Walter, to Baum Elektrophysik GmbH. Radiation protected cables. 3,518,577, Cl. 333-12.

Baumstein, Lee: See—
Schmidt, Jacob, Baumstein, Lee, and James, Arthur M. 3,518,025.

Baxter, Gene F.: See—
Freeman, Harlan G., Baxter, Gene F., and Allan, George Graham 3,518,159.

Bayati, Jamal E., to North American Rockwell Corporation. Integrated aircraft propulsion control system. 3,517,509, Cl. 60-226.

Bazin, Lucas J.: See—
Herrmann, Donald C., and Bazin, Lucas J. 3,518,457.

B-D Laboratories, Inc.: See—
Andelin, John Philip, and Moody, Jay H., 3,518,164.

Bea, Robert G., to Shell Oil company. Folding support structure for offshore drilling platforms. 3,517,516, Cl. 61-46.5

Beauchef, Gaston Henri, to Societe d'Application des Matieres Plastiques. Ski goggles. 3,517,393, Cl. 2-14.

Beaver, Thomas R., and Van Benthuyzen, John D., to CTS Corporation. Electrical component. 3,518,604, Cl. 338-164.

Beavers, Dorothy J., and Yutzy, Henry C., to Eastman Kodak Company. Chemical transfer receiving sheets and a method of preparing such sheets. 3,518,160, Cl. 162-135.

Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., to Monsanto Company. Hydrocarbon separations. 3,518,322, Cl. 260-674.

Beckman Instruments, Inc.: See—
Bleak, Thomas M., and Porter, Joe A., 3,518,179.

Doering, John P., Jr., and Brant, Roy G., 3,518,389.

Franklin, Robert C., and Boyd, William R., 3,518,012.

Hell, August, 3,518,001.

Rochte, Jerry E., 3,518,011.

Szobonya, Karl F., 3,517,437.

Becton, Dickinson and Company: See—
Buono, Frank S., and Gandi, Robert A., 3,517,669.

Beears, Warren L., to Goodrich, B. F., Company, The. Process for the preparation of triacrylyl perhydro-S-triazines. 3,518,264, Cl. 260-248.

Beears, Warren L., to Goodrich, B. F., Company, The. Process for the preparation of 1,3,5-triacrylyl perhydro-S-triazines. 3,518,265, Cl. 260-248.

Beecham Group Limited: See—
Fosker, George R., Naylor, John Herbert Charles, and Smith, Harry, 3,518,253.

Beer, Carl. Liquid waste treatment process. 3,517,810, Cl. 210-7.

Behrends, Jack Richard: See—
Reder, Robert, and Behrends, Jack Richard 3,517,456.

Belart, Jaun, to Teves, Alfred, G.m.b.H. Floating-yoke disk brake with wear-compensating mechanism. 3,517,783, Cl. 188-196.

Bell & Howell Company: See—
Ghiselli, William A., Jr., 3,517,997.

Kral, Fred G., 3,517,896.

Tyler, Len A., 3,517,993.

Bell, Geoffrey Hairsine: See—
Groszek, Aleksander, Bell, Geoffrey Hairsine, and Dodson, Stanley C. 3,518,191.

Bell, Henry Thomas. Roll-over plow structure. 3,517,750, Cl. 172-226.

Bell, Stanley C.: See—
Wei, Peter H. L., and Bell, Stanley C. 3,518,254.

Bell Telephone Laboratories, Incorporated: See—
Ballman, Albert A., Lenzo, Pascal V., and Spencer, Edward G., 3,518,634.

Chynoweth, Alan G., and Feldmann, William L., 3,518,659.

Copeland, John A., III, 3,518,545.

Dorman, Paul W., and Shoji, Masakazu, 3,518,502.

Feldman, David, and Rao, Tadikonda N., 3,518,571.

French, Joseph C., 3,518,454.

Heiss, John H., Jr., and Smolinsky, Gerald, 3,518,108.

Miller, John A., and Nash, Donald H., 3,518,584.

Pernecki, Anthony J., 3,518,643.

Rao, Tadikonda N., 3,518,572.

Shores, Stanley C., Jr., 3,518,611.

Smith, Warren L., 3,518,573.

Swanson, Robert A., 3,518,618.

Bell, Vernon L., Jr. Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetrasubstituted benzene. 3,518,232, Cl. 260-78.

Bell, Vernon Lee, to Du Pont de Nemours, E. I., and Company. Process of forming crosslinkable copolymers of polyesters and substituted benzophenones and product thereof. 3,518,175, Cl. 204-159.19

Beller, Hans Albert, to Teves, Alfred, G.m.b.H. Spot-type disk brake. 3,517,777, Cl. 188-73.

Bender, Werner K., to Kalart Company Inc., The. Cartridge for storing visual and audio information. 3,517,991, Cl. 353-19.

Bendix Corporation, The: See—
Bach, Lloyd G., 3,517,907.

Bolenbaugh, Daniel L., 3,517,779.

Cripe, Maxwell L., 3,517,970.

Cunningham, Joseph A., 3,517,785.

Eastman, James M., 3,517,685.

Kytta, Oswald O., 3,517,588.

Peczowski, Joseph L., and Sollman, Francis G., 3,517,506.

Watson, Harry Bell, 3,518,490.

Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Westrom, Alfred, 3,517,532.

Beninger, Robert L., to Weber, H. G., and Company Inc. Continuous motion mechanical vertical compression apparatus. 3,517,482, Cl. 53-387.

Bennett Brothers, Inc.: See—
Bennett, Gail, 3,517,947.

Bennett, Gail, to Bennett Brothers, Inc. Gift catalog. 3,517,947, Cl. 283-56.

Bennison, Michael Newstead, and Margereson, Gregory John, to Clarkson, W. J., Limited. Stitching of materials. 3,517,630, Cl. 112-121.12

Benz, Jakob: See—
Auerbach, Guenther, Benz, Jakob, and Wehrli, Walter 3,518,246.

Berlinger, Jordan P., and Richter, Sidney B., to Veliscol Chemical Corporation. Herbicidal compositions and method. 3,518,077, Cl. 71-118.

Bertellini, Gianfranco: See—
Butti, Adriano, Prino, Giuseppe, and Bertellini, Gianfranco 3,518,243.

Bertrams, Johannes Kurt, to U.S. Philips Corporation, mesne. Flash-lamp holder. 3,518,417, Cl. 240-1.3

Besseling, Johann Lodewyk Naude, and Bull, Arthur Barclay, to South African Inventions Development Corporation. Bloodwarmers. 3,518,393, Cl. 219-10.41

Betz Laboratories, Inc.: See—
Hansen, Gerald D., Jr., and Guthrie, Elizabeth A., 3,518,204.

Beusink, Bernard Joseph, to U.S. Philips Corporation, mesne. Mowing machine. 3,517,495, Cl. 56-296.

Beusink, Bernard Joseph, Horowitz, Alexandre, and Van Den Heuvel, Wilhelmus Henricus Maria, to U.S. Philips Corporation, mesne. Mowing machine having an eccentric drive. 3,517,494, Cl. 56-293.

Bezouska, Vlastimil, Pivmec, Jan, Hrdlicka, Jiri, Krasa, Evzen, and Smekal, Zdenek, to CKD Prague, oborovy podnik. Semiconductor device having pressure-held contacts. 3,518,507, Cl. 317-234.

Bianco, Carlo, to Elbi S.a.s. dei Fratelli Bianco. Liquid detergent metering device. 3,517,862, Cl. 222-440.

Bickmore, John T., and Goffe, William L., to Xerox Corporation. Image formation and development. 3,518,081, Cl. 96-1.

Biegel, John E. Tensile test device. 3,517,551, Cl. 73-95.

Bille, Heinaz: See—
Petersen, Harro, Bille, Heinaz, and Ruemens, Wilhelm 3,518,043.

Binks-Bullows Limited: See—
Boyce, Guy Baron, 3,517,641.

Bio-neering, Inc.: See—
Brickson, William L., 3,517,668.

Birnbaucher, Walter, to Oesterreichisch-Alpine Montangesellschaft. Crossing frogs for railway points. 3,518,423, Cl. 246-468.

Birstein, Seymour J.: See—
Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A. 3,517,505.

Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A. 3,517,512.

Birtcher Corporation, The: See—
Finch, Horace T., and Emmons, Donald L., 3,517,662.

Bissett, Thomas B., and Murphy, John Brian, to Bissett-Berman Corporation, The. Electrochemical cell circuits. 3,518,501, Cl. 317-231.

Bissett-Berman Corporation, The: See—
Bissett, Thomas B., and Murphy, John Brian, 3,518,501.

Black, Robert J., and Sordello, Frank J., to International Business Machines Corporation. Digital comparison-to-analog signal converter. 3,518,658, Cl. 340-347.

Blaho, Rudolph G.: See—
Fritz, Albert J., and Blaho, Rudolph G. 3,517,867.

Blake, Wallace. Powder spreading device. 3,517,885, Cl. 239-309.

Blazek, Henry, to Sperry Rand Corporation. Pneumatic accelerometer. 3,517,559, Cl. 73-503.

Bleak, Thomas M., and Porter, Joe A., to Beckman Instruments, Inc. Temperature compensated electrochemical cell. 3,518,179, Cl. 204-195.

Blenkarn, Kenneth A., to Pan American Petroleum Corporation. Encapsulated cable for marine use. 3,517,517, Cl. 61-46.5

Block Engineering, Inc.: See—
DeWeerd, Herman, 3,517,781.

Block, Leo, and Rafenstein, Roy Frank, to Raypak Company, Inc. Burner safety control system. 3,518,034, Cl. 431-45.

- Blom, Karl-Johan: See—
Jarleborg, Holger, and Blom, Karl-Johan 3,518,080.
- Blonde, Guy, to Societe Anonyme Outinord. Casting frames or molds. 3,517,906, Cl. 249-184.
- Bocker, Friedrich, to Holstein & Kappert Maschinenfabrik Phonix GmbH. Transporting arrangement for transporting bottles or the like away from a bottle-cleaning machine. 3,517,793, Cl. 198-25.
- Boe, Norman W.: See—
Hersh, Solomon P., Boe, Norman W., and Stow, George C., Jr. 3,518,138.
- Boehringer Ingelheim G.m.b.H.: See—
Pattermann, Franz, 3,518,248.
- Boeing Company, The: See—
Collett, John E., and Host, Rudolph P., 3,518,621.
- Bogaerts, Leo C.: See—
Kushmuk, Walter P., and Bogaerts, Leo C., 3,517,558.
- Bohac, Frantisek, to Adamovske strojirny, narodni podnik. Ductor roller mounting arrangement for a printing machine. 3,517,614, Cl. 101-349.
- Bolenbaugh, Daniel L., to Bendix Corporation, The. Parking brake lever. 3,517,779, Cl. 188-78.
- Bolt, Murray H., and Nick, Howard H., to International Business Machines Corporation. Logic circuit directionally combining single pulses representing logic variables. 3,518,450, Cl. 307-216.
- Bolton, R. B. (Mining Engineers) Limited: See—
Bolton, Robert Benjamin, and Gray, Thomas, 3,517,815.
- Bolton, Robert Benjamin, and Gray, Thomas, to Bolton, R. B. (Mining Engineers) Limited. Replenishment tanks. 3,517,815, Cl. 210-256.
- Booher, Robert K., to North American Rockwell Corporation. Gating system for reducing the effects of negative feedback noise in multiphase gating devices. 3,518,451, Cl. 307-221.
- Borsuk, Leslie M.: See—
Goodman, David S., Borsuk, Leslie M., and Inacker, Frederick T., 3,518,610.
- Bosch, Werner, to Siemens Aktiengesellschaft. Holding relay with operating characteristics which remain constant with fluctuations of temperature. 3,518,592, Cl. 335-234.
- Bosco, Joseph, to Eltop Corporation. Cartower-and means for storing automobiles in a spiral-shaped garage. 3,517,836, Cl. 214-16.1.
- Bosworth, Melvin B., Bowman, Douglas F., Sparkes, Harry P., and Young, Clarence A., to Lockheed Aircraft Corporation. Electrical connectors. 3,518,617, Cl. 339-107.
- Bottomley, William Kelvin, to Honeywell Inc. Transformer having variable number of turns. 3,518,594, Cl. 336-15.
- Bouboulex, Albert, and Cheze, Rene, to CSF-Compagnie Generale de Telegraphie Sans Fil. Selective loop antenna system for receivers. 3,518,550, Cl. 325-375.
- Bouehat, Andre, to Ateliers de Constructions Electriques de Charleroi (ACEC). Reversible air conditioning unit. 3,517,527, Cl. 62-325.
- Boucher, Paul D., and Miller, Joseph C., to International Business Machines Corporation. Vacuum pick-up with air shield. 3,517,958, Cl. 294-64.
- Boudes, Jaques, and Gerometta, Mario. Vehicle anti-fire safety device. 3,518,385, Cl. 200-61.45.
- Boudreault, Armand: See—
Pavilanis, Vytautas, Marois, Paul, Boudreault, Armand, and Gilker, Jean Claude 3,518,347.
- Bourns, Inc.: See—
Provance, Jason D., 3,518,209.
- Bourns, Richard T., and McDonald, Lawrence T., to Eastman Kodak Company. Method of applying photographic coatings to a moving web with a spliced joint. 3,518,141, Cl. 156-157.
- Bouvier, Jean J., to Ferro Corporation. Stone polishing wheel for contoured surfaces. 3,517,466, Cl. 51-358.
- Bovagne, Rene, and Deynat, Gerard, to Societe des Forges et Ateliers du Creusot. Self-aligning carrying rollers for heavy rotary bodies, such as rotary kilns. 3,517,915, Cl. 263-33.
- Bowden, Ernest R.L.: See—
Clarke, Trevor G., Bowden, Ernest R.L., and Tustin, Oliver A., 3,517,967.
- Bowen, Eldred W., to Pet Incorporated. Method and apparatus for closing containers. 3,517,476, Cl. 53-37.
- Bowers, David L., and Fisher, David C., to General Electric Company. Threshold analyzer for an implanted heart stimulator. 3,517,663, Cl. 128-2.06.
- Bowman, Douglas F.: See—
Sparkes, Harry P., Bowman, Douglas F., and Pusateri, Anthony J., Jr. 3,518,615.
- Bosworth, Melvin B., Bowman, Douglas F., Sparkes, Harry P., and Young, Clarence A., 3,518,617.
- Boyce, Guy Baron, to Binks-Bullows Limited. Article detecting device. 3,517,641, Cl. 118-2.
- Boyd, Branin A.: See—
Zandman, Felix, and Boyd, Branin A., 3,517,436.
- Boyd, William R.: See—
Franklin, Robert C., and Boyd, William R., 3,518,012.
- Boyer, Jackson S., and Cassar, Richard D., to Sun Oil Company. Ultraviolet stabilized petroleum hydrocarbons. 3,518,196, Cl. 252-56.
- Boyer, Jackson S., and Cassar, Richard D., to Sun Oil Company. Polymethylated muconic acids and phosphite esters synergistic stabilizer combination for elastomer composition. 3,518,225, Cl. 260-45.85.
- B-R Corporation: See—
Nicklas, James P., and Stotz, Robert H., 3,518,660.
- Braastad, Gerald G.: See—
Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddel, James F., and Shaw, William A., 3,517,478.
- Brant, Roy G.: See—
Doering, John P., Jr., and Brant, Roy G., 3,518,389.
- Brebant, Robert, to Sodeo, Societe Anonyme, mesne. Apparatus for treating a liquid with a gas, notably for deodorizing edible oil. 3,517,732, Cl. 165-108.
- Brennan, Edward N., and Harris, Clifford P. Telephone microphone cutoff. 3,518,380, Cl. 179-167.
- Breslow, Jeffrey D., to Glass, Marvin, & Associates. Balloon kicking game apparatus. 3,517,934, Cl. 273-95.
- Brewer, Silas H., to United States of America, Air Force. Method and apparatus for determining the accuracy of the reflecting surface of a paraboloidal reflector in space. 3,518,004, Cl. 356-124.
- Brickson, William L., to Bio-neering, Inc. Multiple dosage veterinary injection gun. 3,517,668, Cl. 128-218.
- Bridges, Robert L., and Dick, James, to Weyerhaeuser Company. Tree seedling capsule planting tool. 3,517,629, Cl. 111-96.
- Bridgestone Tire Company Limited: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru, 3,518,238.
- Bristol, David A., to General Electric Company. Rotor drive mechanism for two-position indicating instrument. 3,518,665, Cl. 340-373.
- British Petroleum Company Limited, The: See—
Andrews, George Inglis, Groszek, Aleksander Jerzy, and Witheridge, Rodney Ernest, 3,518,186.
- Cairns, Roger John Russell, and Dodson, Stanley Charles, 3,518,192.
- Desty, Denis Henry, 3,517,887.
- Groszek, Aleksander, Bell, Geoffrey Hairsine, and Dodson, Stanley C., 3,518,191.
- Groszek, Aleksander Jerzy, 3,518,187.
- Groszek, Aleksander Jerzy, 3,518,190.
- British Titan Products Company Limited: See—
Foulds, James Taylor, 3,518,052.
- Britten, Colin G., and Ashmole, Patrick John, to Rolls-Royce Limited. Standby control system for multi-engine power plant. 3,518,023, Cl. 416-30.
- Broadhurst, Jack M., to Uniroyal, Inc. Process for making flock decorated materials and product. 3,518,154, Cl. 161-64.
- Broadway Finance Corporation: See—
Logan, Raymond N., 3,518,342.
- Broekema, Heiko, Luitjen, Willem Jacob, Wolf, Gerrit, and van Dijkum, Adalbertus Hermanus Jacobus Nieveen, to U.S. Philips Corporation, mesne. Circuit including a coupling network for power and noise matching a common base transistor. 3,518,565, Cl. 330-31.
- Brokke, Mervin E., and Dewald, Chester L., to Stauffer Chemical Company. Method of controlling weeds. 3,518,075, Cl. 71-103.
- Bronnes, Robert L., Hughes, Ray C., and Sweet, Richard C., to U.S. Philips Corporation, mesne. Metallizing non-metals. 3,518,066, Cl. 29-195.
- Brooks, Robert R., to RCA Corporation. Preset sensitivity and amplification control system. 3,518,371, Cl. 178-72.
- Brossi, Arnold, Gerecke, Max, and Kyburz, Emilio, to Hoffmann-La Roche Inc. Pivaloyl and undecanoyl esters of griseofulvin. 3,518,283, Cl. 260-346.2.
- Broussard, Paul Daniel. Quadruple sound output loudspeaker enclosure. 3,517,769, Cl. 181-31.
- Brown, Claude H., to Jet Research Center, Inc. Camouflet device. 3,517,469, Cl. 52-155.
- Brown, Ellsworth R., to Armstrong Rubber Company, The. Pneumatic tire. 3,517,720, Cl. 152-352.
- Brown Engineering Company, Inc.: See—
Rhinehart, Richard W., Conn, Henry L., and Morris, Howard E., 3,517,403.
- Brown, Harry W., and Fries, Donald W., to Cutler-Hammer, Inc. Air conditioner compressor and air fan speed controller. 3,517,523, Cl. 62-180.
- Brown, Norman H., to Dexter Corporation, The. Cable or like enclosure. 3,518,358, Cl. 174-138.
- Brown, Richard E., and Meltzer, Robert I., to Warner-Lambert Pharmaceutical Company. 1-Oxime substituted quinolizines. 3,518,269, Cl. 260-286.
- Brown, Thomas Townsend, to Guidance Technology, Inc., mesne. Fluid flow control system. 3,518,462, Cl. 310-10.
- Brown, Willard Gene: See—
Dines, Allen I., and Brown, Willard Gene, 3,518,345.
- Bruder, Michel: See—
Granger, Camille, Demeure, Marc, and Bruder, Michel, 3,517,557.
- Brueckmann, Helmut, to United States of America, Army. Duplex antenna systems for aircraft transceivers. 3,518,684, Cl. 343-705.
- Bruejens, Wilhelm H., Heifetz, Sidney T., and Kahn, Benjamin. Infusion type coffee urns. 3,517,603, Cl. 99-283.
- Brundage, Robert W., to Emerson Electric Company. Hydraulic laundry machine transmission. 3,517,507, Cl. 60-52.
- Bruno, Joseph S.: See—
Reinhardt, Robert M., and Bruno, Joseph S., 3,518,044.
- Bucchioni, Dario, and De Toffoli, Mirella Forgiione. Process and apparatus for removing floating wastes from water surfaces. 3,517,812, Cl. 210-73.

- Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warrant, Julien, and Goffinet, Bernard, to Roussel-Uclaf. Process of preparation of alkyl cyclopentane diones and intermediates therefor. 3,518,296, Cl. 260-468.
- Bucyrus-Erie Company: See—
Barber, Donald E., 3,518,444.
- Lonngren, Bruno L., and Davidson, Trevor O., 3,517,975.
- Mork, George W., and Novotny, Carl F., 3,517,960.
- Budd Company, The: See—
Mattia, Michael, and Tompkins, William T., 3,517,464.
- Wessells, Henry W., III, and Eggert, Walter S., Jr., 3,517,765.
- Wessells, Henry W., III, and Dean, Walter B., 3,517,787.
- Wonos, Dale W., 3,517,729.
- Budge, William W., to Pacific Mariculture Co., Inc. Method and apparatus for growing free oyster seed. 3,517,648, Cl. 119-4.
- Buffington, Marvin A., to Picker Corporation, mesne. Differential plethysmography. 3,517,661, Cl. 128-2.05.
- Bull, Arthur Barclay: See—
Besseling, Johann Lodewyk Naude, and Bull, Arthur Barclay, 3,518,393.
- Bunker-Ramo Corporation, The: See—
Cole, Robert H., Nissim, Samuel, Podraza, George V., and Feuer, Robert, 3,518,635.
- Bunner, James E., to General Electric Company. Dynamoelectric machine. 3,518,466, Cl. 310-54.
- Bunting, Ernest V., and Lind, Hans V., to Massey-Ferguson Inc. Universal weight transfer hitch. 3,517,943, Cl. 280-405.
- Buono, Frank S., and Gandi, Robert A., to Becton, Dickinson and Company. Valved suction catheter. 3,517,669, Cl. 128-276.
- Burdin, Clifford, Clarke, James D., Gehris, James D., and Whittaker, Johnnie L., to McDonnell Douglas Corporation, mesne. Gyroscopically controlled image stabilization system. 3,518,016, Cl. 356-248.
- Burellier, Georges J., and Menault, Jacques A., to Rhodiacta. Apparatus and method for producing a doupion thread. 3,517,498, Cl. 57-91.
- Burleson, James C., and Yates, William F., to Monsanto Company. Manufacture of alkyl amines using a silent electric discharge. 3,518,178, Cl. 204-177.
- Burnham, Gerald E., Sr. Drilling mud flow and divider apparatus. 3,517,487, Cl. 55-192.
- Burroughs Corporation: See—
Bader, Clifford J., 3,518,534.
- Fehnel, Richard B., 3,518,477.
- Green, Milton, 3,518,459.
- Powell, Wilmer S., 3,518,535.
- Shelton, Richard M., 3,518,642.
- Busacca, Rosario, to Pharmirex Anstalt, mesne. N-(acetylsalicyl) anthranilic acid compounds. 3,518,297, Cl. 260-480.
- Bushey, Dale Nelson, and Showman, Robert Linn, to AMP Incorporated. Connector keying device. 3,518,620, Cl. 339-184.
- Butler Industries, Inc.: See—
Goldstein, Arthur, and Sobel, Theodore, 3,517,623.
- Butti, Adriano, Prino, Giuseppe, and Bertellini, Gianfranco, to Prephar Prospection de Recherches Pharmaceutiques S.A. Sulfonated derivatives of a glycopeptide extracted from animal organs, useful as drugs and a process for the preparation thereof. 3,518,243, Cl. 260-112.
- Byler, Thomas E., and Osborn, Donald H., to Revere Copper and Brass Incorporated. Electrolytic process of preparing a copper foil for a plastic coat. 3,518,168, Cl. 204-32.
- Cacka, Zdenek, and Elmore, Glenn V., to International Business Machines Corporation. Method of making conductive circuit patterns by intaglio process. 3,518,130, Cl. 156-3.
- Cairns, Roger John Russell, and Dodson, Stanley Charles, to British Petroleum Company Limited, The. Oleophilic graphite. 3,518,192, Cl. 252-29.
- Caldwell, John R., and Jackson, Winston J., Jr., to Eastman Kodak Company. Formation of urethane units on the surface of polycarbonate structures. 3,518,040, Cl. 8-115.5.
- Callahan, Irwin J. Two-way plow roll-over mechanism. 3,517,749, Cl. 172-225.
- Callan, John E., to Allen-Bradley Company. Ripple eliminating armature feedback D-C motor speed control circuit. 3,518,519, Cl. 318-308.
- Calumet & Hecla Corporation: See—
Herren, James L., and Habbas, Edward P., 3,518,405.
- Cambridge Instrument Company Limited: See—
Campbell, Alistair John, 3,518,426.
- Camenzind, Hans R., to Mallory, P. R., & Co., Inc. Decoupling means for integrated circuit. 3,518,458, Cl. 307-297.
- Campbell, Alistair John, to Cambridge Instrument Company Limited. Blazed diffraction grating X-ray spectrometer. 3,518,426, Cl. 250-51.5.
- Campbell, David Neil, to Hymatic Engineering Company, The. Employing the Joule-Thomson effect cooling apparatus. 3,517,525, Cl. 62-222.
- Campbell, James K., and Sprenger, Lawrence C., to Dow Corning Corporation. Polysiloxane release coatings. 3,518,325, Cl. 260-825.
- Canadair Limited: See—
Adams, Glenn N., 3,518,022.
- Canadian Patents and Development Limited: See—
Winkler, Ernst W. S., Emmett, John R., and Perry, John A., 3,517,435.
- Canceill, Bernard Jean-Jacques, and Regnier, Albert, to International Standard Electric Corporation. Magnetic memory switching device, particularly for telephony. 3,518,626, Cl. 340-166.
- Caneer, Ralph A.: See—
Zeis, Steve E., and Caneer, Ralph A., 3,517,891.
- Carborundum Company, The: See—
Ohnsorg, Roger W., and Casper, Richard L., 3,518,351.
- Carley, James A., Mc Roskey, Leonard H., and Parsons, Robert O., said Mc Roskey, Leonard, assor of 1/2 to Mc Roskey, John W., and Mc Roskey, Catherine. Force responsive switch. 3,518,384, Cl. 200-61.45.
- Carlisle, Sanford K., Jr., and Gordon, George F., to Diamond Crystal Salt Company. Packet dispenser. 3,517,577, Cl. 83-23.
- Carlow, Earl F., to Motorola, Inc. Multi-frequency signal generation. 3,518,552, Cl. 328-43.
- Carlsen, Albert, and Evans, Armstead J. Method for comminuting and drying cooked food products. 3,517,716, Cl. 146-230.
- Carman, Richard W.: See—
Oram, Derek O., and Carman, Richard W., 3,517,926.
- Carmichael, Jack B., to Dow Corning Corporation. Chromatographic technique. 3,517,483, Cl. 55-67.
- Carniol, Bohdan, and Styblo, Rudolf, to Tesla, narodni podnik. Circuit arrangement for measuring the damping of an oscillation. 3,518,551, Cl. 328-5.
- Carrigan, William H., and MacLam, James A., to Kirkhof Manufacturing Corporation. Method of forming three dimensional plastic articles. 3,518,334, Cl. 264-89.
- Carrotte, Frederick Henry, and Wilson, George Herbert, to Kirkland, A., & Company Limited. Knitting machinery. 3,517,429, Cl. 29-200.
- Carruthers, Ronald W., Sr.: See—
Hoffman, Benjamin F., and Carruthers, Ronald W., Sr. 3,518,453.
- Carson, William S., Jr., to Scottel, Inc. Apparatus for processing material. 3,517,414, Cl. 18-16.5.
- Case, J. I., Company: See—
Lazzeroni, Edward J., 3,517,941.
- Reeser, Esral M., and Anderson, Ronald L., 3,517,711.
- Casper, Richard L.: See—
Ohnsorg, Roger W., and Casper, Richard L., 3,518,351.
- Cassar, Richard D.: See—
Boyer, Jackson S., and Cassar, Richard D., 3,518,196.
- Boyer, Jackson S., and Cassar, Richard D., 3,518,225.
- Cassidy, Francis D., to RCA Corporation. Magnetic memory with noise-cancellation sense wiring. 3,518,640, Cl. 340-174.
- Castellani, Leon: See—
Eveleigh, John W., Castellani, Leon, and Isreeli, Jack, 3,517,695.
- Caterpillar Tractor Company: See—
Paddock, Byron, Jr., 3,517,676.
- Cecil, Eugene L., Jr.: See—
Tower, Dell K., Cecil, Eugene L., Jr., and Hack, George J., 3,517,618.
- Cenkner, George A. Metal recovery device. 3,517,918, Cl. 266-37.
- Central Transformer Corporation: See—
Winter, David F., 3,517,917.
- Cerniglia, Nino P., Crytzer, JACOB., and Tonner, Richard C., to Sylvia Electric Products, Inc. Method for producing patterns of conductive leads. 3,518,135, Cl. 156-17.
- Ceskoslovenska akademie ved: See—
Hrdina, Jiri, 3,518,015.
- Petrán, Mojmir, and Hadravsky, Milan, 3,517,980.
- Chaddha, Aron K., Jones, Trevor L., and Stamatis, Sam P., to Wells-Gardner Electronics Corporation. Keyed fine tune indicator for color or monochrome TV. 3,518,365, Cl. 178-5.8.
- Chandler, Herman R. Thermal pressure relief device. 3,517,683, Cl. 137-74.
- Chaptal de Chanteloup, Victor, to CSF-Compagnie Generale de Telegraphie Sans Fil. Laminated layer ferromagnetic memory and logical circuit elements. 3,518,641, Cl. 340-174.
- Charette, Omer. Can opener having drip collecting means. 3,517,440, Cl. 30-5.5.
- Chazen, Julius L. Portable auto preparator. 3,518,078, Cl. 75-44.
- Chemerda, John M., and Slettinger, Meyer, to Merck & Co., Inc. 1-p-Chlorobenzoyl-2-methyl-5-methoxyindole-3- malonic acid derivative. 3,518,280, Cl. 260-326.13.
- Chemtron Corporation: See—
Wilson, Thomas Lamont, and Hickok, Willard H., 3,518,396.
- Chemical Construction Corporation: See—
Strelzoff, Samuel, Warshaw, Abe, Villiers-Fisher, John F., and Atkin, Sydney, 3,518,073.
- Villiers-Fisher, John F., and Andreach, Anthony J., 3,518,071.
- Chemtoy Corporation: See—
Kalish, Jerome Barton, 3,517,931.
- Cherdron, Harald: See—
Hafner, Karl-Heinz, and Cherdron, Harald, 3,518,231.
- Chevron Research Company: See—
Klett, Robert J., 3,518,056.
- Klett, Robert J., 3,518,166.
- Klett, Robert J., 3,518,167.
- Paterson, Norman J., 3,518,182.
- Cheze, Rene: See—
Bouboulex, Albert, and Cheze, Rene, 3,518,550.
- Chieccchi, Eraldo M., to Ampex Corporation. Method of electrophotographic imaging employing phenazine as the sensitizer for the photoconductive material. 3,518,082, Cl. 96-1.

Chirco, Peter R., to Huck Manufacturing Company. Crimping tool. 3,517,539, Cl. 72-414.

Chmela, Stephen M. Roll feed. 3,517,872, Cl. 226-90.

Chrisp, Joseph D., to Du Pont de Nemours, E. I., and Company. Polyvinyl alcohol and derivatives crosslinked with titanium, permanganate, or vanadyl ions. 3,518,242, Cl. 260-91.3

Christal, Philip Richard: See—
Williamson, David Theodore Nelson, Crosland, Richard Graham, and Christal, Philip Richard 3,517,430.

Christensen, Ferdinand. Pressure sensitive ribbon cover stripping means and method therefor. 3,518,145, Cl. 156-248.

Christian, John B., to United States of America, Air Force. Grease composition for use at high temperatures and high speeds. 3,518,189, Cl. 252-28.

Christy Metal Products Inc.: See—
Dunmire, Paul G., 3,517,951.

Chrysler Corporation: See—
Holbrook, Rex R., 3,517,561.

Sarto, Jorma O., and Hunter, William A., 3,517,654.

Chung, David H., to Texas Instruments, Incorporated. Integrated logic network. 3,518,449, Cl. 307-215.

Chynoweth, Alan G., and Feldmann, William L., to Bell Telephone Laboratories, Incorporated. High speed light switch. 3,518,659, Cl. 340-347.

Cicirello, Daniel J. Method and apparatus for the destruction of airborne microorganisms within a room. 3,518,046, Cl. 21-53.

CKD Prague, oborovy podnik: See—
Bezouska, Vlastimil, Pivrnec, Jan, Hrdlicka, Jiri, Krasa, Evzen, and Smekal, Zdenek, 3,518,507.

Claes, Joseph: See—
Dutilleul, Jacques, and Claes, Joseph 3,518,452.

Clare, C. P., and Company: See—
Rhode Terry L., 3,518,411.

Clark & Vicario Corporation: See—
Shaver, James D., 3,517,434.

Clark Equipment Company: See—
King, James F., 3,517,846.

Clarke, Chapman & Co. Limited: See—
Tasker, Ronald Vivian, and Holmes, Raymond Leslie, 3,517,733.

Clarke, James D.: See—
Burdin, Clifford, Clarke, James D., Gehris, James D., and Whitaker, Johnnie L., 3,518,016.

Clarke, Trevor G., Bowden, Ernest R.L., and Tustin, Oliver A., to Modern Mining Machinery Limited. Mineral cutting machines. 3,517,967, Cl. 299-51.

Clarkson, W. J., Limited: See—
Bennison, Michael Newstead, and Margereson, Gregory John, 3,517,630.

Clayton, Robert W.: See—
Converse, Vernon G., III, Clayton, Robert W., and Westervelt, James T., 3,517,552.

Clemmons, Quentin T., to Westinghouse Air Brake Company. Pneumatic-hydraulic tread brake unit for railway car trucks. 3,517,784, Cl. 188-196.

Clevite Corporation: See—
Lungo, Antonio, 3,518,470.

Clinkscales, Dorothy G. Carbonating and dispensing receptacle for liquids. 3,517,932, Cl. 222-399.

Clyde Corporation, The: See—
Ginther, Gary D., 3,517,856.

Coca-Cola Company, The: See—
Wakefield, Harold Donavon, 3,517,875.

Cofe, Daniel B., to Southwire Company. Method of hot-forming continuously cast aluminum. 3,517,537, Cl. 72-234.

Cogdill, Cletus V. Hanger structure. 3,518,421, Cl. 240-85.

Cohen, George R., to Standard Pressed Steel Co. Method of making bolt. 3,517,402, Cl. 10-27.

Cohen, Marvin P.: See—
von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., 3,518,258.

von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., 3,518,272.

Von Strandtmann, Maximilian, Cohen, Marvin P., and Shavel, John, Jr., 3,518,273.

Cohen, Saul M., and Young, Raymond H. Jr., to Monsanto Company. Crosslinkable aromatic sulfone polymers. 3,518,235, Cl. 260-79.3

Cole, Robert H., Nissim, Samuel, Podraza, George V., and Feuer, Robert, to Bunker-Ramo Corporation, The. Digital memory apparatus. 3,518,635, Cl. 340-173.

Cole, William G., Jr., to Ferro Corporation. Method of forming glass fibers. 3,518,069, Cl. 65-2.

Colgate-Palmolive Company: See—
Dillastone, Alan, 3,518,410.

Suh, John T., 3,518,277.

Suh, John T., 3,518,278.

Collett, John E., and Host, Rudolph P., to Boeing Company, The. Aircraft stall warning system. 3,518,621, Cl. 340-27.

Collins and Aikman Corporation: See—
Hayes, John T., and Currier, Robert G., 3,517,707.

Collins Radio Company: See—
Schroeder, Klaus G., 3,518,695.

Colon-Morales, Miguel Angel. Device for monitoring physiological phenomenon. 3,517,636, Cl. 116-67.

Colson Corporation, The: See—
Martin, Leonard M., 3,517,845.

Combustion Engineering, Inc.: See—
Lichtenberger, Harold V., 3,518,162.

Commercial Solvents Corporation: See—
Frump, John A., 3,518,239.

Commissariat a l'Energie Atomique: See—
Delange, Maurice, Huet, Henri, and Vertes, Paul, 3,518,060.

Delange, Maurice, Huet, Henri, and Vertes, Paul, 3,518,062.

Laguerre, Rene, 3,518,429.

Rebut, Paul-Henri, and Torossian, Antoine, 3,518,474.

Comm-Tang Corporation: See—
Kozma, Sol A., Jr., 3,517,540.

Compagnie des Compteurs: See—
Janssen, Sylvain Jean, 3,517,544.

Mauduit, Christian Camille Jules, and Maury, Christian Gerard, 3,518,456.

Compagnie Francaise de Television: See—
Fessard, Roland, 3,518,362.

Compagnie Generale d'Electricite: See—
Vechain, Jacques, 3,517,904.

Computron Corporation: See—
Frankel, Stanley P., 3,518,629.

Conn, Henry L.: See—
Rhinehart, Richard W., Conn, Henry L., and Morris, Howard E., 3,517,403.

Connell, Edwin A., to General Electric Company. Coil wire fastening device and method. 3,518,596, Cl. 336-192.

Connick, William J., Jr., and Elzey, Samuel E., Jr., to United States of America, Agriculture. Water-and oil-repellent emulsion finish for cellulosic materials and process for preparing the emulsion. 3,518,218, Cl. 260-29.2

Converse, Vernon G., III, Clayton, Robert W., and Westervelt, James T., to Scans Associates, Inc. Apparatus for testing carburetors. 3,517,552, Cl. 73-118.

Convex Limited: See—
Zysman, Milton, 3,517,857.

Conway, Patrick H., to Sperry Rand Corporation. Digital signal cross-correlator. 3,517,879, Cl. 235-181.

Coors, Robert M. Combined teapot cover and tea bag holder. 3,517,604, Cl. 99-323.

Cope, Robert S., to Cope Typesetting Service, Inc. Automated drafting system. 3,517,591, Cl. 95-4.5

Cope Typesetting Service, Inc.: See—
Cope, Robert S., 3,517,591.

Copeland, John A., III, to Bell Telephone Laboratories, Incorporated. Methods and apparatus for measuring semiconductor doping profiles by determining second harmonic content. 3,518,545, Cl. 324-158.

Corbett, William H., to De Vilbiss Company, The. Electric steam vaporizer for therapeutic use. 3,518,409, Cl. 219-271.

Corlyon, Phillip R., and Fletcher, John C., to Singer-General Precision, Inc. Vehicle trainer controls and control loading. 3,517,446, Cl. 35-12.

Cornford, Arthur S., to Aerofall Mills Limited. Dual pinion drive. 3,517,566, Cl. 74-411.

Corti, Gianfranco, and San Martino, Roy G. Wheel blocking safety mechanism. 3,517,776, Cl. 188-4.

Coscor, A. C., Limited: See—
Woollvin, Geoffrey George, 3,518,668.

Costerousse, Germain: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.

Cote, Raymond A., to Riegel Paper Corporation. Display carton. 3,517,801, Cl. 206-45.14

Cottatellucci, Ezio, to Societa Italiana Telecomunicazioni Siemens S.p.A. Frequency modulator with transistor multivibrator. 3,518,575, Cl. 332-14.

Cotterill, Rodney M. J., to United States of America, Atomic Energy Commission. Universal planar X-ray resonator. 3,518,427, Cl. 250-53.

Couleur, John F.: See—
Bahrs, David L., Couleur, John F., Ruth, Richard L., and Shelly, William A., 3,518,630.

Courchesne, Germain. Air intake, mixer and recirculator system. 3,517,601, Cl. 98-33.

Cowles, John H., and Massey, Roger G., to Torrington Company, The. Seat back position control mechanism. 3,517,965, Cl. 297-374.

Cox, Bernard Carlton: See—
Ford, Ian Alastair Moncrieff, Cox, Bernard Carlton, and Thornton, James Coward 3,518,098.

Cox, Peter H., to Miles Laboratories, Inc. Tableting. 3,518,346, Cl. 424-44.

Crane, George J., to DuVernet, Ernest Arthur, and Crane, Selma Leslie, executors of the last will of said Crane, George J., deceased assor to Huron Nassau Ltd. Continuous manufacture of chlorates and perchlorates. 3,518,173, Cl. 204-95.

Crane, Selma Leslie: See—
Crane, George J., 3,518,173.

Cressy, Clifford E. Fastener attachment. 3,517,874, Cl. 227-144.

Cripe, Maxwell L., to Bendix Corporation, The. Brake proportioning means. 3,517,970, Cl. 303-6.

Crosland, Richard Graham: See—
Williamson, David Theodore Nelson, Crosland, Richard Graham, and Christal, Philip Richard 3,517,430.

Crosslen, Louis John, and Vicenzi, Elio, to Mayer, Frank, & Associates, Inc. Theftproof merchandise display. 3,517,827, Cl. 211-163.

Crouse, David J., Jr.: See—
Seeley, Forest G., and Crouse, David J., Jr., 3,518,063.

Crown Cork & Seal Company, Inc.: See—
Kesler, William C., and Ermer, Joseph W., Jr., 3,517,848.

Crownover, Albert B.: See—
Williams, Darrell W., and Crownover, Albert B., 3,517,553.

Croy, John E., to RCA Corporation. Weighted time accounting in time shared computer. 3,518,633, Cl. 340-172.5

Crumbo, Woodrow W. Reciprocating drilling tool. 3,517,759, Cl. 175-298.

Crytzer, JACOB.: See—
Cerniglia, Nino P., Crytzer, JACOB., and Tonner, Richard C., 3,518,135.

CSF-Compagnie Generale de Telegraphie Sans Fil: See—
Bouboileux, Albert, and Cheze, Rene, 3,518,550.

Chaptal de Chanteloup, Victor, 3,518,641.

C.S.S. Machine & Tool Co., Inc.: See—
Faure, Alphonse W., 3,517,696.

CTS Corporation: See—
Beaver, Thomas R., and Van Benthuyzen, John D., 3,518,604.

Cuffe, Moses L., and Frese, Ralph L. Hide-away step-up device. 3,517,942, Cl. 280-166.

Cullis, Roger, to International Standard Electric Corporation. Complementary field-effect transistors on common substrate by multiple epitaxy techniques. 3,518,509, Cl. 317-235.

Cumbo, Charles Carmen, to Du Pont de Nemours, E. I., and Company. Bromination process. 3,518,316, Cl. 260-612.

Cunningham, Joseph A., to Bendix Corporation, The. Automatic brake adjuster mechanism. 3,517,785, Cl. 188-196.

Currier, John A., to Scott & Williams, Inc. Knitting machine. 3,517,529, Cl. 66-41.

Currier, Robert G.: See—
Hayes, John T., and Currier, Robert G., 3,517,707.

Curtiss-Wright Corporation: See—
Sneeden, Ralph J., 3,518,037.

Cushera, Rosario E., and Hallett, Joseph L., to Sylvania Electric Products, Inc. Display contrast enhancement apparatus for use with a cathode ray tube. 3,518,373, Cl. 178-7.85

Cutler-Hammer, Inc.: See—
Brown, Harry W., and Fries, Donald W., 3,517,523.

Lombardo, Peter, Moley, Edmund, and Whelehan, James, 3,518,562.

Cyba, Henryk A., to Universal Oil Products Company. Synergistic antioxidant mixture and use thereof. 3,518,193, Cl. 252-46.3

Dahlberg, Bengt Georg: See—
Ekberg, Hugo, and Dahlberg, Bengt Georg 3,518,161.

Dainippon Pharmaceutical Co., Ltd.: See—
Minami, Shinsaku, Nakata, Minoru, Fujimoto, Katsuro, and Takse, Yoshiyuki, 3,518,256.

Daleffe, Giovanni, and Rappo, Angelo. Thread bobbin tube aligner. 3,517,797, Cl. 198-33.

D'Alelio, Gaetano F., to United States of America, Air Force. Arylene sulfimide polymers. 3,518,233, Cl. 260-78.

Damerel, George S. Means for putting on a shoe construction. 3,517,866, Cl. 223-118.

Damon, Gerald D., to Eaton Yale & Towne, Inc. Hydrostatic transmission and brake with controls. 3,517,790, Cl. 192-4.

Dane, Ivo: See—
Freitag, Helmut, Dane, Ivo, Muller, Erwin, and Fromandi, Guido 3,518,155.

Daniels, Richard L. Refuse container. 3,517,902, Cl. 248-137.

Danira Corporation: See—
Fraglia, Dante J., 3,517,419.

Darrell, George H. Centrifugal type projecting device. 3,517,656, Cl. 124-7.

Data Memory, Inc.: See—
Phan, John T., 3,518,366.

Data Products Corporation: See—
David, Charles W., 3,517,642.

Daughtry, Wallace B. Carriers for food plates, cups, sandwiches and the like. 3,517,868, Cl. 224-45.

Daum, Werner, and Scheinplug, Hans, to Farbenfabriken Bayer Aktiengesellschaft. N-pentahalophenyl-amino ammonium salts. 3,518,308, Cl. 260-567.6

David, Charles W., to Data Products Corporation. Apparatus for edging magnetic disc. 3,517,642, Cl. 118-7.

Davidson, Hubert: See—
Freeman, Ardee H., Schulte, Harold F., and Davidson, Hubert 3,517,465.

Davidson, Trevor O.: See—
Lonnegren, Bruno L., and Davidson, Trevor O., 3,517,975.

Davis, Elwood T., to Leeds & Northrup Company. Apparatus for measuring average thickness or density of strip material. 3,518,430, Cl. 250-83.3

Davis, George D.: See—
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,518,322.

Davis, Martin A.: See—
Dobson, Thomas A., and Davis, Martin A., 3,518,263.

Davis, Russell S., to I-T-E Imperial Corporation. Indicator for bus duct joint. 3,518,357, Cl. 174-88.

Davison, Bartholomew J., to United Aircraft Corporation. Viscosity independent pressure regulating valve. 3,517,681, Cl. 137-505.18

Dawson, Chester H., to Remington Arms Company, Inc. Output transformer and work inductor for induction generators. 3,518,394, Cl. 219-10.75

Dawson, Samuel Lee, and Felkner, Norman Darrel, to Wyle Laboratories. Variable inductor. 3,518,595, Cl. 336-134.

DCA Food Industries, Inc.: See—
Rock, Stanley P., Roth, Howard, and Sommers, John E., 3,518,092.

Dean, Walter B.: See—
Wessells, Henry W., III, and Dean, Walter B., 3,517,787.

Deardorff, Donald L.: See—
Fath, Joseph, and Deardorff, Donald L., 3,518,223.

De Bell, John M.: See—
Edelstein, Joel J., De Bell, John M., and Parker, Charles H., 3,518,210.

de Boisblanc, Deslonde R., to United States of America, Atomic Energy Commission. Sodium-cooled fast-flux test reactor. 3,518,163, Cl. 176-40.

De Croes, Leon C. Bait bucket. 3,517,453, Cl. 43-55.

Deep Oil Technology, Inc.: See—
Horton, Edward E., 3,517,518.

Deffenbaugh, Edmund F.: See—
Sapp, Hubert Beard, Jr., and Deffenbaugh, Edmund F., 3,517,599.

Degroff, Richard, and King, Thomas L., to Dresser Industries, Inc. Compressor cylinder unloader. 3,518,032, Cl. 417-440.

Deibel, Raymond A., and Riester, William C., to Trico Products Corporation. Pneumatic actuator control system. 3,517,698, Cl. 137-625.64

De La Vega, Robert P., to Geotol, Inc. Positive-feed powder hopper and method. 3,517,861, Cl. 222-194.

Delange, Maurice, Huet, Henri, and Vertes, Paul, to Commissariat a l'Energie Atomique. Apparatus for converting UO₂ to UF₆. 3,518,060, Cl. 23-262.

Delange, Maurice, Huet, Henri, and Vertes, Paul, to Commissariat a l'Energie Atomique. Apparatus for the production of uranium fluoride. 3,518,062, Cl. 23-284.

De Lano, Don L., to Vare Corporation. Lamp socket. 3,518,619, Cl. 339-127.

Dell'Agnese, David E., and Tinker, Townsend, to Modern Equipment Company. Apparatus for treating gases. 3,517,485, Cl. 55-226.

Deller, Anthony William: See—
West, De Witt Henry, 3,517,766.

Delmag-Maschinenfabrik Reinhold Dornfeld: See—
Kehrberger, Achim, 3,517,760.

De Lorme, James F.: See—
Holmboe, Christian Fredrik, De Lorme, James F., and Sommerud, Rolf Gunnar 3,518,556.

Delta P Incorporated: See—
Golden, Billy G., 3,517,486.

Demag Aktiengesellschaft: See—
Mahringer, Heinrich-Karl, and Langlitz, Karl-Heinz, 3,517,771.

DEMAG-Elektrometallurgie G.m.b.H.: See—
Lunig, Hermann Karl, 3,518,350.

Demaision, Raymond J., to Quigley Company, Inc. Method for prolonging the life of the cone section of the refractory lining of a basic oxygen furnace of the Kaldo type. 3,518,330, Cl. 264-30.

De Maria, Anthony J., and Penney, Albert W., Jr., to United Aircraft Corporation. Laser pulse generator using marx-bank pulser. 3,518,436, Cl. 250-199.

Demeure, Marc: See—
Granger, Camille, Demeure, Marc, and Bruder, Michel 3,517,557.

Demozay, Daniel: See—
Nguyen, Thanh-Thuong, and Demozay, Daniel 3,518,261.

Dennison Manufacturing Company: See—
Stucchi, Richard F., 3,517,612.

Dens, Rolf: See—
Taub, William, Dens, Rolf, and Ostermayer, Franz 3,518,307.

Denton Plastic Products Corporation: See—
Adey, George R., and Souder, Wilmer, Jr., 3,518,333.

Denzler, Emil, and Zollinger, Hans Rudolf, to Schlatter, H. A., AG. Butt-welding device for billets. 3,518,398, Cl. 219-101.

Desbarats, Edward W. Screwdriver. 3,517,714, Cl. 145-50.

Deseret Pharmaceutical Company, Inc.: See—
Santomieri, Louis S., 3,517,909.

Desty, Denis Henry, to British Petroleum Company Limited, The. Linear slot burner. 3,517,887, Cl. 239-568.

De Toffoli, Mirella Forgiore: See—
Bucchioni, Dario, and De Toffoli, Mirella Forgiore 3,517,812.

Deutsche Advance Produktion GmbH: See—
Eggensperger, Heinz, Franzen, Volker, and Stephan, Hans, 3,518,224.

Deutsche Babcock & Wilcox-Dampfkessel-Werke Aktiengesellschaft: See—
Harnisch, Heinz, Ottomy, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmuller, Werner, and Jochims, Heinz, 3,517,628.

Devenco Incorporated: See—
Smith, Harold A., 3,518,367.

- De Vilbiss Company, The: See—
Corbett, William H., 3,518,409.
- Dewald, Chester L.: See—
Brokke, Mervin E., and Dewald, Chester L., 3,518,075.
- DeWeerd, Herman, to Block Engineering, Inc. Dashpot with apertured piston, cylinder and rolling, flexible seal therebetween. 3,517,781, Cl. 188-94.
- De Wendel & Cie Societe Anonyme: See—
Lanternier, Andre, 3,517,474.
- Dexter Corporation, The: See—
Brown, Norman H., 3,518,358.
- Deynat, Gerard: See—
Bovagne, Rene, and Deynat, Gerard, 3,517,915.
- DeZurik Corporation: See—
Roos, William N., 3,517,689.
- Diamond Crystal Salt Company: See—
Carlisle, Sanford K., Jr., and Gordon, George F., 3,517,577.
- Diamond Power Specialty Corporation: See—
Johnston, Clifford V., 3,517,564.
- Dick, James: See—
Bridges, Robert L., and Dick, James, 3,517,629.
- Dickinson, Becton and Company: See—
Wittland, Frank, 3,517,806.
- Diersch & Schroder: See—
Mertgen, Lothar, and Schabel, Joachim, 3,518,102.
- Dietrich, Bernhard, to International Standard Electric Corporation. Transistor with lead-in electrodes. 3,518,504, Cl. 317-234.
- Dietz, Henry G. Low gas signal and indicator for gas cylinders. 3,517,693, Cl. 137-557.
- Dighe, Shrikant V., to Grace, W. R., & Co. Preparation of o-phenethyl benzoic acid. 3,518,300, Cl. 260-515.
- Diglio, Frank A., and Rae, John L., to Honeywell Inc. Document stacking arrangement. 3,517,924, Cl. 271-75.
- Dillardstone, Alan, to Colgate-Palmolive Company. Electrical heating device for fluent products. 3,518,410, Cl. 219-300.
- Dilot, Rolf Magnus: See—
Jeppesen, Torsten, Holmstrom, Kjell Ingavr, and Dilot, Rolf Magnus, 3,518,144.
- Dines, Allen I., and Brown, Willard Gene, to Miles Laboratories, Inc. Tabletting lubricant. 3,518,345, Cl. 424-44.
- Disko, Harry: See—
Glass, Marvin I., and Disko, Harry, 3,517,937.
- Dittrich, William A., to United States of America, Army. Laser exciter system. 3,518,570, Cl. 331-94.5
- Dixon Automatic Tool, Inc.: See—
Dixon, Paul H., 3,517,795.
- Dixon, Paul H., to Dixon Automatic Tool, Inc. Machine for orienting workpieces. 3,517,795, Cl. 198-33.
- Dobson, Thomas A., and Davis, Martin A., to American Home Products Corporation. Basically substituted 10,5-(epoxymethano)-10,11-dihydro-5H-dibenzo[a,d]cyclohepten-13-ones. 3,518,263, Cl. 260-247.2
- Dodson, Stanley C.: See—
Groszek, Aleksander, Bell, Geoffrey Hairsine, and Dodson, Stanley C., 3,518,191.
- Dodson, Stanley Charles: See—
Cairns, Roger John Russell, and Dodson, Stanley Charles, 3,518,192.
- Doering, John P., Jr., and Brant, Roy G., to Beckman Instruments, Inc. Rotor assembly for integral electrical switch. 3,518,389, Cl. 200-166.
- Dolter, Paul A.: See—
Hanna, John W., McCarty, William R., Jr., and Dolter, Paul A., 3,518,667.
- Donaldson Company, Inc.: See—
Monson, Donald R., Keller, Darryl E., and Rothman, James C., 3,517,821.
- Doo, Ven Y., to International Business Machines Corporation. Semiconductor structures of single crystals on polycrystalline substrates. 3,518,503, Cl. 317-234.
- Dooley, William P., to Sun Oil Company. Process for applying hot melt adhesive to corrugated paperboard. 3,518,142, Cl. 156-205.
- Doorley, Richard B., and Settle, Paul S., Jr., to Railway Maintenance Corporation. Vehicle control apparatus. 3,518,422, Cl. 246-167.
- Dorman, Paul W., and Shoji, Masakazu, to Bell Telephone Laboratories, Incorporated. Current function generators using two-valley semiconductor devices. 3,518,502, Cl. 317-231.
- Dow Chemical Company, The: See—
Layne, Gilbert S., Huml, James O., and Smith, Richard Dale, 3,518,172.
- McDonald, Leighton S., 3,518,202.
- Windecker, Leo J., 3,518,156.
- Dow Corning Corporation: See—
Alsgaard, Richard W., 3,518,047.
- Campbell, James K., and Sprenger, Lawrence C., 3,518,325.
- Carmichael, Jack B., 3,517,483.
- Frye, Cecil L., 3,518,292.
- Haluska, Loren A., 3,518,288.
- Ostrowski, Leon J., 3,518,222.
- Polmanteer, Keith E., 3,518,324.
- Raper, Dick, 3,518,340.
- Speier, John L., 3,518,291.
- Downhour, Russell, Jr.: See—
Roemer, Philip, and Downhour, Russell, Jr., 3,518,185.
- Downs, Clifford L., to General Electric Company. Reverse power flow detector. 3,518,491, Cl. 317-33.
- Downs, James A., and Schellenbach, Stanley T., to Thiokol Chemical Corporation, meane. R.T.V. polysulfide sealants. 3,518,211, Cl. 260-18.
- Dransfield, Desmond, and Bass, Patrick, to United Gas Industries Limited. Remote meter reading attachment utilizing rotary switches. 3,518,652, Cl. 340-177.
- Drelich, Arthur H., to Johnson & Johnson. Nonwoven fabrics and methods of making the same. 3,518,041, Cl. 8-115.7
- Dresser Industries, Inc.: See—
Anderson, Gerald L., 3,517,950.
- Degroff, Richard, and King, Thomas L., 3,518,032.
- Pumpelly, Robert C., Simpson, Harry E., and Kilgore, Marion D., 3,517,743.
- Whittemore, Dwight S., 3,518,100.
- Williams, Robert C., 3,517,742.
- Wright, Robert R., Barbee, John P., and Kucera, Clement M., 3,517,953.
- Drew Chemical Corporation: See—
Savinelli, Emilio A., and Rice, James K., 3,518,203.
- Dryon, Jacques Max Charles, to Ateliers Heuze, Malevez et Simon Reunis Societe Anonyme. Process and arrangement for breaking a sheet of glass. 3,517,869, Cl. 225-2.
- Dubois, Jean Claude, to U.S. Philips Corporation, meane. Electro-luminescent diode and radiation projector. 3,518,418, Cl. 240-41.35
- Dubs, Gustav, to Adolph Saurer Ltd. Weft inserting device. 3,517,704, Cl. 139-122.
- Duck, Edward William, and Grieve, David Page, to International Synthetic Rubber Company Limited. The. Ethylene copolymerisation catalyst. 3,518,237, Cl. 260-80.78
- Duckworth, James J., Schnog, Norbert, and Muller, Alfred B., to Singer Company, The. System providing a D.C. voltage equal to the R.M.S. value of an unknown A.C. voltage. 3,518,525, Cl. 321-1.5
- Duddy, Joseph C., to ESB Incorporated. Method of forming the electrodes in a low maintenance storage battery. 3,518,124, Cl. 136-27.
- Dulat, Joseph, to United States Borax & Chemical Corporation. Halogenated phenol-borate fungicide compositions. 3,518,348, Cl. 424-148.
- Dulin, Grady N., Jr.: See—
Swanson, Eugene A., Harlacher, William H., and Dulin, Grady N., Jr., 3,517,412.
- Duling, Irl N., Schneider, Abraham, and Moore, Robert E., to Sun Oil Company. Acrylate and methacrylate esters and polymers thereof. 3,518,241, Cl. 260-89.5
- Dunlop Company Limited, The: See—
Hogg, Derek, and Leeson, William G., 3,517,723.
- Knapp, Wilhelm, 3,517,778.
- Dunman, John P. G., and Axford, John G., to International Business Machines Corporation. Connector assembly. 3,518,612, Cl. 339-19.
- Dunmire, Paul G., to Christy Metal Products Inc. Pipe coupling. 3,517,951, Cl. 285-110.
- Dunn, Joseph S., and Smith, Albert C., Jr., to Eastman Kodak Company. Developing agent dispersions. 3,518,088, Cl. 96-114.
- Du Pont de Nemours, E. I., and Company: See—
Bell, Vernon Lee, 3,518,175.
- Chriap, Joseph D., 3,518,242.
- Cumbo, Charles Carmen, 3,518,316.
- Engelhardt, Vaughn Arthur, 3,518,229.
- Garth, Bruce H., 3,518,195.
- Nicolas, Jesus, 3,518,337.
- Potter, William N., III, 3,518,184.
- Sowards, Donald Maurice, and Stiles, Alvin B., 3,518,206.
- Dura Corporation: See—
Fikse, Tyman H., 3,517,945.
- Dutilleul, Jacques, and Claes, Joseph, to Ateliers de Constructions Electriques de Charleroi, (ACEC) Societe Anonyme. Circuit for detecting a current and a voltage of a predetermined magnitude. 3,518,452, Cl. 307-235.
- DuVernet, Ernest Arthur: See—
Crane, George J., 3,518,173.
- Du Vivier, Charles L.: See—
Barke, John L., Du Vivier, Charles L., Odion, John R., and Pallat, Ludwig R., 3,518,622.
- Dworkin, Larry U., to United States of America, Army. Pulse code modulation terminal with improved synchronizing circuitry. 3,518,377, Cl. 179-15.
- Dyck, Gerhard J. Lawn sprinkler nozzles. 3,517,886, Cl. 239-518.
- Earl Manufacturing Company: See—
Keagle, Stanley E., 3,517,607.
- Early, Randolph C., to General Electric Company. High-Q, high-frequency silicon/silicon-dioxide capacitor. 3,518,498, Cl. 317-230.
- Eason, William H., and Sakshaug, Eugene C., to General Electric Company. Fused pressure relief means for overvoltage protective device. 3,518,483, Cl. 315-36.
- Eastman, James M., to Bendix Corporation, The. Gas pressure regulator. 3,517,685, Cl. 137-81.5
- Eastman Kodak Company: See—
Beavers, Dorothy J., and Yutzy, Henry C., 3,518,160.
- Bourne, Richard T., and McDonald, Lawrence T., 3,518,141.
- Caldwell, John R., and Jackson, Winston J., Jr., 3,518,040.
- Dunn, Joseph S., and Smith, Albert C., Jr., 3,518,088.
- Guenther, Ralph E., 3,517,987.
- Harvey, Donald M., 3,517,598.

- Hiatt, Gordon D., Rowley, Martin E., and Slowig, Walter D., 3,518,249.
- McGillion, Robert W., and Owen, William S., Jr., 3,517,990.
- Milton, Kirby M., and Goffe, Charles A., 3,518,085.
- Natale, Eugene T., and Hicks, Harry F., Jr., 3,518,070.
- Pituley, Nicholas M., 3,517,582.
- Ruben, Paul L., 3,517,985.
- Sapp, Hubert Beard, Jr., and Deffenbaugh, Edmund F., 3,517,599.
- Yackel, Edward C., and Foster, Donald P., 3,518,087.
- Eaton, Jay S. Combination dragline and material feeder and loading unit. 3,517,841, Cl. 214-93.
- Eaton Yale & Towne, Inc.: See—
Damon, Gerald D., 3,517,790.
- Hanna, John W., McCarty, William R., Jr., and Dolter, Paul A., 3,518,667.
- O'Callaghan, Gerald F., 3,518,472.
- Roper, Daniel W., 3,517,573.
- Ebeling, Jack F.: See—
Hanna, Daniel C., and Ebeling, Jack F., 3,517,405.
- Eccher, Oreste B. Constant velocity universal joint. 3,517,528, Cl. 64-21.
- Eckert, Rudolf J. A., to Shell Oil Company. Lubricant compositions. 3,518,197, Cl. 252-56.
- Edelstein, Joel J., De Bell, John M., and Parker, Charles H., to U.S. Plywood-Champion Papers Inc. Bark-phenol-aldehyde molding compounds and resins and methods of forming same. 3,518,210, Cl. 260-17.2
- Eden, Jamal S., to Goodrich, B. F., Company, The. Process for preparing unsaturated nitriles by catalytic ammoxidation of olefins. 3,518,295, Cl. 260-465.3
- Edeus, James A., to National Manufacturing Co. Door hanger for a sliding door. 3,517,409, Cl. 16-105.
- Educating Systems, Inc.: See—
Kamen, Ira, and Walker, Harold R., 3,518,376.
- Edwards High Vacuum International Limited: See—
English, James, 3,518,532.
- Egashira, Shohachi, and Matsuo, Hiroo, to Japan Gasoline Co., Ltd. Hydrocarbon reforming process. 3,518,055, Cl. 23-212.
- Eggensperger, Heinz, Franzen, Volker, and Stephan, Hans, to Deutsche Advance Produktion GmbH. Stabilization of halogenated vinyl resins. 3,518,224, Cl. 260-45.85
- Eggert, Walter S., Jr.: See—
Wessells, Henry W., III, and Eggert, Walter S., Jr., 3,517,765.
- Ehms, Hermann: See—
Von Saldern, Rudiger, Ehms, Hermann, and Weigert, Johann, 3,517,850.
- Eisenberg, Bernard C., to Solbern Corporation. Machine and method for transferring predetermined amounts of material. 3,517,708, Cl. 141-1.
- Ekberg, Hugo, and Dahlberg, Bengt Georg. Suction box with foraminous belt running thereover. 3,518,161, Cl. 162-367.
- Eklund, Phillip R., to United States of America, Air Force. Method of heat treating to produce a wear-resistant and low friction surface. 3,517,974, Cl. 308-187.
- Elbi S.a.s. dei Fratelli Bianco: See—
Bianco, Carlo, 3,517,862.
- Elco Corporation: See—
Frompovicz, Frank John, and Knapp, William Richard, 3,517,803.
- Goodman, David S., Borsuk, Leslie M., and Inacker, Frederick T., 3,518,610.
- Electric Fuel Propulsion, Inc.: See—
Aronson, Robert R., 3,518,127.
- Electronic Specialty Company: See—
Giel, George J., Villwock, Robert D., and Smith, Lawrence S., 3,518,628.
- Elfvig, Claes T.: See—
Schick, William F., LaValley, William R., Elfvig, Claes T., and Wahl, Marvin L., 3,518,690.
- Ellert, Henry George, Robinson, James William, and Koontz, John Dana, to Esso Research and Engineering Company. Process for improving oxo selectivity to unbranched alcohols. 3,518,319, Cl. 260-638.
- Ellinor, Daniel H. Means for producing honeycomb stock. 3,518,151, Cl. 156-512.
- Ellis, Alan F., to Gulf Research & Development Company. Process for the preparation of alpha nitro-ketones and carboxylic acids. 3,518,302, Cl. 260-526.
- Ellzey, Samuel E., Jr.: See—
Connick, William J., Jr., and Ellzey, Samuel E., Jr., 3,518,218.
- Elmore, Glenn V.: See—
Cacka, Zdenek, and Elmore, Glenn V., 3,518,130.
- Elrod, Charles W., to United States of America, Air Force. Pressure relief valve assembly. 3,517,692, Cl. 137-557.
- Eltop Corporation: See—
Bosco, Joseph, 3,517,836.
- Eltra Corporation: See—
Barker, Robert A., 3,518,606.
- Eltro GmbH & Co.: See—
Siebeck, Hans, 3,518,686.
- Elwell, Richard C.: See—
Lake, John E., and Elwell, Richard C., 3,518,021.
- Emerson, David E., to United States of America, Interior. Method and apparatus for separating neon from a mixture of gases. 3,517,521, Cl. 62-12.
- Emerson Electric Co.: See—
Lewis, John G., 3,518,616.
- Wightman, Lawrence W., and Paul, Eugene F., 3,518,471.
- Wightman, Lawrence W., 3,518,467.
- Wightman, Lawrence W., 3,518,468.
- Brundage, Robert W., 3,517,507.
- Emery Industries, Inc.: See—
Holtman, Dennis Charles, 3,518,281.
- Emhart Corporation: See—
MacMaster, Malcolm D., and Morris, Herbert R., 3,517,526.
- Emmett, John R.: See—
Winkler, Ernst W. S., Emmett, John R., and Perry, John A., 3,517,435.
- Emmons, Donald L.: See—
Finch, Horace T., and Emmons, Donald L., 3,517,662.
- Ender, Norman G., Meier, Charles N., and Lukich, Lewis T., to Goodyear Tire & Rubber Company, The. Wire cable-to-rubber adhesion. 3,517,722, Cl. 152-359.
- Engelhard Industries Limited: See—
Payne, William Charles, 3,518,336.
- Engelhardt, Vaughn Arthur, to Du Pont de Nemours, E. I., and Company. Polyfluoroketone/formaldehyde copolymers and method of preparation. 3,518,229, Cl. 260-64.
- Engelmann, Richard H., to Hayden, J. Page. System for detecting small light sources in presence of large ones using plurality of detectors. 3,518,443, Cl. 250-220.
- English, James, to Edwards High Vacuum International Limited. Penning pump power supplies. 3,518,532, Cl. 324-33.
- Englund, Roland Gosta, Mattsson, Mats Erik, and Lindelow, Claes-Goran, to Svenska Dataregister AB. Control device. 3,517,877, Cl. 235-3.
- Enomoto, Mitsuo: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru, 3,518,238.
- Ensor, Melvin W.: See—
Schneider, Kenneth, and Ensor, Melvin W., 3,517,622.
- Entschel, Roland: See—
Altermatt, Rudolf, Entschel, Roland, and Muller, Curt, 3,518,247.
- Erba, Carlo, S.p.A.: See—
Gandolfi, Carmelo, and Amendola, Marco, 3,518,255.
- Ermer, Joseph W., Jr.: See—
Kesler, William C., and Ermer, Joseph W., Jr., 3,517,848.
- ESB Incorporated: See—
Duddy, Joseph C., 3,518,124.
- Sklarchuk, Jack C., and Kobie, William F., 3,518,332.
- Esquire, Inc.: See—
Kripp, Robert M., 3,518,420.
- Essem Metotest AB: See—
Arnelo, Anders Ingvar, 3,518,533.
- Esso Research and Engineering Company: See—
Ellert, Henry George, Robinson, James William, and Koontz, John Dana, 3,518,319.
- Pine, Lloyd A., Roberts, Durward T., Jr., and Jolley, Gordon B., 3,518,323.
- Wanless, Graham G., and Glock, George A., Jr., 3,518,424.
- Eta A.G. Ebauches-Fabrik: See—
Giger, Urs, 3,517,500.
- Etoh, Eisuke: See—
Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke, 3,518,696.
- Euphonics Corporation: See—
Wood, John F., and Tauch, Carl D., 3,518,460.
- Evans, Anthony C., to Shell Oil Company. Process for separation of oil films from water. 3,518,183, Cl. 210-40.
- Evans, Armstead J.: See—
Carlsen, Albert, and Evans, Armstead J., 3,517,716.
- Evans, David: See—
Woollacott, Derrick Sunnucks, 3,517,600.
- Evans, Pat E.: See—
Kimura, Noboru, and Evans, Pat E., 3,518,700.
- Eveleigh, John W., Castellani, Leon, and Isreeli, Jack, to Technicon Corporation. Controller for a plurality of hydraulic and electrical circuits. 3,517,695, Cl. 137-566.
- Fabriques Reunies de Lampes Electriques: See—
Bardin, Jacques, 3,518,478.
- Fagersta Bruks Aktiebolag: See—
Jarleborg, Holger, and Blom, Karl-Johan, 3,518,080.
- Fairbanks, William J., and Petersen, William H., to Shell Oil Company. Underwater production facility. 3,517,735, Cl. 166-0.5
- Fairchild Camera and Instrument Corporation: See—
Michalchik, Michael, 3,518,488.
- Falanga, John C., Jr.: See—
Leutwyler, Kurt, and Falanga, John C., Jr., 3,518,027.
- Falcos S.p.A.: See—
Pitacco, Sergio, 3,518,408.
- Farbenfabriken Bayer Aktiengesellschaft: See—
Daum, Werner, and Scheinplug, Hans, 3,518,308.
- Freytag, Helmut, Dane, Ivo, Muller, Erwin, and Fromandi, Guido, 3,518,155.
- Klauke, Erich, and Holtschmidt, Hans, 3,518,293.
- Rehlemann, Wolfgang, Wieden, Horst, von Falkai, Bela, and Reichle, Alfred, 3,518,045.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: See—
Hafner, Karl-Heinz, and Cherdron, Harald, 3,518,231.
Meininger, Fritz, and Steuernagel, Hans Helmut, 3,518,245.
Mohr, Reinhard, and Ostermeier, Johann, 3,518,039.
Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spieb, Bernhard, and Hohmann, Kurt, 3,518,244.
Farison, Robert Emanuel, to Grace, W. R., & Co. Method of applying noxious cleaning chemicals. 3,518,118, Cl. 134-36.
Farison, Robert Emanuel, to Grace, W. R., & Co. Method of applying noxious cleaning chemicals. 3,518,119, Cl. 134-36.
Farmer, Samuel D. Flour milling method and apparatus. 3,517,889, Cl. 241-9.
Farquhar, Melville T., to Reynolds Metals Company. Reclosable dispensing carton. 3,517,858, Cl. 221-305.
Fath, Joseph, and Deardorff, Donald L., to Teknor Apex Company, mesne. Poly(organotin)mercaptide polymers and resins stabilized therewith. 3,518,223, Cl. 260-45.75.
Faulkner, Arthur Manthorp, to Plessey Company Limited, The. Jointing clips for insulated electric wires and method of making same. 3,517,804, Cl. 206-56.
Faure, Alphonse W., to C.S.S. Machine & Tool Co., Inc. Safety valve. 3,517,696, Cl. 137-596.
Fearing, Ralph B., to Stauffer Chemical Company. Phosphoro and phosphono acetylhydrazides. 3,518,327, Cl. 260-923.
Federal Bearings Co., Inc., The: See—
McAllister, William D., 3,517,976.
Federal Cartridge Corporation: See—
Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddel, James F., and Shaw, William A., 3,517,478.
Fehnel, Richard B., to Burroughs Corporation. Compact cold cathode indicator tube. 3,518,477, Cl. 313-109.5.
Fein, Michael E., Markin, Joseph, and Sobel, Alan, to Zenith Radio Corporation. Light control and image translating system. 3,517,983, Cl. 350-160.
Feinmechanik-Anstalt: See—
Gasser, Adolf, 3,517,543.
Feldman, David, and Rao, Tadikonda N., to Bell Telephone Laboratories, Incorporated. Multifrequency signal generator. 3,518,571, Cl. 331-109.
Feldmann, William L.: See—
Chynoweth, Alan G., and Feldmann, William L., 3,518,659.
Feldtkeller, Ernst, and Stein, Karl-Ulrich, to Siemens Aktiengesellschaft. Magnetic memory elements with stacked magnetic layers. 3,518,639, Cl. 340-174.
Felkner, Norman Darrel: See—
Dawson, Samuel Lee, and Felkner, Norman Darrel, 3,518,595.
Fenton, Donald M., and Wolgemuth, Larry G., to Union Oil Company of California. Hydrocarbon olefin oxidation. 3,518,285, Cl. 260-348.5.
Ferguson, Ronald. Wheel lifter. 3,517,959, Cl. 294-67.
Ferranti-Packard Limited.: See—
Taylor, Maurice K., 3,518,664.
Ferro Corporation: See—
Bouvier, Jean J., 3,517,466.
Cole, William G., Jr., 3,518,069.
Fessard, Roland, to Compagnie Francaise de Television. Demodulating circuit for waves frequency modulated by signals of the video type. 3,518,362, Cl. 178-5.4.
Fettis, Henry E.: See—
Gebel, Radames K. H., and Fettis, Henry E., 3,518,416.
Feuer, Robert: See—
Cole, Robert H., Nissim, Samuel, Podraza, George V., and Feuer, Robert, 3,518,635.
Fichtel & Sachs Aktiengesellschaft: See—
Gimmler, Joachim, and Glock, Winfried, 3,517,789.
Fidelity Bank, The: See—
McClister, Harry A., and Fidelity Bank, The, executor, 3,517,878.
Fiedler, Armin, to Tastee Freez Industries, Inc. Apparatus for producing and dispensing frozen and semiliquid products. 3,517,524, Cl. 62-188.
Fikse, Tyman H., to Page & Page, a division of Dura Corporation. Trailer including detachable gooseneck. 3,517,945, Cl. 280-425.
Filipowsky, Richard F. J., to International Business Machines Corporation. Digital communication system employing multiplex transmission of maximal length binary sequences. 3,518,547, Cl. 325-42.
Finch, Horace T., and Emmons, Donald L., to Birtcher Corporation, The. Patient identification marker apparatus. 3,517,662, Cl. 128-208.
Fink, Wolfgang, to Siemens Aktiengesellschaft. Dual impact means for print hammers in high speed printers. 3,517,611, Cl. 101-93.
Finley, Sidney. Picture mounting apparatus. 3,517,452, Cl. 40-159.
First National Bank of Dunedin, Fla.: See—
Layton, Grover C., 3,518,096.
Fischbach, Adolph, to United States of America, Army. Thermal batteries. 3,518,125, Cl. 136-90.
Fischbein, Irwin W., to Gillette Company, The. Razor blade and method of making same. 3,518,110, Cl. 117-93.4.
Fischer, Frederick R.: See—
Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Westrom, Alfred, 3,517,532.
Fischer, Raymond C., to International Harvester Company. Automatic control means for implement. 3,517,747, Cl. 172-7.

Fischer, Raymond C., to International Harvester Company. Two way plow trip. 3,517,748, Cl. 172-224.
Fisher, David C.: See—
Bowers, David L., and Fisher, David C., 3,517,663.
Fitch, Steven Joseph, and Irani, Riyad R., to Monsanto Company. Organic phosphorus compounds, compositions containing same, and uses thereof. 3,518,200, Cl. 252-89.
Fitzmaurice, Thomas F. G., to Anaconda American Brass Company. Method of machining the inside wall of a tube. 3,517,536, Cl. 72-275.
Flanagan, Allan L.: See—
Richardson, David A., and Flanagan, Allan L., 3,517,680.
Fletcher, John C.: See—
Corlyon, Phillip R., and Fletcher, John C., 3,517,446.
Fliesser, Engelbert: See—
Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann, 3,517,595.
Flint, Hyland C. Patio chair. 3,517,964, Cl. 297-309.
Flippo, Arthur P.: See—
Flippo, Franklin C., and Flippo, Arthur P., 3,517,713.
Flippo, Franklin C., and Flippo, Arthur P. Fibre cutting machine. 3,517,713, Cl. 144-186.
Flo-Container Incorporated: See—
Smith, Franklin G., 3,517,682.
Florian, Eugene F., to Mark Products, Inc. Electric marine cable. 3,518,677, Cl. 340-7.
Flygare, Melvin E., to Maintenance-Free Machines, Inc. Sheet folding machine. 3,517,919, Cl. 270-68.
Foley, Thomas P. Non-lethal protective device. 3,517,912, Cl. 256-1.
Folkmann, Eduard: See—
Pammer, Erich, and Folkmann, Eduard, 3,518,115.
Fonda-Bonardi, Giusto, to Litton Systems, Inc. Coherent light modulating system. 3,517,982, Cl. 350-160.
Fontenot, John E., to Shell Oil Company. Telemetry drill pipe with ring-control electrode means. 3,518,609, Cl. 339-16.
Ford, David E., Jr., and Hudson, William J., to Allen-Bradley Company. Automatic field regulation for shunt field motor for regenerative braking. 3,518,518, Cl. 318-308.
Ford, Ian Alastair Moncrieff, Cox, Bernard Carlton, and Thornton, James Coward, to Goddard, J., & Sons Limited. Metal protecting preparations. 3,518,098, Cl. 106-3.
Ford Motor Company: See—
Nilsen, Ole K., Freimark, Ronald J., and Parker, Robert H., 3,518,586.
Forsberg, John W., to Lubrizol Corporation, The. Novel phosphating solutions containing lead and fluoride ions. 3,518,129, Cl. 148-6.15.
Forsberg, John W., to Lubrizol Corporation, The. Thermosetting resins derived from N-3-oxohydrocarbon-substituted acrylamides. 3,518,326, Cl. 260-828.
Fortenberry, John D., to McDonnell Douglas Corporation. Fastening device. 3,517,583, Cl. 89-1.
Fosker, George R., Naylor, John Herbert Charles, and Smith, Harry, to Beecham Group Limited. (Carboxycycloalkyl)acyl-aminopenicillins. 3,518,253, Cl. 260-239.1.
Foster, Donald P.: See—
Yackel, Edward C., and Foster, Donald P., 3,518,087.
Foster, E. Gordon, to Shell Oil Company. Partial oxidation of organic compounds. 3,518,284, Cl. 260-346.4.
Foster Grant Co., Inc.: See—
Wilson, Carl H., 3,517,989.
Foulds, James Taylor, to British Titan Products Company Limited. Process of producing metal oxide in vapour phase oxidation of a metal chloride. 3,518,052, Cl. 23-202.
Fox Corporation.: See—
Wendt, David W., 3,517,764.
Fox, Paul L., to United States of America, Air Force. Optical-reimag-ing system. 3,517,447, Cl. 35-25.
Foxboro Company, The: See—
Richardson, David A., and Flanagan, Allan L., 3,517,680.
Frandsen, Jorgen Melchior, to International Business Machines Corporation. Tulip Meat Packers. Educational and instructional device. 3,517,449, Cl. 35-53.
Frankel, Stanley P., to Computron Corporation. Recirculating memory timing. 3,518,629, Cl. 340-172.5.
Franklin, Robert C., and Boyd, William R., to Beckman Instruments, Inc. Cell identification and selection system for centrifuge apparatus. 3,518,012, Cl. 356-197.
Franzen, Volker: See—
Eggensperger, Heinz, Franzen, Volker, and Stephan, Hans, 3,518,224.
Fraser, John P., to Shell Oil Company. Detector configuration for the ultrasonic leak detector. 3,517,546, Cl. 73-40.5.
Freedman, Ruth. Brassiere pocket for bust form. 3,517,671, Cl. 128-478.
Freeman, Ardee H., Schulte, Harold F., and Davidson, Hubert, to Wheelabrator Corporation, The. Method and means for continuous surface treatment. 3,517,465, Cl. 51-319.
Freeman, Harlan G., Baxter, Gene F., and Allan, George Graham, to Weyerhaeuser Company. Method of making a fast-curing adhesive and a method of bonding members utilizing said adhesives. 3,518,159, Cl. 161-258.
Frei, Josef Hermann, and Holmberg, Gote Eskil Yngve. Buckles for safety seat belts. 3,517,416, Cl. 24-75.

Freimark, Ronald J.: See—
Nilsen, Ole K., Freimark, Ronald J., and Parker, Robert H., 3,518,586.
French, Joseph C., to Bell Telephone Laboratories, Incorporated. Bidirectional transmission circuit. 3,518,454, Cl. 307-251.
Frese, Ralph L.: See—
Cuffe, Moses L., and Frese, Ralph L., 3,517,942.
Freytag, Helmut, Dane, Ivo, Muller, Erwin, and Fromandi, Guido, to Farbenfabriken Bayer Aktiengesellschaft. Bond strength between rubber and textiles. 3,518,155, Cl. 161-92.
Friaglia, Dante J., to Danira Corporation. Non-interlacing, feedable pin for badges. 3,517,419, Cl. 24-103.
Friedman, George. Cover for a wall switch. 3,518,356, Cl. 174-66.
Friedrich, Waldo J., to Basler Electric Company. Generator voltage regulator with reactor sensing means. 3,518,528, Cl. 322-25.
Fries, Donald W.: See—
Brown, Harry W., and Fries, Donald W., 3,517,523.
Fritschy, Hugo: See—
Futterer, Bodo, Fritschy, Hugo, and Gorlinger, Klaus, 3,517,441.
Fritz, Albert J., and Blaho, Rudolph G., to Schwinn Bicycle Company. Detachable basket. 3,517,867, Cl. 224-31.
Fritzjohn, Albert Henry, to Shackman, David, & Sons Limited. Watchcases. 3,517,502, Cl. 58-94.
Fromandi, Guido: See—
Freytag, Helmut, Dane, Ivo, Muller, Erwin, and Fromandi, Guido, 3,518,155.
Frompovicz, Frank John, deceased (by Frompovicz, Mary, executrix), and Knapp, William Richard, to Elco Corporation. Electrical contact carrier strip. 3,517,803, Cl. 206-56.
Frompovicz, Mary: See—
Frompovicz, Frank John, and Knapp, William Richard, 3,517,803.
Frump, John A., to Commercial Solvents Corporation. Preparation of copolymers of vinyl chloride and oxazolines. 3,518,239, Cl. 260-87.5.
Frye, Cecil L., to Dow Corning Corporation. Quaternary phosphonium silicon complexes. 3,518,292, Cl. 260-448.8.
Fuhr, Hans. Method of welding writing materials, thermoplastics foil for welding the writing materials and apparatus for carrying out the method, employing the thermoplastics foil. 3,518,143, Cl. 156-212.
Fuhrmann, Hans. Absorption tester having beam splitter and wheatstone bridge with potentiometer balancing. 3,518,439, Cl. 250-218.
Fuji Denki Kagaku Kabushiki Kaisha: See—
Kobayashi, Seiichi, Torii, Michihiro, and Sakoda, Hiroichi, 3,518,644.
Fujimoto, Katsuro: See—
Minami, Shinsaku, Nakata, Minoru, Fujimoto, Katsuro, and Takase, Yoshiyuki, 3,518,256.
Fujio, Ryota: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru, 3,518,238.
Fujitsu Limited: See—
Yunoki, Hisashi, Kudo, Tatsuo, Ito, Yukio, and Komizo, Hidemitsu, 3,518,583.
Funston, David Lee, Pifer, Marion Jonathan, and Wheeler, Robert Charles, to Sylvania Electric Products, Inc. Hue control circuitry. 3,518,363, Cl. 178-5.4.
Furutani, Akhisa: See—
Izawa, Nobuo, Tamura, Yoshio, Furutani, Akhisa, and Okamoto, Kazuo, 3,518,252.
Futterer, Bodo, Fritschy, Hugo, and Gorlinger, Klaus, to Gillette Company, The, mesne. Shaver with two-foil shearing head. 3,517,441, Cl. 30-34.1.
Gabor, Andrew, to Honeywell Inc. Detection of double transition recording. 3,518,554, Cl. 328-63.
Gabor, Andrew, to Potter Instrument Company, Inc. Tape drive with means to intermittently connect vacuum to two loop boxes. 3,518,649, Cl. 340-174.1.
Gadd, John D., to TRW Inc. Brazed article with aluminide coating stop-off. 3,517,428, Cl. 29-195.
GAF Corporation: See—
Millard, Frederick W., 3,518,086.
Gaffney, James P., and Gaffney, John J. Tablet cutter. 3,517,871, Cl. 225-103.
Gaffney, John J.: See—
Gaffney, James P., and Gaffney, John J., 3,517,871.
Gallivan, James E., to United Aircraft Corporation. Method of welding with a high energy beam. 3,518,400, Cl. 219-121.
Gallo, Charles F., and Leiga, Algid G., to Xerox Corporation. Method of increasing the efficiency of corona charging. 3,517,995, Cl. 355-17.
Games, John E., Lach, Richard F., and Towey, James P., to United Aircraft Corporation. Low level, low offset, high frequency preamplifier chopper circuit. 3,518,564, Cl. 330-10.
Gandi, Robert A.: See—
Buono, Frank S., and Gandi, Robert A., 3,517,669.
Gandolfi, Carmelo, and Amendola, Marco, to Erba, Carlo, S.p.A. Acetalic ethers of estra-1,3,5(10)-trienes and process for their preparation. 3,518,255, Cl. 260-239.55.
Gann, Robert C.: See—
Lambert, Gordon C., Shoemaker, Dick E., and Gann, Robert C., 3,517,626.
Garth, Bruce H., to Du Pont de Nemours, E. I., and Company. Corrosion-inhibited and stabilized perfluorinated polyether oils. 3,518,195, Cl. 252-51.5.

Gartner, Stanley J., Regec, John J., Roeder, Henry W., and Smith, James M., to Sylvania Electric Products, Inc. Chain and indexing driving mechanism. 3,517,799, Cl. 198-135.
Gasser, Adolf, to Feinmechanik-Anstalt. Apparatus for the determination of hydrogen in aluminum melts. 3,517,543, Cl. 73-19.
Gates, Harlan R., to International Business Machines Corporation. Semiconductor device with contact metallurgy thereon, and method for making same. 3,518,506, Cl. 317-234.
Gates, Robert H.: See—
Anthony, Ralph J., Larson, Clarence E., and Gates, Robert H., 3,517,424.
Gatzi, Karl, to Geigy, J. R. Certain aminoalkylamino substituted azacycloalkenes. 3,518,251, Cl. 260-239.
Gauss Electrophysics, Inc.: See—
Johnson, Keith O., 3,518,442.
Gaynor, Edwin G., to Gaynor, Edwin S. Two-button two-stage switch. 3,518,381, Cl. 200-5.
Gaynor, Edwin S.: See—
Gaynor, Edwin G., 3,518,381.
Gebel, Radames K. H., and Fettis, Henry E., to United States of America, Air Force. Apparatus for obtaining computer input data from unknown curves. 3,518,416, Cl. 235-197.
Gebr. Happich G.m.b.H.: See—
Treber, Willi O., and Nothacker, Siegfried, 3,517,571.
Gebr. Schmidt: See—
Schmidt, Gunther, 3,518,017.
Gebr. Staubli & Co.: See—
Schwarz, Rudolf, 3,517,703.
Gehris, James D.: See—
Burdin, Clifford, Clarke, James D., Gehris, James D., and Whitaker, Johnnie L., 3,518,016.
Geigy Chemical Corporation: See—
Adank, Kurt, 3,518,268.
Hausermann, Heinrich, and Troxler, Eduard, 3,518,266.
Taub, William, Dens, Rolf, and Ostermayer, Franz, 3,518,307.
Geigy, J. R.: See—
Gatzi, Karl, 3,518,251.
General Dynamics Corporation: See—
Kuecken, John A., 3,518,692.
Kuecken, John A., 3,518,694.
General Electric Company: See—
Allen, Merton, and Schrom, Edward C., 3,517,674.
Babcock, Robert E., 3,518,486.
Bahrs, David L., Couleur, John F., Ruth, Richard L., and Shelly, William A., 3,518,630.
Bathrick, John R., Jr., George, Fred A., and Mogle, Rodman A., 3,518,493.
Bowers, David L., and Fisher, David C., 3,517,663.
Bristol, David A., 3,518,665.
Bunner, James E., 3,518,466.
Connell, Edwin A., 3,518,596.
Downs, Clifford L., 3,518,491.
Early, Randolph C., 3,518,498.
Eason, William H., and Sakshaug, Eugene C., 3,518,483.
Genuit, Luther L., 3,518,526.
Gillis, Kenneth H., 3,518,068.
Kresge, James S., and Miske, Stanley A., Jr., 3,518,492.
Lake, John E., 3,518,020.
Lake, John E., and Elwell, Richard C., 3,518,021.
Reaume, Robert S., 3,518,543.
Tachick, Henry N., 3,518,544.
Wright, Archibald Nelson, and Mathewson, Wilfred F., Jr., 3,518,111.
General Equipment and Manufacturing Company, Inc.: See—
Marcum, Charles R., 3,517,699.
General Fire Extinguisher Corporation: See—
Balmes, Mark E., Sr., 3,517,746.
General Foods Corporation: See—
Roemer, Philip, and Downhour, Russell, Jr., 3,518,185.
General Motors Corporation: See—
Klees, Gerard Timothy, 3,518,030.
General Refractories Company: See—
Grigsby, Chester E., 3,518,349.
General Time Corporation: See—
Keane, Raymond A., Jr., and Robinson, Ralph C., 3,517,499.
Genuit, Luther L., to General Electric Company. Switching regulator. 3,518,526, Cl. 321-2.
George, Fred A.: See—
Bathrick, John R., Jr., George, Fred A., and Mogle, Rodman A., 3,518,493.
Georges Lesieur & ses Fils: See—
Menzi, Robert, and Giddey, Claude, 3,518,097.
Geotel, Inc.: See—
De La Vega, Robert P., 3,517,861.
Gerecke, Max: See—
Brossi, Arnold, Gerecke, Max, and Kyburz, Emilio, 3,518,283.
Gerometta, Mario: See—
Boudes, Jaques, and Gerometta, Mario, 3,518,385.
Gevaert-Agfa N.V.: See—
Paquette, Raymond E., 3,518,480.
Ghiselli, William A., Jr., to Bell & Howell Company. Document feeding and exposure means for an office copier. 3,517,997, Cl. 355-71.
Gibson, Walter G., and Gravel, Arthur J., to RCA Corporation. Portable color television camera system. 3,518,360, Cl. 178-5.2.

- Giddey, Claude: See—
Menzi, Robert, and Giddey, Claude 3,518,097.
- Giel, George J., Villwock, Robert D., and Smith, Lawrence S., to Electronic Specialty Company. Systems and methods for communicating with a plurality of remote units. 3,518,628, Cl. 340-167.
- Gieseking, Carl W., to Monsanto Company. Treatment of polyphenyl thioethers with alkali metal hydrides. 3,518,314, Cl. 260-609.
- Giger, Urs, to Eta A.G. Ebauches-Fabrik. Frictional bearing arrangement for the winding weight in a self winding watch. 3,517,500, Cl. 58-82.
- Giles, Sol L., and Patch, Philip G., said Giles assor. to said Patch. Devices for bonding thermoplastic filaments. 3,518,150, Cl. 156-426.
- Gilker, Jean Claude: See—
Pavlanis, Vytautas, Marois, Paul, Boudreault, Armand, and Gilker, Jean Claude 3,518,347.
- Gillette Company, The: See—
Fischbein, Irwin W., 3,518,110.
- Gitter, Bodo, Fritschy, Hugo, and Gorlinger, Klaus, 3,517,441.
- Gillis, Kenneth H., to General Electric Company. Process for manufacturing grinding wheels containing copper-coated grains. 3,518,068, Cl. 51-295.
- Gilsdorf, Robert B. Hand grip for crutch. 3,517,678, Cl. 135-51.
- Gimmler, Joachim, and Glock, Winfried, to Fichtel & Sachs Aktiengesellschaft. Torque converter and clutch. 3,517,789, Cl. 192-321.
- Ginther, Gary D., to Clyde Corporation, The. Apparatus for feeding articles one at a time into a tube. 3,517,856, Cl. 221-278.
- Giordano, Nicholas D., to Huron Road Hospital. Method and apparatus for thrombus formation time determinations. 3,518,057, Cl. 23-230.
- Girdler-Sudchemie Katalysator G.m.b.H.: See—
Schneider, Michael R., 3,518,208.
- G.K.N. Screws & Fasteners Limited: See—
Stokes, Kenneth John, and Turnbull, John Hilton, 3,517,581.
- Gladioux, Pierre. Electric circuit system for controlling the speed of a D.C. motor and of at least one accessory thereof. 3,518,521, Cl. 318-332.
- Glamorgan, Wales: See—
Pearce, Christopher A., Glamorgan, Wales, and Lloyd, Norman C. 3,518,289.
- Glass, Marvin, & Associates: See—
Breslow, Jeffrey D., 3,517,934.
- Glass, Marvin I., and Schoenfeld, Palmer J., 3,517,455.
- Glass, Marvin I., and Disko, Harry, 3,517,937.
- Glass, Marvin I., and Disko, Harry, to Glass, Marvin, & Associates. Lighted jig saw puzzle. 3,517,937, Cl. 273-157.
- Glass, Marvin I., and Schoenfeld, Palmer J., to Glass, Marvin, & Associates. Toy boat with phonograph. 3,517,455, Cl. 46-93.
- Glatfelter, Edward William. Two-speed drive for power tool. 3,517,574, Cl. 74-812.
- Gleason Works, The: See—
Jaehn, Edwin C., 3,517,939.
- Glee, Lyle L. Planting shovel. 3,517,752, Cl. 172-721.
- Glendinning, William B., to United States of America, Army. Method for eliminating defects in a semiconductor junction. 3,518,131, Cl. 156-17.
- Glendinning, William B., to United States of America, Army. Corrosive vapor etching process for semiconductors using combined vapors of hydrogen fluoride and nitrous oxide. 3,518,132, Cl. 156-17.
- Glendinning, William B., to United States of America, Army. Method for measuring the thickness of a diffused surface layer. 3,518,133, Cl. 156-17.
- Globe Union Inc.: See—
Lello, Giles S., and Lowe, Paul V., 3,518,120.
- Glock, George A., Jr.: See—
Wanless, Graham G., and Glock, George A., Jr. 3,518,424.
- Glock, Winfried: See—
Gimmler, Joachim, and Glock, Winfried 3,517,789.
- Goddard, J., & Sons Limited: See—
Ford, Ian Alastair Moncrieff, Cox, Bernard Carlton, and Thornton, James Coward, 3,518,098.
- Goff, John C., to United States of America, Navy. Method for cushioning and sealing. 3,518,339, Cl. 264-249.
- Goffe, Charles A.: See—
Milton, Kirby M., and Goffe, Charles A. 3,518,085.
- Goffe, William L.: See—
Bickmore, John T., and Goffe, William L. 3,518,081.
- Goffinet, Bernard: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.
- Golden, Billy G., to Delta P Incorporated, mesne. Vane-type separator. 3,517,486, Cl. 55-440.
- Goldstein, Arthur, and Sobel, Theodore, to Butler Industries, Inc. Rack system. 3,517,623, Cl. 108-114.
- Goldstein, David R., and Parekh, Pravin C., to Sylvania Electric Products, Inc. Vapor deposition apparatus including diffuser means. 3,517,643, Cl. 118-48.
- Goodman, David S., Borsuk, Leslie M., and Inacker, Frederick T., to Elco Corporation. Voltage ground plane assembly. 3,518,610, Cl. 339-17.
- Goodman, Leonard S., and Salter, Forrest O., to United States of America, Atomic Energy Commission. Digital filter for suppressing nonstatistical noise bursts in digital averaging. 3,518,414, Cl. 235-164.
- Goodrich, B. F., Company, The: See—
Beears, Warren L., 3,518,264.
- Beears, Warren L., 3,518,265.
- Eden, Jamal S., 3,518,295.
- Goodyear Tire & Rubber Company, The: See—
Endter, Norman G., Meier, Charles N., and Lukich, Lewis T., 3,517,722.
- Hawkes, Joseph S., Krohn, Henry W., and Rudwell, William C., 3,517,710.
- Hunter, Edward E., 3,517,425.
- Lovell, John A., and Graham, Earl C., 3,518,139.
- Smithkey, John C., 3,518,140.
- Wert, Clifford M., 3,517,396.
- Woodhall, Edwin S., 3,517,721.
- Gordon, George F.: See—
Carlisle, Sanford K., Jr., and Gordon, George F. 3,517,577.
- Gorlinger, Klaus: See—
Futterer, Bodo, Fritschy, Hugo, and Gorlinger, Klaus 3,517,441.
- Goron, Paul C.: See—
Scarnato, Thomas J., Goron, Paul C., and Morkoski, James 3,517,492.
- Goss, Jack P., to Schlumberger Technology Corporation. Methods and apparatus for procuring formation samples from well bores. 3,517,756, Cl. 175-4.
- Gould, Emma: See—
Gould, James P. 3,517,805.
- Gould, James P., deceased (by Gould, Emma, administrator). Moldable resin-bonded laminate. 3,517,805, Cl. 206-59.
- Gowell, Robert W., Rosenthal, Sidney, and Whidden, Roger W., to United States of America, Air Force. High frequency antenna termination unit for aircraft. 3,518,682, Cl. 343-705.
- Grace, W. R., & Co.: See—
Dighe, Shrikant V., 3,518,300.
- Farison, Robert Emanuel, 3,518,118.
- Farison, Robert Emanuel, 3,518,119.
- Maher, Philip K., and McDaniel, Carl V., 3,518,051.
- Marans, Nelson S., and Jaffe, Fred, 3,518,177.
- Triggiani, Leonard V., 3,518,328.
- Triggiani, Leonard Vincent, and Stone, Irving Charles, 3,518,065.
- Wessells, Forrest Ashton, 3,518,201.
- Wood, Louis L., 3,518,226.
- Wood, Louis L., 3,518,227.
- Graham, Earl C.: See—
Lovell, John A., and Graham, Earl C. 3,518,139.
- Graham, Floyd Lanier. Chessmen and package containing same. 3,517,935, Cl. 273-137.
- Graham, John. Attachment for mounting to the bucket of a loading apparatus. 3,517,863, Cl. 222-460.
- Graham, Robert P., Huxsoll, Charles C., Hart, Marcus R., and Weaver, Merle L., to United States of America, Agriculture. Process for peeling potatoes. 3,517,715, Cl. 146-231.
- Grams, Ronald Lynn, to Auto Specialties Manufacturing Company. Car jack. 3,517,911, Cl. 254-111.
- Grams, Walter H.: See—
Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddel, James F., and Shaw, William A. 3,517,478.
- Granger, Camille, Demeure, Marc, and Bruder, Michel, to Naphtachimie, Societe Anonyme. Device for sampling hot gaseous mixtures containing condensables. 3,517,557, Cl. 73-421.5.
- Grantham, Max Edward, to Tecalemit (Engineering) Limited. Fluid pump. 3,518,029, Cl. 417-211.
- Gravel, Arthur J.: See—
Gibson, Walter G., and Gravel, Arthur J. 3,518,360.
- Gray, Dudley Justin. Boat suspension system. 3,517,632, Cl. 114-61.
- Gray, Thomas: See—
Bolton, Robert Benjamin, and Gray, Thomas 3,517,815.
- Graybill, Clinton L., to Graybill Industries, Inc. Rotary two-cycle engine. 3,517,651, Cl. 123-44.
- Graybill Industries, Inc.: See—
Graybill, Clinton L., 3,517,651.
- Great Lakes Carbon Corporation: See—
Snyder, Joseph T., Maxfield, Charles C., Skinner, Francis H., and Whitwell, James A., 3,517,954.
- Vail, Jack J., and Millette, Raymond G., 3,517,957.
- Greco, Michael R., to Professional Tape Co., Inc. Adhesived recording label. 3,517,450, Cl. 40-2.
- Greefkes, Johannes Anton, and Riemens, Karel, to U.S. Philips Corporation, mesne. Pulse delta modulation transmission system having separately transmitted low-frequency average level signal. 3,518,548, Cl. 325-38.
- Green, Milton, to Burroughs Corporation. Negative resistance magnetoresistive device. 3,518,459, Cl. 307-309.
- Gregoire Flowers, Inc.: See—
Gregoire, Gerald L., 3,517,809.
- Gregoire, Gerald L., to Gregoire Flowers, Inc. Central grading system for cut flowers. 3,517,809, Cl. 209-122.
- Greskamp, John B.: See—
Jimeron, James C., Greskamp, John B., and Anderson, Daniel J. 3,518,500.
- Grieve, David Page: See—
Duck, Edward William, and Grieve, David Page 3,518,237.
- Grigsby, Chester E., to General Refractories Company. Perforated or ventilated shell for electric arc furnaces. 3,518,349, Cl. 13-10.
- Griot, Rudolf G., to Sandoz-Wander, Inc. 8-Carboxy-1,3,8-triazaspiro[4,5]decane-2,4-dione. 3,518,275, Cl. 260-294.3.

- Gross, Josef, and Barkow, William Henry, to RCA Corporation. Deflection yoke and apparatus for its fabrication utilizing a magnetic ramming technique. 3,518,590, Cl. 335-213.
- Groszek, Aleksander Jerzy: See—
Andrews, George Inglis, Groszek, Aleksander Jerzy, and Witheridge, Rodney Ernest 3,518,186.
- Groszek, Aleksander Jerzy, to British Petroleum Company Limited, The. Oleophilic tin sulphide. 3,518,187, Cl. 252-25.
- Groszek, Aleksander Jerzy, to British Petroleum Company Limited, The. Oleophilic graphite thickened grease. 3,518,190, Cl. 252-29.
- Groszek, Aleksander, Bell, Geoffrey Hairsine, and Dodson, Stanley C., to British Petroleum Company Limited, The. Modified oleophilic graphite and heavy metal sulphides. 3,518,191, Cl. 252-29.
- Grotheer, Morris P., to Hooker Chemical Corporation. Bipolar electrolytic cell. 3,518,180, Cl. 204-268.
- Grube, Sol: See—
Zinn, Alfred W., and Grube, Sol 3,518,657.
- Gruenwald, Clifford L., to Ohmart Corporation, The. Method and apparatus utilizing a radioactive source and detector for weighing material carried by a screw conveyor. 3,518,425, Cl. 250-43.5.
- Guala, Piergiacomo, to Angelo Guala di Piergiacomo E Roberto Guala & C. S.A.S. Frangible bottle closure. 3,517,847, Cl. 215-42.
- Guardiola, Jose Harold Acevedo: See—
Alexandrin, Victor M., and Guardiola, Jose Harold Acevedo 3,517,489.
- Guberman, Irwin J., to Raytheon Company. Illuminated switch means. 3,518,386, Cl. 200-167.
- Guenther, Ralph E., to Eastman Kodak Company. Four element triplet photographic objective. 3,517,987, Cl. 350-227.
- Guidance Technology, Inc.: See—
Brown, Thomas Townsend, 3,518,462.
- Gulf & Western Industrial Products Company: See—
Strance, John Sherman, 3,517,531.
- Gulf & Western Systems Company: See—
McLeod, Robert Beaton, and Weld, Foster Earle, 3,518,378.
- Gulf Research & Development Company: See—
Ellis, Alan F., 3,518,302.
- Hilly, Lloyd W., and Maier, Robert W., 3,517,576.
- McGrath, Joseph J., and Strange, Harold O., 3,518,194.
- Gulton Industries, Inc.: See—
Aikens, Wallace R., 3,517,853.
- Gunter, Leifheit K.G.: See—
Leifheit, Gunter, and Liebscher, Johannes, 3,517,404.
- Gurtler, Edward A., to United States of America, Army. Electronic timer with magnetic core counter and reset circuit. 3,518,447, Cl. 307-88.
- Gustav Schade Maschinenfabrik: See—
Strocker, Gunter, 3,517,798.
- Guthrie, Elizabeth A.: See—
Hansen, Gerald D., Jr., and Guthrie, Elizabeth A. 3,518,204.
- Gutleber, Frank S., to International Telephone and Telegraph Corporation. Impulse correlation function generator. 3,518,415, Cl. 235-181.
- Gutshall, Charles Edward, to Illinois Tool Works Inc. Hanger assembly. 3,517,903, Cl. 248-291.
- Gzinski, Felix C., and Taylor, Robert C., to Atlantic Richfield Company. Cationic asphalt emulsions. 3,518,101, Cl. 106-277.
- Habdas, Edward P.: See—
Herren, James L., and Habdas, Edward P. 3,518,405.
- Haber, Charles P., and McWilliams, Gerald E., to United States of America, Navy. Nonaqueous ammonia primary cell utilizing nitrated polystyrene cathode oxidant. 3,518,121, Cl. 136-83.
- Hack, George J.: See—
Tower, Dell K., Cecil, Eugene L., Jr., and Hack, George J. 3,517,618.
- Hadravsky, Milan: See—
Petran, Mojmir, and Hadravsky, Milan 3,517,980.
- Hafner, Karl-Heinz, and Cherdron, Harald, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for preparing copolymers of trioxane and a Comonomer containing epoxy and dioxolane groups. 3,518,231, Cl. 260-67.
- Hage, Otto. Hydraulic mechanism for raising and lowering flat bed trailers. 3,517,944, Cl. 280-414.5.
- Hagy, Robert W., Morgan, Zeulon V., and Northcraft, Robert L., to American Cyanamid Company. Impregnation process for platinum-alumina catalyst and catalyst produced thereby. 3,518,207, Cl. 252-466.
- Hahn, William Peter: See—
Terry, Rupert Douglas, Hannes, George John, and Hahn, William Peter 3,518,157.
- Hahn, Winfried, to Holstein & Kappert Maschinenfabrik Phonix GmbH. Machine for loading and unloading of pallets. 3,517,831, Cl. 214-6.
- Hainaut, Daniel: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.
- Hakonsen, Ole Petter, to SINTEF. Antenna system for ILS localizers. 3,518,673, Cl. 343-108.
- Hall, Bradley P., to International Business Machines Corporation. Magnetic handling device. 3,518,593, Cl. 335-285.
- Hall, John R. Shotgun shells and method of forming hulls for shotgun shells. 3,517,617, Cl. 102-42.
- Hall, Ralph W., to Textron Inc. Machine for forming a trim strip. 3,517,873, Cl. 226-113.
- Hallendorff, Richard H., to United States of America, Navy, mesne. Dielectric rod antenna with broadband coupling to coaxial feed. 3,518,691, Cl. 343-785.
- Hallett, Joseph L.: See—
Cushera, Rosario E., and Hallett, Joseph L. 3,518,373.
- Halley, James Wood: See—
Mills, Norman Thomas, Jackson, Charles Richard, and Halley, James Wood 3,517,726.
- Halley, James W., to Inland Steel Company. Apparatus and method for controlling thickness of molten metal coating by a moving magnetic field. 3,518,109, Cl. 117-93.2.
- Hallmark Cards, Incorporated: See—
McGrath, Paul F., and Otto, Stanley W., 3,517,415.
- Halls, Lawrence M.: See—
Lausch, Henry N., Halls, Lawrence M., Harer, Delmar C., and McCarty, Horace G. 3,517,491.
- Halsey, Frederick T.: See—
Hughes, Brian, and Halsey, Frederick T. 3,518,581.
- Haluska, Loren A., to Dow Corning Corporation. Polyoxethylene siloxane branch copolymers. 3,518,288, Cl. 260-448.2.
- Hamel, Carl, Spinn- und Zwirnereimaschinen AG: See—
Rettenmund, Hans, 3,517,497.
- Hamilton, Vern E., to McDonnell Douglas Corporation, mesne. Method and apparatus for producing safety glass panel assembly. 3,518,137, Cl. 156-104.
- Hammitt, Dillard S., to Shell Oil Company. Method of connecting underwater pipelines. 3,517,520, Cl. 61-72.3.
- Hanna, Daniel C., and Ebeling, Jack F., said Ebeling assor. to said Hanna. Car washing friction scrubber. 3,517,405, Cl. 15-97.
- Hanna, John W., McCarty, William R., Jr., and Dolter, Paul A., to Eaton Yale & Towne, Inc. Adjustable buzzer with manual adjustment of levels of sound. 3,518,667, Cl. 340-388.
- Hannahs, James R., to Hobart Brothers Company. Apparatus for electroslag welding. 3,518,397, Cl. 219-73.
- Hannes, George John: See—
Terry, Rupert Douglas, Hannes, George John, and Hahn, William Peter 3,518,157.
- Hansen, Gerald D., Jr., and Guthrie, Elizabeth A., to Betz Laboratories, Inc. Control of the rate of precipitate growth and of precipitation in aqueous systems. 3,518,204, Cl. 252-181.
- Hanson, Charles C., and Sokolski, Michael, to Rochester Datronics, Inc. Photoelectric sensing apparatus. 3,518,440, Cl. 250-219.
- Hara, Shibeyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio, to Teijin Limited. Novel aromatic polyamide imines, novel N-aryl substituted polybenzimidazoles derived therefrom and processes for preparation thereof. 3,518,234, Cl. 260-78.
- Harding, Fred H., Horowitz, Reuben, and Monti, Anthony, to Su Crest Corporation. Dry fondant and method of making the same. 3,518,095, Cl. 99-141.
- Hare, James M.: See—
Tift, Leo R., 3,517,753.
- Harer, Delmar C.: See—
Lausch, Henry N., Halls, Lawrence M., Harer, Delmar C., and McCarty, Horace G. 3,517,491.
- Harlacher, William H.: See—
Swanson, Eugene A., Harlacher, William H., and Dulin, Grady N., Jr. 3,517,412.
- Harmen, John H., to Owens-Illinois, Inc. Process and apparatus for manufacture of novel joint. 3,518,147, Cl. 156-252.
- Harmuth, Henning F., Nowak, David J., and Schmid, Pierre E., to Allen-Bradley Company. Circuit for detection of sine and cosine pulses. 3,518,557, Cl. 328-139.
- Harnisch, Heinz, Ottony, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmüller, Werner, and Jochims, Heinz, to Deutsche Babcock & Wilcox-Dampfkessel-Werke Aktiengesellschaft. Process for the treatment of crude coal slurry for fuel purposes. 3,517,628, Cl. 110-101.
- Harnischfeger Corporation: See—
Bartley, Wilbur E., and Wigman, Harry W., 3,517,761.
- Schneider, Karl, 3,517,840.
- Harrington, John Beny: See—
Pizzarello, Frank A., and Harrington, John Beny 3,518,582.
- Harris, Clifford P.: See—
Brennan, Edward N., and Harris, Clifford P. 3,518,380.
- Harris, Henry B., to Sperry Rand Corporation. Opto-mechanical alignment apparatus. 3,517,445, Cl. 33-46.
- Harris, Hunter L., to United States of America, Army. Bridgewire current detector. 3,518,542, Cl. 324-106.
- Hart, Cornelis Maria, and Slob, Arie, to U.S. Philips Corporation, mesne. Circuit for photometers and the like having sensing and compensating diodes and utilizing potentiometer for setting the constant of proportionality between the light intensity and the output current. 3,518,438, Cl. 250-211.
- Hart, Herbert J., to Schlumberger Technology Corporation. Switching apparatus for selectively actuating explosive well-completion devices. 3,517,757, Cl. 175-4.55.
- Hart, Marcus R.: See—
Graham, Robert P., Huxsoll, Charles C., Hart, Marcus R., and Weaver, Merle L. 3,517,715.
- Hartman, Richard L., to United States of America, Army. Device for adjusting the coupling between a transmission line and resonant cavity. 3,518,580, Cl. 333-24.
- Harvey, Donald M., to Eastman Kodak Company. Systems for removing a normally fixed mask from a lens aperture. 3,517,598, Cl. 95-64.

- Harvey, Wildon T., and Knepper, Jay C., Jr., to Sun Oil Company. Corrugated paperboard composition. 3,518,216, Cl. 260-28.5
- Haryu, Hiroshi, to Mitsubishi Rayon Co., Ltd. Process for producing synthetic resin articles having excellent mar resistant surfaces. 3,518,341, Cl. 264-255.
- Hausermann, Heinrich, and Troxler, Eduard, to Geigy Chemical Corporation. Quaternary 3-aryl-7-triazinylamino-coumarin salts. 3,518,266, Cl. 260-249.6
- Hawkes, Joseph S., Krohn, Henry W., and Rudwell, William C., to Goodyear Tire & Rubber Company, The. Automatic inflating and pressure checking means for dual chamber tires. 3,517,710, Cl. 141-95.
- Hawkins, William R., to Newcomb Electronics Corporation. Voice override circuit. 3,518,375, Cl. 179-1.
- Hayden, J. Page. See—
- Engelmann, Richard H., 3,518,443.
- Hayes, Edward James, to Kelsey-Hayes Company. Dual braking system including a disc brake piston and cylinder construction. 3,517,782, Cl. 188-152.
- Hayes, John T., and Currier, Robert G., to Collins and Aikman Corporation. Dual wall fabric with reinforcing strands. 3,517,707, Cl. 139-410.
- Hecht, Joachim, Luckert, Hans, and Rufer, Hans-Ruedi, to Inventa A.G. fur Forschung und Patentverwertung. Process for the prevention of agglomeration of polyester particles. 3,518,112, Cl. 117-100.
- Hedger, John Henry, to United States of America, Air Force. Load exchanger for weigher. 3,517,762, Cl. 177-153.
- Hedger, John Henry, to Mettler Instrumente A.G. Load exchanger for weigher. 3,517,763, Cl. 177-153.
- Heggestad, Robert E., to Puleo Electronics Inc. Mimic diagram panel for railways having light piping. 3,518,666, Cl. 340-380.
- Heifetz, Sidney T.: See—
- Brunejes, Wilhelm H., Heifetz, Sidney T., and Kahn, Benjamin 3,517,603.
- Heiss, John H., Jr., and Smolinsky, Gerald, to Bell Telephone Laboratories, Incorporated. Polymer coating by glow discharge technique and resulting product. 3,518,108, Cl. 117-93.
- Heitmuller, Werner. See—
- Harnisch, Heinz, Ottomy, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmuller, Werner, and Jochims, Heinz 3,517,628.
- Helgeson, Alan L., to Varian Associates. Sequential frequency combiner for frequency standard systems. 3,518,567, Cl. 331-2.
- Hell, August, to Beckman Instruments, Inc. Radiant energy analyzer. 3,518,001, Cl. 356-87.
- Helland, Howard M., to Appleton Mills. Adjustable woven fabric. 3,517,819, Cl. 210-400.
- Helms, John D., to Texas Instruments, Incorporated. Movable table surface and means of positioning same. 3,517,624, Cl. 108-137.
- Hemisphere Novelties, Inc.: See—
- Wolfeld, Max, 3,517,418.
- Hemphill, Dean P., to Shell Oil Company. Apparatus for marking underwater pipelines. 3,517,400, Cl. 9-8.
- Hennecke, Hermann. See—
- Harnisch, Heinz, Ottomy, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmuller, Werner, and Jochims, Heinz 3,517,628.
- Herd, Josef, and Jacob, Hans Helmut, to Maschinenfabrik Goebel G.m.b.H. Method and apparatus for interconnecting a plurality of webs. 3,517,589, Cl. 93-1.1
- Herren, James L., and Haddas, Edward P., to Calumet & Hecla Corporation. Production of annealed tubing by strand annealing process. 3,518,405, Cl. 219-155.
- Herrmann, Donald C., and Bazin, Lucas J., to RCA Corporation. Push-pull current source. 3,518,457, Cl. 307-297.
- Hersh, Michael S., to United States of America, Air Force. Method for sealing high pressure tubes. 3,518,402, Cl. 219-137.
- Hersh, Solomon P., Boe, Norman W., and Stow, George C., Jr., to Monsanto Company. Nylon tire cord. 3,518,138, Cl. 156-110.
- Hewlett-Packard Company. See—
- Levy, Eugene J., 3,518,059.
- Miller, Arthur, Patrick, Gerard R., and Strassberg, Daniel D., 3,518,558.
- Mitchell, Charles S., 3,518,699.
- Hiatt, Gordon D., Rowley, Martin E., and Slowig, Walter D., to Eastman Kodak Company. Oligosaccharide propionate compositions and processes. 3,518,249, Cl. 260-227.
- Hickok, Willard H.: See—
- Wilson, Thomas Lamont, and Hickok, Willard H. 3,518,396.
- Hicks, Alan A., and Swimmer, Ernest J., to Kohner Bros., Inc. Optical illusion device. 3,517,936, Cl. 273-115.
- Hicks, Harry F., Jr.: See—
- Natale, Eugene T., and Hicks, Harry F., Jr. 3,518,070.
- Hill, Jerome C.: See—
- Algeo, Jerry A., and Hill, Jerome C. 3,518,689.
- Hillis, Donald A., to Man-Mark Projects Limited. Desk paper dispenser. 3,517,855, Cl. 221-259.
- Hilty, Lloyd W., and Maier, Robert W., to Gulf Research & Development Company. Cutting process. 3,517,576, Cl. 83-5.
- Hipple, George M., to Robertshaw Controls Company. Switch construction with switch base and telescoping cover. 3,518,391, Cl. 200-168.
- Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu, to Mitsubishi Jukogyo Kabushiki Kaisha, and Osaka Shosen
- Mitsui Senpaku Kabushiki Kaisha. Coupler construction. 3,517,949, Cl. 285-9.
- Hirose, Akira. See—
- Ueno, Kisaburo, Hirose, Akira, Takazawa, Yoshio, and Yamamura, Tatsuya 3,518,074.
- Hirs, Gilles Gerardus, to Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek ten behoeve van Nijverheid, Handel en Verkeer. Device for supporting two elements movable with respect to each other. 3,517,973, Cl. 308-9.
- Hitzel, Hans, to Metallgesellschaft Aktiengesellschaft. Liquid treating apparatus. 3,517,817, Cl. 210-279.
- Ho, Shu-Kuang, and Kardash, John J., to Sylvania Electric Products, Inc. Programmable frequency divider. 3,518,553, Cl. 328-48.
- Hobart Brothers Company. See—
- Hannahs, James R., 3,518,397.
- Hochberg, Arthur K.: See—
- Pearce, Thomas W., Hochberg, Arthur K., and Poehler, Theodore O., Jr. 3,518,455.
- Hodge, Robert R.: See—
- Hodge, William R., and Hodge, Robert R. 3,517,392.
- Hodge, William R., and Hodge, Robert R. Chin operated shield for welder's mask. 3,517,392, Cl. 2-8.
- Hoffman, Benjamin F., and Carruthers, Ronald W., Sr., to United States of America, Navy. Solid state chopper. 3,518,453, Cl. 307-240.
- Hoffman, Daniel S., and Jones, Hugh L., to Xerox Corporation. Sheet registration apparatus. 3,517,923, Cl. 271-53.
- Hoffman, Murray, to International Telephone and Telegraph Corporation. Microstrip waveguide transducer. 3,518,579, Cl. 333-21.
- Hoffmann-La Roche Inc.: See—
- Brossi, Arnold, Gerecke, Max, and Kyburz, Emilio, 3,518,283.
- Hogg, Derek, and Leeson, William G., to Dunlop Company Limited, The. Vehicle tire fitting and removal apparatus. 3,517,723, Cl. 157-124.
- Hohmann, Kurt. See—
- Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spieb, Bernhard, and Hohmann, Kurt 3,518,244.
- Holbrook, Rex R., to Chrysler Corporation, mesne. Speedometer mechanism. 3,517,561, Cl. 73-519.
- Holbus, Edward. Protective coating for metal surfaces. 3,518,099, Cl. 106-10.
- Holden, Edward F., to Aeroquip Corporation. Floating aquatic scene. 3,517,649, Cl. 119-5.
- Holle, Werner, to Leitz, Ernst, G.m.b.H. Automatic focusing slide projector. 3,517,992, Cl. 353-101.
- Holley, Al F. Denture structure and method of making. 3,517,443, Cl. 32-2.
- Hollinden, Charles S.: See—
- Tilak, Manohar A., and Hollinden, Charles S. 3,518,240.
- Holmberg, Gote Eskil Yngve. See—
- Frei, Josef Hermann, and Holmberg, Gote Eskil Yngve 3,517,416.
- Holmboe, Christian Fredrik, De Lorme, James F., and Sommerud, Rolf Gunnar, to International Telephone and Telegraph Corporation. Multipulse detector for harmonically related signals. 3,518,556, Cl. 328-133.
- Holmes, Raymond Leslie. See—
- Tasker, Ronald Vivian, and Holmes, Raymond Leslie 3,517,733.
- Holmstrom, Kjell Ingavr. See—
- Jeppesen, Torsten, Holmstrom, Kjell Ingavr, and Dilot, Rolf Magnus 3,518,144.
- Holstein & Kappert Maschinenfabrik Phonix GmbH. See—
- Bocker, Friedrich, 3,517,793.
- Hahn, Winfried, 3,517,831.
- Holstein, Frederick William, to Woodings-Verona Tool Works. One piece double rail anchor. 3,517,883, Cl. 238-346.
- Holtey, Thomas O., to Honeywell Inc. Apparatus for checking the sequencing of a data processing system. 3,518,413, Cl. 235-153.
- Holtman, Dennis Charles, to Emery Industries, Inc. Production of 2,3-dihydropyran. 3,518,281, Cl. 260-345.1
- Holtschmidt, Hans. See—
- Klauke, Erich, and Holtschmidt, Hans 3,518,293.
- Holzschuh, Fred A.: See—
- Hott, Melville W., Jr., and Holzschuh, Fred A. 3,517,697.
- Honeywell Inc.: See—
- Ainsworth, Frank W., 3,518,563.
- Bottomley, William Kelvin, 3,518,594.
- Digilio, Frank A., and Rae, John L., 3,517,924.
- Gabor, Andrew, 3,518,554.
- Holtey, Thomas O., 3,518,413.
- Kaiser, David D., 3,517,637.
- Kolb, Edgar C., 3,517,570.
- Ogren, Harvey D., 3,517,545.
- Oram, Derek O., and Carman, Richard W., 3,517,926.
- Hoogendonk, Johan W., to Stamicarbon N.V. Preparation of diphenylpropane granules. 3,518,329, Cl. 264-13.
- Hooker Chemical Corporation. See—
- Grotheer, Morris P., 3,518,180.
- Hooper, Thomas G. Railroad crossing structure. 3,517,882, Cl. 238-8.
- Hoppen, Johannes, to U.S. Philips Corporation, mesne. Fluid treating apparatus. 3,517,816, Cl. 210-266.
- Horger, Richard N.: See—
- Slater, Keith, 3,518,058.

- Horowitz, Alexandre. See—
- Beusink, Bernard Joseph, Horowitz, Alexandre, and Van Den Heuvel, Wilhelmus Henricus Maria 3,517,494.
- Horowitz, Maurice, and Myers, Clinton S., to Magnavox Company, The. Mooring apparatus having a free floating buoyant element. 3,517,399, Cl. 9-8.
- Horowitz, Reuben. See—
- Harding, Fred H., Horowitz, Reuben, and Monti, Anthony 3,518,095.
- Horton, Edward E., to Deep Oil Technology, Inc. Apparatus and method for terminating a subsea pipeline at a sea surface station. 3,517,518, Cl. 61-72.3
- Horton, James P. Barbecue cooker. 3,517,602, Cl. 99-259.
- Horton, William D., to Texaco Inc. Hydrocarbon production by in-situ combustion and natural water drive. 3,517,744, Cl. 166-245.
- Horvath, Stephen D. Spiral drinking straw. 3,517,884, Cl. 239-33.
- Hoss, George Carr. See—
- Welsh, Thomas Laurence, Peterson, Donald Leroy, Palermo, Blasey Thomas, and Hoss, George Carr 3,518,343.
- Host, Rudolph P.: See—
- Collett, John E., and Host, Rudolph P. 3,518,621.
- Hott, Melville W., Jr., and Holzschuh, Fred A., to Richards Industries, Inc. Pressure regulating valve. 3,517,697, Cl. 137-625.33
- Houdaille Industries, Inc.: See—
- Rumsey, Rollin Douglas, Kamman, Gordon W., and Hughson, Robert I., 3,517,946.
- Houghton, Warren W., Nearman, Gerald M., and Royce, Robert C., to Raytheon Company. Inertial gyroscope. 3,517,562, Cl. 74-5.6
- Hrdina, Jiri, to Ceskoslovenska akademie ved. Inclined flow cell including a sink for solid particles. 3,518,015, Cl. 356-246.
- Hrdlicka, Jiri. See—
- Bezouska, Vlastimil, Pivnec, Jan, Hrdlicka, Jiri, Krassa, Evzen, and Smeal, Zdenek 3,518,507.
- Huck Manufacturing Company. See—
- Chirco, Peter R., 3,517,539.
- Hudson, Kenneth E. Vehicle file cabinet. 3,517,978, Cl. 312-235.
- Hudson, William J.: See—
- Ford, David E., Jr., and Hudson, William J. 3,518,518.
- Huet, Henri. See—
- Delange, Maurice, Huet, Henri, and Vertes, Paul 3,518,060.
- Delange, Maurice, Huet, Henri, and Vertes, Paul 3,518,062.
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- Huggins, William A., to I-T-E Imperial Corporation. Circuit breaker hold open latch release means. 3,518,587, Cl. 335-46.
- Hughes Aircraft Company. See—
- Newman, Daniel D., and Rosen, Harold A., 3,517,508.
- Hughes, Brian, and Halsey, Frederick T., to Northern Electric Company Limited. All-pass delay equalizer network. 3,518,581, Cl. 333-28.
- Hughes, Ray C.: See—
- Bronnes, Robert L., Hughes, Ray C., and Sweet, Richard C. 3,518,066.
- Hughes, Robert W., to Ingersoll-Rand Company. Rock drill bit drive. 3,517,754, Cl. 173-104.
- Hughson, Robert I.: See—
- Rumsey, Rollin Douglas, Kamman, Gordon W., and Hughson, Robert I. 3,517,946.
- Huml, James O.: See—
- Layne, Gilbert S., Huml, James O., and Smith, Richard Dale 3,518,172.
- Humphrey, Robert G., to United States of America, Army. Projection system for circular array of laser diodes. 3,518,419, Cl. 240-41.3
- Hunter, Byron A., to Uniroyal, Inc. Acceleration of sulfur-vulcanization of rubber with sulfonic acids and derivatives. 3,518,236, Cl. 260-79.5
- Hunter, Edward E., to Goodyear Tire & Rubber Company, The. Apparatus for conveying and stretching tire cord fabric. 3,517,425, Cl. 26-54.
- Hunter, Frank M.: See—
- Stock, Arthur J., and Hunter, Frank M. 3,518,116.
- Hunter, Margaret C.: See—
- Stock, Arthur J., and Hunter, Frank M. 3,518,116.
- Hunter, Ralph E. Rack stacking guide. 3,517,828, Cl. 211-177.
- Hunter, William A.: See—
- Sarto, Jorma O., and Hunter, William A. 3,517,654.
- Huron Road Hospital. See—
- Giordano, Nicholas D., 3,518,057.
- Hurch, James R., Weimer, Ralph E., Miller, Dye O., Jr., and Weiss, Frank F., to McDonald's System, Inc. Bun toaster. 3,517,605, Cl. 99-423.
- Hurst, Alan R., to ARHCO, Inc. Release sheet or web having a printable surface. 3,518,158, Cl. 161-208.
- Hutton, Thomas J., to Westinghouse Air Brake Company. Analog multiplier including a time average integrating unit. 3,517,880, Cl. 235-194.
- Hutz, Gerhard, to Siempelkamp, G., & Co. Conveyor system for fiber mats. 3,517,925, Cl. 271-76.
- Huxsoll, Charles C.: See—
- Graham, Robert P., Huxsoll, Charles C., Hart, Marcus R., and Weaver, Merle L. 3,517,715.
- Hyder, Charles W., to United States of America, Army, The. Method of producing a fluted cone mandrel. 3,517,587, Cl. 90-13.
- Hymatic Engineering Company, The. See—
- Campbell, David Neil, 3,517,525.
- Ide, Masao. See—
- Mori, Eiji, Ide, Masao, and Kaneko, Seiji 3,518,136.
- Ifield, Richard Joseph, to Lucas, Joseph, (Industries) Limited. Static friction free valve. 3,517,690, Cl. 137-330.
- Iida, Akihiko, and Maruta, Iwao, to Kao Soap Co., Ltd. Method of stabilizing aqueous formaldehyde. 3,518,313, Cl. 260-606.
- Iida, Takayuki. See—
- Tanaka, Masashi, Nomura, Osamu, Kawamura, Hiyutaro, and Iida, Takayuki 3,518,487.
- Iijima, Tetsuya, to Nissan Jidosha Kabushiki Kaisha. Hydrodynamic coupling. 3,518,026, Cl. 416-197.
- Ikeno, Hitoshi. See—
- Kawakami, Tsuneta, Ikeno, Hitoshi, and Sato, Masami 3,518,464.
- Illinois Tool Works Inc.: See—
- Guthall, Charles Edward, 3,517,903.
- Imai, Yoshio. See—
- Hara, Shibeyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio 3,518,234.
- Imhof, Herman A., to USM Corporation. Reducing and roughing tools. 3,517,462, Cl. 51-128.
- Imperial Chemical Industries Limited. See—
- Shooter, Douglas, and Jubb, Anthony Howden, 3,518,317.
- Sils, Stanley Albert, 3,518,117.
- Improved Machinery Inc.: See—
- Luthi, Oscar, 3,517,818.
- Inacker, Frederick T.: See—
- Goodman, David S., Borsuk, Leslie M., and Inacker, Frederick T. 3,518,610.
- Industrial Washing Machine Corporation. See—
- Sadwith, Howard M., 3,517,675.
- Industrie-Werke Karlsruhe Aktiengesellschaft. See—
- Niemann, Rudolf, 3,517,619.
- Ingenjorsfirman Nils Weibull AB. See—
- Westesson, Lawe Herbert, 3,517,709.
- Ingersoll-Rand Company. See—
- Hughes, Robert W., 3,517,754.
- Terjesen, Greger B., 3,517,956.
- Inland Steel Company. See—
- Halley, James W., 3,518,109.
- Mills, Norman Thomas, Jackson, Charles Richard, and Halley, James Wood, 3,517,726.
- Inoue, Kiyoshi. Method and apparatus for purification of water containing organic contaminants. 3,518,174, Cl. 204-149.
- Institute of Gas Technology. See—
- Staats, William R., Rosenberg, Robert B., and Kweiler, Escher R., 3,518,036.
- International Business Machines Corporation. See—
- Barson, Fred, Kuehn, Richard T., and Palmer, Myron D., 3,518,084.
- Black, Robert J., and Sordello, Frank J., 3,518,658.
- Bolt, Murray H., and Nick, Howard H., 3,518,450.
- Boucher, Paul D., and Miller, Joseph C., 3,517,958.
- Cacka, Zdenek, and Elmore, Glenn V., 3,518,130.
- Doo, Ven Y., 3,518,503.
- Dunman, John P. G., and Axford, John G., 3,518,612.
- Filipowsky, Richard F. J., 3,518,547.
- Frandsen, Jorgen Melchior, 3,517,449.
- Gates, Harlan R., 3,518,506.
- Hall, Bradley P., 3,518,593.
- Johnson, Alfred H., and McConnell, William R., 3,517,438.
- Kollar, Ernest P., 3,517,592.
- Koretzky, Herman, 3,518,170.
- Lindquist, Arwin B., Pricer, Wilbur D., and Seiber, Robert R., 3,518,631.
- Overacker, James L., 3,517,593.
- Pawletko, Joseph P., 3,518,516.
- Rutz, Richard F., 3,518,574.
- Schaaf, Robert L., 3,518,656.
- Schumaker, Robert R., 3,518,250.
- International Harvester Company. See—
- Fischer, Raymond C., 3,517,747.
- Fischer, Raymond C., 3,517,748.
- Morkoski, James, 3,517,751.
- Scarnato, Thomas J., Goron, Paul C., and Morkoski, James, 3,517,492.
- International Standard Electric Corporation. See—
- Avignon, Michel Louis, 3,518,560.
- Canceill, Bernard Jean-Jacques, and Regnier, Albert, 3,518,626.
- Cullis, Roger, 3,518,509.
- Dietrich, Bernhard, 3,518,504.
- International Synthetic Rubber Company Limited, The. See—
- Duck, Edward William, and Grieve, David Page, 3,518,237.
- International Telephone and Telegraph Corporation. See—
- Gutbeber, Frank S., 3,518,415.
- Hoffman, Murray, 3,518,579.
- Holmboe, Christian Fredrik, De Lorme, James F., and Sommerud, Rolf Gunnar, 3,518,556.
- Stayboldt, Gordon R., Thomas, Delmer L., and Todd, Beverly J., 3,518,688.
- Weaver, David P., 3,517,999.
- Inui, Tsuneo. See—
- Oyama, Taro, and Inui, Tsuneo 3,518,169.

- Inventa A.G. fur Forschung und Patentverwertung. See—
Hecht, Joachim, Luckert, Hans, and Rufer, Hans-Ruedi, 3,518,112.
- Irako, Koichi: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru 3,518,238.
- Irani, Riyad R.: See—
Fitch, Steven Joseph, and Irani, Riyad R. 3,518,200.
- Irgens, Finn T., to Outboard Marine Corporation. Steering mechanism for a marine propulsion unit. 3,517,634, Cl. 114-172.
- Irwin, Richard M., and Kollock, David H., to Philadelphia Resins Company Inc. Sprayable vibration damping material. 3,518,217, Cl. 260-29.2
- Iso Optische Werke GmbH: See—
Lindstedt, Kurt, and Kirchhoff, Kurt, 3,517,984.
- Isreeli, Jack: See—
Eveleigh, John W., Castellani, Leon, and Isreeli, Jack 3,517,695.
- I.T.E. Imperial Corporation: See—
Davis, Russell S., 3,518,357.
- Huggins, William A., 3,518,587.
- Meacham, James Frank, 3,518,495.
- Platz, Elwood T., Kussy, Frank W., and Witzmann, Gustav, 3,518,597.
- Aumayer, Hansruedi, Jensen, Otto, and Kesselring, Fritz, 3,518,388.
- Itek Corporation: See—
Sanford, Lloyd Clifford, and O'Brien, John A., 3,518,013.
- Wingate, Sidney A., 3,518,661.
- Ito, Michiaki, to Nippon Electric Company, Limited. Measuring device utilizing the diffraction of light. 3,518,007, Cl. 356-166.
- Ito, Yukio: See—
Yunoki, Hisashi, Kudo, Tatsuo, Ito, Yukio, and Komizo, Hidemitsu 3,518,583.
- Izawa, Nobuo, Tamura, Yoshio, Furutani, Akhisa, and Okamoto, Kazuo, to Kanegafuchi Boseki Kabushiki Kaisha. Production of aliphatic Schiff bases and diaminoalkanone derivatives thereof. 3,518,252, Cl. 260-239.
- Jaanning, John L., to National Cash Register Company, The. Thermal half-select printing matrix. 3,518,406, Cl. 219-216.
- Jablonski, Casmer S., to Uniroyal, Inc. Tire vulcanizing method. 3,518,335, Cl. 264-93.
- Jackson, Charles Richard: See—
Mills, Norman Thomas, Jackson, Charles Richard, and Halley, James Wood 3,517,726.
- Jackson, Winston J., Jr.: See—
Caldwell, John R., and Jackson, Winston J., Jr. 3,518,040.
- Jacob, Hans Helmut: See—
Herd, Josef, and Jacob, Hans Helmut 3,517,589.
- Jacobs, Earl D., and Zingery, Wilbur L., to North American Rockwell Corporation. Accelerometer. 3,517,560, Cl. 73-516.
- Jacobs, Sigmund J., to United States of America, Navy. Explosive wave shaper. 3,517,615, Cl. 102-22.
- Jacobsen, Allen I. Variable resistance swimmer training device. 3,517,930, Cl. 272-71.
- Jacobson, Earl H., to Auburn Plastics, Inc. Apparatus for bonding a flexible plastic backing to a synthetic fiber textile. 3,518,148, Cl. 156-380.
- Jaehn, Edwin C., to Gleason Works, The. Work holder and radially expandable collet therefor. 3,517,939, Cl. 279-2.
- Jaffe, Fred: See—
Marans, Nelson S., and Jaffe, Fred 3,518,177.
- Jaffe, Wolfgang, and Wagoner, Richard E., to Singer Company, The. Dual voltage speed control systems for D.C. motors supplied from A.C. voltages. 3,518,522, Cl. 318-349.
- Jakobs, Hans, to Niehoff, C. E., & Co. Snap action electric switch. 3,518,598, Cl. 337-135.
- James, Arthur M.: See—
Schmidt, Jacob, Baumstein, Lee, and James, Arthur M. 3,518,025.
- James, Brian David, to Signetics Corporation. Radiation resistant semiconductor device and method. 3,518,494, Cl. 317-101.
- Janssen, Paul Adriaan Jan, to Janssen Pharmaceutica. Substituted 1-benzoylpropyl-4-hydroxy-4-phenyl piperidine derivatives. 3,518,276, Cl. 260-294.7
- Janssen Pharmaceutica: See—
Janssen, Paul Adriaan Jan, 3,518,276.
- Janssen, Sylvain Jean, to Compagnie des Compteurs. Gas pressure measuring device. 3,517,544, Cl. 73-30.
- Jantach, Ottomar, to Siemens Aktiengesellschaft. Power transistor with particular width of base region. 3,518,505, Cl. 317-234.
- Japan Atomic Energy Research Institute: See—
Amano, Noboru, and Sasaki, Hirotaka, 3,518,539.
- Japan Gasoline Co., Ltd.: See—
Egashira, Shobachi, and Matsuoka, Hiroo, 3,518,055.
- Jarleborg, Holger, and Blom, Karl-Johan, to Fagersta Bruks Aktiebolag. High-strength, weldable constructional steel with high manganese. 3,518,080, Cl. 75-123.
- Jaulmes, Eric, to Ateliers de la Motobecane, Societe Anonyme. Capacity-discharge electronic ignition apparatus for internal combustion engines. 3,517,655, Cl. 123-148.
- Jenkins, John C., to TRW Inc., mesne. Pipe hanger. 3,517,901, Cl. 248-59.
- Jennifer Corporation: See—
Oswald, Raymond C., 3,518,079.
- Jensen, Otto: See—
Aumayer, Hansruedi, Jensen, Otto, and Kesselring, Fritz 3,518,388.
- Jeppssen, Torsten, Holmstrom, Kjell Ingavr, and Dilot, Rolf Magnue, to AB Akerlund & Rousing. Method for providing carton blanks with a coating of plastic. 3,518,144, Cl. 156-244.
- Jepson, Ivar, and Roszyk, Leon M., to Sunbeam Corporation. Electric shaver. 3,518,465, Cl. 310-47.
- Jet Research Center, Inc.: See—
Brown, Claude H., 3,517,469.
- Jimerson, James C., Greskamp, John B., and Anderson, Daniel J. Flat plate feed-through capacitor. 3,518,500, Cl. 317-230.
- Jochims, Heinz: See—
Harnisch, Heinz, Ottony, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmuller, Werner, and Jochims, Heinz 3,517,628.
- John, David Gwynfryn, to Steelfab Limited. Container handling apparatus. 3,517,843, Cl. 214-314.
- Johns, Theron J., to North American Rockwell Corporation. Tracking system platform stabilization. 3,518,372, Cl. 178-7.81
- Johns-Manville Corporation: See—
Terry, Rupert Douglas, Hannes, George John, and Hahn, William Peter, 3,518,157.
- Johnson & Johnson: See—
Drelich, Arthur H., 3,518,041.
- Johnson, Albert W., to Schlumberger Technology Corporation. Apparatus for selectively releasing cable-suspended well tools. 3,517,740, Cl. 166-63.
- Johnson, Alfred H., and McConnell, William R., to International Business Machines Corporation. Method of packaging a circuit module and joining same to a circuit substrate. 3,517,438, Cl. 29-627.
- Johnson, Edmond Eric. Vehicle suspension and coupling therefor. 3,517,718, Cl. 152-27.
- Johnson Engine Works Company, The: See—
Albertson, Victor N., 3,517,652.
- Johnson, Glenn D., to Shell Oil Company. Hydraulic pipe clamp. 3,517,961, Cl. 294-86.12
- Johnson, Keith O., to Gauss Electrophysics, Inc. Video playback assembly wherein the record disc has optical recordings on both sides. 3,518,442, Cl. 250-219.
- Johnson, Sigurd W., and Leedom, Marvin A., to RCA Corporation. Screening unit for half-tone color reproduction. 3,517,596, Cl. 95-12.2
- Johnston, Clifford V., to Diamond Power Specialty Corporation. Nutating drive. 3,517,564, Cl. 74-89.17
- Jolley, Gordon B.: See—
Pine, Lloyd A., Roberts, Durward T., Jr., and Jolley, Gordon B. 3,518,323.
- Joly, Robert: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.
- Jones, Ernest W. Gate closer and tightener. 3,517,724, Cl. 160-328.
- Jones, Howard S., Jr., to United States of America, Army. Dielectric-loaded antenna with matching window. 3,518,683, Cl. 343-705.
- Jones, Howard S., Jr., to United States of America, Army. Projectile with an incorporated dielectric-loaded cavity antenna. 3,518,685, Cl. 343-708.
- Jones, Hugh L.: See—
Hoffman, Daniel S., and Jones, Hugh L. 3,517,923.
- Jones, Joseph R. Microfilming system. 3,517,996, Cl. 355-69.
- Jones, Trevor L.: See—
Chaddha, Aaron K., Jones, Trevor L., and Stamatis, Sam P. 3,518,365.
- Joplin, Frederick H.: See—
Oddo, Rocco R., and Joplin, Frederick H. 3,518,663.
- Jorgensen, Karl-Gunnar, to Logma Aktiebolag. Timber sledge. 3,517,839, Cl. 214-85.5
- Jubb, Anthony Howden: See—
Shooter, Douglas, and Jubb, Anthony Howden 3,518,317.
- Juraschek, Richard: See—
Kannegiesser, Herbert, and Juraschek, Richard 3,517,865.
- Kabushiki Kaisha Hattori Tokeiten: See—
Kawakami, Tsuneta, Ikeno, Hitoshi, and Sato, Masami, 3,518,464.
- Kitai, Kiyoshi, 3,517,594.
- Kabushiki Kaisha Yokogawa Denki Seisakusho (Yokogawa Electric Works, Ltd.): See—
Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke, 3,518,696.
- Kachel, Stanley. Mounting clip. 3,517,417, Cl. 24-81.
- Kafitz, Peter H.: See—
Aasted, Jorgen, and Kafitz, Peter H. 3,518,671.
- Kahn, Benjamin: See—
Bruenjes, Wilhelm H., Heifetz, Sidney T., and Kahn, Benjamin 3,517,603.
- Kaiser, David D., to Honeywell Inc. Pushbutton signaling arrangement. 3,517,637, Cl. 116-114.
- Kalart Company Inc., The: See—
Bender, Werner K., 3,517,991.
- Kalish, Jerome Barton, to Chemtoy Corporation. Convertible jump rope. 3,517,931, Cl. 272-75.
- Kamen, Ira, and Walker, Harold R., to Educating Systems, Inc. Low frequency television system. 3,518,376, Cl. 179-15.

- Kamman, Gordon W.: See—
Rumsey, Rollin Douglas, Kamman, Gordon W., and Hughson, Robert I. 3,517,946.
- Kane, Ellis D.: See—
Stewart, Donald R., and Kane, Ellis D. 3,517,460.
- Stewart, Donald R., and Kane, Ellis D. 3,517,659.
- Kanegafuchi Boseki Kabushiki Kaisha: See—
Izawa, Nobuo, Tamura, Yoshio, Furutani, Akhisa, and Okamoto, Kazuo, 3,518,252.
- Kaneko, Makoto: See—
Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu 3,517,949.
- Kaneko, Seiji: See—
Mori, Eiji, Ide, Masao, and Kaneko, Seiji 3,518,136.
- Kango Electric Hammers Limited: See—
Badcock, David Norman William, 3,517,755.
- Kannegiesser, Herbert, and Juraschek, Richard, to Kannegiesser Maschinenfabrik Gesellschaft mit beschränkter Haftung. Device for shaping knitwear. 3,517,865, Cl. 223-69.
- Kannegiesser Maschinenfabrik Gesellschaft mit beschränkter Haftung: See—
Kannegiesser, Herbert, and Juraschek, Richard, 3,517,865.
- Kanno, Hideo: See—
Schuller, Walter H., Minor, Jacob C., Lawrence, Ray V., and Kanno, Hideo 3,518,282.
- Kao Soap Co., Ltd.: See—
Iida, Akihiko, and Maruta, Iwao, 3,518,313.
- Kardash, John J.: See—
Ho, Shu-Kuang, and Kardash, John J. 3,518,553.
- Karlinski, Herbert E.: See—
Baldwin, Brian E., and Karlinski, Herbert E. 3,517,461.
- Kass, Robert E.: See—
Lavin, Edward, Markhart, Albert H., and Kass, Robert E. 3,518,219.
- Katsoulis, Emanuel G., and Prescia, John J., to Leesona Corporation. Metal/air battery. 3,518,123, Cl. 136-86.
- Kaulins, Edward: See—
Smythe, Frederic H., Jr., and Kaulins, Edward 3,517,503.
- Kawakami, Tsuneta, Ikeno, Hitoshi, and Sato, Masami, to Kabushiki Kaisha Hattori Tokeiten. Electromagnetic driving mechanism. 3,518,464, Cl. 310-22.
- Kawamura, Hiayutaro: See—
Tanaka, Masashi, Nomura, Osamu, Kawamura, Hiayutaro, and Iida, Takayuki 3,518,487.
- Kazan, Benjamin, and Vance, Arthur W., to Xerox Corporation. Imaging system. 3,518,698, Cl. 340-174.
- Keagle, Stanley E., to Earli Manufacturing Company. Automatic article crushing apparatus. 3,517,607, Cl. 100-49.
- Keane, Raymond A., Jr., and Robinson, Ralph C., to General Time Corporation. Twenty-four hour alarm. 3,517,499, Cl. 58-17.
- Keeney, Ronald B., to Singer Company, The. Homing control for flying head of magnetic surface storage system. 3,518,651, Cl. 340-174.1
- Kehrberger, Achim, to Delmag-Maschinenfabrik Reinhold Dornfeld. Telescopic drill rods for soil drilling equipments. 3,517,760, Cl. 175-321.
- Keith, Charles Christopher: See—
Woollacott, Derrick Sunucks, 3,517,600.
- Keller, Darryl E.: See—
Monson, Donald R., Keller, Darryl E., and Rothman, James C. 3,517,821.
- Keller, Joseph Richard: See—
Rueger, Herman, and Keller, Joseph Richard 3,517,981.
- Kelley, James O.: See—
Probst, Robert L., and Kelley, James O. 3,517,467.
- Kelsey-Hayes Company: See—
Hayes, Edward James, 3,517,782.
- Taccone, Russell W., 3,517,728.
- Kemp, Robert I., and Schaefer, Edmund T. Fruit picking device and method. 3,517,496, Cl. 56-328.
- Kennel, William. Helical spring bouncing device. 3,517,927, Cl. 272-57.
- Kenyon, Allen S., and Slocombe, Robert J., to Monsanto Company. Reinforcing fillers in a matrix of two thermosetting resins. 3,518,221, Cl. 260-37.
- Keprta, Buran I., Jr., and West, William A., to Philco-Ford Corporation. Resistive voltage divider. 3,518,603, Cl. 338-260.
- Kern, Walter P. Indicating dial assembly. 3,517,638, Cl. 116-115.
- Keeler, William C., and Erner, Joseph W., Jr., to Crown Cork & Seal Company, Inc. Foil closure for plastic containers. 3,517,848, Cl. 215-43.
- Kessel, John E. Slip form paver. 3,517,590, Cl. 94-46.
- Kesselring, Fritz: See—
Aumayer, Hansruedi, Jensen, Otto, and Kesselring, Fritz 3,518,388.
- Kiepe, Paul Edwin. Back-country radio booster. 3,518,681, Cl. 343-702.
- Kilgore, James S., to Polyspede Electronics Corporation. Airflow control for an air-fluid mixing pump. 3,517,691, Cl. 137-550.
- Kilgore, Marion D.: See—
Pumpelly, Robert C., Simpson, Harry E., and Kilgore, Marion D. 3,517,743.
- Kim, Charles. Eyelash measuring device and trimmer. 3,517,673, Cl. 132-79.
- Kimura, Noboru, and Evans, Pat E., to National Cash Register Company, The. Quadruple modulation recording system. 3,518,700, Cl. 346-74.
- King, James F., to Clark Equipment Company. High lift bucket. 3,517,846, Cl. 214-774.
- King, Thomas L.: See—
Degroff, Richard, and King, Thomas L. 3,518,032.
- Kirchhoff, Kurt: See—
Lindstedt, Kurt, and Kirchhoff, Kurt 3,517,984.
- Kirkendall, William D., to Weston Instruments, Inc. Potentiometers. 3,518,605, Cl. 338-183.
- Kirkhof Manufacturing Corporation: See—
Carrigan, William H., and MacLam, James A., 3,518,334.
- Kirkland, A., & Company Limited: See—
Carotte, Frederick Henry, and Wilson, George Herbert, 3,517,429.
- Kirknes, Bjorn, to Simonsen & Mustad A.S. Apparatus for directional stabilization of an acoustic beam emitted from a shipborne echo sounding or sonar transducer. 3,518,676, Cl. 340-5.
- Kishaseizo Kabushiki Kaisha: See—
Ozono, Toshiro, and Matsushima, Hisashi, 3,517,522.
- Kistner, Charles R., and Anderson, Thomas W., to Textron Inc. Vehicle trim strip with elastomeric bumper insert. 3,517,473, Cl. 52-718.
- Kitai, Kiyoshi, to Kabushiki Kaisha Hattori Tokeiten. Camera with two different automatic photographic mechanisms. 3,517,594, Cl. 95-10.
- Kitley, Peter W., to Turner Industries Limited. Lawn mower and grass catcher therefor. 3,517,493, Cl. 56-194.
- Klauke, Erich, and Holtschmidt, Hans, to Farbenfabriken Bayer Aktiengesellschaft. Process for the preparation of trifluoromethyl isocyanate. 3,518,293, Cl. 260-453.
- Klees, Gerard Timothy, to General Motors Corporation. Fluid supply system. 3,518,030, Cl. 417-259.
- Klein, Robert, Jr. Apparatus for finish-spraying of shoes. 3,517,645, Cl. 118-301.
- Klett, Robert J., to Chevron Research Company. Hydrogen sulfide recovery by degassing, distillation and ammonia recycle with subsequent sulfur production. 3,518,056, Cl. 23-225.
- Klett, Robert J., to Chevron Research Company. Hydrogen sulfide and ammonia recovery by degassing and plural distillation with ammonia recycle. 3,518,166, Cl. 203-78.
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- Klingenberg, Hans Ulrich. Watch crown in narrow recess. 3,517,501, Cl. 58-88.
- Knapp, Wilhelm, to Dunlop Company Limited, The. Disc brakes and friction pad mounting therefor. 3,517,778, Cl. 188-73.
- Knapp, William Richard: See—
Frompovich, Frank John, and Knapp, William Richard 3,517,803.
- Knepper, Jay C., Jr.: See—
Harvey, Wildon T., and Knepper, Jay C., Jr. 3,518,216.
- Knickerbocker Metal Guild, Inc.: See—
Springer, Leonard, and Lambert, Abraham D., 3,517,660.
- Kobayashi, Seiichi, Torii, Michihiro, and Sakoda, Hiroichi, to Fuji Denki Kagaku Kabushiki Kaisha. Core matrix plane. 3,518,644, Cl. 340-174.
- Kobayashi, Yoshio: See—
Matsuno, Shiro, and Kobayashi, Yoshio 3,518,126.
- Kobie, William F.: See—
Sklarчук, Jack C., and Kobie, William F. 3,518,332.
- Koehler, Gerard N. Electromagnetic conversion relay. 3,518,589, Cl. 335-132.
- Koehring Company: See—
Werner, John A., and Schaefer, Kenneth A., 3,517,534.
- Koelmans, Hein, to U.S. Philips Corporation, mesne. Semiconductor device having at least one contact applied to a semiconductor material of the type II-B-VI-A and method of manufacturing such a device. 3,518,511, Cl. 317-237.
- Kohlbeck, Orin J., and Sweger, Russell P., to Barber-Colman Company. Temperature controller. 3,517,881, Cl. 236-13.
- Kohler Co.: See—
Pratt, Aloysius W., 3,518,529.
- Kohner Bros., Inc.: See—
Hicks, Alan A., and Swimmer, Ernest J., 3,517,936.
- Kojima, Minoru: See—
Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru 3,518,238.
- Kok, Pieter W., to U.S. Philips Corporation, mesne. Automatic X-radiation collimating apparatus responsive to film cassette size. 3,518,435, Cl. 250-105.
- Kokusai Denshin Denwa Kabushiki Kaisha: See—
Nakagome, Yukio, Amano, Katsutaro, and Ohta, Chuichi, 3,518,662.
- Kolb, Edgar C., to Honeywell Inc. Multi-position rotary actuating mechanism. 3,517,570, Cl. 74-527.
- Kolb, Robert H., and Langner, Carl G., to Shell Oil Company. Adjustable vessel pipe ramp with elastically flexible hinge joints. 3,517,519, Cl. 61-72.3
- Kollar, Ernest P., to International Business Machines Corporation. Reciprocating lens photocomposer. 3,517,592, Cl. 95-4.5
- Koller, Walter. Ashtray having resilient closures. 3,517,851, Cl. 220-20.5
- Kollock, David H.: See—
Irwin, Richard M., and Kollock, David H. 3,518,217.

- Kolznak, George A., and Row, Lancelot W., to National Lead Company. Method for producing an improved titanium dioxide pigment. 3,518,053, Cl. 23-202.
- Komizo, Hidemitsu: See—
Yunoki, Hisashi, Kudo, Tatsuo, Ito, Yukio, and Komizo, Hidemitsu 3,518,583.
- Konotchick, John A., Jr., to Sanders Associates, Inc. Pulse train detectors. 3,518,555, Cl. 328-110.
- Koontz, John Dana: See—
Ellert, Henry George, Robinson, James William, and Koontz, John Dana 3,518,319.
- Koretzky, Herman, to International Business Machines Corporation. Electrodeposition of iron group metals. 3,518,170, Cl. 204-43.
- Kozma, Sol A., Jr., to Comm-Tang Corporation. Commutator tool. 3,517,540, Cl. 72-414.
- Koznar, Jaroslav, to Naradi narodni podnik. Assembly for rolling cylindrical surfaces. 3,517,533, Cl. 72-76.
- Kraft, William A., to Singer Company, The. Tape reeling device. 3,517,895, Cl. 242-190.
- Kral, Fred G., to Bell & Howell Company. Magazine with readily removable cartridges. 3,517,896, Cl. 242-197.
- Krasa, Evzen: See—
Bezouska, Vlastimil, Pivnec, Jan, Hrdlicka, Jiri, Krasa, Evzen, and Smekal, Zdenek 3,518,507.
- Kresge, James S., and Miske, Stanley A., Jr., to General Electric Company. Triggering circuit for spark gap assemblies. 3,518,492, Cl. 317-68.
- Kripp, Robert M., to Esquire, Inc. Recessed light fixtures. 3,518,420, Cl. 240-78.
- Krofta, Milo. Device for cutting sheet material. 3,517,578, Cl. 83-98.
- Krohn, Henry W.: See—
Hawkes, Joseph S., Krohn, Henry W., and Rudwell, William C. 3,517,710.
- Krone, Russell R. Rotor drum contact construction with integral molded insulation spacer means. 3,518,382, Cl. 200-24.
- Kroneder, John G., and Leyshon, David W. Beneficiation treatment of phosphate rock for preparation of fertilizers and other products. 3,518,072, Cl. 71-41.
- Krosby, Johannes Anders, to Kvarner Brugs Kjoelavdeling A/S. Heat exchangers. 3,517,734, Cl. 165-178.
- Krug, Robert W., to Zenith Radio Corporation. Two-stage DC coupled video amplifier. 3,518,361, Cl. 178-54.
- Krug, Robert W., to Zenith Radio Corporation. Chrominance demodulator system for color television. 3,518,364, Cl. 178-54.
- Kruse, Robert C., to Tucci, Gertrude H., d/b/a Poersch Metal Manufacturing Company. Radiation protective fall construction and clad furring strips therefor. 3,517,627, Cl. 109-82.
- Kucera, Clement M.: See—
Wright, Robert R., Barbee, John P., and Kucera, Clement M. 3,517,953.
- Kudo, Tatsuo: See—
Yunoki, Hisashi, Kudo, Tatsuo, Ito, Yukio, and Komizo, Hidemitsu 3,518,583.
- Kuecken, John A., to General Dynamics Corporation. Orthogonal antenna system with multiple channels. 3,518,692, Cl. 343-797.
- Kuecken, John A., to General Dynamics Corporation. Antenna system. 3,518,694, Cl. 343-848.
- Kuehn, Richard T.: See—
Barson, Fred, Kuehn, Richard T., and Palmer, Myron D. 3,518,084.
- Kues, Henry A., Jr., and Murphy, John C., to United States of America, Navy. Crystal growth in aqueous solution utilizing complexing agents. 3,518,049, Cl. 23-50.
- Kuhl, Ivy B.: See—
Kuhl, Philip J., and Kuhl, Ivy B. 3,517,635.
- Kuhl, Philip J., and Kuhl, Ivy B. Gopher chaser apparatus. 3,517,635, Cl. 116-22.
- Kuhn, Richard B., to North American Rockwell Corporation. Apparatus and information processing methods for a tracking system tracker unit. 3,518,369, Cl. 178-68.
- Kulling, Achim, and Steinhausen, Helmut, to Titangesellschaft m.b.H. Process for the manufacture of a titanium dioxide concentrate. 3,518,054, Cl. 23-202.
- Kulp, John L., to United States of America, Army, mesne. Precision phase-amplitude demodulator using two pairs of transistors with isolation between each pair. 3,518,559, Cl. 329-101.
- Kunkel, Lorenz V., to Pan American Petroleum Corporation. Method of inhibiting corrosion in sour gas sweetening systems. 3,518,048, Cl. 23-2.
- Kushmuk, Walter P., and Bogaerts, Leo C., to Ammco Tools, Inc. Wheel support for balancer. 3,517,558, Cl. 73-485.
- Kussy, Frank W.: See—
Platz, Elwood T., Kussy, Frank W., and Witzmann, Gustav 3,518,597.
- Kvarner Brugs Kjoelavdeling A/S: See—
Krosby, Johannes Anders, 3,517,734.
- Kweller, Esher R.: See—
Staats, William R., Rosenberg, Robert B., and Kweller, Esher R. 3,518,036.
- Kyburz, Emilio: See—
Brossi, Arnold, Gerecke, Max, and Kyburz, Emilio 3,518,283.
- Kytta, Oswald O., to Bendix Corporation, The. Servomotor and valve means. 3,517,588, Cl. 91-369.
- Lach, Richard F.: See—
Games, John E., Lach, Richard F., and Towey, James P. 3,518,564.
- Laguerre, Rene, to Commissariat a l'Energie Atomique. Device for pulse shape discrimination. 3,518,429, Cl. 250-71.5.
- Laird, William F., and Rosenstein, Nathan, to Allied Chemical Corporation. Unwinding device for a ball warp package. 3,517,892, Cl. 242-54.
- Lake, John E., to General Electric Company. Split seal ring assembly for compressors. 3,518,020, Cl. 415-111.
- Lake, John E., and Elwell, Richard C., to General Electric Company. Thrust bearing for compressor. 3,518,021, Cl. 415-172.
- Lambert, Abraham D.: See—
Springer, Leonard, and Lambert, Abraham D. 3,517,660.
- Lambert, Gordon C., Shoemaker, Dick E., and Gann, Robert C., to New Castle Products, Inc. Vertically adjustable clamping assembly for a desk or the like. 3,517,626, Cl. 108-144.
- Lamming, Jack Stewart, to U.S. Philips Corporation, mesne. Planar transistor with substrate-base connection providing automatic gain control. 3,518,510, Cl. 317-235.
- Landbrecht, Franz: See—
Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann 3,517,595.
- Landis, George G., and Stearns, James B., to Lincoln Electric Company, The. Alternating current power source for electric arc welding. 3,518,403, Cl. 219-137.
- Landua, Alton J., and Lantz, William L., to Shell Oil Company. Powdered heat-curable epoxy resin compositions of (1) an adduct of a polyepoxide and an aromatic amine and (2) 3-aminopyridine. 3,518,220, Cl. 260-37.
- Langford, Obie M., to Texaco Inc. Well logging system. 3,518,623, Cl. 340-18.
- Langlitz, Karl-Heinz: See—
Mahringer, Heinrich-Karl, and Langlitz, Karl-Heinz 3,517,771.
- Langner, Carl G.: See—
Kolb, Robert H., and Langner, Carl G. 3,517,519.
- Lanternier, Andre, to De Wendel & Cie Societe Anonyme. Flanged structural assembly. 3,517,474, Cl. 52-732.
- Lantz, William L.: See—
Landua, Alton J., and Lantz, William L. 3,518,220.
- Lanux, Claude Pascal, to La Telemecanique Electrique. Box for cartridge fuses with fuse ejector. 3,518,599, Cl. 337-186.
- Larko, Robert C.: See—
Ross, Robert H., Roth, Willard, Larko, Robert C., and Swartzfager, Walter G. 3,517,916.
- Larson, Clarence E.: See—
Anthony, Ralph J., Larson, Clarence E., and Gates, Robert H. 3,517,424.
- La Telemecanique Electrique: See—
Lanux, Claude Pascal, 3,518,599.
- Latour, Andre, to Magrini-Fabbriche Riunite Magrini-Scarpa e Magnano M.S.M. S.p.A. Arc-quenching electrode assembly for high-power circuit breakers and switches. 3,518,387, Cl. 200-144.
- Lauer, George E. Article sorting and conveying system. 3,517,808, Cl. 209-73.
- Laurenty, Francois. Installations for crystallization of a substance in solution, especially anhydrous sodium sulfate. 3,518,061, Cl. 23-273.
- Lauro, Luciano: See—
Pomella, Piero, and Lauro, Luciano 3,518,513.
- Lausch, Henry N., Halls, Lawrence M., Harer, Delmar C., and McCarthy, Horace G., to Sperry Rand Corporation. Header suspension mounting for pull-type harvesters. 3,517,491, Cl. 56-23.
- LaValley, William R.: See—
Schick, William F., LaValley, William R., Elfving, Claes T., and Wahl, Marvin L. 3,518,690.
- Laville, Andre Henri, and Maillard, Francis Henri Marie Joseph, to Sud-Aviation Societe Nationale de Constructions Aeronautiques. Lift and propulsion device for a jet aircraft of the hybrid helicopter-autogyro type. 3,517,898, Cl. 244-7.
- Lavin, Edward, Markhart, Albert H., and Kass, Robert E., to Monsanto Company. Novel polyimide forming mixtures. 3,518,219, Cl. 260-334.
- Lawrence, Philip L., and Nipper, Jack T., to Mobil Oil Corporation. Method of dynamically equalizing the gain of seismic signals. 3,518,678, Cl. 340-15.5.
- Lawrence, Ray V.: See—
Schuller, Walter H., Minor, Jacob C., Lawrence, Ray V., and Kanono, Hideo 3,518,282.
- Layne, Gilbert S., Huml, James O., and Smith, Richard Dale, to Dow Chemical Company, The. Process for the electrolysis of aluminum chloride. 3,518,172, Cl. 204-67.
- Layton, Grover C., deceased (by Layton, Stella, administratrix), to First National Bank of Dunedin, Fla., Trustee. Food preserving process. 3,518,096, Cl. 99-154.
- Layton, Stella: See—
Layton, Grover C. 3,518,096.
- Lazzeroni, Edward J., to Case, J. I., Company. Counter-weight attachment for a tractor. 3,517,941, Cl. 280-150.
- Lear Siegler, Inc.: See—
Will, Christian H., Jr., 3,517,563.
- Leathem, Douglas B., to United-Carr Incorporated, mesne. Switch-controlled dual function indicator. 3,518,485, Cl. 315-129.

- LeBeau, Katherine Marie. Fluid operated zipper. 3,517,423, Cl. 24-207.
- Lectromagnetics Inc.: See—
Luce, Carl T., 3,518,355.
- Lee Corporation: See—
Barke, John L., Du Vivier, Charles L., Odion, John R., and Pallat, Ludwig R., 3,518,622.
- Lee, John F. Environment survival capsule. 3,517,401, Cl. 9-14.
- Lee, Max Nai Yuen, and Schoofs, Richard Joseph, to Union Carbide Corporation. Selective adsorption process. 3,517,484, Cl. 55-73.
- Lee, Shih-Ying, and Li, Yao T. Mechano-electrical transduction system having a pair of electrical sensing networks arranged to be triggered alternatively. 3,518,536, Cl. 324-57.
- Leedom, Marvin A.: See—
Johnson, Sigurd W., and Leedom, Marvin A. 3,517,596.
- Leedom, Marvin A., to RCA Corporation. Electrophotographic apparatus. 3,517,994, Cl. 355-16.
- Leeds & Northrup Company: See—
Davis, Elwood T., 3,518,430.
- Leeson, William G.: See—
Hogg, Derek, and Leeson, William G. 3,517,723.
- Leesona Corporation: See—
Katsoulis, Emanuel G., and Prescia, John J., 3,518,123.
- Leifheit, Gunter, and Liebscher, Johannes, to Gunter Leifheit K.G. Carpet sweepers. 3,517,404, Cl. 15-42.
- Leiga, Algrid G.: See—
Gallo, Charles F., and Leiga, Algrid G. 3,517,995.
- Leinberger, Merton C., and Peters, Richard T., to National Cash Register Company, The. Random access data store. 3,518,645, Cl. 340-174.1.
- Leistriz, Hans Karl. Device for producing an exhaust gas-oil mixture to be supplied to a main burner of a nozzle-free oil-gasifying burner installation. 3,518,035, Cl. 431-207.
- Leitz, Ernst, G.m.b.H.: See—
Holle, Werner, 3,517,992.
- Leitz, Louis: See—
Sext, Gerhard, and Ziegler, Eugen, 3,517,854.
- Lello, Giles S., and Lowe, Paul V., to Globe Union Inc. Storage battery plates and method of manufacture. 3,518,120, Cl. 136-26.
- Lengnick, Guenther Fritz: See—
Pande, Kailash Chandra, and Lengnick, Guenther Fritz 3,518,286.
- Lenzo, Pascal V.: See—
Ballman, Albert A., Lenzo, Pascal V., and Spencer, Edward G. 3,518,634.
- Les Travaux Soterrains: See—
Montacie, Marcel, 3,517,966.
- Leshner, George Y., to Sterling Drug Inc. Certain 1,4-dihydro-8-[2-(5-nitro-2-furyl) vinyl or lower alkylene]-4-oxo-1,7-naphthyridine-3-carboxylates. 3,518,259, Cl. 260-240.
- Leutwyler, Kurt, and Falanga, John C., Jr., to Baker Oil Tools, Inc. Gravity valve. 3,518,027, Cl. 417-65.
- Leventhal, Robert S., to United States of America, Navy, mesne. Load and rate of change of load detection system. 3,517,550, Cl. 73-88.5.
- Levi Strass & Co.: See—
Michaels, Sidney, 3,517,864.
- Levy, Eugene J., to Hewlett-Packard Company. Method and apparatus for determining chemical structure. 3,518,059, Cl. 23-232.
- Lewin, Seymour Z., to Warner-Lambert Pharmaceutical Company. Dry heating process for preparation of antacid compounds. 3,518,064, Cl. 23-315.
- Lewis, Arthur M. Safety pin. 3,517,421, Cl. 24-162.
- Lewis, John G., to Emerson Electric Co. Motor lead connector box. 3,518,616, Cl. 339-107.
- Lewis, Sheldon N.: See—
Swithenbank, Colin, Lewis, Sheldon N., and Viste, Kenneth L. 3,518,304.
- Leyshon, David W.: See—
Kroneder, John G., and Leyshon, David W. 3,518,072.
- Li, Yao T.: See—
Lee, Shih-Ying, and Li, Yao T. 3,518,536.
- Lichtenberger, Harold V., to Combustion Engineering, Inc. Nuclear reactor control element drive apparatus. 3,518,162, Cl. 176-36.
- Liebscher, Johannes: See—
Leifheit, Gunter, and Liebscher, Johannes 3,517,404.
- Lieffring, Gordon V., to Robo-Wash, Inc. Swivel apparatus. 3,517,694, Cl. 137-560.
- Lilly, Eli, and Company: See—
Soper, Quentin F., 3,518,309.
- Spencer, John L., and Ryan, Charles W., 3,518,260.
- Tilak, Manohar A., and Hollinden, Charles S., 3,518,240.
- Wright, William L., 3,518,076.
- Lincoln Electric Company, The: See—
Landis, George G., and Stearns, James B., 3,518,403.
- Lind, Hans V.: See—
Bunting, Ernest V., and Lind, Hans V. 3,517,943.
- Lind, Laurel Raymond, to Magnavox Company, The. Balanced FM detector with variable resistance loads. 3,518,561, Cl. 329-130.
- Linde Aktiengesellschaft: See—
Von Saldern, Rudiger, Ehms, Hermann, and Weigert, Johann, 3,517,850.
- Lindelow, Claes-Goran: See—
Englund, Roland Gosta, Mattsson, Mats Erik, and Lindelow, Claes-Goran 3,517,877.
- Lindmark, Karl Signar. Method of joining logs and the resulting structure with a clamp used therein. 3,517,471, Cl. 52-233.
- Lindquist, Arvin B., Pricer, Wilbur D., and Seiber, Robert R., to International Business Machines Corporation. Associative memory system which can be addressed associatively or conventionally. 3,518,631, Cl. 340-172.5.
- Lindstedt, Kurt, and Kirchhoff, Kurt, to Isco Optische Werke GmbH. Anamorphic objective. 3,517,984, Cl. 350-181.
- L'Institut de Microbiologie et d'Hygiene de l'Universite de Montreal: See—
Pavlanis, Vytautas, Marois, Paul, Boudreault, Armand, and Gilker, Jean Claude, 3,518,347.
- Litton Systems, Inc.: See—
Fonda-Bonardi, Giusto, 3,517,982.
- Lloyd, Norman C.: See—
Pearce, Christopher A., Glamorgan, Wales, and Lloyd, Norman C. 3,518,289.
- Pearce, Christopher A., and Lloyd, Norman C. 3,518,290.
- Lockheed Aircraft Corporation: See—
Bosworth, Melvin B., Bowman, Douglas F., Sparkes, Harry P., and Young, Clarence A., 3,518,617.
- Robillard, Robert J., 3,517,569.
- Schmidt, Jacob, Baumstein, Lee, and James, Arthur M., 3,518,025.
- Sparkes, Harry P., Bowman, Douglas F., and Pusateri, Anthony J., Jr., 3,518,615.
- Vernon, Richard L., 3,517,899.
- Logan, Raymond N., to Broadway Finance Corporation. Centrifugal molding method for making facing for building blocks. 3,518,342, Cl. 264-257.
- Logma Aktiebolag: See—
Jorgensen, Karl-Gunnar, 3,517,839.
- Loix, Gilbert L. Foldable ladder. 3,517,770, Cl. 182-96.
- Lombardo, Daniel F., to Picker Corporation. X-ray tube rotatable anode control circuit with means to sense and control anode motor current. 3,518,434, Cl. 250-93.
- Lombardo, Peter, Moley, Edmund, and Whelehan, James, to Cutler-Hammer, Inc. High idler diode parametric amplifier. 3,518,562, Cl. 330-49.
- Lonnegren, Bruno L., and Davidson, Trevor O., to Bucyrus-Erie Company. Roller bearing construction. 3,517,975, Cl. 308-227.
- Lovell, John A., and Graham, Earl C., to Goodyear Tire & Rubber Company, The. Shaped articles from polyurethanes cured with phenol blocked polyisocyanates. 3,518,139, Cl. 156-112.
- Lowe, Paul V.: See—
Lello, Giles S., and Lowe, Paul V. 3,518,120.
- Lowenthal, Herman, to Morgan, R. A., Co., Inc. Lens system for use in the near ultraviolet light range. 3,517,979, Cl. 350-2.
- Lubow, Raymond. Vibrato system with variable speed signal storage disc. 3,518,354, Cl. 84-125.
- Lubrizol Corporation, The: See—
Forsberg, John W., 3,518,129.
- Forsberg, John W., 3,518,326.
- Lucas, Joseph, (Industries) Limited: See—
Ifield, Richard Joseph, 3,517,690.
- Lucca, Salvatore: See—
Merker, Reuven, and Lucca, Salvatore 3,518,171.
- Luce, Carl T., to Lectromagnetics Inc. Electromagnetic shield. 3,518,355, Cl. 174-35.
- Luckert, Hans: See—
Hecht, Joachim, Luckert, Hans, and Rufer, Hans-Ruedi 3,518,112.
- Luebke, George C. Earth mount assembly. 3,517,470, Cl. 52-157.
- Lugash, Max J., to Maxon Industries, Inc. Power loader for vehicles with transfer plate. 3,517,838, Cl. 214-77.
- Luijten, Willem Jacob: See—
Broekema, Heiko, Luijten, Willem Jacob, Wolf, Gerrit, and van Dijkum, Adalbertus Hermanus Jacobus Nieveen 3,518,565.
- Lukich, Lewis T.: See—
Endter, Norman G., Meier, Charles N., and Lukich, Lewis T. 3,517,722.
- Lundell, Vernon J., to Massey-Ferguson Services N.V. Machine for compacting forage crops. 3,517,488, Cl. 56-1.
- Lungo, Antonio, to Clevite Corporation. Filter assembly. 3,518,470, Cl. 310-82.
- Lunig, Hermann Karl, to DEMAG-Elektrometallurgie G.m.b.H. Control method and control system for batch-like electric melting furnace. 3,518,350, Cl. 13-12.
- Luthi, Oscar, to Improved Machinery Inc. Rotary drum filter. 3,517,818, Cl. 210-392.
- Lutz, Eugene F., to Shell Oil Company. Preparation of β -hydroxypropionaldehyde and β -alkoxypropionaldehydes. 3,518,310, Cl. 260-602.
- Lyman, Brooks, and O'Keefe, Robert F., to Pitney-Bowes, Inc. Fluid oscillator system. 3,517,686, Cl. 137-81.5.
- MacGugan, Ian C., to Wyandotte Chemicals Corporation. Polyurethane latices as paper-making additives. 3,518,113, Cl. 117-155.
- MacLam, James A.: See—
Carrigan, William H., and MacLam, James A. 3,518,334.
- MacMaster, Malcolm D., and Morris, Herbert R., to Emhart Corporation. Refrigerated equipment. 3,517,526, Cl. 62-256.
- Magnavox Company, The: See—
Horowitz, Maurice, and Myers, Clinton S., 3,517,399.
- Lind, Laurel Raymond, 3,518,561.

- Magnus & Co. A/S: See—
Magnus, Hans Petter, 3,517,530.
Magnus, Hans Petter, to Magnus & Co. A/S. Process for producing knitted articles having loop formations. 3,517,530, Cl. 66-85.
Magrini-Fabbriche Riunite Magrini-Scarpa e Magnano M.S.M. S.p.A.: See—
Latour, Andre, 3,518,387.
Maher, Philip K., and Mc Daniel, Carl V., to Grace, W. R., & Co. Preparation of thermal stable synthetic zeolites. 3,518,051, Cl. 23-111.
Mahringer, Heinrich-Karl, and Langlitz, Karl-Heinz, to Demag Aktiengesellschaft. Movable platform between metallurgical furnaces. 3,517,771, Cl. 182-141.
Maier, Ludwig, to Monsanto Company. Diorgano-aminomethylphosphine sulfides and process. 3,518,262, Cl. 260-247.1
Maier, Ludwig, to Monsanto Company. Process for exchanging halogen for hydrocarbon radicals in compounds containing a thiophosphorus halide group. 3,518,303, Cl. 260-543.
Maier, Ludwig, to Monsanto Company. Tertiary phosphine sulfides and process for preparing. 3,518,311, Cl. 260-606.5
Maier, Ludwig, to Monsanto Company. Methylene bis(dialkyl phosphines). 3,518,312, Cl. 260-606.5
Maier, Robert W.: See—
Hilty, Lloyd W., and Maier, Robert W. 3,517,576.
Maillard, Francis Henri Marie Joseph: See—
Laville, Andre Henri, and Maillard, Francis Henri Marie Joseph 3,517,898.
Main, Lauren O., to Oster, John, Manufacturing Co. Control means for blender or the like. 3,518,523, Cl. 318-443.
Maintenance-Free Machines, Inc.: See—
Flygare, Melvin E., 3,517,919.
Makin, Earle C., Jr.: See—
Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr. 3,518,322.
Malkin, Edwin Steel. Game ball. 3,517,933, Cl. 273-63.
Mallory, P. R., & Co., Inc.: See—
Baer, Charles A., 3,517,644.
Camenzind, Hans R., 3,518,458.
Shepherd, Harold D., and Anderson, Daniel J., 3,518,499.
Manko, Howard H., to Alpha Metals, Inc. Method of making a microminiature connector. 3,517,439, Cl. 29-630.
Man-Mark Projects Limited: See—
Hillis, Donald A., 3,517,855.
Marans, Nelson S., and Jaffe, Fred, to Grace, W. R., & Co. Preparation of polyoxymethylene using high energy radiation. 3,518,177, Cl. 204-159.21
Marcum, Charles R., to General Equipment and Manufacturing Company, Inc. Magnetic-pneumatic proximity switch. 3,517,699, Cl. 137-625.64
Margereson, Gregory John: See—
Bennison, Michael Newstead, and Margereson, Gregory John 3,517,630.
Marin, Paul J. Method for forming improved concrete structure. 3,518,331, Cl. 264-35.
Mark Products, Inc.: See—
Florian, Eugene F., 3,518,677.
Markhart, Albert H.: See—
Lavin, Edward, Markhart, Albert H., and Kass, Robert E. 3,518,219.
Markin, Joseph: See—
Fein, Michael E., Markin, Joseph, and Sobel, Alan 3,517,983.
Marks, Alvin M. Charged aerosol power conversion device and method. 3,518,461, Cl. 310-10.
Marois, Paul: See—
Pavlanis, Vytautas, Marois, Paul, Boudreault, Armand, and Gilker, Jean Claude 3,518,347.
Martell, Michael Joseph, and Ross, Adma Schneller, to American Cyanamid Company. 7- and/or 9-(N-nitrosoalkylamino)-6-demethyl-6-deoxytetracyclines. 3,518,306, Cl. 260-559.
Martens, George D., to Automation Industries, Inc. Material tester and recorder. 3,518,697, Cl. 346-33.
Martin, Graham D., to Atlas Chemical Industries, Inc. Axially expandable and contractable container. 3,517,616, Cl. 102-24.
Martin, Leonard M., to Colson Corporation, The. Lateral loading apparatus for storage and retrieval of stacked goods. 3,517,845, Cl. 214-730.
Martin-Marietta Corporation: See—
Anthony, Ralph J., Larson, Clarence E., and Gates, Robert H., 3,517,424.
Martins, Wagner Waneck: See—
Picchia, Walter Del, and Martins, Wagner Waneck 3,518,497.
Maruta, Iwao: See—
Iida, Akihiko, and Maruta, Iwao 3,518,313.
Maschinenfabrik Goebel G.m.b.H.: See—
Herd, Josef, and Jacob, Hans Helmut, 3,517,589.
Maschinenfabrik Oerlikon: See—
Storsand, Bjarne, 3,518,469.
Maskell, Clifford William Alfred, to United Kingdom Atomic Energy Authority. Hollow cathode discharge device with control electrode for electron beam focusing. 3,518,484, Cl. 315-111.
Massachusetts Institute of Technology: See—
Oppenheim, Alan V., and Stockham, Thomas G., Jr., 3,518,578.
Massey, Roger G.: See—
Cowles, John H., and Massey, Roger G. 3,517,965.
Massey-Ferguson Inc.: See—
Bunting, Ernest V., and Lind, Hans V., 3,517,943.
Massey-Ferguson Services N.V.: See—
Lundell, Vernon J., 3,517,488.
Mathews, Bernard C. Snapper mechanism and corn harvester embodying same. 3,517,490, Cl. 56-18.
Mathews, Howard Hume, to Air Reduction Company, Incorporated. Electric arc pulsing. 3,518,401, Cl. 219-131.
Mathewson Corporation: See—
Wanzer, Arthur W., 3,517,633.
Mathewson, Wilfred F., Jr.: See—
Wright, Archibald Nelson, and Mathewson, Wilfred F., Jr. 3,518,111.
Matsuno, Shiro, and Kobayashi, Yoshio, to Yuasa Battery Company Limited. Deferred action battery. 3,518,126, Cl. 136-100.
Matsuoka, Hiroo: See—
Egashira, Shohachi, and Matsuoka, Hiroo 3,518,055.
Matsushima, Hisashi: See—
Ozono, Toshiro, and Matsushima, Hisashi 3,517,522.
Matsushita Electric Industrial Co., Ltd.: See—
Amano, Noboru, and Sasaki, Hirotsuka, 3,518,539.
Yamashita, Akio, and Tanaka, Masaru, 3,518,508.
Matsuura, Kazuo: See—
Miyoshi, Mituji, Matsuura, Kazuo, and Otsuki, Yutaka 3,518,213.
Mattia, Michael, and Tompkins, William T., to Budd Company, The. Method of making abrasive tools by electro-deposition. 3,517,464, Cl. 51-309.
Mattsson, Mats Erik: See—
Englund, Roland Gosta, Mattsson, Mats Erik, and Lindelow, Claes-Goran 3,517,877.
Mauduit, Christian Camille Jules, and Maury, Christian Gerard, to Compagnie des Compteurs. Apparatus for regenerating timer pulses in the processing of binary information data. 3,518,456, Cl. 307-269.
Maury, Christian Gerard: See—
Mauduit, Christian Camille Jules, and Maury, Christian Gerard 3,518,456.
Maxfield, Charles C.: See—
Snyder, Joseph T., Maxfield, Charles C., Skinner, Francis H., and Whitwell, James A. 3,517,954.
Maxon Industries, Inc.: See—
Lugash, Max J., 3,517,838.
Mayer, Frank, & Associates, Inc.: See—
Crosslen, Louis John, and Vicenzi, Elio, 3,517,827.
McAllister, William D., to Federal Bearings Co., Inc., The. Bearing locking device. 3,517,976, Cl. 308-236.
McAuliffe, Gerald K., to North American Rockwell Corporation. Carrier phase lock apparatus using correlation between received quadrature phase components. 3,518,680, Cl. 343-205.
McBride, Richard A.: See—
Huggett, George R., McBride, Richard A., and Augustine, Larry J. 3,518,531.
McBroom, Everal B., Jr.: See—
Sebok, Albert L., Porter, John H., and McBroom, Everal B., Jr. 3,518,475.
McCarty, Horace G.: See—
Lausch, Henry N., Halls, Lawrence M., Harer, Delmar C., and McCarty, Horace G. 3,517,491.
McCarty, William R., Jr.: See—
Hanna, John W., McCarty, William R., Jr., and Dolter, Paul A. 3,518,667.
McClaskey, Frank L. Cargo container locking assembly. 3,517,621, Cl. 105-366.
McClister, Harry A., deceased (by McClister, Ruth W., executrix), and Fidelity Bank, The, executor. Powered scorer for bowling. 3,517,878, Cl. 235-114.
McClister, Ruth W.: See—
McClister, Harry A., and Fidelity Bank, The, executor 3,517,878.
McClure, William M., Jr., to North American Rockwell Corporation. Tape motion for shuttleless looms. 3,517,705, Cl. 139-122.
McConnell, William R.: See—
Johnson, Alfred H., and McConnell, William R. 3,517,438.
McCracken, Donald G., to Aeroquip Corporation. Swivel joint. 3,517,952, Cl. 285-276.
Mc Daniel, Carl V.: See—
Maher, Philip K., and Mc Daniel, Carl V. 3,518,051.
McDonald, Lawrence T.: See—
Bourne, Richard T., and McDonald, Lawrence T. 3,518,141.
McDonald, Leighton S., to Dow Chemical Company, The. Stabilized 1,1,1-trichloroethane composition. 3,518,202, Cl. 252-171.
McDonald's System, Inc.: See—
Hursch, James R., Weimer, Ralph E., Miller, Dye O., Jr., and Weiss, Frank F., 3,517,605.
McDonnell Douglas Corporation: See—
Burdin, Clifford, Clarke, James D., Gehris, James D., and Whitaker, Johnnie L., 3,518,016.
Fortenberry, John D., 3,517,583.
Hamilton, Vern E., 3,518,137.
McElroy, Clifford T. Panel-treating process. 3,518,105, Cl. 117-46.
McFee, Richard. Apparatus and method for determining the capacitance and conductance of capacitors. 3,518,537, Cl. 324-60.
McGillion, Robert W., and Owen, William S., Jr., to Eastman Kodak Company. Fade-in, fade-out control. 3,517,990, Cl. 352-91.
McGrath, Joseph J., and Strange, Harold O., to Gulf Research & Development Company. Lubricating composition. 3,518,194, Cl. 252-47.5

- McGrath, Paul F., and Otto, Stanley W., to Hallmark Cards, Incorporated. Decorative spectacle frame cover and method and apparatus for producing same. 3,517,415, Cl. 18-19.
McGraw-Edison Company: See—
Urani, Angelo, 3,518,600.
McKnight, William B.: See—
Otto, William F., and McKnight, William B. 3,518,569.
McLeod, Robert Beaton, and Weld, Foster Earle, to Gulf & Western Systems Company, meane. Polarized alarm and communication monitoring system. 3,518,378, Cl. 179-5.
McRoskey, Catherine: See—
Carley, James A., McRoskey, Leonard H., and Parsons, Robert Q., 3,518,384.
McRoskey, John W.: See—
Carley, James A., McRoskey, Leonard H., and Parsons, Robert Q., 3,518,384.
McRoskey, Leonard H.: See—
Carley, James A., McRoskey, Leonard H., and Parsons, Robert Q. 3,518,384.
McWilliams, Gerald E.: See—
Haber, Charles P., and McWilliams, Gerald E. 3,518,121.
Meacham, James Frank, to I-T-E Imperial Corporation. Molded meter socket. 3,518,495, Cl. 317-108.
Mead Corporation, The: See—
Stout, James T., 3,517,876.
Meier, Charles N.: See—
Endter, Norman G., Meier, Charles N., and Lukich, Lewis T. 3,517,722.
Meininger, Fritz, and Steuernagel, Hans Helmut, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Azo dyestuffs and their metal complex compounds. 3,518,245, Cl. 260-150.
Melenic, John A. Self-starting valveless resonant pulse-jet engine and method. 3,517,510, Cl. 60-249.
Meltzer, Robert I.: See—
Brown, Richard E., and Meltzer, Robert I. 3,518,269.
Menault, Jacques A.: See—
Burellier, Georges J., and Menault, Jacques A. 3,517,498.
Menzi, Robert, and Giddey, Claude, to Georges Lesieur & ses Fils. Method of producing dehydrated fried potatoes. 3,518,097, Cl. 99-207.
Merard, Rene. Electrically energized device for pumping crystal lasers having the laser crystals within a housing containing an ionizable gas. 3,518,568, Cl. 331-94.5
Merck & Co., Inc.: See—
Chemerda, John M., and Slettinger, Meyer, 3,518,280.
Merker, Reuben, and Lucca, Salvatore, to Metalux Corporation, The. Purification of nickel electroplating solutions. 3,518,171, Cl. 204-49.
Mertgen, Lothar, and Schabel, Joachim, to Diersch & Schroder. Method and apparatus for making foam backed carpets. 3,518,102, Cl. 117-10.
Messer, Chester R., to Page Belting Company. Check strap assembly. 3,517,706, Cl. 139-161.
Metallgesellschaft Aktiengesellschaft: See—
Hitzel, Hans, 3,517,817.
Metalux Corporation, The: See—
Merker, Reuben, and Lucca, Salvatore, 3,518,171.
Mettler Instrumente A.G.: See—
Hedger, John Henry, 3,517,763.
Mettler Instruments AG.: See—
Schurmann, Werner, 3,518,412.
Meyer, John E., Jr., to RCA Corporation. Coupling system for elemental panel array. 3,518,627, Cl. 340-166.
Meyer, Roy E. Tower elevator. 3,517,774, Cl. 187-6.
Meyer, Roy E. Elevator. 3,517,775, Cl. 187-12.
Meyer, Warren L.: See—
Tully, Frank R., and Meyer, Warren L. 3,517,968.
Meyn, Fredrik W. Procedure for continuous registration of the concentration of fibre suspensions. 3,518,003, Cl. 356-116.
Michaels, Sidney, to Levi Strauss & Co. Garment curing apparatus and method. 3,517,864, Cl. 223-57.
Michalechik, Michael, to Fairchild Camera and Instrument Corporation. Corona discharge charging of particles wherein a porous insulator is disposed between the corona electrodes. 3,518,488, Cl. 317-3.
Michelson, Irving, to American Safety Equipment Corporation. Method of treating a smoking composition to reduce undesirable products therefrom. 3,517,672, Cl. 131-140.
Miciukiewicz, Joseph F., to Pitney-Bowes, Inc. Combined copy paper pre-feed and timing mechanism for copying machines. 3,517,921, Cl. 271-8.
Microlab/FXR: See—
Augenblick, Harry A., and Vogler, John G., 3,518,546.
Midland Silicones Limited: See—
Pearce, Christopher A., Glamorgan, Wales, and Lloyd, Norman C., 3,518,289.
Pearce, Christopher A., and Lloyd, Norman C., 3,518,290.
Midland-Ross Corporation: See—
Weber, Hans B., 3,517,620.
Miles Laboratories, Inc.: See—
Cox, Peter H., 3,518,346.
Dines, Allen I., and Brown, Willard Gene, 3,518,345.
Strycker, Wallace Glenn, 3,518,274.
Welsh, Thomas Laurence, Peterson, Donald Leroy, Palermo, Blasey Thomas, and Hoss, George Carr, 3,518,343.
Welsh, Thomas Laurence, and Tomaich, George Ronald, 3,518,344.
Miles, Ray P. Ramps. 3,517,791, Cl. 193-41.
Millard, Frederick W., to GAF Corporation. Silver halide emulsions for lithography. 3,518,086, Cl. 96-66.4
Millen, Edward G., to Thiokol Chemical Corporation. Polysulfide sealant bonded to cementitious and asphaltic substrates. 3,518,107, Cl. 117-72.
Miller, Alton B. Beverage dispensing device. 3,517,859, Cl. 222-52.
Miller, Arnold, to North American Rockwell Corporation. Artificial ion cloud. 3,518,670, Cl. 343-18.
Miller, Arthur, Patrick, Gerard R., and Strassberg, Daniel D., to Hewlett-Packard Company. Signal rate converter. 3,518,558, Cl. 328-140.
Miller, Bernard, to American Cyanamid Company. Thiazolylphenyl phosphates. 3,518,279, Cl. 260-302.
Miller, Dye O., Jr.: See—
Hursch, James R., Weimer, Ralph E., Miller, Dye O., Jr., and Weiss, Frank F. 3,517,605.
Miller, Herman, Inc.: See—
Propst, Robert L., and Kelley, James O., 3,517,467.
Propst, Robert L., 3,517,825.
Miller, John A., and Nash, Donald H., to Bell Telephone Laboratories, Incorporated. Gyration circuit utilizing a plurality of cascaded pairs of insulated-gate, field effect transistors. 3,518,584, Cl. 333-80.
Miller, Joseph C.: See—
Boucher, Paul D., and Miller, Joseph C. 3,517,958.
Miller, Malan R. Clutch release and gear change mechanism for transmission. 3,517,788, Cl. 192-3.5
Miller, Thomas E. Dragline toy. 3,517,948, Cl. 294-55.
Millette, Raymond G.: See—
Vail, Jack J., and Millette, Raymond G. 3,517,957.
Mills, Norman Thomas, Jackson, Charles Richard, and Halley, James Wood, to Inland Steel Company. Method of introducing molten into a continuous casting mold. 3,517,726, Cl. 164-82.
Milton, Kirby M., and Goffe, Charles A., to Eastman Kodak Company. Lith-type emulsions containing a polyalkyleneoxy polymer and a 3-pyrazolidone developing agent. 3,518,085, Cl. 96-66.3
Milton Manufacturing Co., Inc.: See—
Pruss, Gilbert A., 3,518,538.
Minami, Shinsaku, Nakata, Minoru, Fujimoto, Katsuro, and Takae, Yoshiyuki, to Dainippon Pharmaceutical Co., Ltd. 2-[2-(5-Nitro-2-furyl)vinyl]pyridine derivatives and process for preparation thereof. 3,518,256, Cl. 260-240.
Minami, Shinsaku, and Shimizu, Masanao. Novel nitrofurans derivatives and process for their preparation. 3,518,257, Cl. 260-240.
Minegishi, Toyomasa. High speed water purifying apparatus. 3,517,814, Cl. 210-197.
Minick, Richard C., to TRW Inc. Power reduction of liquid ring pumps. 3,518,028, Cl. 103-113.
Ministerul Industriei Alimentare: See—
Nikolic, Vasile, 3,518,094.
Minnesota Mining and Manufacturing Company: See—
Ploss, William R., 3,517,664.
Minor, Jacob C.: See—
Schuller, Walter H., Minor, Jacob C., Lawrence, Ray V., and Kanno, Hideo 3,518,282.
Mintz, Michael D., to Purolator Products, Inc. Coalescer cartridge. 3,517,820, Cl. 210-491.
Mirtain, Henri, to Societe Francaise du Pneu Englebert. Sealing apparatus for shaping of radial tire carcasses. 3,518,149, Cl. 156-416.
Miske, Stanley A., Jr.: See—
Kresge, James S., and Miske, Stanley A., Jr. 3,518,492.
Mitchell, Bruce. Automatic water sprinkler control system. 3,517,684, Cl. 137-78.
Mitchell, Charles S., to Hewlett-Packard Company. Scanning apparatus for driving an electrostatic recording structure. 3,518,699, Cl. 346-74.
Mitsubishi Atomic Power Industries, Inc.: See—
Takahashi, Shuichiro, and Asami, Naoto, 3,517,413.
Mitsubishi Denki Kabushiki Kaisha: See—
Sakamoto, Tosiaki, 3,517,504.
Mitsubishi Jukogyo Kabushiki Kaisha: See—
Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu, 3,517,949.
Mitsubishi Rayon Co., Ltd.: See—
Haryu, Hiroshi, 3,518,341.
Mitsui Toatsu Chemicals Incorporated: See—
Ueno, Kisaburo, Hirose, Akira, Takazawa, Yoshio, and Yamamura, Tatsuya, 3,518,074.
Mitterer, Ernesto. Elbow cock with spray outlet nozzle for agricultural spraying machines. 3,517,888, Cl. 239-579.
Miyoshi, Mituji, Matsuura, Kazuo, and Otsuki, Yutaka, to Nippon Oil Company, Limited. Aqueous resinous coating compositions for electrophoretic deposition. 3,518,213, Cl. 260-22.
Mobil Oil Corporation: See—
Baldwin, Willett F., and Slover, Vaseil R., 3,518,679.
Lawrence, Philip L., and Nipper, Jack T., 3,518,678.
Rein, Burton M., 3,518,294.
Straus, Andrew J. D., and Zemanek, Joseph, Jr., 3,517,767.
Straus, Andrew J. D., 3,517,768.
Modder, Otto, and Schmidt, Arno, to Siegener Maschinenbau G.m.b.H. Rotary conveyor for rolled products. 3,517,800, Cl. 198-210.

- Modern Equipment Company: See—
Dell'Agnes, David E., and Tinker, Townsend, 3,517,485.
- Modern Mining Machinery Limited: See—
Clarke, Trevor G., Bowden, Ernest R.L., and Tustin, Oliver A., 3,517,967.
- Mogle, Rodman A.: See—
Bathrick, John R., Jr., George, Fred A., and Mogle, Rodman A., 3,518,493.
- Mohr, Alfred V.: See—
Babbitt, Saul A., and Mohr, Alfred V., 3,517,667.
- Mohr, Reinhard: See—
Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spieb, Bernhard, and Hohmann, Kurt, 3,518,244.
- Mohr, Reinhard, and Ostermeier, Johann, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for dyeing and printing polymerisates and mixed polymerisates of acrylonitrile, 3,518,039, Cl. 8-41.
- Moley, Edmund: See—
Lombardo, Peter, Moley, Edmund, and Whelehan, James, 3,518,562.
- Molins Machine Company Limited: See—
Thornton, Leonard, 3,517,477.
- Williamson, David Theodore Nelson, Crosland, Richard Graham, and Christal, Philip Richard, 3,517,430.
- Molnar, James V., to Singer Company, The. Speed control circuits with line voltage compensation for D. C. motors, 3,518,520, Cl. 318-331.
- Monogram Models, Inc.: See—
Reder, Robert, and Behrends, Jack Richard, 3,517,456.
- Monsanto Company: See—
Barker, George E., 3,517,556.
- Beckham, Rodney D., Davis, George D., and Makin, Earle C., Jr., 3,518,322.
- Burleson, James C., and Yates, William F., 3,518,178.
- Cohen, Saul M., and Young, Raymond H. Jr., 3,518,235.
- Fitch, Steven Joseph, and Irani, Riyad R., 3,518,200.
- Gieseking, Carl W., 3,518,314.
- Hersh, Solomon P., Boe, Norman W., and Stow, George C., Jr., 3,518,138.
- Kenyon, Allen S., and Slocombe, Robert J., 3,518,221.
- Lavin, Edward, Markhart, Albert H., and Kass, Robert E., 3,518,219.
- Maier, Ludwig, 3,518,262.
- Maier, Ludwig, 3,518,303.
- Maier, Ludwig, 3,518,311.
- Maier, Ludwig, 3,518,312.
- Plyler, Everett L., 3,518,104.
- Monsanto Europe S.A.: See—
Visnovsky, Lubomir, 3,518,103.
- Monson, Donald R., Keller, Darryl E., and Rothman, James C., to Donaldson Company, Inc. Deflecting element for centrifugal separators, 3,517,821, Cl. 210-512.
- Montacie, Marcel, to Les Travaux Soterrains. Guiding system for a boring machine, 3,517,966, Cl. 299-1.
- Monti, Anthony: See—
Harding, Fred H., Horowitz, Reuben, and Monti, Anthony, 3,518,095.
- Moody, Jay H.: See—
Andelin, John Philip, and Moody, Jay H., 3,518,164.
- Moore, Robert E.: See—
Duling, Irl N., Schneider, Abraham, and Moore, Robert E., 3,518,241.
- Moore, Stephen G. Powered retracting bed construction, 3,517,397, Cl. 5-147.
- Moorehead, Donovan L., and Patterson, Dan W., to Urban Scientific Corporation. Mobile unit locating system, 3,518,674, Cl. 343-112.
- Morf, Ernest. Method of and apparatus for checking the tightness of a watchcase, 3,517,547, Cl. 73-45.5
- Morfax Limited: See—
Moss, Brian Yoxall, 3,518,514.
- Morgan, R. A., Co., Inc.: See—
Lowenthal, Herman, 3,517,979.
- Morgan, Zeulon V.: See—
Hagy, Robert W., Morgan, Zeulon V., and Northcraft, Robert L., 3,518,207.
- Morgenstern, Manfred: See—
Thiersch, Friedrich, and Morgenstern, Manfred, 3,517,837.
- Mori, Eiji, Ide, Masao, and Kaneko, Seiji. Method for welding plastic members, 3,518,136, Cl. 156-73.
- Mori, Mitsutoshi: See—
Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke, 3,518,696.
- Mork, George W., and Novotny, Carl F., to Bucyrus-Erie Company. Hydraulic actuated clamshell bucket attachment for stick clam excavators or the like, 3,517,960, Cl. 294-70.
- Morkoski, James: See—
Scarnato, Thomas J., Goron, Paul C., and Morkoski, James, 3,517,492.
- Morkoski, James, to International Harvester Company. Flexible gang harrow, 3,517,751, Cl. 172-572.
- Morris, Herbert R.: See—
MacMaster, Malcolm D., and Morris, Herbert R., 3,517,526.
- Morris, Howard E.: See—
Rhinehart, Richard W., Conn, Henry L., and Morris, Howard E., 3,517,403.
- Moss, Brian Yoxall, to Morfax Limited. Outline following apparatus, 3,518,514, Cl. 318-18.
- Motor Wheel Corporation: See—
Tully, Frank R., and Meyer, Warren L., 3,517,968.
- Motorola, Inc.: See—
Carlow, Earl F., 3,518,552.
- Mueller, Arthur Llewellyn: See—
Trimble, John Omer, and Mueller, Arthur Llewellyn, 3,518,359.
- Mueller, Arthur Llewellyn, and Trimble, John Omer, to AMP Incorporated. Flexible material to form a tubular member, 3,517,702, Cl. 138-128.
- Mueller, Gerhard R. Tire and chain combination, 3,517,719, Cl. 152-223.
- Muller, Alfred B.: See—
Duckworth, James J., Schnog, Norbert, and Muller, Alfred B., 3,518,525.
- Muller, Curt: See—
Altermatt, Rudolf, Entschel, Roland, and Muller, Curt, 3,518,247.
- Muller, Erwin: See—
Freytag, Helmut, Dane, Ivo, Muller, Erwin, and Fromandi, Guido, 3,518,155.
- Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spieb, Bernhard, and Hohmann, Kurt, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Water-soluble quaternary amine containing monoazo dyestuffs, 3,518,244, Cl. 260-149.
- Murakami, Yasuo, to Sanko-Shikei Keisanki Kabushiki Kaisha. Paper sheet feeding device, 3,517,922, Cl. 271-44.
- Murase, Isao: See—
Ariga, Hajime, and Murase, Isao, 3,517,653.
- Murphy, John Brian: See—
Bissett, Thomas B., and Murphy, John Brian, 3,518,501.
- Murphy, John C.: See—
Kues, Henry A., Jr., and Murphy, John C., 3,518,049.
- Musham, John Robin, to Associated Electrical Industries Limited. Voltage suppression circuit, 3,518,489, Cl. 317-16.
- Myers, Clinton S.: See—
Horowitz, Maurice, and Myers, Clinton S., 3,517,399.
- Myles, Michael J., and Spellman, John P., to Union Carbide Corporation. Apparatus for processing large sausage products, 3,517,606, Cl. 99-450.
- Nadella S.A.: See—
Pitner, Alfred, 3,517,433.
- Nakagome, Yukio, Amano, Kitsutaro, and Ohta, Chuichi, to Kokusai Denshin Denwa Kabushiki Kaisha. Digital transmission system using a multilevel pulse signal, 3,518,662, Cl. 340-347.
- Nakamura, Kinichi. Synthetic resin penpoint, 3,518,019, Cl. 401-265.
- Nakanishi, Motoyoshi. Electrostatic engine, 3,518,446, Cl. 290-45.
- Nakata, Minoru: See—
Minami, Shinsaku, Nakata, Minoru, Fujimoto, Katsuro, and Takse, Yoshiyuki, 3,518,256.
- Nakazawa, Hiromu: See—
Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu, 3,517,949.
- Nakonieczny, Edward M.: See—
Slosberg, David K., Nakonieczny, Edward M., and Smith, Merrill M., 3,518,153.
- Naphtachimie, Societe Anonyme: See—
Granger, Camille, Demeure, Marc, and Bruder, Michel, 3,517,557.
- Naradi narodni podnik: See—
Koznar, Jaroslav, 3,517,533.
- Nash, Donald H.: See—
Miller, John A., and Nash, Donald H., 3,518,584.
- Natale, Eugene T., and Hicks, Harry F., Jr., to Eastman Kodak Company. Manufacture of high optical quality glass rods, 3,518,070, Cl. 65-102.
- National Bedding & Furniture Industries: See—
Patton, Thomas N., 3,517,398.
- National Cash Register Company, The: See—
Jaanning, John L., 3,518,406.
- Kimura, Noboru, and Evans, Pat E., 3,518,700.
- Leinberger, Merton C., and Peters, Richard T., 3,518,645.
- National Lead Company: See—
Kolznak, George A., and Row, Lancelot W., 3,518,053.
- National Manufacturing Co.: See—
Banse, George, 3,517,408.
- Edeus, James A., 3,517,409.
- National Research Development Corporation: See—
Nixon, Brian, and Phillips, Leslie Nathan, 3,518,228.
- Naylor, John Herbert Charles: See—
Fosker, George R., Naylor, John Herbert Charles, and Smith, Harry, 3,518,253.
- Nearman, Gerald M.: See—
Houghton, Warren W., Nearman, Gerald M., and Royce, Robert C., 3,517,562.
- Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek ten behoeve van Nijverheid, Handel en Verkeer: See—
Hirs, Gilles Gerardus, 3,517,973.
- Neotec Corporation: See—
Selgin, Paul J., 3,518,441.
- Nerem, Marvin E.: See—
Bainter, Huston K., and Nerem, Marvin E., 3,517,427.
- Nestegard, Sander Charles. Sign holder, 3,517,905, Cl. 248-469.

- New Castle Products, Inc.: See—
Lambert, Gordon C., Shoemaker, Dick E., and Gann, Robert C., 3,517,626.
- Newcomb Electronics Corporation: See—
Hawkins, William R., 3,518,375.
- Newfarmer, Leo R., to Shell Oil Company. Method and apparatus for filtering submicroscopic solid particles from a fluid carrier, 3,517,811, Cl. 210-19.
- Newman, Daniel D., and Rosen, Harold A., to Hughes Aircraft Company. Rocket process employing electrolysis, 3,517,508, Cl. 60-207.
- Newman, William G.: See—
Sutton, John R., and Newman, William G., 3,517,910.
- Nguyen, Thanh-Thuong, and Demozay, Daniel, to Pechiney-Progil-Societe pour le Developpement et la Vente de Specialites Chimiques. Process of preparing phosphorus esters, 3,518,261, Cl. 260-247.1
- Nick, Howard H.: See—
Boht, Murray H., and Nick, Howard H., 3,518,450.
- Nicklas, James P., and Stotz, Robert H., to B-R Corporation. Encoder, 3,518,660, Cl. 340-347.
- Nicolas, Jesus, to Du Pont de Nemours, E. I., and Company. Process for dispersing partially miscible polymers in melt-spinnable fiber-forming polymers, 3,518,337, Cl. 264-176.
- Nicolay, Klaus: See—
Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann, 3,517,595.
- Niehoff, C. E., & Co.: See—
Jakobs, Hans, 3,518,598.
- Niemann, Rudolf, to Industrie-Werke Karlsruhe Aktiengesellschaft. Practice ammunition, particularly target image ammunition, 3,517,619, Cl. 102-92.7
- Niemiec, Stephen M., to Super-Cut, Inc. Rotary segmental saw with dry-cutting characteristics, 3,517,463, Cl. 51-206.4
- Nikolic, Vasilie, to Ministerul Industriei Alimentare. Continuous production of telemea cheese, 3,518,094, Cl. 99-116.
- Nilsen, Ole K., Freimark, Ronald J., and Parker, Robert H., to Ford Motor Company. Electronic tuning device utilizing binary counters and memory system, 3,518,586, Cl. 334-7.
- Nipper, Jack T.: See—
Lawrence, Philip L., and Nipper, Jack T., 3,518,678.
- Nippon Electric Company, Limited: See—
Ito, Michiaki, 3,518,007.
- Sasamoto, Takeshi, 3,518,390.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, 3,518,198.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, 3,518,199.
- Nippon Oil Company, Limited: See—
Miyoshi, Mituji, Matsuura, Kazuo, and Otsuki, Yutaka, 3,518,213.
- Nippon Piston Ring Co., Ltd.: See—
Takao, Tsutomu, and Takahashi, Kentaro, 3,518,128.
- Nissan Jidosha Kabushiki Kaisha: See—
Ariga, Hajime, and Murase, Isao, 3,517,653.
- Iijima, Tatsuya, 3,518,026.
- Nissim, Samuel: See—
Cole, Robert H., Nissim, Samuel, Podraza, George V., and Feuer, Robert, 3,518,635.
- Nitzsche, Siegfried: See—
Pirson, Ewald, and Nitzsche, Siegfried, 3,518,188.
- Nixon, Brian, and Phillips, Leslie Nathan, to National Research Development Corporation. Synthetic cross linked polymers, 3,518,228, Cl. 260-47.
- Nolt, Edwin B.: See—
Smith, Charles A., and Nolt, Edwin B., 3,517,609.
- Nomura, Osamu: See—
Tanaka, Masashi, Nomura, Osamu, Kawamura, Hiayutaro, and Iida, Takayuki, 3,518,487.
- Nordebo, Knut Asar. Alternating current generator without slip rings and brushes, 3,518,473, Cl. 310-168.
- Nordt, Gunter Oskar, to Schroeder, H., & Co. Method and device for the oscillation-free operation of a rotary pump, 3,517,687, Cl. 137-117.
- Norris, Kermit A., to Subscription Television, Inc., mesne. High density record and reproduce system, 3,518,648, Cl. 340-174.1
- North American Rockwell Corporation: See—
Algeo, Jerry A., 3,518,576.
- Algeo, Jerry A., and Hill, Jerome C., 3,518,689.
- Bayati, Jamal E., 3,517,509.
- Booher, Robert K., 3,518,451.
- Jacobs, Earl D., and Zingery, Wilbur L., 3,517,560.
- Johns, Theron J., 3,518,372.
- Kuhn, Richard B., 3,518,369.
- McAuliffe, Gerald K., 3,518,680.
- McClure, William M., Jr., 3,517,705.
- Miller, Arnold, 3,518,670.
- Olson, Everett C., 3,518,368.
- Payerle, Frank S., 3,517,568.
- Pulliam, George R., and Archer, John L., 3,518,636.
- Waldron, Stoddard S., 3,517,736.
- Northcraft, Robert L.: See—
Hagy, Robert W., Morgan, Zeulon V., and Northcraft, Robert L., 3,518,207.
- Northern Electric Company Limited: See—
Hughes, Brian, and Hahey, Frederick T., 3,518,581.
- Northrop Carolina, Inc.: See—
Zeis, Steve E., and Caneer, Ralph A., 3,517,891.
- Norton, Roscoe A., Jr., to Westinghouse Air Brake Company. Microminiature relay, 3,518,588, Cl. 335-124.
- Nothacker, Siegfried: See—
Treber, Willi O., and Nothacker, Siegfried, 3,517,571.
- Novotny, Carl F.: See—
Mork, George W., and Novotny, Carl F., 3,517,960.
- Nowak, David J.: See—
Harmuth, Henning F., Nowak, David J., and Schmid, Pierre E., 3,518,557.
- Nowak, Leon J., to Schroeder Machines Corporation. Valve, 3,517,908, Cl. 251-158.
- N.V. Vereenigde Touwfabrieken: See—
Visser, Christiaan, 3,517,514.
- Nyberg, Richard A., to United States of America, Navy. Receptacle device, 3,518,614, Cl. 339-74.
- O'Brien, John A.: See—
Sanford, Lloyd Clifford, and O'Brien, John A., 3,518,013.
- O'Callaghan, Gerald F., to Eaton Yale & Towne, Inc. Speed control apparatus with eddy current clutch and brake means, 3,518,472, Cl. 310-95.
- Oddo, Rocco R., and Joplin, Frederick H., to Singer-General Precision, Inc. Shaft angle encoder with brush selection logic circuitry, 3,518,663, Cl. 340-347.
- Odion, John R.: See—
Barke, John L., Du Vivier, Charles L., Odion, John R., and Pallat, Ludwig R., 3,518,622.
- Oesterreichisch-Alpine Montangesellschaft: See—
Birnacher, Walter, 3,518,423.
- Ogren, Harvey D., to Honeywell Inc. Fluid sensor, 3,517,545, Cl. 73-37.5
- Ohmart Corporation, The: See—
Gruenwald, Clifford L., 3,518,425.
- Rowe, Snowden, 3,518,431.
- Ohno, Tomeji: See—
Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, 3,518,198.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, 3,518,199.
- Ohnsorg, Roger W., and Casper, Richard L., to Carborundum Company, The. Heating element, 3,518,351, Cl. 13-25.
- Ohta, Chuichi: See—
Nakagome, Yukio, Amano, Kitsutaro, and Ohta, Chuichi, 3,518,662.
- Okada, Soichi: See—
Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu, 3,517,949.
- Okamoto, Kazuo: See—
Izawa, Nobuo, Tamura, Yoshio, Furutani, Akhisa, and Okamoto, Kazuo, 3,518,252.
- O'Keefe, Robert F.: See—
Lyman, Brooks, and O'Keefe, Robert F., 3,517,686.
- Oldfield, Harry: See—
Andrews, Edward George David, and Oldfield, Harry, 3,517,511.
- Olivetti, Ing. C., & C., S.p.A.: See—
Pomella, Piero, and Lauro, Luciano, 3,518,513.
- Olson, Everett C., to North American Rockwell Corporation. Apparatus and information processing methods for a tracking system tracker unit, 3,518,368, Cl. 178-6.8
- Onishi, Akira, Anzai, Shiro, Irako, Koichi, Fujio, Ryota, Enomoto, Mitsuo, and Kojima, Minoru, to Bridgestone Tire Company Limited. Process for the manufacture of polymers, 3,518,238, Cl. 260-82.1
- Oppenheim, Alan V., and Stockham, Thomas G., Jr., to Massachusetts Institute of Technology. Signal compression and expansion system, 3,518,578, Cl. 333-14.
- Optische Werke G. Rodenstock: See—
Schlegel, Franz, 3,517,986.
- Oram, Derek O., and Carman, Richard W., to Honeywell Inc. Variable-length sort-docking with outrigger pusher, 3,517,926, Cl. 271-86.
- Orlomoski, Roger W., to Reed Rolled Thread Die Co. Self-locking screws, 3,517,717, Cl. 151-22.
- Orner, John W., to Avco Corporation. Means for and method of detecting leaks in the seal of a component, 3,517,548, Cl. 73-49.3
- Osaka Shosen Mitui Sempaku Kabushiki Kaisha: See—
Hirai, Toshio, Okada, Soichi, Kaneko, Makoto, and Nakazawa, Hiromu, 3,517,949.
- Osborn, Donald H.: See—
Byler, Thomas E., and Osborn, Donald H., 3,518,168.
- Oster, John, Manufacturing Co.: See—
Main, Lauren O., 3,518,523.
- Ostermayer, Franz: See—
Taub, William, Denna, Rolf, and Ostermayer, Franz, 3,518,307.
- Ostermeier, Johann: See—
Mohr, Reinhard, and Ostermeier, Johann, 3,518,039.
- Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spieb, Bernhard, and Hohmann, Kurt, 3,518,244.
- Ostrowski, Leon J., to Dow Corning Corporation. Curable silicone compositions containing certain acidic fillers, 3,518,222, Cl. 260-37.
- Oswald, Raymond C., to Jennifer Corporation. Production of rimmed steels, 3,518,079, Cl. 75-53.
- O'Toole, John J., to RCA Corporation. Modulation error cancelling apparatus, 3,518,370, Cl. 178-7.1
- Otsuki, Yutaka: See—
Miyoshi, Mituji, Matsuura, Kazuo, and Otsuki, Yutaka, 3,518,213.

Otto, Stanley W.: See—
McGrath, Paul F., and Otto, Stanley W. 3,517,415.
Otto, William F., and McKnight, William B., to United States of America, Army. Circulating liquid cladding system for laser rods. 3,518,569, Cl. 331-94.5
Ottony, Heinz Friedrich: See—
Harnisch, Heinz, Ottony, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmüller, Werner, and Jochims, Heinz 3,517,628.
Outboard Marine Corporation: See—
Irgens, Finn T., 3,517,634.
Overacker, James L., to International Business Machines Corporation. Reciprocating lens photocomposer. 3,517,593, Cl. 95-4.5
Owen, William Denley, to United Kingdom Atomic Energy Authority. Methods and apparatus for generating flash X-rays employing a three electrode field emission X-ray tube. 3,518,433, Cl. 250-90.
Owen, William S., Jr.: See—
McGillion, Robert W., and Owen, William S., Jr. 3,517,990.
Owens-Illinois, Inc.: See—
Harmsen, John H., 3,518,147.
Oyama, Taro, and Inui, Tsuneo, to Toyo Kahan Co., Ltd. Alkali solution treatment of cathodically chromated metal surface. 3,518,169, Cl. 204-35.
Ozono, Toshiro, and Matsushima, Hisashi, to Kishaseizo Kabushiki Kaisha. Device for automatically adjusting concentration of absorbent solution. 3,517,522, Cl. 62-141.
Pacific Mariculture Co., Inc.: See—
Budge, William W., 3,517,648.
Paddock, Byron, Jr., to Caterpillar Tractor Company. Quench apparatus for providing pulsating and sweeping flow of quench fluid. 3,517,676, Cl. 134-199.
Page & Page: See—
Fikse, Tyman H., 3,517,945.
Page Belting Company: See—
Messer, Chester R., 3,517,706.
Palermo, Blasey Thomas: See—
Welsh, Thomas Laurence, Peterson, Donald Leroy, Palermo, Blasey Thomas, and Hoss, George Carr 3,518,343.
Pallat, Ludwig R.: See—
Barke, John L., Du Vivier, Charles L., Odion, John R., and Pallat, Ludwig R. 3,518,622.
Palmer, Myron D.: See—
Barson, Fred, Kuehn, Richard T., and Palmer, Myron D. 3,518,084.
Pammer, Erich, and Folkmann, Eduard, to Siemens Aktiengesellschaft. Method of producing homogeneous oxide layers on semiconductor crystals. 3,518,115, Cl. 117-213.
Pan American Petroleum Corporation: See—
Blenkarn, Kenneth A., 3,517,517.
Kunkel, Lorenz V., 3,518,048.
Pande, Kailash Chandra, and Lengnick, Guenther Fritz, to Stauffer-Wacker Silicone Corporation, mesne. Organotin N-carbamates. 3,518,286, Cl. 260-429.7
Papadopoulos, Michael N., to Shell Oil Company. Telemetry drill pipe with thread electrode. 3,518,608, Cl. 339-16.
Papineau, Donald G. Hanger for skindiver's equipment. 3,517,823, Cl. 211-13.
Paque, Francis H. Sheet stack leveler for printing press. 3,517,824, Cl. 211-50.
Paquette, Raymond E., to Gevaert-Agfa N.V. Arc lamp construction. 3,518,480, Cl. 313-288.
Parekh, Pravin C.: See—
Goldstein, David R., and Parekh, Pravin C. 3,517,643.
Pargeter, Roland Albert: See—
Woollacott, Derrick Sunnucks, 3,517,600.
Parker, Charles H.: See—
Edelstein, Joel J., De Bell, John M., and Parker, Charles H. 3,518,210.
Parker, Robert H.: See—
Nilsen, Ole K., Freimark, Ronald J., and Parker, Robert H. 3,518,586.
Parker-Kalon Corporation: See—
Skierski, Edwin J., 3,517,542.
Parkwood Homes, Inc.: See—
Bassett, Raymond F., 3,517,962.
Parsons, Brinckerhoff, Quade & Douglas, Inc.: See—
Warshaw, Robert, 3,517,515.
Parsons Corporation: See—
Sporck, Claus L., 3,517,535.
Parsons, Robert Q.: See—
Carley, James A., McRoskey, Leonard H., and Parsons, Robert Q. 3,518,384.
Pasbrig, Max: See—
Anzini, Renato, 3,517,420.
Patch, Philip G.: See—
Giles, Sol L., and Patch, Philip G. 3,518,150.
Pate, Orran Terence: See—
Threadgold, Ronald, and Pate, Orran Terence 3,518,632.
Paterson, Norman J., to Chevron Research Company. Conversion of coal to liquid products. 3,518,182, Cl. 208-50.
Patrick, Gerard R.: See—
Miller, Arthur, Patrick, Gerard R., and Strassberg, Daniel D. 3,518,558.

Pattermann, Franz, to Boehringer Ingelheim G.m.b.H. Scilliglaucosidin- α -L-rhamnoside and method for its isolation from white squill. 3,518,248, Cl. 260-210.5
Patterson, Dan W.: See—
Moorehead, Donovan L., and Patterson, Dan W. 3,518,674.
Patton, Thomas N., to National Bedding & Furniture Industries. Inner-spring unit construction. 3,517,398, Cl. 5-351.
Paul, Eugene F.: See—
Wightman, Lawrence W., and Paul, Eugene F. 3,518,471.
Pauls, Edwin A. Device for creating tension in a travelling strip. 3,517,894, Cl. 242-75.2
Pavlanis, Vytautas, Marois, Paul, Boudreault, Armand, and Gilker, Jean Claude, to L'Institut de Microbiologie et d'Hygiene de l'Université de Montreal. Vaccine for equine influenza. 3,518,347, Cl. 424-89.
Pawletko, Joseph P., to International Business Machines Corporation. Stepping motor constant velocity drive. 3,518,516, Cl. 318-138.
Payerle, Frank S., to North American Rockwell Corporation, mesne. Single lever control. 3,517,568, Cl. 74-471.
Payne, William Charles, to Engelhard Industries Limited. Method of forming a compact article of particulate material. 3,518,336, Cl. 264-111.
Pearce, Christopher A., Glamorgan, Wales, and Lloyd, Norman C., to Midland Silicones Limited. Process for preparing bicyclic tetrasilazanes and tucycloletrasilazane compounds. 3,518,289, Cl. 260-448.2
Pearce, Christopher A., and Lloyd, Norman C., to Midland Silicones Limited. Bicyclic tetrasilazanes and the preparation thereof. 3,518,290, Cl. 260-448.2
Pearce, Thomas W., Hochberg, Arthur K., and Poehler, Theodore O., Jr., to United States of America, Navy, mesne. Pulse generator. 3,518,455, Cl. 307-265.
Pechiney-Progil-Societe pour le Developpement et la Vente de Specialites Chimiques: See—
Nguyen, Thanh-Thuong, and Demozay, Daniel, 3,518,261.
Peczowski, Joseph L., and Sollman, Francis G., to Bendix Corporation. The Fuel control governor. 3,517,506, Cl. 60-39-16
Pellite Corporation: See—
Smith, Russell B., 3,517,914.
Penney, Albert W., Jr.: See—
De Maria, Anthony J., and Penney, Albert W., Jr. 3,518,436.
Pennwalt Corporation: See—
Albert, Harry Elmer, 3,518,320.
Babbin, Saul A., and Mohr, Alfred V., 3,517,667.
Baldwin, Brian E., and Karlinski, Herbert E., 3,517,461.
Shetty, Bola Vithal, 3,518,267.
Shetty, Bola Vithal, 3,518,392.
Peno, William H. Self-propelled snow toy vehicle. 3,517,457, Cl. 46-243.
Pensa, Ildo E., to Stevens, J. P., & Co., Inc. Storable polymeric compositions and processes. 3,518,042, Cl. 8-116.3
Perneski, Anthony J., to Bell Telephone Laboratories, Incorporated. Magnetic domain propagation arrangement. 3,518,643, Cl. 340-174.
Perry, John A.: See—
Winkler, Ernst W. S., Emmett, John R., and Perry, John A. 3,517,435.
Pet Incorporated: See—
Bowen, Eldred W., 3,517,476.
Peters, Richard T.: See—
Leinberger, Merton C., and Peters, Richard T. 3,518,645.
Petersen, Harro, Bille, Heinaz, and Ruemens, Wilhelm, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Hexahydropyrimidone derivatives and a method of finishing textile material. 3,518,043, Cl. 8-116.3
Petersen, William H.: See—
Fairbanks, William J., and Petersen, William H. 3,517,735.
Petersen, William H., to Shell Oil Company. Marine riser pull-down device. 3,517,737, Cl. 166-0.6
Petersen, William H., to Shell Oil Company. Selective bore wellhead lubricator system. 3,517,738, Cl. 166-0.6
Peterson, Donald Leroy: See—
Welsh, Thomas Laurence, Peterson, Donald Leroy, Palermo, Blasey Thomas, and Hoss, George Carr 3,518,343.
Peterson, Henry J., to Sun Oil Company. Preparation of a synthetic lubricating oil via a disproportionation reaction. 3,518,321, Cl. 260-672.
Peterson, Walter H., to Shell Oil Company. Dialkanoyloxybutene production. 3,518,298, Cl. 260-497.
Petran, Mojmir, and Hadravsky, Milan, to Ceskoslovenska akademie ved. Method and arrangement for improving the resolving power and contrast. 3,517,980, Cl. 350-17.
Petrie, Patrick. Watch band calendar and dispenser. 3,517,802, Cl. 206-39.
Petrolite Corporation: See—
Wilson, Homer M., 3,518,530.
Petry, Baldwin E.: See—
Weis, Albert, and Petry, Baldwin E. 3,517,772.
Petschauer, Richard J., to United States of America, Navy, mesne. Magnetic core memory matrix wiring rearrangement. 3,518,638, Cl. 340-174.
Phan, John T., to Data Memory, Inc., mesne. Slow motion picture video system with magnetic disc storage. 3,518,366, Cl. 178-6.6
Pharmirex Anstalt.: See—
Busacca, Rosario, 3,518,297.

Philadelphia Resins Company Inc.: See—
Irwin, Richard M., and Kollock, David H., 3,518,217.
Phico-Ford Corporation: See—
Keptra, Buran I., Jr., and West, William A., 3,518,603.
Phillips, Leslie Nathan: See—
Nixon, Brian, and Phillips, Leslie Nathan 3,518,228.
Picchia, Walter Del, and Martins, Wagner Waneck. Bistable polarized interrupter with remote control and respective system of utilization. 3,518,497, Cl. 317-150.
Picker Corporation.: See—
Buffington, Marvin A., 3,517,661.
Lombardo, Daniel F., 3,518,434.
Pierdet, Andre: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.
Pifer, Marion Jonathan: See—
Funston, David Lee, Pifer, Marion Jonathan, and Wheeler, Robert Charles 3,518,363.
Pine, Lloyd A., Roberts, Durward T., Jr., and Jolley, Gordon B., to Esso Research and Engineering Company. Purification of butylenes. 3,518,323, Cl. 260-683.13
Pinkham, Jesse R., to Reynolds, R. J., Tobacco Company. Wrapping machine. 3,517,479, Cl. 53-182.
Pinkham, Jesse R., to Reynolds, R. J., Tobacco Company. Apparatus for making loose granular filters. 3,518,479, Cl. 53-183.
Pinsley, Edward A., to United Aircraft Corporation. Apparatus for traversing a cold cathode discharge. 3,518,479, Cl. 313-161.
Pirson, Ewald, and Nitzsche, Siegfried, to Wacker-Chemie G.m.b.H. Silicone compounds and greases. 3,518,188, Cl. 252-28.
Pitacco, Sergio, to Falcos S.p.A. Retractable cigar lighter. 3,518,408, Cl. 219-264.
Pitner, Alfred, 1/2 to Nadella S.A. Method for assembling universal joints. 3,517,433, Cl. 29-434.
Pitney-Bowes, Inc.: See—
Lyman, Brooks, and O'Keefe, Robert F., 3,517,686.
Miciukiewicz, Joseph F., 3,517,921.
Pittman, Allen G., and Wasley, William L., to United States of America, Agriculture. Process for rendering textiles and other fibrous materials oil-water- and soil repellent. 3,518,114, Cl. 117-161.
Pituley, Nicholas M., to Eastman Kodak Company. Albada viewfinder. 3,517,582, Cl. 88-1.5
Pivmec, Jan: See—
Bezouska, Vlastimil, Pivmec, Jan, Hrdlicka, Jiri, Krasa, Evzen, and Smekal, Zdenek 3,518,507.
Pizzarello, Frank A., and Harrington, John Beny, to United States of America, Air Force. Acoustic diffraction spectrometer and method of fabrication thereof. 3,518,582, Cl. 333-30.
Platz, Elwood T., Kussy, Frank W., and Witzmann, Gustav, to I-T-E Imperial Corporation, mesne. Manual motor starter. 3,518,597, Cl. 337-46.
Plessey Company Limited, The: See—
Faulkner, Arthur Manthorp, 3,517,804.
Ploss, William R., to Minnesota Mining and Manufacturing Company. Constant stethoscopic monitoring system. 3,517,664, Cl. 128-2.05
Plunkett, Bradley J., to Warwick Electronics Inc. Rhythm generating circuit for musical instrument. 3,518,352, Cl. 84-1.03
Plyler, Everett L., to Monsanto Company. Coated casting belt. 3,518,104, Cl. 117-53
Plympton, Marvin E. Method of making simulated inlaid designs. 3,518,146, Cl. 156-245.
Pocs, Konstantin K., to United States of America, Air Force. Microwave antenna side lobe and beam reduction apparatus. 3,518,687, Cl. 343-761.
Podraza, George V.: See—
Cole, Robert H., Nissim, Samuel, Podraza, George V., and Feuer, Robert 3,518,635.
Poehler, Theodore O., Jr.: See—
Pearce, Thomas W., Hochberg, Arthur K., and Poehler, Theodore O., Jr. 3,518,455.
Poersch Metal Manufacturing Company: See—
Kruse, Robert C., 3,517,627.
Polmanteer, Keith E., to Dow Corning Corporation. Optical compositions of silicone rubber. 3,518,324, Cl. 260-825.
Polyspede Electronics Corporation: See—
Kilgore, James S., 3,517,691.
Pomella, Piero, and Lauro, Luciano, to Olivetti, Ing. C., & C., S.p.A. Position control device comprising an interpolating unit. 3,518,513, Cl. 318-18.
Porter, Joe A.: See—
Bleak, Thomas M., and Porter, Joe A. 3,518,179.
Porter, John H.: See—
Sebok, Albert L., Porter, John H., and McBroom, Everal B., Jr. 3,518,475.
Potter Instrument Company, Inc.: See—
Altonji, John A., and Vajana, Joseph G., 3,518,647.
Gabor, Andrew, 3,518,649.
Potter, William N., III, to Du Pont de Nemours, E. I., and Company. Textile fiber finish composition. 3,518,184, Cl. 252-8.75
Powell, Wilmer S., to Burroughs Corporation. Thin film gradiometer with transducer windings connected in series as part of the resonant circuit of the energizing source. 3,518,535, Cl. 324-43.
Pratt, Aloysius W., to Kohler Co. Generator voltage regulator. 3,518,529, Cl. 322-28.

Preist, Ruth C., to Stanford Research Institute. Gaseous etching of molybdenum. 3,518,134, Cl. 156-18.
Prephar Prospection de Recherches Pharmaceutiques S.A.: See—
Butti, Adriano, Prino, Giuseppe, and Bertellini, Gianfranco, 3,518,243.
Prescia, John J.: See—
Katsoulis, Emanuel G., and Prescia, John J. 3,518,123.
Presnick, Michael C. Lightweight collapsible shipping container. 3,517,849, Cl. 220-4.
Pricer, Wilbur D.: See—
Lindquist, Arwin B., Pricer, Wilbur D., and Seeber, Robert R. 3,518,631.
Prino, Giuseppe: See—
Butti, Adriano, Prino, Giuseppe, and Bertellini, Gianfranco 3,518,243.
Prisco, John C. Disk shear. 3,517,890, Cl. 241-141.
Professional Tape Co., Inc.: See—
Greco, Michael R., 3,517,450.
Propper Manufacturing Co., Inc.: See—
Speelman, Irving A., 3,517,670.
Propet, Robert L., to Miller, Herman, Inc. Article handling tray. 3,517,825, Cl. 211-126.
Propet, Robert L., and Kelley, James O., to Miller, Herman, Inc. Structural support system for shelving. 3,517,467, Cl. 52-36.
Provance, Jason D., to Bourns, Inc. Semiconductive glasses. 3,518,209, Cl. 252-521.
Pruss, Gilbert A., to Milton Manufacturing Co., Inc. Replaceable meter unit for a tachometer or like instrument. 3,518,538, Cl. 324-70.
Pryor, Timothy R. Optical doppler radar device. 3,517,998, Cl. 356-28.
Puleo Electronics Inc.: See—
Heggestad, Robert E., 3,518,666.
Pulliam, George R., and Archer, John L., to North American Rockwell Corporation. Ferrite memory device. 3,518,636, Cl. 340-174.
Pumpelly, Robert C., Simpson, Harry E., and Kilgore, Marion D., to Dresser Industries, Inc. Selective interval packer. 3,517,743, Cl. 166-127.
Purrolator Products, Inc.: See—
Mintz, Michael D., 3,517,820.
Purpura, August C. Keyless ignition switch for automobiles. 3,518,383, Cl. 200-43.
Pusateri, Anthony J., Jr.: See—
Sparkes, Harry P., Bowman, Douglas F., and Pusateri, Anthony J., Jr. 3,518,615.
Putscher, Johann: See—
Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann 3,517,595.
Quenot & Cie S.a.r.l.: See—
Quenot, Andre, 3,517,780.
Quenot, Andre, to Quenot & Cie S.a.r.l. Braking mechanism for linear measuring instruments. 3,517,780, Cl. 188-83.
Query, Grady W. Feeder and package arrangement for fluent dry solids. 3,517,454, Cl. 43-131.
Quigley Company, Inc.: See—
Demaison, Raymond J., 3,518,330.
Rae, John L.: See—
Digilio, Frank A., and Rae, John L. 3,517,924.
Rafenstein, Roy Frank: See—
Block, Leo, and Rafenstein, Roy Frank 3,518,034.
Raible, Hermann: See—
Schinke, Heinz Joachim, and Raible, Hermann 3,517,613.
Railway Maintenance Corporation: See—
Doorley, Richard B., and Settle, Paul S., Jr. 3,518,422.
Rainer, Erich, to Siemens Aktiengesellschaft. Method and apparatus for continuous reversal of brushless DC motors. 3,518,517, Cl. 318-254.
Randall, Freddie D., to Tecumseh Products Company. Motor-compressor unit. 3,518,031, Cl. 417-319.
Rao, Tadikonda N.: See—
Feldman, David, and Rao, Tadikonda N. 3,518,571.
Rao, Tadikonda N., to Bell Telephone Laboratories, Incorporated. Multifrequency signal generator. 3,518,572, Cl. 331-109.
Raper, Dick, to Dow Corning Corporation. Method of forming silicone rubber drug carriers. 3,518,340, Cl. 264-251.
Rapisarda, Paul. Apparatus for producing reinforced apertures in plastic materials. 3,517,410, Cl. 18-1.
Rappo, Angelo: See—
Daleffe, Giovanni, and Rappo, Angelo 3,517,797.
Rauffer, Walter, to Agfa-Gevaert Aktiengesellschaft. Zoom lens control mechanism. 3,517,597, Cl. 95-45.
Raypak Company, Inc.: See—
Block, Leo, and Rafenstein, Roy Frank 3,518,034.
Raytheon Company: See—
Guberman, Irwin J., 3,518,386.
Houghton, Warren W., Nearman, Gerald M., and Royce, Robert C., 3,517,562.
Zimmer, John T., 3,518,672.
RCA Corporation: See—
Abrahamsen, Thomas C., 3,517,792.
Agin, Julius, 3,518,625.
Brooks, Robert R., 3,518,371.
Cassidy, Francis D., 3,518,640.
Croy, John E., 3,518,633.
Gibson, Walter G., and Gravel, Arthur J., 3,518,360.

- Gross, Josef, and Barkow, William Henry, 3,518,590.
Herrmann, Donald C., and Bazin, Lucas J., 3,518,457.
Johnson, Sigurd W., and Leedom, Marvin A., 3,517,596.
Leedom, Marvin A., 3,517,994.
Meyer, John E., Jr., 3,518,627.
O'Toole, John J., 3,518,370.
Wilmarth, Paul C., 3,518,482.
Reaume, Robert S., to General Electric Company. Device for setting a meter to true zero. 3,518,543, Cl. 324-115.
Rebut, Paul-Henri, and Torossian, Antoine, to Commissariat a l'Energie Atomique. Homopolar generators. 3,518,474, Cl. 310-178.
Reder, Robert, and Behrends, Jack Richard, to Monogram Models, Inc. Jet engine sound simulating device. 3,517,456, Cl. 46-232.
Redwood Food Packing Company. See—
Asti, Adolph Reynol, 3,518,093.
Reed Rolled Thread Die Co.: See—
Orlomski, Roger W., 3,517,717.
Reel, Richard F. Safety ground device. 3,518,607, Cl. 339-12.
Reeser, Esral M., and Anderson, Ronald L., to Case, J. I. Company. Logging fork with saw attachment. 3,517,711, Cl. 143-32.
Regan, Malachy J. Attachment for increasing the effectiveness of an electric shaver. 3,517,442, Cl. 30-41.
Regec, John J.: See—
Gartner, Stanley J., Regec, John J., Roeber, Henry W., and Smith, James M., 3,517,799.
Regnier, Albert: See—
Canceill, Bernard Jean-Jacques, and Regnier, Albert 3,518,626.
Reich, Robert W. Electronic driving circuit. 3,518,515, Cl. 318-128.
Reichert, Leonard K. Striking pad for die cutting machines. 3,517,579, Cl. 83-533.
Reichle, Alfred: See—
Rellepsmann, Wolfgang, Wieden, Horst, von Falkai, Bela, and Reichle, Alfred 3,518,045.
Rein, Burton M., to Mobil Oil Corporation. Aromatic dicarboxylic acids having two sulfonate linkages. 3,518,294, Cl. 260-456.
Reinhardt, Robert M., and Bruno, Joseph S., to United States of America, Agriculture. Process for producing wrinkle resistant carbamate-modified cellulosic textile materials by catalysis with hydrogen halide gas. 3,518,044, Cl. 8-129.
Rellensmann, Wolfgang, Wieden, Horst, von Falkai, Bela, and Reichle, Alfred, to Farbenfabriken Bayer Aktiengesellschaft. Dyed polyurethane threads. 3,518,045, Cl. 8-178.
Remcor Products Company: See—
Whalen, James M., 3,517,860.
Remington Arms Company, Inc.: See—
Dawson, Chester H., 3,518,394.
Renshaw, Clarence, and Trippe, Juan T. Fresh-water cistern. 3,517,513, Cl. 61-1.
Research Corporation: See—
Woodbury, Richard C., 3,518,637.
Rettemund, Hans, to Hamel, Carl, Spinn- und Zwirnereimaschinen AG. Thread guard with thread brake. 3,517,497, Cl. 57-81.
Revere Copper and Brass Incorporated: See—
Byler, Thomas E., and Osborn, Donald H., 3,518,168.
Reyes, Zoila, and Russell, Charles R., to United States of America, Agriculture. Graft polymerization of starch in novel alcohol reaction medium. 3,518,176, Cl. 204-159.12
Reynolds Metals Company: See—
Farquhar, Melville T., 3,517,858.
Reynolds, R. J., Tobacco Company: See—
Pinkham, Jesse R., 3,517,479.
Pinkham, Jesse R., 3,517,480.
Rhinehart, Richard W., Conn, Henry L., and Morris, Howard E., to Brown Engineering Company, Inc. Brush assembly. 3,517,403, Cl. 15-21.
Rhodiacta: See—
Burellier, Georges J., and Menault, Jacques A., 3,517,498.
Rice, James K.: See—
Savinelli, Emilio A., and Rice, James K., 3,518,203.
Richards Industries, Inc.: See—
Hott, Melville W., Jr., and Holzschuh, Fred A., 3,517,697.
Richardson, David A., and Flanagan, Allan L., to Foxboro Company. The. Control apparatus and method for processes having long time lags. 3,517,680, Cl. 137-2.
Richey, Joseph B., 1/4 to Vargo, Ernest R., and Vargo, Louis E. Lamp dimmer. 3,518,602, Cl. 338-73.
Richter, Sidney B.: See—
Berlinger, Jordan P., and Richter, Sidney B., 3,518,077.
Riddel, James F.: See—
Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddel, James F., and Shaw, William A., 3,517,478.
Riegel Paper Corporation: See—
Cote, Raymond A., 3,517,801.
Riemens, Karel: See—
Greefkes, Johannes Anton, and Riemens, Karel 3,518,548.
Riester, William C.: See—
Deibel, Raymond A., and Riester, William C., 3,517,698.
Riggs, William A., to Shell Oil Company. Apparatus for measuring haze in flowing liquids utilizing an operational amplifier with photosensitive feedback and input resistors for computing the ratio of scattered to directly transmitted light. 3,518,437, Cl. 250-209.
Ring, Jack. Magnetically attractive identifying plates for attachment to X-ray cassettes. 3,518,428, Cl. 250-67.
Rinse, Jacobus. Metal oxide acylates and their process of preparation. 3,518,287, Cl. 260-438.5
- Roberson, Jessie L. Rod spinner. 3,517,575, Cl. 81-73.
Robert, Elie J., to Shell Oil Company. Variable capacitor. 3,518,512, Cl. 317-257.
Roberts, Durward T., Jr.: See—
Pine, Lloyd A., Roberts, Durward T., Jr., and Jolley, Gordon B., 3,518,323.
Roberts, Eric, to Rolls-Royce Limited, mesne. Frequency measuring apparatus having a variable time base. 3,518,540, Cl. 324-79.
Robertshaw Controls Company: See—
Hipple, George M., 3,518,391.
Thomas, Alan E., 3,518,653.
Tyler, Hugh J., and Wolfe, Dennis H., 3,518,601.
Robillard, Robert J., to Lockheed Aircraft Corporation. Control-actuating device. 3,517,569, Cl. 74-471.
Robinson, George C., and Wilks, Edward F., to United States of America, Air Force. Stores ejection means. 3,517,584, Cl. 89-15.
Robinson, James William: See—
Ellert, Henry George, Robinson, James William, and Koontz, John Dana 3,518,319.
Robinson, Ralph C.: See—
Keane, Raymond A., Jr., and Robinson, Ralph C., 3,517,499.
Robinson, Sylvester. Protective apron. 3,517,394, Cl. 2-51.
Robotron Corporation: See—
Vanderhelst, Peter W., 3,518,395.
Vanderhelst, Peter W., 3,518,399.
Robo-Wash, Inc.: See—
Liefing, Gordon V., 3,517,694.
Rochester Datronics, Inc.: See—
Hanson, Charles C., and Sokolski, Michael, 3,518,440.
Rochte, Jerry E., to Beckman Instruments, Inc. Micro-volume flow cell. 3,518,011, Cl. 356-181.
Rock, Stanley P., Roth, Howard, and Sommers, John E., to DCA Food Industries, Inc. Comestible coating composition. 3,518,092, Cl. 99-92.
Roeber, Henry W.: See—
Gartner, Stanley J., Regec, John J., Roeber, Henry W., and Smith, James M., 3,517,799.
Roeder, George K. Hydraulic well pumping system. 3,517,741, Cl. 166-106.
Roemer, Philip, and Downhour, Russell, Jr., to General Foods Corporation. Drilling mud additives. 3,518,185, Cl. 252-8.5
Rohde Terry L., to Clare, C. P., & Company. Infrared heating apparatus for sealing reed switches. 3,518,411, Cl. 219-349.
Rohm & Haas Company: See—
Storti, Michael, 3,518,152.
Swithenbank, Colin, Lewis, Sheldon N., and Viste, Kenneth L., 3,518,304.
Rolls-Royce Limited: See—
Andrews, Edward George David, and Oldfield, Harry, 3,517,511.
Britten, Colin G., and Ashmole, Patrick John, 3,518,023.
Roberts, Eric, 3,518,540.
Roos, William N., to DeZurik Corporation. Butterfly valve. 3,517,689, Cl. 137-329.01
Roper, Daniel W., to Eaton Yale & Towne, Inc. Centrifugally actuated locking differential. 3,517,573, Cl. 74-711.
Rosen, Harold A.: See—
Newman, Daniel D., and Rosen, Harold A., 3,517,508.
Rosenberg, Robert B.: See—
Staats, William R., Rosenberg, Robert B., and Kwell, Esher R., 3,518,036.
Rosenstein, Nathan: See—
Laird, William F., and Rosenstein, Nathan 3,517,892.
Rosenthal, Sidney: See—
Gowell, Robert W., Rosenthal, Sidney, and Whidden, Roger W., 3,518,682.
Ross, Adma Schneller: See—
Martell, Michael Joseph, and Ross, Adma Schneller 3,518,306.
Ross, Robert H., Roth, Willard, Larko, Robert C., and Swartzfager, Walter G., to Sunbeam Equipment Corporation. Aluminum annealing furnace. 3,517,916, Cl. 263-40.
Roszyk, Leon M.: See—
Jepson, Ivar, and Roszyk, Leon M., 3,518,465.
Roszyk, Leon M., to Sunbeam Corporation. Cordless electric appliance. 3,518,524, Cl. 320-2.
Roth, Howard: See—
Rock, Stanley P., Roth, Howard, and Sommers, John E., 3,518,092.
Roth, Willard: See—
Ross, Robert H., Roth, Willard, Larko, Robert C., and Swartzfager, Walter G., 3,517,916.
Rothman, Edward A., to United Aircraft Corporation. Self-sealing fluid/fluid heat exchanger. 3,517,731, Cl. 165-70.
Rothman, James C.: See—
Monson, Donald R., Keller, Darryl E., and Rothman, James C., 3,517,821.
Roussel, Philip A. Process and apparatus for detecting ice formation. 3,517,900, Cl. 244-134.
Roussel-Uclaf: See—
Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard, 3,518,296.
Row, Lancelot W.: See—
Kolznak, George A., and Row, Lancelot W., 3,518,053.

- Rowe, Snowden, to Ohmart Corporation. The. Web thickness gauging and recording system having automatic web edge sensing. 3,518,431, Cl. 250-83.3
Rowley, Martin E.: See—
Hiatt, Gordon D., Rowley, Martin E., and Slowig, Walter D., 3,518,249.
Rowley, Paul Robert, to Atlantic Richfield Company. Apparatus for supporting a tubular member at the ocean floor. 3,517,739, Cl. 166-06
Royce, Robert C.: See—
Houghton, Warren W., Nearman, Gerald M., and Royce, Robert C., 3,517,562.
Ruben, Paul L., to Eastman Kodak Company. Six element Petzval-type projection lens. 3,517,985, Cl. 350-215.
Rubin, Leonard S.: See—
Travia, John S., Salkins, Burton E., Jr., and Rubin, Leonard S., 3,518,541.
Rudwell, William C.: See—
Hawkes, Joseph S., Krohn, Henry W., and Rudwell, William C., 3,517,710.
Ruecke, James E., to SCM Corporation, mesne. Monoepoxide resin compositions. 3,518,212, Cl. 260-18.
Rueger, Herman, and Keller, Joseph Richard, to AMP Incorporated. Termination members for fiber optic means. 3,517,981, Cl. 350-96.
Ruemens, Wilhelm: See—
Petersen, Harro, Bille, Heinaz, and Ruemens, Wilhelm 3,518,043.
Rufer, Hans-Ruedi: See—
Hecht, Joachim, Luckert, Hans, and Rufer, Hans-Ruedi 3,518,112.
Rumsey, Rollin Douglas, Kamman, Gordon W., and Hughson, Robert I., to Houdaille Industries, Inc. Fifth wheel viscous damper construction. 3,517,946, Cl. 280-432.
Russell, Charles R.: See—
Reyes, Zoila, and Russell, Charles R., 3,518,176.
Russell, Robert E., to Basic Incorporated. SCR power supply with inherent line regulating feature. 3,518,527, Cl. 321-18.
Ruth, Richard L.: See—
Bahra, David L., Couleur, John F., Ruth, Richard L., and Shelly, William A., 3,518,630.
Rutz, Richard F., to International Business Machines Corporation. Injection laser device. 3,518,574, Cl. 332-7.51
Ryan Aeronautical Co.: See—
Aasted, Jorgen, and Kafitz, Peter H., 3,518,671.
Ryan, Charles W.: See—
Spencer, John L., and Ryan, Charles W., 3,518,260.
Rychlewski, Thaddeus V., to Sylvania Electric Products, Inc. Display device and connector therefor. 3,517,451, Cl. 40-130.
Sadwith, Howard M., to Industrial Washing Machine Corporation. Apparatus for washing industrial articles. 3,517,675, Cl. 134-144.
Sakamoto, Tosiyo, to Mitsubishi Denki Kabushiki Kaisha. Connection means for air injection pump. 3,517,504, Cl. 60-30.
Sakasegawa, Eugene, to United Control Corporation, mesne. Transducer with conductive gap material. 3,518,646, Cl. 340-174.1
Sakoda, Hiroichi: See—
Kobayashi, Seiin, Torii, Michihiro, and Sakoda, Hiroichi 3,518,644.
Sakshaug, Eugene C.: See—
Eason, William H., and Sakshaug, Eugene C., 3,518,483.
Salkins, Burton E., Jr.: See—
Travia, John S., Salkins, Burton E., Jr., and Rubin, Leonard S., 3,518,541.
Salter, Forrest O.: See—
Goodman, Leonard S., and Salter, Forrest O., 3,518,414.
Sampson, Harvey W., Jr. Diving board extender. 3,517,929, Cl. 272-66.
San Martino, Roy G.: See—
Corti, Gianfranco, and San Martino, Roy G., 3,517,776.
Sanders Associates, Inc.: See—
Konotchick, John A., Jr., 3,518,555.
Sanders, Wilber E., Jr.: See—
Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Weststrom, Alfred 3,517,532.
Sandoz A.G.: See—
Altermatt, Rudolf, Entschel, Roland, and Muller, Curt, 3,518,247.
Auerbach, Guenther, Benz, Jakob, and Wehrli, Walter, 3,518,246.
Sandoz Ltd.: See—
Altermatt, Rudolf, Entschel, Roland, and Muller, Curt, 3,518,247.
Auerbach, Guenther, Benz, Jakob, and Wehrli, Walter, 3,518,246.
Sandoz-Wander, Inc.: See—
Griot, Rudolf G., 3,518,275.
Sandstrom, Donald J., to United States of America, Atomic Energy Commission. Diffusion bonding of ceramics. 3,517,432, Cl. 29-472.7
Sanford, Lloyd Clifford, and O'Brien, John A., to Itek Corporation. Densitometer. 3,518,013, Cl. 356-203.
Sanku-Shikei Keisanki Kabushiki Kaisha: See—
Murakami, Yasuo, 3,517,922.
Santomieri, Louis S., to Deseret Pharmaceutical Company, Inc. Valve unit for an intravenous liquid feeding apparatus. 3,517,909, Cl. 251-342.
Sapp, Hubert Beard, Jr., and Deffenbaugh, Edmund F., to Eastman Kodak Company. Flash and daylight exposure control. 3,517,599, Cl. 95-64.
- Sarati, Luigi, to Societa Italiana Telecomunicazioni Siemens S.p.A. Automatic protection switching system for communication channels. 3,518,549, Cl. 325-56.
Sarto, Jorma O., and Hunter, William A., to Chrysler Corporation. Evaporative emission control system. 3,517,654, Cl. 123-136.
Sasaki, Hirotaka: See—
Amano, Noboru, and Sasaki, Hirotaka 3,518,539.
Sasamoto, Takeshi, to Nippon Electric Company, Limited. Multilayer electric contacts. 3,518,390, Cl. 200-166.
Sato, Masami: See—
Kawakami, Tsuneta, Ikeno, Hitoshi, and Sato, Masami 3,518,464.
Sato, Yasuta. Movable toy having detachable auxiliary driving wheel means. 3,517,458, Cl. 46-243.
Saul, Benno B. Security devices. 3,518,655, Cl. 340-274.
Savinelli, Emilio A., and Rice, James K., to Drew Chemical Corporation. Corrosion and scale inhibitor compositions and processes therefor. 3,518,203, Cl. 252-181.
Scans Associates, Inc.: See—
Converse, Vernon G., III, Clayton, Robert W., and Westervelt, James T., 3,517,552.
Scarnato, Thomas J., Goron, Paul C., and Morkoski, James, to International Harvester Company. Implement control assembly. 3,517,492, Cl. 56-25.
Schaaf, Robert L., to International Business Machines Corporation. Remotely controlled high energy discharge drive circuit. 3,518,656, Cl. 340-310.
Schabel, Joachim: See—
Mertgen, Lothar, and Schabel, Joachim 3,518,102.
Schaefer, Edmund T.: See—
Kemp, Robert I., and Schaefer, Edmund T., 3,517,496.
Schaefer, Kenneth A.: See—
Werner, John A., and Schaefer, Kenneth A., 3,517,534.
Schafer, Fritz, K.G.: See—
Schafer, Manfred, 3,517,826.
Schafer, Manfred, to Schafer, Fritz, K.G. Shelf unit. 3,517,826, Cl. 211-134.
Scheinpflug, Hans: See—
Daum, Werner, and Scheinpflug, Hans 3,518,308.
Schellenbach, Stanley T.: See—
Downs, James A., and Schellenbach, Stanley T., 3,518,211.
Schenectady Chemicals, Inc.: See—
Sheffer, Howard E., and Zielinski, Gerald C., 3,518,230.
Schick, William F., LaValley, William R., Elfving, Claes T., and Wahl, Marvin L., to Sylvania Electric Products, Inc. Boom and feed line construction for multielement antenna. 3,518,690, Cl. 343-792.5
Schinke, Heinz Joachim, and Raible, Hermann. Math. Bauerie GmbH Offset printing machine with interchangeable application and etching rollers. 3,517,613, Cl. 101-142.
Schlatter, H. A., AG: See—
Denzler, Emil, and Zollinger, Hans Rudolf, 3,518,398.
Schlegel, Franz, to Optische Werke G. Rodenstock. Wide angle objective system. 3,517,986, Cl. 350-220.
Schlumberger Technology Corporation: See—
Goss, Jack P., 3,517,756.
Hart, Herbert J., 3,517,757.
Johnson, Albert W., 3,517,740.
Schuster, Nick A., 3,517,758.
Schmidt, Leopold Franz, to Teves, Alfred, G.m.b.H. Differential hand-brake. 3,517,572, Cl. 74-710.5
Schmid, Pierre E.: See—
Harmuth, Henning F., Nowak, David J., and Schmid, Pierre E., 3,518,557.
Schmidt, Arno: See—
Modder, Otto, and Schmidt, Arno 3,517,800.
Schmidt, Gunther, to Gebr. Schmidt. Writing instrument. 3,518,017, Cl. 401-29.
Schmidt, Jacob, Baumstein, Lee, and James, Arthur M., to Lockheed Aircraft Corporation. Helicopter rotor system. 3,518,025, Cl. 416-131.
Schneider, Abraham: See—
Duling, Irl N., Schneider, Abraham, and Moore, Robert E., 3,518,241.
Schneider, Karl, to Harnischfeger Corporation. Conveyor excavator having plural conveyors for continuous unloading. 3,517,840, Cl. 214-91.
Schneider, Kenneth, and Ensor, Melvin W., said Ensor assor. to said Schneider. Apparatus for forming and oiling bagel dough. 3,517,622, Cl. 107-4.
Schneider, Michael R., to Girdler-Sudchemie Katalysator G.m.b.H. Catalyst for the water gas shift reaction. 3,518,208, Cl. 252-468.
Schnog, Norbert: See—
Duckworth, James J., Schnog, Norbert, and Muller, Alfred B., 3,518,525.
Schock, Josef Pep: See—
Barringer, Anthony Rene, and Schock, Josef Pep 3,518,002.
Schoeller, Alexander. Low bottle crates of synthetic material. 3,517,852, Cl. 220-21.
Schoenfeld, Palmer J.: See—
Glass, Marvin L., and Schoenfeld, Palmer J., 3,517,455.
Scholle Container Corporation: See—
Scholle, William R., 3,517,688.
Scholle, William R., to Scholle Container Corporation. Aseptic filling valve. 3,517,688, Cl. 137-240.

- Schoofs, Richard Joseph: See—
Lee, Max Nai Yuen, and Schoofs, Richard Joseph 3,517,484.
- Schroeder, H., & Co.: See—
Nordt, Gunter Oskar, 3,517,687.
- Schroeder, Klaus G., to Collins Radio Company. Antenna array multifrequency and beam steering control multiplex feed. 3,518,695, Cl. 343-854.
- Schroeder Machines Corporation: See—
Nowak, Leon J., 3,517,908.
- Schrom, Edward C.: See—
Allen, Merton, and Schrom, Edward C. 3,517,674.
- Schuller, Walter H., Minor, Jacob C., Lawrence, Ray V., and Kanno, Hideo, to United States of America, Agriculture. Method for preparing levopimaric acid dioxide from peroxide using ferrous sulfate. 3,518,282, Cl. 260-346.2
- Schulte, Harold F.: See—
Freeman, Ardee H., Schulte, Harold F., and Davidson, Hubert 3,517,465.
- Schulz, Gordon R., to Subscription Television, Inc., mesne. Cartridge and tape storage bin. 3,517,893, Cl. 242-55.16
- Schumaker, Robert R., to International Business Machines Corporation. Substitution of imino-heterocyclic compounds. 3,518,250, Cl. 260-239.
- Schupper, Heinrich. Roller support for a sliding door, a sliding window, or the like. 3,517,459, Cl. 49-425.
- Schurmann, Werner, to Mettler Instruments AG. Counter storage and visual readout means. 3,518,412, Cl. 235-92.
- Schuster, Nick A., to Schlumberger Technology Corporation. Control apparatus for selectively operating electrical well-completion devices. 3,517,758, Cl. 175-4.55
- Schwarz, Rudolf, to Gebr. Staubli & Co. Heald control and drive mechanism for double lift dollies. 3,517,703, Cl. 139-68.
- Schweitzer, Donald G., to United States of America, Atomic Energy Commission. Superconductor magnetic energy storage system. 3,518,496, Cl. 317-123.
- Schwind, Herbert. Practitioner-patient direct viewing ophthalmological testing apparatus. 3,517,988, Cl. 351-30.
- Schwinn Bicycle Company: See—
Fritz, Albert J., and Blahor, Rudolf G., 3,517,867.
- SCM Corporation.: See—
Ruecke, James E., 3,518,212.
- Scott & Williams, Inc.: See—
Currier, John A., 3,517,529.
- Scott, Daniel G., to Westinghouse Air Brake Company. Variable load brake control apparatus. 3,517,971, Cl. 303-22.
- Scottel, Inc.: See—
Carson, William S., Jr., 3,517,414.
- Sebok, Albert L., Porter, John H., and McBroom, Everal B., Jr., to Ametek, Inc. Brush and brush holder assembly. 3,518,475, Cl. 310-245.
- Seeber, Robert R.: See—
Lindquist, Arwin B., Pricer, Wilbur D., and Seeber, Robert R. 3,518,631.
- Seeley, Forest G., and Crouse, David J., Jr., to United States of America, Atomic Energy Commission. Purification of beryllium by liquid-liquid extraction. 3,518,063, Cl. 23-312.
- Seifert, Gerd W. Fan arrangement for automotive vehicles and the like. 3,517,650, Cl. 123-41.12
- Selgin, Paul J., to Neotec Corporation. Optical gage for measuring the thickness of a continuous web. 3,518,441, Cl. 250-219.
- Selowitz, Charles, to Selowitz, Ronald. Workpiece edge trimming device. 3,517,712, Cl. 144-134.
- Selowitz, Ronald: See—
Selowitz, Charles, 3,517,712.
- Senoo, Masao: See—
Hara, Shibeyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio 3,518,234.
- Settle, Paul S., Jr.: See—
Doorley, Richard B., and Settle, Paul S., Jr. 3,518,422.
- Shackman, David, & Sons Limited: See—
Fritzjohn, Albert Henry, 3,517,502.
- Shaffer, James O., to Youngstown Foundry & Machine Company. Means for transferring and stacking elongated members. 3,517,833, Cl. 214-6.
- Shamos, Morris H., and Smythe, William J., to Technicon Corporation. Colorimeter flow cell. 3,518,009, Cl. 356-181.
- Shanahan, Gerard F. Weighted shoe. 3,517,928, Cl. 272-57.
- Sharp, Benny H., to Western Electric Company, Incorporated. Coating apparatus including means to shape surface of coating bed. 3,517,647, Cl. 118-600.
- Shavel, John, Jr.: See—
von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr. 3,518,258.
- von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr. 3,518,272.
- Von Strandtmann, Maximilian, Cohen, Marvin P., and Shavel, John, Jr. 3,518,273.
- Shavel, John, Jr., and Zinnes, Harold, to Warner-Lambert Pharmaceutical Company. 6,7,12,13-Tetrahydro-6,12-imino-5H-benzo[5,6]cyclooct[1,2-b]indole derivatives and process for their production. 3,518,270, Cl. 260-286.
- Shavel, John, Jr., and Zinnes, Harold, to Warner-Lambert Pharmaceutical Company. 1,2,3,4,4a,5,6,7,8,13-Decahydro-7,13b-methano-
- 13bH-indolo [3,2-e] [2]benzazocines and process for their production. 3,518,271, Cl. 260-286.
- Shaver, James D., to Clark & Vicario Corporation. Method for fastening bodies. 3,517,434, Cl. 29-502.
- Shaw, William A.: See—
Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddel, James F., and Shaw, William A. 3,517,478.
- Sheffer, Howard E., and Zielinski, Gerald C., to Schenectady Chemicals, Inc. Imide modified amide imide wire enamel. 3,518,230, Cl. 260-65.
- Sheldon, Edward Emanuel. Negative pressure treatment device. 3,517,665, Cl. 128-24.
- Shell Oil Company: See—
Eckert, Rudolf J. A., 3,518,197.
- Evans, Anthony C., 3,518,183.
- Fairbanks, William J., and Petersen, William H., 3,517,735.
- Fontenot, John E., 3,518,609.
- Foster, E. Gordon, 3,518,284.
- Fraser, John P., 3,517,546.
- Hammitt, Dillard S., 3,517,520.
- Hemphill, Dean P., 3,517,400.
- Johnson, Glenn D., 3,517,961.
- Kolb, Robert H., and Langner, Carl G., 3,517,519.
- Landua, Alton J., and Lantz, William L., 3,518,220.
- Lutz, Eugene F., 3,518,310.
- Newfarmer, Leo R., 3,517,811.
- Papadopoulos, Michael N., 3,518,608.
- Petersen, William H., 3,517,737.
- Petersen, William H., 3,517,738.
- Peterson, Walter H., 3,518,298.
- Riggs, William A., 3,518,437.
- Robert, Elie J., 3,518,512.
- Smutny, Edgar J., 3,518,318.
- Smutny, Edgar J., 3,518,315.
- Suman, George O., Jr., 3,517,745.
- Wicks, Moye, III, 3,517,969.
- Shell Oil Company: See—
Bea, Robert G., 3,517,516.
- Shelley, Carey W.: See—
Winegard, John R., and Shelley, Carey W. 3,518,693.
- Shelly, William A.: See—
Bahrs, David L., Couleur, John F., Ruth, Richard L., and Shelly, William A. 3,518,630.
- Shelton, Richard M., to Burroughs Corporation. Magnetic associative memory. 3,518,642, Cl. 340-174.
- Shepherd, Harold D., and Anderson, Daniel J., to Mallory, P. R., & Co., Inc. Electrolyte for electrolytic capacitors. 3,518,499, Cl. 317-230.
- Sherwin-Williams Company, The: See—
Vukasovich, Mark S., 3,518,205.
- Wallace, John J., 3,517,448.
- Shetty, Bola Vithal, to Pennwalt Corporation. 1-Aminoalkyl and 1-hydroxyalkyl-tetrahydro-halo-sulfamyl-quinazolinone. 3,518,267, Cl. 260-256.5
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- Shimizu, Masanao: See—
Minami, Shinsaku, and Shimizu, Masanao 3,518,257.
- Shimoi, Masanobu. Necktie attachment. 3,517,395, Cl. 2-153.
- Shoemaker, Dick E.: See—
Lambert, Gordon C., Shoemaker, Dick E., and Gann, Robert C. 3,517,626.
- Shoji, Masakazu: See—
Dorman, Paul W., and Shoji, Masakazu 3,518,502.
- Shooter, Douglas, and Jubb, Anthony Howden, to Imperial Chemical Industries Limited. Production of substituted phenols. 3,518,317, Cl. 260-621.
- Shores, Stanley C., Jr., to Bell Telephone Laboratories, Incorporated. Connector for telephone main distributing frame. 3,518,611, Cl. 339-18.
- Showman, Robert Linn: See—
Bushey, Dale Nelson, and Showman, Robert Linn 3,518,620.
- Shurts, Donald E. Archery bows. 3,517,658, Cl. 124-23.
- Siebeck, Hans, to Eltro GmbH & Co. Cassegrain antenna with dielectric lens mounted in main reflector. 3,518,686, Cl. 343-755.
- Siegner Maschinenbau G.m.b.H.: See—
Modder, Otto, and Schmidt, Arno, 3,517,800.
- Siemens Aktiengesellschaft: See—
Aumayer, Hansruedi, Jensen, Otto, and Kesselring, Fritz, 3,518,388.
- Bosch, Werner, 3,518,592.
- Feldtkeller, Ernst, and Stein, Karl-Ulrich, 3,518,639.
- Fink, Wolfgang, 3,517,611.
- Jantsch, Ottomar, 3,518,505.
- Pammer, Erich, and Folkmann, Eduard, 3,518,115.
- Rainer, Erich, 3,518,517.
- Touchy, Wolfgang, 3,518,083.
- Winstel, Gunter, and Zschauer, Karl-Heinz, 3,518,476.
- Siempelkamp, Eugen. Press for the production of hot-pressed sheets. 3,517,610, Cl. 100-198.
- Siempelkamp, G., & Co.: See—
Hutz, Gerhard, 3,517,925.
- Signetics Corporation: See—
James, Brian David, 3,518,494.

- Sills, Stanley Albert, to Imperial Chemical Industries Limited. Process for removing copper oxide from processing equipment. 3,518,117, Cl. 134-2.
- Silverman, Bernard A.: See—
Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A. 3,517,505.
- Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A. 3,517,512.
- Simonsen & Mustad A.S.: See—
Kirknes, Bjorn, 3,518,676.
- Simpson, Harry E.: See—
Pumpelly, Robert C., Simpson, Harry E., and Kilgore, Marion D. 3,517,743.
- Singer Company, The: See—
Duckworth, James J., Schnog, Norbert, and Muller, Alfred B., 3,518,525.
- Jaffe, Wolfgang, and Wagoner, Richard E., 3,518,522.
- Kraft, William A., 3,517,895.
- Molnar, James V., 3,518,520.
- Weber, Max E., 3,517,631.
- Singer-General Precision, Inc.: See—
Corlyon, Phillip R., and Fletcher, John C., 3,517,446.
- Oddo, Rocco R., and Joplin, Frederick H., 3,518,663.
- Zinn, Alfred W., and Grube, Sol, 3,518,657.
- SINTEF: See—
Hakonsen, Ole Petter, 3,518,673.
- Sixt, Gerhard, and Ziegler, Eugen, to Leitz, Louis. Spring biased follower. 3,517,854, Cl. 220-93.
- Skeggs, Leonard T., to Technicon Corporation. Flow cell device. 3,518,008, Cl. 356-181.
- Skierski, Edwin J., to Parker-Kalon Corporation. Complementary finishing dies. 3,517,542, Cl. 72-469.
- Skinner, Francis H.: See—
Snyder, Joseph T., Maxfield, Charles C., Skinner, Francis H., and Whitwell, James A. 3,517,954.
- Skinner, Robert L.: See—
Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Westrom, Alfred 3,517,532.
- Sklarchuk, Jack C., and Koble, William F., to ESB Incorporated. Method for making thin, microporous fluorocarbon polymer sheet material. 3,518,332, Cl. 264-49.
- Skorheim, Robert D., to United States of America, Navy. Approximating the networks for a beamforming transducer array. 3,518,675, Cl. 340-5.
- Slade, Edwin. Reinforced plastic tube and gun barrel construction incorporating an imbedded expandable woven screen lining. 3,517,585, Cl. 89-16.
- Slater, Keith, 1/3 to Horgor, Richard N., and 1/3 to Bango, Joseph, Jr. Apparatus and method for detecting the carbon monoxide content of a gas mixture. 3,518,058, Cl. 23-232.
- Slettinger, Meyer: See—
Chemerd, John M., and Slettinger, Meyer 3,518,280.
- Slob, Arie: See—
Hart, Cornelis Maria, and Slob, Arie 3,518,438.
- Slocombe, Robert J.: See—
Kenyon, Allen S., and Slocombe, Robert J. 3,518,221.
- Slosberg, David K., Nakonieczny, Edward M., and Smith, Merrill M., to American Biltrite Rubber Co., Inc. Embossed floor material. 3,518,153, Cl. 161-5.
- Slover, Vasek R.: See—
Baldwin, Willett F., and Slover, Vasek R. 3,518,679.
- Slowig, Walter D.: See—
Hiatt, Gordon D., Rowley, Martin E., and Slowig, Walter D. 3,518,249.
- Smekal, Zdenek: See—
Bezouska, Vlastimil, Pivnec, Jan, Hrdlicka, Jiri, Krassa, Evzen, and Smekal, Zdenek 3,518,507.
- Smith, Albert C., Jr.: See—
Dunn, Joseph S., and Smith, Albert C., Jr. 3,518,088.
- Smith, Alfred A. Invalid walker. 3,517,677, Cl. 135-45.
- Smith, Andrew M., to Uniroyal, Inc. Safety sight glass. 3,517,554, Cl. 73-332.
- Smith, Charles A., and Nolt, Edwin B., to Sperry Rand Corporation. Feeding mechanism. 3,517,609, Cl. 100-189.
- Smith, Ernest H., Jr. Combination signal light for motor vehicles. 3,518,624, Cl. 340-87.
- Smith, Franklin G., to Flo-Container Incorporated. Inflation means. 3,517,682, Cl. 137-68.
- Smith, Harold A., to Devenco Incorporated. Methods and apparatus for producing artificial holograms. 3,518,367, Cl. 178-6.7
- Smith, Harry: See—
Fosker, George R., Nayler, John Herbert Charles, and Smith, Harry 3,518,253.
- Smith, James M.: See—
Gartner, Stanley J., Regec, John J., Roeder, Henry W., and Smith, James M. 3,517,799.
- Smith, Joseph B. Repair fitting. 3,517,701, Cl. 138-97.
- Smith, Lawrence S.: See—
Giel, George J., Villwock, Robert D., and Smith, Lawrence S. 3,518,628.
- Smith, Merrill M.: See—
Slosberg, David K., Nakonieczny, Edward M., and Smith, Merrill M. 3,518,153.
- Smith, Richard Dale: See—
Layne, Gilbert S., Huml, James O., and Smith, Richard Dale 3,518,172.
- Smith, Roland C. Universal belt drive. 3,517,565, Cl. 74-231.
- Smith, Russell B., to Pellite Corporation. Vibrating furnace for pellet material. 3,517,914, Cl. 263-21.
- Smith, Warren L., to Bell Telephone Laboratories, Incorporated. Oscillator with multiresonator crystal feedback and load coupling. 3,518,573, Cl. 331-116.
- Smithkey, John C., to Goodyear Tire & Rubber Company, The. Method for one stage building of radial ply tires by sandwiching tread strips between the radial plies before expansion to tire form. 3,518,140, Cl. 156-123.
- Smolinsky, Gerald: See—
Heiss, John H., Jr., and Smolinsky, Gerald 3,518,108.
- Smutny, Edgar J., to Shell Oil Company. Octadienyl phenols. 3,518,318, Cl. 260-624.
- Smutny, Edgar J., to Shell Oil Company. Ether production. 3,518,315, Cl. 260-612.
- Smythe, Frederic H., Jr., and Kaulins, Edward, to Timex Corporation. Horological hairspring device. 3,517,503, Cl. 58-109.
- Smythe, William J.: See—
Shamos, Morris H., and Smythe, William J. 3,518,009.
- Smythe, William J., to Technicon Corporation. Colorimeter. 3,518,010, Cl. 356-181.
- Sneeden, Ralph J., to Curtiss-Wright Corporation. Educator-atomizer combustor. 3,518,037, Cl. 431-350.
- Snyder, Joseph T., Maxfield, Charles C., Skinner, Francis H., and Whitwell, James A., to Great Lakes Carbon Corporation. Electrode section-connecting nipple pre-assembly and process of assembling an electrode joint. 3,517,954, Cl. 287-127.
- Snyder, Robert A., to Wood Newspaper Machinery Corporation. Folding blade silencing mechanism. 3,517,920, Cl. 270-77.
- Sobel, Alan: See—
Fein, Michael E., Markin, Joseph, and Sobel, Alan 3,517,983.
- Sobel, Theodore: See—
Goldstein, Arthur, and Sobel, Theodore 3,517,623.
- Societa Italiana Telecomunicazioni Siemens S.p.A.: See—
Cottatellucci, Ezio, 3,518,575.
- Sarati, Luigi, 3,518,549.
- Societe Anonyme Outinord: See—
Blonde, Guy, 3,517,906.
- Societe d'Application des Matieres Plastiques: See—
Beauchef, Gaston Henri, 3,517,393.
- Societe des Forges et Ateliers du Creusot: See—
Bovagne, Rene, and Deynat, Gerard, 3,517,915.
- Societe Francaise du Pneu Englebert: See—
Mirtain, Henri, 3,518,149.
- Societe General de Constructions Electriques et Mecaniques (Alstom): See—
Warszawski, Bernard, 3,518,122.
- Societe Metallurgique d'Imphy: See—
Babel, Louis, 3,517,727.
- Sodeo, Societe Anonyme.: See—
Brebant, Robert, 3,517,732.
- Sokolaki, Michael: See—
Hanson, Charles C., and Sokolaki, Michael 3,518,440.
- Solberg Corporation: See—
Eisenberg, Bernard C., 3,517,708.
- Sollman, Francis G.: See—
Peczowski, Joseph L., and Sollman, Francis G. 3,517,506.
- Sommers, John E.: See—
Rock, Stanley P., Roth, Howard, and Sommers, John E. 3,518,092.
- Sommerud, Rolf Gunnar: See—
Holmboe, Christian Fredrik, De Lorme, James F., and Sommerud, Rolf Gunnar 3,518,556.
- Soper, Quentin F., to Lilly, Eli, and Company. 2, 4-Dinitroanilines. 3,518,309, Cl. 260-577.
- Sordello, Frank J.: See—
Black, Robert J., and Sordello, Frank J. 3,518,658.
- Souder, Wilmer, Jr.: See—
Adey, George R., and Souder, Wilmer, Jr. 3,518,333.
- South African Inventions Development Corporation: See—
Beseling, Johann Lodewyk Naude, and Bull, Arthur Barclay, 3,518,393.
- Southwire Company: See—
Cofer, Daniel B., 3,517,537.
- Sowards, Donald Maurice, and Stiles, Alvin B., to Du Pont de Nemours, E. I., and Company. Supported catalysts composed of substrate coated with colloidal silica and catalyst. 3,518,206, Cl. 252-446.
- Sparkes, Harry P.: See—
Bosworth, Melvin B., Bowman, Douglas F., Sparkes, Harry P., and Young, Clarence A. 3,518,617.
- Sparkes, Harry P., Bowman, Douglas F., and Pusateri, Anthony J., Jr., to Lockheed Aircraft Corporation. Electrical connector assembly. 3,518,615, Cl. 339-94.
- Spatz, Sydney M., and Sugarman, Meyer L., to Allied Chemical Corporation. Electrographic recording mixture containing a morpholinyl diphenyl methane and 2 triphenyl methane. 3,518,038, Cl. 8-2.
- Speaks, Fred A., to Texas Instruments, Incorporated. Cathode-ray tube linearity corrector. 3,518,481, Cl. 315-24.

- Speelman, Irving A., to Propper Manufacturing Co., Inc. Blood-letting lancet. 3,517,670, Cl. 128-314.
- Speier, John L., to Dow Corning Corporation. Organometallic aminosilicon compounds. 3,518,291, Cl. 260-448.2
- Spellman, John P.: See—
- Myers, Michael J., and Spellman, John P. 3,517,606.
- Spencer, Edward G.: See—
- Ballman, Albert A., Lenzo, Pascal V., and Spencer, Edward G. 3,518,634.
- Spencer, John L., and Ryan, Charles W., to Lilly, Eli, and Company. Method for preparing aminoacyl cephalosporins. 3,518,260, Cl. 260-243.
- Sperry Rand Corporation: See—
- Blazek, Henry, 3,517,559.
- Conway, Patrick H., 3,517,879.
- Harris, Henry B., 3,517,445.
- Lausche, Henry N., Halls, Lawrence M., Harer, Delmar C., and McCarty, Horace G., 3,517,491.
- Smith, Charles A., and Nolt, Edwin B., 3,517,609.
- Stark, Edward W., 3,518,650.
- Spiebs, Bernhard: See—
- Mundlos, Eberhard, Mohr, Reinhard, Ostermeier, Johann, Spiebs, Bernhard, and Hohmann, Kurt 3,518,244.
- Sporck, Claus L., to Parsons Corporation. Method and apparatus for roll-extruding large diameter thin-walled tubing. 3,517,535, Cl. 72-85.
- Sprenger, Lawrence C.: See—
- Campbell, James K., and Sprenger, Lawrence C. 3,518,325.
- Springer, Leonard, and Lambert, Abraham D., to Knickerbocker Metal Guild, Inc. Fireplace screen. 3,517,660, Cl. 126-139.
- Sprinkle, Leland W., to United States of America, Interior. Intermittent timer circuit. 3,518,448, Cl. 307-114.
- Staats, William R., Rosenberg, Robert B., and Kweiler, Esler R., to Institute of Gas Technology. Electrolytic pilot igniter. 3,518,036, Cl. 431-268.
- Stamatis, Sam P.: See—
- Chaddha, Aron K., Jones, Trevor L., and Stamatis, Sam P. 3,518,365.
- Stamcarbon N.V.: See—
- Hoogendouk, Johan W., 3,518,329.
- Standard Pressed Steel Co.: See—
- Cohen, George R., 3,517,402.
- Stanford Research Institute: See—
- Preist, Ruth C., 3,518,134.
- Staples, Charles F. Molding machine for making compacted abrasive articles. 3,517,411, Cl. 18-5.
- Stark, Edward W., to Sperry Rand Corporation. Signal comparator having distributed playback heads. 3,518,650, Cl. 340-174.1
- Stauffer Chemical Company: See—
- Brokke, Mervin E., and Dewald, Chester L., 3,518,075.
- Fearing, Ralph B., 3,518,327.
- Stauffer-Wacker Silicone Corporation: See—
- Pande, Kailash Chandra, and Lengnick, Guenther Fritz, 3,518,286.
- Stayboldt, Gordon R., Thomas, Delmer L., and Todd, Beverly J., to International Telephone and Telegraph Corporation. Microwave strip transmission line adapted for integral slot antenna. 3,518,688, Cl. 343-771.
- Stearns, James B.: See—
- Landis, George G., and Stearns, James B. 3,518,403.
- Steelbalm Limited: See—
- John, David Gwynfryn, 3,517,843.
- Stein, Karl-Ulrich: See—
- Feldtkeller, Ernst, and Stein, Karl-Ulrich 3,518,639.
- Steinhausen, Helmut: See—
- Kulling, Achim, and Steinhausen, Helmut 3,518,054.
- Stephan, Hans: See—
- Eggensperger, Heinz, Franzen, Volker, and Stephan, Hans 3,518,224.
- Stephens, Paul B. Scouring pad holder. 3,517,406, Cl. 15-209.
- Sterling Drug Inc.: See—
- Lesher, George Y., 3,518,259.
- Steuernagel, Hans Helmut: See—
- Meininger, Fritz, and Steuernagel, Hans Helmut 3,518,245.
- Stevens, J. P., and Co., Inc.: See—
- Pensa, Ildo E., 3,518,042.
- Stewart, Donald R.: See—
- Stewart, Donald R., and Kane, Ellis D., 3,517,460.
- Stewart, Donald R., and Kane, Ellis D., said Ellis assor. to Stewart, Donald R., d/b/a Stewart Instrument Company. Abrading tool control systems. 3,517,460, Cl. 51-3.
- Stewart, Donald R., and Kane, Ellis D., said Kane assor. to said Stewart, d/b/a Stewart Instrument Company. Apparatus for automatically dressing a grinding wheel contour. 3,517,659, Cl. 125-11.
- Stewart Instrument Company: See—
- Stewart, Donald R., and Kane, Ellis D., 3,517,460.
- Stewart, Donald R., and Kane, Ellis D., 3,517,659.
- Stiles, Alvin B.: See—
- Sowards, Donald Maurice, and Stiles, Alvin B. 3,518,206.
- Still, Carl, Firma: See—
- Thiersch, Friedrich, and Morgenstern, Manfred, 3,517,837.
- Stock, Arthur J., and Hunter, Frank M., deceased (by Hunter, Margaret C., administratrix), to Acheson Industries, Inc. Compositions and methods for producing electrically conductive coatings. 3,518,116, Cl. 117-226.
- Stockham, Thomas G., Jr.: See—
- Oppenheim, Alan V., and Stockham, Thomas G., Jr. 3,518,578.
- Stokes, Kenneth John, and Turnbull, John Hilton, to G.K.N. Screws & Fasteners Limited. Self-tapping screw. 3,517,581, Cl. 85-47.
- Stone, Irving Charles: See—
- Triggiani, Leonard Vincent, and Stone, Irving Charles 3,518,065.
- Stoner, Eugene M. Automatic gun buffer assembly. 3,517,586, Cl. 89-198.
- Storsand, Bjarne, to Maschinenfabrik Oerlikon. Electrical driving arrangement including a flywheel. 3,518,469, Cl. 310-74.
- Storti, Michael, to Rohm & Haas Company. Apparatus for producing fabric-film laminates. 3,518,152, Cl. 156-540.
- Stotz, Robert H.: See—
- Nicklas, James P., and Stotz, Robert H. 3,518,660.
- Stout, James T., to Mead Corporation. The Article carrier. 3,517,876, Cl. 229-40.
- Stow, George C., Jr.: See—
- Hersh, Solomon P., Boe, Norman W., and Stow, George C., Jr. 3,518,138.
- Strance, John Sherman, to Gulf & Western Industrial Products Company, meane. Rolling mill gage control actuator system. 3,517,531, Cl. 72-16.
- Strange, Harold O.: See—
- McGrath, Joseph J., and Strange, Harold O. 3,518,194.
- Strassberg, Daniel D.: See—
- Miller, Arthur, Patrick, Gerard R., and Strassberg, Daniel D. 3,518,558.
- Straus, Andrew J. D., to Mobil Oil Corporation. Focusing system for dual transducer logging tool. 3,517,768, Cl. 181-05.
- Straus, Andrew J. D., and Zemanek, Joseph, Jr., to Mobil Oil Corporation. Caliper system for focusing dual transducers in logging tool. 3,517,767, Cl. 181-05.
- Strelzoff, Samuel, Warshaw, Abe, Villiers-Fisher, John F., and Atkin, Sydney, to Chemical Construction Corporation. Solvent extraction process for the production of ammonium nitrate fertilizer product and phosphoric acid mixed with nitric acid. 3,518,073, Cl. 71-60.
- Strickland, William L., to United States of America, Army. Radio frequency hazard detector. 3,517,555, Cl. 73-342.
- Strocker, Gunter, to Gustav Schade Maschinenfabrik. Dump scrapers. 3,517,798, Cl. 198-36.
- Strycker, Wallace Glenn, to Miles Laboratories, Inc. Phenyl substituted N-(2-aminoethyl)-N-benzylamides. 3,518,274, Cl. 260-294.
- Stucchi, Richard F., to Dennison Manufacturing Company. Print wheel setting and resetting means. 3,517,612, Cl. 101-99.
- Sturm, Richard H., to Tension Envelope Corporation. Quick change chisel. 3,517,580, Cl. 83-652.
- Styblo, Rudolf: See—
- Carniol, Bohdan, and Styblo, Rudolf 3,518,551.
- Su Crest Corporation: See—
- Harding, Fred H., Horowitz, Reuben, and Monti, Anthony, 3,518,095.
- Subscription Television, Inc.: See—
- Norris, Kermit A., 3,518,648.
- Schulz, Gordon R., 3,517,893.
- Sud-Aviation Societe Nationale de Constructions Aeronautiques: See—
- Laville, Andre Henri, and Maillard, Francis Henri Marie Joseph, 3,517,898.
- Sugarman, Meyer L.: See—
- Spatz, Sydney M., and Sugarman, Meyer L. 3,518,038.
- Suh, John T., to Colgate-Palmolive Company. 2- β -Diloweralkylaminopropionyl-1-phenyl 1,2,3,4-tetrahydrobenzothieno[2,3-c]pyridine. 3,518,277, Cl. 260-294.8
- Suh, John T., to Colgate-Palmolive Company. Substituted-1,2,3,4-tetrahydrobenzothieno 2,3-pyridine. 3,518,278, Cl. 260-294.8
- Suman, George O., Jr., to Shell Oil Company. Well perforating method. 3,517,745, Cl. 166-297.
- Sumbeam Equipment Corporation: See—
- Ross, Robert H., Roth, Willard, Larko, Robert C., and Swartzfager, Walter G., 3,517,916.
- Sun Oil Company: See—
- Boyer, Jackson S., and Cassar, Richard D., 3,518,196.
- Boyer, Jackson S., and Cassar, Richard D., 3,518,225.
- Dooley, William P., 3,518,142.
- Duling, Irl N., Schneider, Abraham, and Moore, Robert E., 3,518,241.
- Harvey, Wildon T., and Knepper, Jay C., Jr., 3,518,216.
- Peterson, Henry J., 3,518,321.
- Thomas, Charles L., 3,518,301.
- Tse, Harold F., 3,518,181.
- Sunbeam Corporation: See—
- Jepson, Ivar, and Roszyk, Leon M., 3,518,465.
- Roszyk, Leon M., 3,518,524.
- Super-Cut, Inc.: See—
- Niemiec, Stephen M., 3,517,463.
- Sutton, John R., and Newman, William G., said Newman assor. to said Sutton. Elevating assembly for an offshore platform. 3,517,910, Cl. 254-92.
- Svenska Dataregister AB: See—
- Englund, Roland Gosta, Mattsson, Mats Erik, and Lindelow, Claes-Goran, 3,517,877.

- Swanson, Arthur M., to America Dry Milk Institute, Inc. Treatment of milk to improve its properties for use in yeast-raised bakery goods. 3,518,090, Cl. 99-56.
- Swanson, Eugene A., Harlacher, William H., and Dulin, Grady N., Jr., to Allied Chemical Corporation. Melt spinning process and apparatus. 3,517,412, Cl. 18-8.
- Swanson, Robert A., to Bell Telephone Laboratories, Incorporated. Telephone type connector block and mounting bracket. 3,518,618, Cl. 339-125.
- Swanson, Russell K. Check-out system and counter for use with cantilever shopping cart. 3,517,773, Cl. 186-1.
- Swartzfager, Walter G.: See—
- Ross, Robert H., Roth, Willard, Larko, Robert C., and Swartzfager, Walter G. 3,517,916.
- Sweet, Richard C.: See—
- Bronnes, Robert L., Hughes, Ray C., and Sweet, Richard C. 3,518,066.
- Sweger, Russell P.: See—
- Kohlbeck, Orin J., and Sweger, Russell P. 3,517,881.
- Swett, Erwin G. Extensible mounting assembly with means to grip desk. 3,517,625, Cl. 108-144.
- Swimmer, Ernest J.: See—
- Hicks, Alan A., and Swimmer, Ernest J. 3,517,936.
- Swithenbank, Colin, Lewis, Sheldon N., and Viste, Kenneth L., to Rohm & Haas Company. Fluoroureas. 3,518,304, Cl. 260-553.
- Sybron Corporation: See—
- Tyler, Hugh Jean, 3,517,955.
- Sylvania Electric Products, Inc.: See—
- Cerniglia, Nino P., Crytzer, JACOB., and Tonner, Richard C., 3,518,135.
- Cushera, Rosario E., and Hallett, Joseph L., 3,518,373.
- Funston, David Lee, Pifer, Marion Jonathan, and Wheeler, Robert Charles, 3,518,363.
- Gartner, Stanley J., Regec, John J., Roeder, Henry W., and Smith, James M., 3,517,799.
- Goldstein, David R., and Parekh, Pravin C., 3,517,643.
- Ho, Shu-Kuang, and Kardash, John J., 3,518,553.
- Rychlewski, Thaddeus V., 3,517,451.
- Schick, William F., LaValley, William R., Elfving, Claes T., and Wahl, Marvin L., 3,518,690.
- Szobonya, Karl F., to Beckman Instruments, Inc. Method of forming a terminal structure in a refractory base. 3,517,437, Cl. 29-624.
- Taccone, Russell W., to Kelsey-Hayes Company. Apparatus for making castings. 3,517,728, Cl. 164-255.
- Tachick, Henry N., to General Electric Company. Fault detection circuit for shielded cable terminations. 3,518,544, Cl. 324-127.
- Takahashi, Kentaro: See—
- Takao, Tsutomu, and Takahashi, Kentaro 3,518,128.
- Takahashi, Masao: See—
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo 3,518,198.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo 3,518,199.
- Takahashi, Shuichiro, and Asami, Naoto, to Mitsubishi Atomic Power Industries, Inc. Ultrahigh pressure apparatus. 3,517,413, Cl. 18-16.
- Takao, Tsutomu, and Takahashi, Kentaro, to Nippon Piston Ring Co., Ltd. Process for manufacturing high-strength, wear-resistant piston rings. 3,518,128, Cl. 148-3.
- Takazawa, Yoshio: See—
- Ueno, Kisaburo, Hirose, Akira, Takazawa, Yoshio, and Yamamura, Tatsuya 3,518,074.
- Takae, Yoshiyuki: See—
- Minami, Shinsaku, Nakata, Minoru, Fujimoto, Katsuro, and Takae, Yoshiyuki 3,518,256.
- Tambussi, William C. Molding process. 3,518,338, Cl. 264-221.
- Tamura, Yoshio: See—
- Izawa, Nobuo, Tamura, Yoshio, Furutani, Akhisa, and Okamoto, Kazuo 3,518,252.
- Tanaka, Masaru: See—
- Yamashita, Akio, and Tanaka, Masaru 3,518,508.
- Tanaka, Masashi, Nomura, Osamu, Kawamura, Hiayutaro, and Iida, Takayuki, to Tokyo Shibaura Electric Co., Ltd. Photo-flashing circuit device. 3,518,487, Cl. 315-232.
- Tanenbaum, Joseph Manuel. Apparatus for separating the flanges of large structural channels. 3,517,538, Cl. 72-389.
- Tasker, Ronald Vivian, and Holmes, Raymond Leslie, to Clarke, Chapman & Co. Limited. Heat exchangers. 3,517,733, Cl. 165-166.
- Tastee Freez Industries, Inc.: See—
- Fiedler, Armin, 3,517,524.
- Taub, William, Dens, Rolf, and Ostermayer, Franz, to Geigy Chemical Corporation. Cyclohexenyl amines. 3,518,307, Cl. 260-563.
- Tauch, Carl D.: See—
- Wood, John F., and Tauch, Carl D. 3,518,460.
- Tax, Hans. Luffing crane. 3,517,829, Cl. 212-8.
- Taylor, Maurice K., to Ferranti-Packard Limited, meane. Magnetically actuable visual display surface with magnetic bias. 3,518,664, Cl. 340-373.
- Taylor, Robert C.: See—
- Gzemaki, Felix C., and Taylor, Robert C. 3,518,101.
- Tecalemit (Engineering) Limited: See—
- Grantham, Max Edward, 3,518,029.
- Technicon Corporation: See—
- Eveleigh, John W., Castellani, Leon, and Israeli, Jack, 3,517,695.
- Shamos, Morris H., and Smythe, William J., 3,518,009.
- Skeggs, Leonard T., 3,518,008.
- Smythe, William J., 3,518,010.
- Watts, Leonard, 3,517,725.
- Tecumseh Products Company: See—
- Randall, Freddie D., 3,518,031.
- Teich, Aharon. Moisture-sensing detector and apparatus including same. 3,517,549, Cl. 73-73.
- Teijin Limited: See—
- Hara, Shibeoyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio, 3,518,234.
- Teknor Apex Company: See—
- Fath, Joseph, and Deardorff, Donald L., 3,518,223.
- Temple, Hiram E., to Baker Perkins Inc. Unstacking mechanism. 3,517,835, Cl. 214-8.5
- Tenneco Oil Company: See—
- Williams, Darrell W., and Crownover, Albert B., 3,517,553.
- Tension Envelope Corporation: See—
- Sturm, Richard H., 3,517,580.
- ter Haar, Karel Christian, to U.S. Philips Co., Inc., meane. Welding wire for electric arc-welding in air. 3,518,404, Cl. 219-146.
- Terjesen, Greger B., to Ingersoll-Rand Company. Drill rod coupling arrangement. 3,517,956, Cl. 287-117.
- Terry, Rupert Douglas, Hannes, George John, and Hahn, William Peter, to Johns-Manville Corporation. Method for forming and curing fibrous materials. 3,518,157, Cl. 161-170.
- Testa, narodni podnik: See—
- Carniol, Bohdan, and Styblo, Rudolf, 3,518,551.
- Teves, Alfred, G.m.b.H.: See—
- Belart, Jaun, 3,517,783.
- Beller, Hans Albert, 3,517,777.
- Schmid, Leopold Franz, 3,517,572.
- Texaco Inc.: See—
- Horton, William D., 3,517,744.
- Langford, Obie M., 3,518,623.
- Texas Instruments, Incorporated: See—
- Chung, David H., 3,518,449.
- Helms, John D., 3,517,624.
- Speaks, Fred A., 3,518,481.
- Wilcox, Donald L., 3,518,585.
- Textron Inc.: See—
- Hall, Ralph W., 3,517,873.
- Kistner, Charles R., and Anderson, Thomas W., 3,517,473.
- Tezuka, Kunitoshi. Press for scrap cars. 3,517,608, Cl. 100-100.
- Thaler, Kunibert. Roof drain. 3,517,813, Cl. 210-166.
- Thiersch, Friedrich, and Morgenstern, Manfred, to Still, Carl, Firma. Coking coal hopper construction with partition. 3,517,837, Cl. 214-35.
- Thiokol Chemical Corporation: See—
- Downs, James A., and Schellenbach, Stanley T., 3,518,211.
- Millen, Edward G., 3,518,107.
- Thomas, Alan E., to Robertshaw Controls Company. Constant surveillance alarm system. 3,518,653, Cl. 340-213.1
- Thomas, Buford L., to Valco, Inc. Adhesive application apparatus. 3,517,646, Cl. 118-411.
- Thomas, Charles L., to Sun Oil Company. Alkyl aromatic oxidation process. 3,518,301, Cl. 260-524.
- Thomas, Delmer L.: See—
- Stayboldt, Gordon R., Thomas, Delmer L., and Todd, Beverly J. 3,518,688.
- Thornton, James Coward: See—
- Ford, Ian Alastair Moncrieff, Cox, Bernard Carlton, and Thornton, James Coward 3,518,098.
- Thornton, Leonard, to Molins Machine Company Limited. Article handling apparatus. 3,517,477, Cl. 53-53.
- Threadgold, Ronald, and Pate, Orran Terence, to Automatic Telephone & Electric Company Limited. Data processing system utilizing stored instruction program. 3,518,632, Cl. 340-172.5
- Tift, Leo R., to Hare, James M. Truck underbody scraper for highway maintenance vehicles. 3,517,753, Cl. 172-795.
- Tilak, Manohar A., and Hollinden, Charles S., to Lilly, Eli, and Company. Novel amino acid protecting groups. 3,518,240, Cl. 260-88.2
- Timex Corporation: See—
- Smythe, Frederic H., Jr., and Kaulina, Edward, 3,517,503.
- Tinker, Townsend: See—
- Dell'Agnese, David E., and Tinker, Townsend 3,517,485.
- Titangesellschaft m.b.H.: See—
- Kulling, Achim, and Steinhausen, Helmut, 3,518,054.
- Todd, Beverly J.: See—
- Stayboldt, Gordon R., Thomas, Delmer L., and Todd, Beverly J. 3,518,688.
- Toffemire, Benjamin F. Reversible dental matrix band retaining clamp. 3,517,444, Cl. 32-63.
- Tokunaga, Kenichi: See—
- Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke 3,518,696.
- Tokyo Shibaura Electric Co., Ltd.: See—
- Tanaka, Masashi, Nomura, Osamu, Kawamura, Hiayutaro, and Iida, Takayuki, 3,518,487.
- Tomaich, George Ronald: See—
- Welsh, Thomas Laurence, and Tomaich, George Ronald 3,518,344.
- Tomota, Miyaji, Mori, Mitsutoshi, Tokunaga, Kenichi, Etoh, Eisuke, and Abe, Eisuke, to Kabushikikaisha Yokogawa Denki Seisakusho (Yokogawa Electric Works, Ltd.). Biological electrical phenomenon recording instrument. 3,518,696, Cl. 346-23.

- Tompkins, William T.: See—
Mattia, Michael, and Tompkins, William T. 3,517,464.
- Tonner, Richard C.: See—
Cerniglia, Nino P., Crytzer, JACOB., and Tonner, Richard C. 3,518,135.
- Torii, Michihiro: See—
Kobayashi, Seihin, Torii, Michihiro, and Sakoda, Hiroichi 3,518,644.
- Torossian, Antoine: See—
Rebut, Paul-Henri, and Torossian, Antoine 3,518,474.
- Torrington Company, The: See—
Cowles, John H., and Massey, Roger G. 3,517,965.
- Toth, Louis, to Anchor Enterprises Corporation. Structural element with thermal barrier means. 3,517,472, Cl. 52-403.
- Touchy, Wolfgang, to Siemens Aktiengesellschaft. Method and apparatus for producing photolithographic structures, particularly on semiconductor crystal surfaces. 3,518,083, Cl. 96-33.
- Tower, Dell K., Cecil, Eugene L., Jr., and Hack, George J., to United States of America, Navy. Electric 'point blank' bomb fuze. 3,517,618, Cl. 102-70.2
- Towey, James P.: See—
Games, John E., Lach, Richard F., and Towey, James P. 3,518,564.
- Toyo Kahan Co., Ltd.: See—
Oyama, Taro, and Inui, Tsuneo, 3,518,169.
- Travia, John S., Salkins, Burton E., Jr., and Rubin, Leonard S., to United States of America, Army, mesne. Digital phase measuring set. 3,518,541, Cl. 324-84.
- Treber, Willi O., and Nothacker, Siegfried, to Gebr. Happich G.m.b.H. Retractable crank for the manual actuation of an opening and closing device. 3,517,571, Cl. 74-547.
- Trico Products Corporation: See—
Deibel, Raymond A., and Riester, William C., 3,517,698.
- Triggiani, Leonard Vincent, and Stone, Irving Charles, to Grace, W. R., & Co. Process for preparing stoichiometric uranium dioxide. 3,518,065, Cl. 23-355.
- Triggiani, Leonard V., to Grace, W. R., & Co. Process for preparing microspheres of uranium, plutonium or thorium carbide. 3,518,328, Cl. 264-0.5
- Trimble, John Omer: See—
Mueller, Arthur Llewellyn, and Trimble, John Omer 3,517,702.
- Trimble, John Omer, and Mueller, Arthur Llewellyn, to AMP Incorporated. Heat-shrinkable sealing and strain-relief fittings for electrical cables. 3,518,359, Cl. 174-153.
- Tripp, Guy H. Chucks. 3,517,940, Cl. 279-55.
- Trippe, Juan T.: See—
Renshaw, Clarence, and Trippe, Juan T. 3,517,513.
- Troxler, Eduard: See—
Hausermann, Heinrich, and Troxler, Eduard 3,518,266.
- Truchelut, George B., and Bartlett, Charles M., to United States of America, Army. Defoliation evaluation method. 3,518,000, Cl. 356-72.
- TRW Inc.: See—
Gadd, John D., 3,517,428.
- Jenkins, John C., 3,517,901.
- Minick, Richard C., 3,518,028.
- Tse, Harold F., to Sun Oil Company. Pyrolytic methods of treating bituminous tar sands and preheating of the same. 3,518,181, Cl. 208-11.
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, to Nippon Electric Company, Limited. Piezoelectric ceramics. 3,518,198, Cl. 252-62.9
- Tsubouchi, Norio, Takahashi, Masao, Ohno, Tomeji, and Akashi, Tsuneo, to Nippon Electric Company, Limited. Piezoelectric ceramics. 3,518,199, Cl. 252-62.9
- Tucci, Gertrude H.: See—
Kruse, Robert C., 3,517,627.
- Tulip Meat Packers: See—
Frandsen, Jorgen Melchior, 3,517,449.
- Tully, Frank R., and Meyer, Warren L., to Motor Wheel Corporation. Wheel rim trim ring. 3,517,968, Cl. 301-37.
- Turnbull, John Hilton: See—
Stokes, Kenneth John, and Turnbull, John Hilton 3,517,581.
- Turner Industries Limited: See—
Kiteley, Peter W., 3,517,493.
- Turner, Wesley: Cup-shaped bread or cake and integral cup. 3,518,091, Cl. 99-88.
- Tustin, Oliver A.: See—
Clarke, Trevor G., Bowden, Ernest R.L., and Tustin, Oliver A. 3,517,967.
- Tydemann Machine Works, Inc.: See—
Williams, Alan F., and Zee, William T., 3,517,700.
- Tyler, Hugh Jean, to Sybron Corporation. Instrument linkage with disengageable pivotal coupling. 3,517,955, Cl. 287-101.
- Tyler, Hugh J., and Wolfe, Dennis H., to Robertshaw Controls Company. Control device having an improved one-piece mounting bracket. 3,518,601, Cl. 337-327.
- Tyler, Len A., to Bell & Howell Company. Development apparatus for continuous rotary electrostatographic apparatus. 3,517,993, Cl. 355-15.
- Uchida, Moriya: See—
Hara, Shieyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio 3,518,234.
- Ueno, Kisaburo, Hirose, Akira, Takazawa, Yoshio, and Yamamura, Tatsuya, to Mitsui Toatsu Chemicals Incorporated. Benzoylcholine halides as plant growth stunting agents. 3,518,074, Cl. 71-76.
- Uhrig, Karl Wilhelm. Slide fastener. 3,517,422, Cl. 24-205.1
- Uleski, Robert C. Acceleration apparatus for the production of X-ray and neutrons. 3,518,432, Cl. 250-84.5
- Unger, Paul. Pressure indicating means for safety ski binding. 3,517,640, Cl. 116-124.
- Union Carbide Corporation: See—
Barth, Bruce P., 3,518,067.
- Lee, Max Nai Yuen, and Schoofs, Richard Joseph, 3,517,484.
- Myles, Michael J., and Spellman, John P., 3,517,606.
- Union Oil Company of California: See—
Alston, Terence G., 3,518,299.
- Fenton, Donald M., and Wolgemuth, Larry G., 3,518,285.
- Uniroyal, Inc.: See—
Broadhurst, Jack M., 3,518,154.
- Hunter, Byron A., 3,518,236.
- Jablonski, Casmer S., 3,518,335.
- Smith, Andrew M., 3,517,554.
- United Aircraft Corporation: See—
Davison, Bartholomew J., 3,517,681.
- De Maria, Anthony J., and Penney, Albert W., Jr., 3,518,436.
- Gallivan, James E., 3,518,400.
- Games, John E., Lach, Richard F., and Towey, James P., 3,518,564.
- Pinsley, Edward A., 3,518,479.
- Rothman, Edward A., 3,517,731.
- Williamson, John S., 3,517,679.
- United Control Corporation: See—
Sakasegawa, Eugene, 3,518,646.
- United Gas Industries Limited: See—
Dransfield, Desmond, and Bass, Patrick, 3,518,652.
- United Kingdom Atomic Energy Authority: See—
Maskell, Clifford William Alfred, 3,518,484.
- Owen, William Denley, 3,518,433.
- Woodhead, James Louis, 3,518,050.
- United States Borax & Chemical Corporation: See—
Dulat, Joseph, 3,518,348.
- United States of America
Agriculture: See—
Connick, William J., Jr., and Ellzey, Samuel E., Jr., 3,518,218.
- Graham, Robert P., Huxsoll, Charles C., Hart, Marcus R., and Weaver, Merle L., 3,517,715.
- Pittman, Allen G., and Wasley, William L., 3,518,114.
- Reinhardt, Robert M., and Bruno, Joseph S., 3,518,044.
- Reyes, Zoila, and Russell, Charles R., 3,518,176.
- Schuller, Walter H., Minor, Jacob C., Lawrence, Ray V., and Kanno, Hideo, 3,518,282.
- Air Force: See—
Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A., 3,517,505.
- Anderson, Charles E., Birstein, Seymour J., and Silverman, Bernard A., 3,517,512.
- Brewer, Silas H., 3,518,004.
- Christian, John B., 3,518,189.
- D'Alelio, Gaetano F., 3,518,233.
- Eklund, Phillip R., 3,517,974.
- Elrod, Charles W., 3,517,692.
- Fox, Paul L., 3,517,447.
- Gebel, Radames K. H., and Fettes, Henry E., 3,518,416.
- Gowell, Robert W., Rosenthal, Sidney, and Whidden, Roger W., 3,518,682.
- Hedger, John Henry, 3,517,762.
- Hersh, Michael S., 3,518,402.
- Pizzarello, Frank A., and Harrington, John Beny, 3,518,582.
- Pocs, Konstantins K., 3,518,687.
- Robinson, George C., and Wilks, Edward F., 3,517,584.
- Vogel, George J., 3,518,669.
- Wells, Jimmie D., 3,517,897.
- Army: See—
Alexander, John A., 3,518,106.
- Brueckmann, Helmut, 3,518,684.
- Dittrich, William A., 3,518,570.
- Dworkin, Larry U., 3,518,377.
- Fischbach, Adolph, 3,518,125.
- Glendinning, William B., 3,518,131.
- Glendinning, William B., 3,518,132.
- Glendinning, William B., 3,518,133.
- Gurtler, Edward A., 3,518,447.
- Harris, Hunter L., 3,518,542.
- Hartman, Richard L., 3,518,580.
- Humphrey, Robert G., 3,518,419.
- Jones, Howard S., Jr., 3,518,683.
- Jones, Howard S., Jr., 3,518,685.
- Army: See—
Kulp, John L., 3,518,559.
- Army: See—
Otto, William F., and McKnight, William B., 3,518,569.
- Strickland, William L., 3,517,555.
- Army: See—
Travia, John S., Salkins, Burton E., Jr., and Rubin, Leonard S., 3,518,541.
- Army: See—

- Truchelut, George B., and Bartlett, Charles M., 3,518,000.
- Weber, Paul E., 3,518,005.
- Army, The: See—
Hyder, Charles W., 3,517,587.
- Atomic Energy Commission: See—
Ayer, James E., 3,517,431.
- Cotterill, Rodney M. J., 3,518,427.
- de Boisblanc, Deslonde R., 3,518,163.
- Goodman, Leonard S., and Salter, Forrest O., 3,518,414.
- Sandstrom, Donald J., 3,517,432.
- Schweitzer, Donald G., 3,518,496.
- Seeley, Forest G., and Crouse, David J., Jr., 3,518,063.
- Interior: See—
Emerson, David E., 3,517,521.
- Sprinkle, Leland W., 3,518,448.
- Navy: See—
Abbott, Frank R., 3,518,463.
- Alpert, Louis, 3,518,613.
- Goff, John C., 3,518,339.
- Haber, Charles P., and McWilliams, Gerald E., 3,518,121.
- Navy: See—
Hallendorff, Richard H., 3,518,691.
- Navy: See—
Hoffman, Benjamin F., and Carruthers, Ronald W., Sr., 3,518,453.
- Jacobs, Sigmund J., 3,517,615.
- Kues, Henry A., Jr., and Murphy, John C., 3,518,049.
- Navy: See—
Leventhal, Robert S., 3,517,550.
- Navy: See—
Nyberg, Richard A., 3,518,614.
- Navy: See—
Pearce, Thomas W., Hochberg, Arthur K., and Poehler, Theodore O., Jr., 3,518,455.
- Petschauer, Richard J., 3,518,638.
- Navy: See—
Skorheim, Robert D., 3,518,675.
- Tower, Dell K., Cecil, Eugene L., Jr., and Hack, George J., 3,517,618.
- Vogel, Seymour, 3,518,566.
- Whitel, Ronald J., 3,517,639.
- Wyatt, Theodore, 3,517,730.
- United-Carr Incorporated: See—
Leathem, Douglas B., 3,518,485.
- Universal Oil Products Company: See—
Cyba, Henryk A., 3,518,193.
- Ward, Dennis J., 3,518,165.
- Urani, Angelo, to McGraw-Edison Company. Protector for electric circuits. 3,518,600, Cl. 337-201.
- Urban Scientific Corporation: See—
Moorehead, Donovan L., and Patterson, Dan W., 3,518,674.
- U.S. Philips Co., Inc.: See—
ter Haar, Karel Christiaan, 3,518,404.
- U.S. Philips Corporation: See—
Andrich, Ekkehard, 3,518,407.
- Askew, Gerald Hamilton, 3,518,374.
- Bertrams, Johannes Kurt, 3,518,417.
- Beusink, Bernard Joseph, Horowitz, Alexandre, and Van Den Heuvel, Wilhelmus Henricus Maria, 3,517,494.
- Beusink, Bernard Joseph, 3,517,495.
- Broekema, Heiko, Luijten, Willem Jacob, Wolf, Gerrit, and van Dijkum, Adalbertus Hermanus Jacobus Nieveen, 3,518,565.
- Bronnes, Robert L., Hughes, Ray C., and Sweet, Richard C., 3,518,066.
- Dubois, Jean Claude, 3,518,418.
- Greefkes, Johannes Anton, and Riemens, Karel, 3,518,548.
- Hart, Cornelis Maria, and Slob, Arie, 3,518,438.
- Hoppen, Johannes, 3,517,816.
- Koelmans, Hein, 3,518,511.
- Kok, Pieter W., 3,518,435.
- Lamming, Jack Stewart, 3,518,510.
- U.S. Plywood-Champion Papers Inc.: See—
Edelstein, Joel J., De Bell, John M., and Parker, Charles H., 3,518,210.
- USM Corporation: See—
Imhof, Herman A., 3,517,462.
- Vaiana, Joseph G.: See—
Altonji, John A., and Vaiana, Joseph G., 3,518,647.
- Vail, Jack J., and Millette, Raymond G., to Great Lakes Carbon Corporation. Nipple-electrode assembly and joint and method of making same. 3,517,957, Cl. 287-127.
- Valco, Inc.: See—
Thomas, Buford L., 3,517,646.
- Van Benthuysen, John D.: See—
Beaver, Thomas R., and Van Benthuysen, John D., 3,518,604.
- Vance, Arthur W.: See—
Kazan, Benjamin, and Vance, Arthur W., 3,518,698.
- Van Den Heuvel, Wilhelmus Henricus Maria: See—
Beusink, Bernard Joseph, Horowitz, Alexandre, and Van Den Heuvel, Wilhelmus Henricus Maria, 3,517,494.
- Vanderhelst, Peter W., to Robotron Corporation. End weld control circuit. 3,518,395, Cl. 219-110.
- Vanderhelst, Peter W., to Robotron Corporation. Resistance drop feedback weld control. 3,518,399, Cl. 219-110.
- van Dijkum, Adalbertus Hermanus Jacobus Nieveen: See—
Broekema, Heiko, Luijten, Willem Jacob, Wolf, Gerrit, and van Dijkum, Adalbertus Hermanus Jacobus Nieveen 3,518,565.
- Van Gaalen, Neil. Apparatus for sorting fish eggs. 3,517,807, Cl. 209-73.
- Van Rossem, Walter J. Vibrating table construction. 3,517,913, Cl. 259-91.
- Vare Corporation: See—
De Lano, Don L., 3,518,619.
- Vargo, Ernest R.: See—
Richey, Joseph B., 3,518,602.
- Vargo, Louis E.: See—
Richey, Joseph B., 3,518,602.
- Varian Associates: See—
Helgesson, Alan L., 3,518,567.
- Huggett, George R., McBride, Richard A., and Augustine, Larry J., 3,518,531.
- Vassil, Theo N., to American District Telegraph Company. Method and apparatus for detecting a condition. 3,518,654, Cl. 340-228.
- V.D. Gathen, Rudolf: See—
Harnisch, Heinz, Ottony, Heinz Friedrich, V.D. Gathen, Rudolf, Hennecke, Hermann, Heitmuller, Werner, and Jochims, Heinz 3,517,628.
- Vechain, Jacques, to Compagnie Generale d'Electricite. Object positioning support allowing for multiple displacements. 3,517,904, Cl. 248-324.
- Velsicol Chemical Corporation: See—
Berlinger, Jordan P., and Richter, Sidney B., 3,518,077.
- Vernon, Richard L., to Lockheed Aircraft Corporation. Unitized aircraft food and beverage service. 3,517,899, Cl. 244-118.
- Vertes, Paul: See—
Delange, Maurice, Huet, Henri, and Vertes, Paul 3,518,060.
- Delange, Maurice, Huet, Henri, and Vertes, Paul 3,518,062.
- Vicenzi, Elio: See—
Crosslen, Louis John, and Vicenzi, Elio 3,517,827.
- Vie-Del Company: See—
Warkentin, Hans, 3,518,089.
- Villiers-Fisher, John F., and Andreatch, Anthony J., to Chemical Construction Corporation. Production of nitrophosphate fertilizer and ammonium nitrate-calcium carbonate fertilizers. 3,518,071, Cl. 71-35.
- Villiers-Fisher, John F.: See—
Strelzoff, Samuel, Warshaw, Abe, Villiers-Fisher, John F., and Atkin, Sydney 3,518,073.
- Villwock, Robert D.: See—
Giel, George J., Villwock, Robert D., and Smith, Lawrence S., 3,518,628.
- Virkkala, Vilko Antero. Cranes. 3,517,830, Cl. 212-132.
- Vishay Intertechnology, Inc.: See—
Zandman, Felix, and Boyd, Branin A., 3,517,436.
- Visnovsky, Lubomir, to Monsanto Europe S.A. Process for producing a nylon-coated leather-like product. 3,518,103, Cl. 117-11.
- Visser, Christiaan, deceased (by Batenburg, B. M. A., executrix), to Vrendenberg, C. J., and N.V. Vereenigde Touwfabrieken. Soil protection mats. 3,517,514, Cl. 61-38.
- Viste, Kenneth L.: See—
Swithenbank, Colin, Lewis, Sheldon N., and Viste, Kenneth L., 3,518,304.
- Vogel, George J., to United States of America, Air Force. Time scanned array radar. 3,518,669, Cl. 343-16.
- Vogel, Seymour, to United States of America, Navy. Audio system with modified output. 3,518,566, Cl. 330-144.
- Vogelmann, Friedrich. Roller for handling heavy hot materials. 3,517,426, Cl. 29-125.
- Vogler, John G.: See—
Augenblick, Harry A., and Vogler, John G., 3,518,546.
- von Falkai, Bela: See—
Rellensmann, Wolfgang, Wieden, Horst, von Falkai, Bela, and Reichle, Alfred 3,518,045.
- Von Saldern, Rudiger, Ehms, Hermann, and Weigert, Johann, deceased (by Weigert, Anna, heir), to Linde Aktiengesellschaft. Yieldable wall assembly for containers for the transportation of low-temperature fluids. 3,517,850, Cl. 220-9.
- Von Strandtmann, Maximilian, Cohen, Marvin P., and Shavel, John, Jr., to Warner-Lambert Pharmaceutical Company. Benzopyranquinolinol derivatives and process for their production. 3,518,273, Cl. 260-289.
- Von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., to Warner-Lambert Pharmaceutical Company. Pyranol[3,2-i]quinoline and process for the production. 3,518,258, Cl. 260-240.
- Von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., to Warner-Lambert Pharmaceutical Company. Tetrahydro benzopyranquinolines and process for their production. 3,518,272, Cl. 260-289.
- Voytko, Joseph, to Westvaco Corporation. Two-roll shipping and dispensing container. 3,517,870, Cl. 225-34.
- Vrendenberg, C. J.: See—
Visser, Christiaan, 3,517,514.
- Vukasovich, Mark S., to Sherwin-Williams Company, The. Fluorescent pigment. 3,518,205, Cl. 252-301.3
- Wacker-Chemie G.m.b.H.: See—
Pirson, Ewald, and Nitzsche, Siegfried, 3,518,188.
- Wagner, George J. Supply holder. 3,517,822, Cl. 211-11.

- Wagner, James H., to Arrowhead Engineering Corporation. Wheel fabricating machine with loader and unloader apparatus. 3,517,541, Cl. 72-426.
- Wagner, Karl, Nicolay, Klaus, Fliesser, Engelbert, Landbrecht, Franz, and Putscher, Johann, to Agfa-Gevaert Aktiengesellschaft. Flash unit for use with flashcubes or the like. 3,517,595, Cl. 95-11.5
- Wagoner, Richard E.: See—
- Jaffe, Wolfgang, and Wagoner, Richard E. 3,518,522.
- Wahl, Marvin L.: See—
- Schick, William F., LaValley, William R., Elfving, Claes T., and Wahl, Marvin L. 3,518,690.
- Wakefield, Harold Donavon, to Coca-Cola Company, The. Foldable container. 3,517,875, Cl. 229-39.
- Walburn, Richard H. Automatic program selector device. 3,518,379, Cl. 179-100.1
- Waldron, Stoddard S., to North American Rockwell Corporation. Sub-surface wireline system. 3,517,736, Cl. 166-0.5
- Walker, Harold R.: See—
- Kamen, Ira, and Walker, Harold R. 3,518,376.
- Wallace, John J., to Sherwin-Williams Company, The. Color display and dispensing device. 3,517,448, Cl. 35-28.3
- Wanless, Graham G., and Glock, George A., Jr., to Esso Research and Engineering Company. Ion beam intensity control for a field ionization mass spectrometer employing voltage feedback to the ion source. 3,518,424, Cl. 250-41.9
- Wanzer, Arthur W., to Mathewson Corporation. Bow thruster. 3,517,635, Cl. 114-151.
- Ward, Dennis J., to Universal Oil Products Company. Process for separating alkylation effluent by plural stage distillation with benzene recycle. 3,518,165, Cl. 203-78.
- Warkentin, Hans, to Vie-Del Company. Process for making sherry wine. 3,518,089, Cl. 99-35.
- Warnant, Julien: See—
- Bucourt, Robert, Pierdet, Andre, Costerousse, Germain, Hainaut, Daniel, Joly, Robert, Warnant, Julien, and Goffinet, Bernard 3,518,296.
- Warner-Lambert Pharmaceutical Company: See—
- Brown, Richard E., and Meltzer, Robert I. 3,518,269.
- Lewin, Seymour Z. 3,518,064.
- Shavel, John, Jr., and Zinnes, Harold, 3,518,270.
- Shavel, John, Jr., and Zinnes, Harold, 3,518,271.
- von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., 3,518,258.
- von Strandtmann, Max, Cohen, Marvin P., and Shavel, John, Jr., 3,518,272.
- Von Strandtmann, Maximilian, Cohen, Marvin P., and Shavel, John, Jr., 3,518,273.
- Warshaw, Abe: See—
- Strelzoff, Samuel, Warshaw, Abe, Villiers-Fisher, John F., and Atkin, Sydney 3,518,073.
- Warshaw, Robert, to Parsons, Brinckerhoff, Quade & Douglas, Inc. Tunnel construction sliding assembly. 3,517,515, Cl. 61-42.
- Warszawski, Bernard, to Societe General de Constructions Electriques et Mecaniques (Asthom). Fuel cell battery for use with an electrolyte as carrier for emulsified reagents. 3,518,122, Cl. 136-86.
- Warwick Electronics Inc.: See—
- Plunkett, Bradley J. 3,518,352.
- Wasley, William L.: See—
- Pittman, Allen G., and Wasley, William L. 3,518,114.
- Watts, Leonard, to Technicon Corporation. Continuous casting process and apparatus. 3,517,725, Cl. 164-82.
- Watson, Harry Bell, to Bendix Corporation, The. Control network for an electrical system having multiple power supplies. 3,518,490, Cl. 317-31.
- Weaver, David P., to International Telephone and Telegraph Corporation. Optical strain gauge. 3,517,999, Cl. 356-32.
- Weaver, Merle L.: See—
- Graham, Robert P., Huxsoll, Charles C., Hart, Marcus R., and Weaver, Merle L. 3,517,715.
- Weber, H. G., and Company Inc.: See—
- Beninger, Robert L. 3,517,482.
- Weber, Herbert H. 3,517,481.
- Weber, Hans B., to Midland-Ross Corporation. Railway car truck with friction dampened axles. 3,517,620, Cl. 105-167.
- Weber, Herbert H., to Weber, H. G., and Company Inc. Carton closer and sealer. 3,517,481, Cl. 53-374.
- Weber, Klaus, to Leitz, Ernst, G.m.b.H. Device for optically scanning the object in a microscope. 3,518,014, Cl. 356-203.
- Weber, Max E., to Singer Company, The. Needle threader. 3,517,631, Cl. 112-225.
- Weber, Paul E., to United States of America, Army. Optical boresight device. 3,518,005, Cl. 356-138.
- Wehrli, Walter: See—
- Auerbach, Guenther, Benz, Jakob, and Wehrli, Walter 3,518,246.
- Wei, Peter H. L., and Bell, Stanley C., to American Home Products Corporation. Synthesis of 1,3-diazepino[1,2-a] indolin-1(2H)-ones. 3,518,254, Cl. 260-239.3
- Weichel, Ernst. Method for loading, transporting and unloading bulk materials. 3,517,842, Cl. 214-152.
- Weigert, Anna: See—
- Von Saldern, Rudiger, Ehms, Hermann, and Weigert, Johann 3,517,850.
- Weigert, Johann: See—
- Von Saldern, Rudiger, Ehms, Hermann, and Weigert, Johann 3,517,850.
- Weimer, Ralph E.: See—
- Hirsch, James R., Weimer, Ralph E., Miller, Dye O., Jr., and Weiss, Frank F. 3,517,605.
- Weis, Albert, and Petry, Baldwin E. Folding ladder. 3,517,772, Cl. 182-163.
- Weiss, Frank F.: See—
- Hirsch, James R., Weimer, Ralph E., Miller, Dye O., Jr., and Weiss, Frank F. 3,517,605.
- Welch, Dean E., and Baron, Robert R. Nitro-trifluoromethylbenzamide. 3,518,305, Cl. 260-558.
- Weld, Foster Earle: See—
- McLeod, Robert Beaton, and Weld, Foster Earle 3,518,378.
- Wells, Jimmie D., to United States of America, Air Force. Multi-module thrust mount. 3,517,897, Cl. 244-1.
- Wells-Gardner Electronics Corporation: See—
- Chaddha, Aron K., Jones, Trevor L., and Stamatis, Sam P. 3,518,365.
- Welsh, Thomas Laurence, Peterson, Donald Leroy, Palermo, Blasey Thomas, and Hoss, George Carr, to Miles Laboratories, Inc. Effervescent tablet and process for making same. 3,518,343, Cl. 424-44.
- Welsh, Thomas Laurence, and Tomaich, George Ronald, to Miles Laboratories, Inc. Tableting lubricant. 3,518,344, Cl. 424-44.
- Wendt, David W., to Fox Corporation, mesne. Motorbike. 3,517,764, Cl. 180-33.
- Wenger, Fredy. Locking member for interconnecting household appliances. 3,517,977, Cl. 312-111.
- Werner, John A., and Schaefer, Kenneth A., to Koehring Company. Apparatus for working tubes. 3,517,534, Cl. 72-83.
- Wert, Clifford M., to Goodyear Tire & Rubber Company, The. Cushion toilet seat structure. 3,517,396, Cl. 4-234.
- Wessells, Forrest Ashton, to Grace, W. R., & Co. Chlorine release detergent composition with improved defoamer stability. 3,518,201, Cl. 252-99.
- Wessells, Henry W., III, and Dean, Walter B., to Budd Company, The. Sleet scraper for third rail assembly. 3,517,787, Cl. 191-62.
- Wessells, Henry W., III, and Eggert, Walter S., Jr., to Budd Company, The. Vehicle rear underbody structure. 3,517,765, Cl. 180-64.
- Westrom, Alfred: See—
- Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Westrom, Alfred 3,517,532.
- West, De Witt Henry, to Deller, Anthony William. Electric vehicle powered by a continuously charged electric battery and having an electrical circuit containing a twin electric generator power system. 3,517,766, Cl. 180-65.
- West, William A.: See—
- Kepta, Buran I., Jr., and West, William A. 3,518,603.
- Western Electric Company, Incorporated: See—
- Sharp, Benny H. 3,517,647.
- Westervelt, James T.: See—
- Converse, Vernon G., III, Clayton, Robert W., and Westervelt, James T. 3,517,552.
- Westesson, Lawe Herbert, to Ingeniorsfirman Nils Weibull AB. Laboratory system for automatically analyzing mashed sugar beet samples. 3,517,709, Cl. 141-83.
- Westinghouse Air Brake Company: See—
- Clemmons, Quentin T. 3,517,784.
- Hutton, Thomas J. 3,517,880.
- Norton, Roscoe A., Jr. 3,518,588.
- Scott, Daniel G. 3,517,971.
- Weston Instruments, Inc.: See—
- Kirkendall, William D. 3,518,605.
- Westvaco Corporation: See—
- Voytko, Joseph 3,517,870.
- Weyerhaeuser Company: See—
- Bridges, Robert L., and Dick, James 3,517,629.
- Freeman, Harlan G., Baxter, Gene F., and Allan, George Graham, 3,518,159.
- Whalen, James M., to Remcor Products Company. Ice dispenser having polygonal walls. 3,517,860, Cl. 222-202.
- Wheelabrator Corporation, The: See—
- Freeman, Ardee H., Schulte, Harold F., and Davidson, Hubert, 3,517,465.
- Wheeler, Robert Charles: See—
- Funston, David Lee, Pifer, Marion Jonathan, and Wheeler, Robert Charles 3,518,363.
- Wheeler, Charles Glenn, to Arizona Chemical Company, mesne. Synthetic rubber manufacture. 3,518,214, Cl. 260-27.
- Whelehan, James: See—
- Lombardo, Peter, Moley, Edmund, and Whelehan, James 3,518,562.
- Whidden, Roger W.: See—
- Gowell, Robert W., Rosenthal, Sidney, and Whidden, Roger W. 3,518,682.
- Whitel, Ronald J., to United States of America, Navy. Pure fluid annunciator. 3,517,639, Cl. 116-118.
- Whittaker, Johnnie L.: See—
- Burdin, Clifford, Clarke, James D., Gehris, James D., and Whittaker, Johnnie L. 3,518,016.
- Whitmore, Dwight S., to Dresser Industries, Inc. Stabilized zirconia shapes. 3,518,100, Cl. 106-57.

- Whitwell, James A.: See—
- Snyder, Joseph T., Maxfield, Charles C., Skinner, Francis H., and Whitwell, James A. 3,517,954.
- Wichman, Ralph D. Automatic starting control for engine-generator. 3,518,445, Cl. 290-30.
- Wicks, Moye, III, to Shell Oil Company. Transportation of particles by pipeline. 3,517,969, Cl. 302-66.
- Wieden, Horst: See—
- Reilensmann, Wolfgang, Wieden, Horst, von Falkai, Bela, and Reichle, Alfred 3,518,045.
- Wightman, Lawrence W., and Paul, Eugene F., to Emerson Electric Co. Electric motor with ball bearing and end shield arrangement. 3,518,471, Cl. 310-85.
- Wightman, Lawrence W., to Emerson Electric Co. Totally enclosed fan-cooled electric motor. 3,518,467, Cl. 310-63.
- Wightman, Lawrence W., to Emerson Electric Co. Electric motor cooling construction. 3,518,468, Cl. 310-63.
- Wigman, Harry W.: See—
- Bartley, Wilbur E., and Wigman, Harry W. 3,517,761.
- Wilcox, Donald L., to Texas Instruments, Incorporated. Voltage controlled A.C. signal. 3,518,585, Cl. 333-81.
- Wilks, Edward F.: See—
- Robinson, George C., and Wilks, Edward F. 3,517,584.
- Will, Christian H., Jr., to Lear Siegler, Inc. Gyroscopic platform assembly. 3,517,563, Cl. 74-534.
- Williams, Alan F., and Zee, William T., to Tydeman Machine Works, Inc. Compensating element for hydrostatic bearings. 3,517,700, Cl. 138-44.
- Williams, Darrell W., and Crownover, Albert B., to Tenneco Oil Company. Method and apparatus for measuring and controlling bottom-hole differential pressure while drilling. 3,517,553, Cl. 73-152.
- Williams, James Curtis, to Allis-Chalmers Manufacturing Company. Hydraulic track adjuster. 3,517,972, Cl. 305-10.
- Williams, Robert C., to Dresser Industries, Inc. Well packer and packing element supporting members therefor. 3,517,742, Cl. 166-134.
- Williamson, David Theodore Nelson, Crosland, Richard Graham, and Christal, Philip Richard, to Molins Machine Company Limited. Work-setting stations. 3,517,430, Cl. 29-208.
- Williamson, John S., to United Aircraft Corporation. Dual fluid crossover control. 3,517,679, Cl. 137-1.
- Willmann, Donald F., to Avco Corporation. Gear support and alignment guide. 3,517,567, Cl. 74-414.
- Wilmarth, Paul C., to RCA Corporation. Television receiver horizontal deflection output stage protection circuit and direct voltage supply. 3,518,482, Cl. 315-27.
- Wilson, Carl H., to Foster Grant Co., Inc. Spectacles. 3,517,989, Cl. 351-43.
- Wilson, George Herbert: See—
- Carrotte, Frederick Henry, and Wilson, George Herbert 3,517,429.
- Wilson, Homer M., to Petrolite Corporation. Electrochemical process for studying and determining the nature of fluid-containing underground formations. 3,518,530, Cl. 324-1.
- Wilson, Phillip M. Boat sculling paddle. 3,518,024, Cl. 416-63.
- Wilson, Thomas Lamont, and Hickok, Willard H., to Chemtron Corporation. Dielectric heating apparatus. 3,518,396, Cl. 219-10.53
- Winch, George E., Grams, Walter H., Braastad, Gerald G., Riddell, James F., and Shaw, William A., to Federal Cartridge Corporation. Cartridge packaging machine. 3,517,478, Cl. 53-142.
- Windecker, Leo J., to Dow Chemical Company, The. Fire retardant structure. 3,518,156, Cl. 161-161.
- Winegard Company: See—
- Winegard, John R., and Shelledy, Carey W. 3,518,693.
- Winegard, John R., and Shelledy, Carey W., to Winegard Company. Ultra high frequency television antenna. 3,518,693, Cl. 343-802.
- Wingate, Sidney A., to Itel Corporation, mesne. Linear motion converter. 3,518,661, Cl. 340-347.
- Winkler, Ernst W. S., Emmett, John R., and Perry, John A., to Canadian Patents and Development Limited. Method of producing semiconductor materials. 3,517,435, Cl. 29-573.
- Winnebago Industries, Inc.: See—
- Bainter, Huston K., and Nerem, Marvin E. 3,517,427.
- Winstel, Gunter, and Zschauer, Karl-Heinz, to Siemens Aktiengesellschaft. Luminescence diode with an A B semiconductor monocrystal and an alloyed planar P-N junction. 3,518,476, Cl. 313-108.
- Winter, David F., to Central Transformer Corporation. Annealing form and methods. 3,517,917, Cl. 263-47.
- Witheridge, Rodney Ernest: See—
- Andrews, George Inglis, Groezek, Aleksander Jerzy, and Witheridge, Rodney Ernest 3,518,186.
- Wittland, Frank, to Dickinson, Becton and Company. Glove package. 3,517,806, Cl. 206-63.2
- Witzmann, Gustav: See—
- Platz, Elwood T., Kussy, Frank W., and Witzmann, Gustav 3,518,597.
- Wlozek, Joseph T. Feeder for elongated bars or tubes. 3,517,844, Cl. 214-338.
- Wolf, Gerrit: See—
- Broekema, Heiko, Luijten, Willem Jacob, Wolf, Gerrit, and van Dijkum, Adalbertus Hermanus Jacobus Nieveen 3,518,565.
- Wolfe, Dennis H.: See—
- Tyler, Hugh J., and Wolfe, Dennis H. 3,518,601.
- Wolfe, Max, to Hemisphere Novelties, Inc. Leather button with shank. 3,517,418, Cl. 24-90.
- Wolgemuth, Larry G.: See—
- Fenton, Donald M., and Wolgemuth, Larry G. 3,518,285.
- Wonos, Dale W., to Budd Company, The. Casting apparatus having aligning members in cope and drag. 3,517,729, Cl. 164-366.
- Wood, John F., and Tauch, Carl D., to Euphonia Corporation. Ultrasonic transducer employing suspended piezoelectric plate. 3,518,460, Cl. 310-8.2
- Wood, Louis L., to Grace, W. R., & Co. Orthoester stabilized polyvinylchloride resins. 3,518,226, Cl. 260-45.95
- Wood, Louis L., to Grace, W. R., & Co. Orthoester stabilized polyvinylchloride resins. 3,518,227, Cl. 260-45.95
- Wood Newspaper Machinery Corporation: See—
- Snyder, Robert A. 3,517,920.
- Woodbury, Richard C., to Research Corporation. Magnetic device for storing analog information. 3,518,637, Cl. 340-174.
- Woodhall, Edwin S., to Goodyear Tire & Rubber Company, The. Axially expandable tire and rim assembly. 3,517,721, Cl. 152-352.
- Woodhead, James Louis, to United Kingdom Atomic Energy Authority. Zirconium compounds. 3,518,050, Cl. 23-102.
- Woodings-Verona Tool Works: See—
- Holstein, Frederick William 3,517,883.
- Woods, John Thomas. Audiometric enclosure. 3,517,468, Cl. 52-79.
- Woods, John Thomas, and Woods, Margaret Hinke. Chair insert with upholstered appearance. 3,517,963, Cl. 297-228.
- Woods, Margaret Hinke: See—
- Woods, John Thomas, and Woods, Margaret Hinke 3,517,963.
- Woods, Raymond A. Carpet color retouching kit. 3,518,018, Cl. 401-46.
- Woolacott, Derrick Sunnucks: See—
- Woolacott, Derrick Sunnucks 3,517,600.
- Woolacott, Derrick Sunnucks, to Woolacott, Derrick Sunnucks, and Pargeter, Roland Albert, and Keith, Charles Christopher, and Evans, David. Apparatus for processing photographic materials. 3,517,600, Cl. 95-89.
- Woolvin, Geoffrey George, to Cossor, A. C., Limited. Secondary radar systems. 3,518,668, Cl. 343-6.8
- Wright, Archibald Nelson, and Mathewson, Wilfred F., Jr., to General Electric Company. Photopolymerized film, coating and product, and method of forming. 3,518,111, Cl. 117-93.31
- Wright, Robert R., Barbee, John P., and Kucera, Clement M., to Dresser Industries, Inc. Socket retainer for rotary power tools. 3,517,953, Cl. 287-33.
- Wright, William L., to Lilly, Eli, and Company. Method of eliminating weed species with herbicidal combination. 3,518,076, Cl. 71-111.
- Wyandotte Chemicals Corporation: See—
- MacGugan, Ian C. 3,518,113.
- Wyant, Gerald W. Disposable carpet made from polyethylene coated sheet material with moisture absorbing paper layers. 3,517,407, Cl. 15-215.
- Wyatt, Theodore, to United States of America, Navy. Controllable heat pipe. 3,517,730, Cl. 165-32.
- Wyle Laboratories: See—
- Dawson, Samuel Lee, and Felkner, Norman Darrel 3,518,595.
- Xerox Corporation: See—
- Bickmore, John T., and Goffe, William L. 3,518,081.
- Gallo, Charles F., and Leiga, Algrid G. 3,517,995.
- Hoffman, Daniel S., and Jones, Hugh L. 3,517,923.
- Kazan, Benjamin, and Vance, Arthur W. 3,518,698.
- Yackel, Edward C., and Foster, Donald P., to Eastman Kodak Company. Gravure etch resist film. 3,518,087, Cl. 96-83.
- Yamamura, Tatsuya: See—
- Ueno, Kisaburo, Hirose, Akira, Takazawa, Yoshio, and Yamamura, Tatsuya 3,518,074.
- Yamashita, Akio, and Tanaka, Masaru, to Matsushita Electric Industrial Co., Ltd. Transducer. 3,518,508, Cl. 317-235.
- Yates, William F.: See—
- Burleson, James C., and Yates, William F. 3,518,178.
- Yoshida, Tsunemasa: See—
- Hara, Shibeyoshi, Senoo, Masao, Uchida, Moriya, Yoshida, Tsunemasa, and Imai, Yoshio 3,518,234.
- Young, Clarence A.: See—
- Bosworth, Melvin B., Bowman, Douglas F., Sparkes, Harry P., and Young, Clarence A. 3,518,617.
- Young, Raymond H. Jr.: See—
- Cohen, Saul M., and Young, Raymond H. Jr. 3,518,235.
- Youngtown Foundry & Machine Company: See—
- Shaffer, James O. 3,517,833.
- Yusa Battery Company Limited: See—
- Matsuno, Shiro, and Kobayashi, Yoshio 3,518,126.
- Yunoki, Hisashi, Kudo, Tatsuo, Ito, Yukio, and Komizo, Hidemitsu, to Fujitsu Limited. Broad range frequency selective ultra-high frequency impedance device. 3,518,583, Cl. 333-73.
- Yutzy, Henry C.: See—
- Beavers, Dorothy J., and Yutzy, Henry C. 3,518,160.
- Zandman, Felix, and Boyd, Brinin A., to Vishay Intertechnology, Inc. Precision resistor of great stability. 3,517,436, Cl. 29-613.
- Zar, Jacob L., to Avco Corporation. Superconducting magnet and method of operation. 3,518,591, Cl. 335-216.
- Zee, William T.: See—
- Williams, Alan F., and Zee, William T. 3,517,700.
- Zeis, Steve E., and Caner, Ralph A., to Northrop Carolina, Inc. Inflatable textile winder. 3,517,891, Cl. 242-46.4

- Zemanek, Joseph, Jr.: See—
Straus, Andrew J. D., and Zemanek, Joseph, Jr. 3,517,767.
Zenith Radio Corporation: See—
Fein, Michael E., Markin, Joseph, and Sobel, Alan, 3,517,983.
Krug, Robert W., 3,518,361.
Krug, Robert W., 3,518,364.
Ziegler, Eugen: See—
Sixt, Gerhard, and Ziegler, Eugen 3,517,854.
Zielinski, Gerald C.: See—
Sheffer, Howard E., and Zielinski, Gerald C. 3,518,230.
Zieschang, Edwin C., Jr. Apparatus for loading hay. 3,517,832, Cl. 214-6.
Zilkowsky, Eugene J., Sanders, Wilber E., Jr., Fischer, Frederick R., Skinner, Robert L., and Westrom, Alfred, to Bendix Corporation, The. Apparatus for slitting sheet metal and method of forming circular members therefrom. 3,517,532, Cl. 72-31.
Zimmer, John T., to Raytheon Company. Radar transponder. 3,518,672, Cl. 343-100.
Zingery, Wilbur L.: See—
Jacobs, Earl D., and Zingery, Wilbur L. 3,517,560.
Zinn, Alfred W., and Grube, Sol, to Singer-General Precision, Inc. Pulse code to alpha/numeric translator. 3,518,657, Cl. 340-324.
Zinnes, Harold: See—
Shavel, John, Jr., and Zinnes, Harold 3,518,270.
Shavel, John, Jr., and Zinnes, Harold 3,518,271.
Zollinger, Hans Rudolf: See—
Denzler, Emil, and Zollinger, Hans Rudolf 3,518,398.
Zschauer, Karl-Heinz: See—
Winstel, Gunter, and Zschauer, Karl-Heinz 3,518,476.
Zsilinsky, Victor. Pendulum height finder for use with stereoscopic aerial photographs. 3,518,006, Cl. 356-138.
Zysman, Milton, to Convex Limited. Mattress handle delivering machinery. 3,517,857, Cl. 221-289.

LIST OF DEFENSIVE PUBLICATIONS

APPLICANTS TO WHOM

DEFENSIVE PUBLICATIONS WERE ISSUED ON THE 30TH DAY OF JUNE, 1970

Published at the request of the applicant or owner in accordance with the Notice of Dec. 16, 1969, 869 O. G. 687.

- Abbott, Thomas I., and H. F. Huedepohl. Lithographic printing plate. 875,030, 6-30-70, Cl. 96-33.
Altmann, Heinz C.: See—
Bushnell, Clifford B., Altmann, and West. 875,025.
Brizee, Mary Jane W.: See—
Ulbing, Cynthia G., and Brizee. 875,028.
Bushnell, Clifford B., H. C. Altmann, and H. L. West. Packaging for photographic film. 875,025, 6-30-70, Cl. 206-52.
Caldwell, John R.: See—
Jackson, Winston J., Jr., and Caldwell. 875,027.
Canter, Nathan H. Polymeric anthracene ketonic derivatives. 875,024, 6-30-70, Cl. 280-78.4.
Fassbender, Henry J.: See—
Snellman, Raymond, and Fassbender. 875,029.
Huedepohl, Hugo F.: See—
Abbott, Thomas I., and Huedepohl. 875,030.
Jackson, Winston J., Jr., and J. R. Caldwell. Bisphenol polyester coatings. 875,027, 6-30-70, Cl. 161-186.
Scharf, Philip T. Charging apparatus. 875,028, 6-30-70, Cl. 250-49.5.
Snellman, Raymond, and H. J. Fassbender. Masking of odors of processed photographic elements and processing compositions. 875,029, 6-30-70, Cl. 96-66.
Ulbing, Cynthia G., and M. J. W. Brizee. Supersensitized silver halide photographic materials. 875,028, 6-30-70, Cl. 96-104.
West, Henry L.: See—
Bushnell, Clifford B., Altmann, and West. 875,025.

LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JUNE, 1970

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Agfa Aktiengesellschaft: See—
Jakob, Franz, and Spatz. Re. 26,922.
Brown, Oliver L.: See—
Schonewald, Roger L., Brown, and Wilson. Re. 26,927.
Conoflow Corp.: See—
Ko, Wen H. Re. 26,926.
Cook, Stephen O.: See—
Miller, Walter A., and Cook. Re. 26,928.
Curtis Construction Co.: See—
Curtis, Marland G. Re. 26,923.
Curtis, Marland G., to Curtis Construction Co. Lining ring assembly for rock crushers. Re. 26,923, 6-30-70, Cl. 241-294.
Erllichman, Irving, to Polaroid Corp. Photographic apparatus. Re. 26,921, 6-30-70, Cl. 95-13.
General Dynamics Corp.: See—
Schonewald, Roger L., Brown, and Wilson. Re. 26,927.
Hilbert, Francis H., and N. W. Parker, to Motorola, Inc. Color television demodulation system. Re. 26,925, 6-30-70, Cl. 178-5.4.
Jakob, Franz, and J. Spatz, to Agfa Aktiengesellschaft. Camera having a built-in flash-bulb arrangement. Re. 26,922, 6-30-70, Cl. 95-11.
Ko, Wen H., to Conoflow Corp. Digital actuator including feedback representation of the stepper motor winding energization state. Re. 26,926, 6-30-70, Cl. 318-138.
Miller, Walter A., and S. O. Cook, to Union Carbide Corp. Thermoplastic films and process for preparing same. Re. 26,928, 6-30-70, Cl. 264-230.
Motorola Inc.: See—
Parker, Norman W. Re. 26,924.
Hilbert, Francis H., and Parker. Re. 26,925.
Ostermeier, Claus, to Hans Sickinger Co. Spiral binder applying machine. Re. 26,929, 6-30-70, Cl. 140-92.94.
Parker, Norman W., to Motorola, Inc. Color television demodulation system. Re. 26,924, 6-30-70, Cl. 178-5.4.
Parker, Norman W.: See—
Hilbert, Francis H., and Parker. Re. 26,925.
Polaroid Corp.: See—
Erllichman, Irving. Re. 26,921.
Schonewald, Roger L., O. L. I. Brown, and M. P. Wilson, Jr., to General Dynamics Corp. Aerosol filter. Re. 26,927, 6-30-70, Cl. 55-392.
Sickinger, Hans, Co.: See—
Ostermeier, Claus. Re. 26,929.
Spatz, Joachim: See—
Jakob, Franz, and Spatz. Re. 26,922.
Union Carbide Corp.: See—
Miller, Walter A., and Cook. Re. 26,928.
Wilson, Mason P., Jr.: See—
Schonewald, Roger L., Brown, and Wilson. Re. 26,927.

LIST OF PLANT PATENTEEES

- Anderson, Frederic W., to Fowler Nurseries, Inc. Pear tree. 2,975, 6-30-70, Cl. 36.
Anderson, Frederic W., to Reedley Nursery, Inc. Nectarine tree. 2,976, 6-30-70, Cl. 41.
Fowler Nurseries, Inc.: See—
Anderson, Frederic W. 2,975.
Meiland, Marie L. Rose plant. 2,974, 6-30-70, Cl. 11.
Reedley Nursery, Inc.: See—
Anderson, Frederic W. 2,976.

LIST OF DESIGN PATENTEEES

- Abernathy, Roger E., W. L. Aderman, T. F. Dunnington, F. A. Goplen, E. R. Wiener, and F. Wilkey, Jr., to International Business Machines Corp. Combination computer, on-line keyboard, multifunction document card unit and printer. 217,914, 6-30-70, Cl. D26-5.
Adams, David M. Combined hot-cold drink and snack machine. 217,948, 6-30-70, Cl. D04-3.
Aderman, Wayne L., D. C. Antonelli, D. P. Butterbaugh, J. R. Hammer, R. J. Ullmer, E. R. Wiener, and F. Wilkey, Jr., to International Business Machines Corp. Keypunch for document cards. 217,913, 6-30-70, Cl. D26-5.
Aderman, Wayne L.: See—
Abernathy, Roger E., Aderman, Dunnington, Goplen, Wiener, and Wilkey. 217,914.
Allyn, Lew F., to Welch Allyn, Inc. Wall-mounted transformer for diagnostic instruments. 217,916, 6-30-70, Cl. D26-15.
American Home Products Corp.: See—
Gray, Burton J. 217,900.
Angelakos, Nicholas P., to Lancaster Colony Corp. Ash tray. 217,942, 6-30-70, Cl. D85-2.
Antonelli, Douglas C.: See—
Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
Atkin, C. B., Co.: See—
Chapin, Richard M. 217,917.
Bellem, Norman A., J. W. Harter, and P. E. Swain, to Butler Mfg. Co. Building roof panel. 217,932, 6-30-70, Cl. D54-2.
Boatel Co., Inc.: See—
Johnson, Logan W. 217,906.
Bourke, Robert E., to GAF Corp. Camera. 217,938, 6-30-70, Cl. D61-1.
Brenner, Edward, M. L. Price, and B. Shmurak, to Lambda Electronics Corp. Metered power supply rack adapter. 217,915, 6-30-70, Cl. D26-1.
Burlison, Aaron, to Burlington Industries, Inc. Fastener for welt loop hose or similar articles. 217,895, 6-30-70, Cl. D2-408.

Burlington Industries, Inc.: See—
 Burleson, Aaron. 217,895.
 Butler Mfg. Co.: See—
 Bellem, Norman A., Harter, and Swain. 217,932.
 Butterbaugh, Dennis B.: See—
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Channing, Harry M., to General Battery and Ceramic Corp. Battery display merchandiser. 217,941, 6-30-70, Cl. D80-9.
 Chapin, Richard M., to C. B. Atkin Co. Chest or the like. 217,917, 6-30-70, Cl. D33-6.
 Clostermann, Friedrich, and H.-J. Richter, to Trilux-Lenze KG. Transparent covering panel for light fittings. 217,924, 6-30-70, Cl. D48-10.
 Dan, George: See—
 Mikita, Stanley, and Dan. 217,894.
 Day, Kerry A.: See—
 Koch, Walter L., Day, and Huyler. 217,930.
 De Rebeval, Michel B. Seat or the like. 217,908, 6-30-70, Cl. D15-8.
 Derenski, Frank W. Dispensing cap for a container. 217,902, 6-30-70, Cl. D9-275.
 Derenski, Frank W. Dispensing cap for a container. 217,903, 6-30-70, Cl. D9-275.
 Derenski, Frank W. Combined trunk and storage tank for automobiles. 217,907, 6-30-70, Cl. D14-27.
 Derenski, Frank W. Dispenser valve and spout. 217,947, 6-30-70, Cl. D84-3.
 Dietz R. E., Co.: See—
 Stahl, John F., and Nitsch. 217,927.
 Dresden Lounge Co., Inc.: See—
 Harman, Edward W. 217,909.
 Harman, Edward W. 217,910.
 Dunkelmann, Frederick F. Boot tree. 217,943, 6-30-70, Cl. D86-10.
 Dunkelmann, Frederick F. Boot tree. 217,944, 6-30-70, Cl. D86-10.
 Dunnington, Theodore F.: See—
 Abernathy, Roger E., Aderman, Dunnington, Goplen, Wiener, and Wilkey. 217,914.
 Elsiele, Manfred, G. Saul, and G. H. Stoner, to Elco Corp. Housing for a portable light unit. 217,926, 6-30-70, Cl. D48-24.
 Elco Corp.: See—
 Elsiele, Manfred, Saul, and Stoner. 217,926.
 Felske, Arthur M., to General Electric Co. Floor polisher dispenser or similar article. 217,928, 6-30-70, Cl. D49-17.
 Flaherty, Bernard M. Amphibious vehicle body. 217,940, 6-30-70, Cl. D71-1.
 GAF Corp.: See—
 Bourke, Robert E. 217,938.
 General Battery and Ceramic Corp.: See—
 Channing, Harry M. 217,941.
 General Electric Co.: See—
 Felske, Arthur M. 217,928.
 Gompes, Simon, and H. Schpektor. Combined puzzle and whirling toy. 217,921, 6-30-70, Cl. D34-15.
 Goodyear Tire & Rubber Co.: See—
 Petroff, Ronald P. 217,945.
 Gray, Burton J., to American Home Products Corp. Dispensing pill package or similar article. 217,900, 6-30-70, Cl. D9-134.
 Guodace, Frank K., to International Silver Co. Spoon or similar article of flatware. 217,933, 6-30-70, Cl. D34-12.
 Hammer, James R.: See—
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Harman, Edward W., to Dresden Lounge Co., Inc. End standard for a chair or similar article. 217,909, 6-30-70, Cl. D15-8.
 Harman, Edward W., to Dresden Lounge Co., Inc. End standard for a sofa or the like. 217,910, 6-30-70, Cl. D15-8.
 Harter, James W.: See—
 Bellem, Norman A., Harter, and Swain. 217,932.
 Herold, Willy, Abacus. 217,911, 6-30-70, Cl. D25-1.
 Humphreys, Thomas G., Jr. Apparatus for locating and tracing conductive structures. 217,931, 6-30-70, Cl. D52-8.
 Huyler, George R.: See—
 Koch, Walter L., Day, and Huyler. 217,930.
 International Business Machines Corp.: See—
 Abernathy, Roger E., Aderman, Dunnington, Goplen, Wiener, and Wilkey. 217,914.
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Johnston, Cyril L., to Leslie Building Products, Inc. Ornamental shutter. 217,904, 6-30-70, Cl. D13-1.
 Johnson, Logan W., to Boatel Co., Inc. Snowmobile. 217,906, 6-30-70, Cl. D14-24.
 Koch, Walter L., K. A. Day, and G. R. Huyler, to Rowe International, Inc. Vending machine cabinet. 217,930, 6-30-70, Cl. D52-3.
 Lambda Electronics Corp.: See—
 Brenner, Edward, Price, and Shmurak. 217,915.
 Lamborghini, Ferruccio. Automobile. 217,905, 6-30-70, Cl. D14-3.
 Lancaster Colony Corp.: See—
 Angelakos, Nicholas P. 217,942.
 Laughlin, Clayton A., to Arthur Salm, Inc. Carving fork or the like. 217,923, 6-30-70, Cl. D44-29.
 Lawton, Edward H., to Owens-Illinois, Inc. Bottle. 217,897, 6-30-70, Cl. D8-1.
 Lawton, Edward H., to Owens-Illinois, Inc. Bottle. 217,898, 6-30-70, Cl. D8-1.
 Lawton, Edward H., to Owens-Illinois, Inc. Bottle. 217,899, 6-30-70, Cl. D8-38.
 Leslie Building Products, Inc.: See—
 Johnston, Cyril L. 217,904.
 Mikita, Stan, Enterprises, Inc.: See—
 Mikita, Stanley, and Dan. 217,894.
 Mikita, Stanley, and G. Dan, to Stan Mikita Enterprises, Inc. Hockey helmet. 217,894, 6-30-70, Cl. D2-231.
 Morgan, James T. Grinding mill insulator and cooler. 217,934, 6-30-70, Cl. D55-1.
 Nichols, Robert A. Canoe paddle. 217,939, 6-30-70, Cl. D71-1.
 Nitsch, Edward J.: See—
 Stahl, John F., and Nitsch. 217,927.
 Owens-Illinois, Inc.: See—
 Lawton, Edward H. 217,897.
 Lawton, Edward H. 217,898.
 Lawton, Edward H. 217,899.
 Pelensky, Walter J. Stringed musical instrument. 217,935, 6-30-70, Cl. D56-1.
 Pelensky, Walter J. Stringed musical instrument. 217,936, 6-30-70, Cl. D56-1.
 Pelensky, Walter J. Stringed musical instrument. 217,937, 6-30-70, Cl. D56-1.
 Prescott, J. L., Co.: See—
 Winton, Don A. 217,918.
 Winton, Don A. 217,919.
 Winton, Don A. 217,920.
 Price, Marvin L.: See—
 Brenner, Edward, Price, and Shmurak. 217,915.
 Petroff, Ronald P., to The Goodyear Tire & Rubber Co. Tire. 217,945, 6-30-70, Cl. D90-20.
 Rehrig, Houston, to Rehrig Pacific Co. Crate for milk bottles or the like. 217,901, 6-30-70, Cl. D9-177.
 Rehrig Pacific Co.: See—
 Rehrig, Houston. 217,901.
 Richter, Hans-Joachim: See—
 Clostermann, Friedrich, and Richter. 217,924.
 Rowe International, Inc.: See—
 Koch, Walter L., Day, and Huyler. 217,930.
 Salm, Arthur, Inc.: See—
 Laughlin, Clayton A. 217,923.
 Stahl, Alwin J., II. 217,925.
 Saul, Glenn: See—
 Elsiele, Manfred, Saul, and Stoner. 217,926.
 Schpektor, Herman: See—
 Gompes, Simon, and Schpektor. 217,921.
 Scientific Demonstrators, Inc.: See—
 Trippett, Lee. 217,912.
 Sexauer, J. A., Mfg. Co., Inc.: See—
 Sexauer, James M., to J. A. Sexauer Mfg. Co., Inc. Wrench or similar article. 217,896, 6-30-70, Cl. D8-29.
 Shmurak, Benjamin: See—
 Brenner, Edward, Price, and Shmurak. 217,915.
 Stahl, Alwin J., II, to Arthur Salm, Inc. Flashlight. 217,925, 6-30-70, Cl. D48-24.
 Stahl, John F., and E. J. Nitsch, to R. E. Dietz Co. Vehicle license plate light. 217,927, 6-30-70, Cl. D48-32.
 Stoner, George H.: See—
 Elsiele, Manfred, Saul, and Stoner. 217,926.
 Swain, Paul E.: See—
 Bellem, Norman A., Harter, and Swain. 217,932.
 Trilux-Lenze KG: See—
 Clostermann, Friedrich, and Richter. 217,924.
 Trippett, Lee, to Scientific Demonstrators, Inc. Scientific demonstration apparatus. 217,912, 6-30-70, Cl. D25-1.
 Ullmer, Richard J.: See—
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Weinstein, Allan. Clock. 217,922, 6-30-70, Cl. D42-7.
 Welch Allyn, Inc.: See—
 Allyn, Lew F. 217,916.
 Wiener, Edward R.: See—
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Abernathy, Roger E., Aderman, Dunnington, Goplen, Wiener, and Wilkey. 217,914.
 Wilkey, Frank, Jr.: See—
 Aderman, Wayne L., Antonelli, Butterbaugh, Hammer, Ullmer, Wiener, and Wilkey. 217,913.
 Abernathy, Roger E., Aderman, Dunnington, Goplen, Wiener, and Wilkey. 217,914.
 Winton, Don A., to J. L. Prescott Co. Toy animal figure. 217,918, 6-30-70, Cl. D34-2.
 Winton, Don A., to J. L. Prescott Co. Toy animal figure. 217,919, 6-30-70, Cl. D34-2.
 Winton, Don A., to J. L. Prescott Co. Toy animal figure. 217,920, 6-30-70, Cl. D34-2.
 Yeo, Ronald W. Combined display and coin controlled dispensing cabinet for newspapers. 217,929, 6-30-70, Cl. D62-3.

CLASSIFICATION OF PATENTS

ISSUED JUNE 30, 1970

NOTE.—First number, class; second number, subclass; third number, patent number

2- 8 : 3,517,392	35- 53 : 3,517,449	71-103 : 3,518,075	99- 35 : 3,518,089	128- 206 : 3,517,663	156-252 : 3,518,147
14 : 3,517,393	40- 2 : 3,517,450	111 : 3,518,076	56 : 3,518,090	24 : 3,517,665	380 : 3,518,148
51 : 3,517,394	130 : 3,517,451	118 : 3,518,077	88 : 3,518,091	159 : 3,517,666	416 : 3,518,149
153 : 3,517,395	159 : 3,517,452	72- 16 : 3,517,531	92 : 3,518,092	173 : 3,517,667	426 : 3,518,150
4-234 : 3,517,396	43- 55 : 3,517,453	31 : 3,517,532	105 : 3,518,093	218 : 3,517,668	512 : 3,518,151
5-147 : 3,517,397	131 : 3,517,454	76 : 3,517,533	116 : 3,518,094	276 : 3,517,669	540 : 3,518,152
351 : 3,517,398	46- 93 : 3,517,455	83 : 3,517,534	141 : 3,518,095	314 : 3,517,670	157- 124 : 3,517,723
8- 2 : 3,518,038	232 : 3,517,456	85 : 3,517,535	154 : 3,518,096	478 : 3,517,671	160-328 : 3,517,724
41 : 3,518,039	243 : 3,517,457	234 : 3,517,537	207 : 3,518,097	131-140 : 3,517,672	161- 5 : 3,518,153
115.5 : 3,518,040	49-425 : 3,517,458	275 : 3,517,536	259 : 3,517,602	132- 79 : 3,517,673	64 : 3,518,154
7 : 3,518,041	51- 5 : 3,517,460	389 : 3,517,538	283 : 3,517,603	134- 1 : 3,517,674	92 : 3,518,155
116.3 : 3,518,042	12 : 3,517,461	414 : 3,517,539	323 : 3,517,604	2 : 3,518,117	161 : 3,518,156
129 : 3,518,044	128 : 3,517,462	426 : 3,517,541	423 : 3,517,605	36 : 3,518,118	170 : 3,518,157
178 : 3,518,045	206.4 : 3,517,463	469 : 3,517,542	450 : 3,517,606	358,119 : 3,518,119	208 : 3,518,158
9- 8 : 3,517,399	295 : 3,518,068	73- 19 : 3,517,543	100 : 3,517,608	144 : 3,517,675	258 : 3,518,159
3,517,400	309 : 3,517,464	30 : 3,517,544	189 : 3,517,609	199 : 3,517,676	162-135 : 3,518,160
14 : 3,517,401	319 : 3,517,465	37.5 : 3,517,545	198 : 3,517,610	135- 45 : 3,517,677	367 : 3,518,161
10-27 : 3,517,402	358 : 3,517,466	40.5 : 3,517,546	101- 93 : 3,517,611	51 : 3,517,678	164- 82 : 3,517,725
13-10 : 3,518,349	52- 36 : 3,517,467	45.5 : 3,517,547	99 : 3,517,612	136- 26 : 3,518,120	250 : 3,517,727
12 : 3,518,350	79 : 3,517,468	49.3 : 3,517,548	142 : 3,517,613	27 : 3,518,124	255 : 3,517,728
25 : 3,518,351	155 : 3,517,469	73 : 3,517,549	349 : 3,517,614	83 : 3,518,121	366 : 3,517,729
15-21 : 3,517,403	157 : 3,517,470	88.5 : 3,517,550	102- 22 : 3,517,615	86 : 3,518,122	165- 32 : 3,517,730
42 : 3,517,404	233 : 3,517,471	97 : 3,517,551	24 : 3,517,616	90 : 3,518,125	70 : 3,517,731
97 : 3,517,405	403 : 3,517,472	118 : 3,517,552	42 : 3,517,617	100 : 3,518,126	108 : 3,517,732
209 : 3,517,406	718 : 3,517,473	152 : 3,517,553	70.2 : 3,517,618	134 : 3,518,127	166 : 3,517,733
215 : 3,517,407	732 : 3,517,474	332 : 3,517,554	92.7 : 3,517,619	137- 1 : 3,517,679	178 : 3,517,734
16-72 : 3,517,408	53- 22 : 3,517,475	342 : 3,517,555	105-167 : 3,517,620	2 : 3,517,680	166- 5 : 3,517,735
105 : 3,517,409	37 : 3,517,476	362 : 3,517,556	366 : 3,517,621	68 : 3,517,682	3 : 3,517,736
18- 1 : 3,517,410	53 : 3,517,477	421.5 : 3,517,557	106- 3 : 3,518,098	74 : 3,517,683	6 : 3,517,737
5 : 3,517,411	142 : 3,517,478	485 : 3,517,558	10 : 3,518,099	78 : 3,517,684	3,517,738
8 : 3,517,412	182 : 3,517,479	503 : 3,517,559	57 : 3,518,100	81.5 : 3,517,685	3,517,739
16 : 3,517,413	183 : 3,517,480	516 : 3,517,560	277 : 3,518,101	3,517,686	63 : 3,517,740
5 : 3,517,414	374 : 3,517,481	519 : 3,517,561	107- 4 : 3,517,622	117 : 3,517,687	106 : 3,517,741
19 : 3,517,415	387 : 3,517,482	74- 5.34 : 3,517,563	108-114 : 3,517,623	240 : 3,517,688	127 : 3,517,743
21-53 : 3,518,046	55- 67 : 3,517,483	6 : 3,517,562	137 : 3,517,624	329.01 : 3,517,689	134 : 3,517,742
60.5 : 3,518,047	73 : 3,517,484	89.17 : 3,517,564	144 : 3,517,625	330 : 3,517,690	245 : 3,517,744
23- 2 : 3,518,048	192 : 3,517,487	231 : 3,517,565	109- 82 : 3,517,627	505.18 : 3,517,681	297 : 3,517,745
50 : 3,518,049	226 : 3,517,485	411 : 3,517,566	110-101 : 3,517,628	550 : 3,517,691	169- 9 : 3,517,746
102 : 3,518,050	392 : Re.26,927	414 : 3,517,567	111- 96 : 3,517,629	557 : 3,517,692	172- 7 : 3,517,747
111 : 3,518,051	440 : 3,517,486	471 : 3,517,568	112-121.12 : 3,517,630	3,517,693	224 : 3,517,748
202 : 3,518,052	56- 1 : 3,517,488	491 : 3,517,569	225 : 3,517,631	560 : 3,517,694	225 : 3,517,749
3,518,053	17 : 3,517,489	527 : 3,517,570	114- 61 : 3,517,632	566 : 3,517,695	226 : 3,517,750
3,518,054	18 : 3,517,490	547 : 3,517,571	151 : 3,517,633	596 : 3,517,696	572 : 3,517,751
212 : 3,518,055	23 : 3,517,491	710.5 : 3,517,572	172 : 3,517,634	625.33 : 3,517,697	721 : 3,517,752
225 : 3,518,056	25 : 3,517,492	711 : 3,517,573	812 : 3,517,574	64 : 3,517,698	795 : 3,517,753
230 : 3,518,057	194 : 3,517,493	812 : 3,517,574	75- 44 : 3,518,078	3,517,699	173-104 : 3,517,754
232 : 3,518,058	293 : 3,517,494	812 : 3,517,574	53 : 3,518,079	67 : 3,517,700	117 : 3,517,755
3,518,059	296 : 3,517,495	123 : 3,518,080	81- 73 : 3,517,575	114 : 3,517,701	174- 35 : 3,518,355
262 : 3,518,060	328 : 3,517,496	123 : 3,518,080	83- 5 : 3,517,576	115 : 3,517,702	66 : 3,518,356
273 : 3,518,061	57- 81 : 3,517,497	118 : 3,517,639	23 : 3,517,577	116 : 3,517,703	88 : 3,518,357
284 : 3,518,062	91 : 3,517,498	124 : 3,517,640	98 : 3,517,578	122 : 3,517,704	138 : 3,518,358
312 : 3,518,063	58- 17 : 3,517,499	117- 5.3 : 3,518,104	533 : 3,517,579	3,517,705	153 : 3,518,359
315 : 3,518,064	82 : 3,517,500	10 : 3,518,102	652 : 3,517,580	161 : 3,517,706	175- 4 : 3,517,756
355 : 3,518,065	88 : 3,517,501	11 : 3,518,103	84- 1.03 : 3,518,352	410 : 3,517,707	55 : 3,517,757
24-75 : 3,517,416	94 : 3,517,502	46 : 3,518,105	15 : 3,518,353	140- 92.94 : Re.26,929	3,517,758
81 : 3,517,417	109 : 3,517,503	71 : 3,518,106	25 : 3,518,354	141- 1 : 3,517,708	298 : 3,517,759
90 : 3,517,418	30 : 3,517,504	72 : 3,518,107	85- 47 : 3,517,581	83 : 3,517,709	321 : 3,517,760
103 : 3,517,419	39.16 : 3,517,505	93 : 3,518,108	88- 1.5 : 3,517,582	95 : 3,517,710	176- 36 : 3,518,162
126 : 3,517,420	5 : 3,517,506	89- 1 : 3,517,583	89- 1 : 3,517,583	143- 32 : 3,517,711	40 : 3,518,163
162 : 3,517,421	52 : 3,517,507	16 : 3,517,584	100 : 3,518,112	144-134 : 3,517,712	177-147 : 3,517,761
205.1 : 3,517,422	207 : 3,517,508	155 : 3,518,113	101 : 3,518,113	186 : 3,517,713	153 : 3,517,762
207 : 3,517,423	226 : 3,517,509	161 : 3,518,114	102 : 3,518,114	145- 50 : 3,517,714	173 : 3,517,763
25- 31 : 3,517,424	249 : 3,517,510	198 : 3,517,586	103 : 3,518,115	146-230 : 3,517,716	178- 5.2 : 3,518,360
26-54 : 3,517,425	259 : 3,517,511	90- 13 : 3,517,587	213 : 3,518,116	231 : 3,517,715	4 : Re.26,924
29-125 : 3,517,426	264 : 3,517,512	91-369 : 3,517,588	226 : 3,518,116	148- 3 : 3,518,128	Re.26,925
155 : 3,517,427	61- 1 : 3,517,513	93- 1.1 : 3,517,589	118- 2 : 3,517,641	6.15 : 3,518,129	3,518,361
195 : 3,517,428	38 : 3,517,514	94- 46 : 3,517,590	152- 27 : 3,517,718	151- 22 : 3,517,717	3,518,362
3,518,066	42 : 3,517,515	95- 4.5 : 3,517,591	163 : 3,517,719	22 : 3,517,718	3,518,363
3,518,067	46.5 : 3,517,516	97 : 3,517,592	223 : 3,517,719	223 : 3,517,719	3,518,364
200 : 3,517,517	3,517,517	99 : 3,517,593	352 : 3,517,720	352 : 3,517,720	8 : 3,518,365
208 : 3,517,518	72.3 : 3,517,518	10 : 3,517,594	301 : 3,517,721	359 : 3,517,721	6.6 : 3,518,366
420.5 : 3,517,519	3,517,519	11 : Re.26,922	411 : 3,517,722	156- 3 : 3,518,130	7 : 3,518,367
434 : 3,517,520	3,517,520	5 : 3,517,595	600 : 3,517,723	17 : 3,518,131	8 : 3,518,368
472.7 : 3,517,521	62- 12 : 3,517,521	12.2 : 3,517,596	119- 4 : 3,517,724	35 : 3,518,132	3,518,369
502 : 3,517,522	141 : 3,517,522	13 : Re.26,921	123- 41.12 : 3,517,725	95 : 3,517,725	7.1 : 3,518,370
573 : 3,517,523	180 : 3,517,523	45 : 3,517,597	44 : 3,517,726	104 : 3,518,133	2 : 3,518,371
613 : 3,517,524	188 : 3,517,524	64 : 3,517,598	65 : 3,517,727	105 : 3,518,134	81 : 3,518,372
624 : 3,517,525	222 : 3,517,525	97 : 3,517,599	77 : 3,517,728	106 : 3,518,135	85 : 3,518,373
627 : 3,517,526	256 : 3,517,526	89 : 3,517,600	136 : 3,517,729	107 : 3,518,136	69.5 : 3,518,374
630 : 3,517,527	325 : 3,517,527	96- 1 : 3,518,081	148 : 3,517,730	108 : 3,518,137	179- 1 : 3,518,375
30- 5.5 : 3,517,439	64- 21 : 3,517,528	33 : 3,518,082	149 : 3,517,731	109 : 3,518,138	5 : 3,518,376
34.1 : 3,517,441	65- 2 : 3,518,069	36.2 : 3,518,083	124- 7 : 3,517,732	110 : 3,518,139	15 : 3,518,377
41 : 3,517,442	102 : 3,518,070	66.3 : 3,518,084	20 : 3,517,733	111 : 3,518,140	3,518,378
32- 2 : 3,517,443	66- 41 : 3,517,529	83 : 3,518,085	23 : 3,517,734	112 : 3,518,141	100.1 : 3,518,379
63 : 3,517,444	85 : 3,517,530	114 : 3,518,086	125- 11 : 3,517,735	113 : 3,518,142	167 : 3,518,380
33- 46 : 3,517,445	71- 35 : 3,518,071	126-139 : 3,517,660	126-139 : 3,517,660	114 : 3,518,143	180- 33 : 3,517,764
35- 12 : 3,517,446	41 : 3,518,072	98- 33 : 3,517,601	128- 2.05 : 3,517,661	244 : 3,518,144	64 : 3,517,765
25 : 3,517,447	60 : 3,518,073	98- 33 : 3,517,601	128- 2.05 : 3,517,661	245 : 3,518,145	65 : 3,517,766
28.3 : 3,517,448	76 : 3,518,074	98- 33 : 3,517,601	128- 2.05 : 3,517,661	246 : 3,518,146	181- 5 : 3,517,767

181-5 : 3,517,768	214-314 : 3,517,843	250-90 : 3,518,433	260-286 : 3,518,271	285-9 : 3,517,949	318-308 : 3,518,519
31 : 3,517,769	338 : 3,518,434	93 : 3,518,434	289 : 3,518,272	52 : 3,517,950	331 : 3,518,520
182-96 : 3,517,770	730 : 3,517,845	105 : 3,518,435	289 : 3,518,273	110 : 3,517,951	332 : 3,518,521
141 : 3,517,771	774 : 3,517,846	199 : 3,518,436	294 : 3,518,274	276 : 3,517,952	349 : 3,518,522
163 : 3,517,772	215-42 : 3,517,847	209 : 3,518,437	3 : 3,518,275	287-53 : 3,517,953	443 : 3,518,523
186-1 : 3,517,773	43 : 3,517,848	211 : 3,518,438	7 : 3,518,276	101 : 3,517,955	640 : 3,518,524
187-6 : 3,517,774	219-10.41 : 3,518,393	218 : 3,518,439	8 : 3,518,277	117 : 3,517,956	320-2 : 3,518,524
12 : 3,517,775	53 : 3,518,396	219 : 3,518,440	3,518,278	127 : 3,517,954	321-1.5 : 3,518,525
188-4 : 3,517,776	75 : 3,518,394	3,518,441	302 : 3,518,279	3,517,957	2 : 3,518,526
73.1 : 3,517,777	73 : 3,518,397	3,518,442	326.13 : 3,518,280	290-14 : 3,518,444	18 : 3,518,527
3 : 3,517,778	101 : 3,518,398	220 : 3,518,443	345.1 : 3,518,281	30 : 3,518,445	322-25 : 3,518,528
78 : 3,517,779	110 : 3,518,395	251-5 : 3,517,907	346.2 : 3,518,282	45 : 3,518,446	28 : 3,518,529
83 : 3,517,780	3,518,399	158 : 3,517,908	3,518,283	294-55 : 3,517,948	324-5 : 3,518,531
94 : 3,517,781	121 : 3,518,400	342 : 3,517,909	4 : 3,518,284	64 : 3,517,958	1 : 3,518,530
152 : 3,517,782	131 : 3,518,401	252-8.5 : 3,518,185	348.5 : 3,518,285	67 : 3,517,959	33 : 3,518,532
196 : 3,517,783	137 : 3,518,402	75 : 3,518,184	429.7 : 3,518,286	70 : 3,517,960	40 : 3,518,533
3,517,784	3,518,403	12 : 3,518,186	438.5 : 3,518,287	86.12 : 3,517,961	43 : 3,518,534
3,517,785	146 : 3,518,404	25 : 3,518,187	448.2 : 3,518,288	296-23 : 3,517,962	1 : 3,518,535
200 : 3,517,786	155 : 3,518,405	28 : 3,518,188	3,518,289	297-228 : 3,517,963	57 : 3,518,536
191-62 : 3,517,787	216 : 3,518,406	3,518,189	3,518,290	309 : 3,517,964	60 : 3,518,537
192-3.21 : 3,517,789	229 : 3,518,407	29 : 3,518,190	3,518,291	374 : 3,517,965	77 : 3,518,539
51 : 3,517,788	264 : 3,518,408	3,518,191	3,518,292	299-1 : 3,517,966	79 : 3,518,540
4 : 3,517,790	271 : 3,518,409	3,518,192	453 : 3,518,293	51 : 3,517,967	84 : 3,518,541
193-41 : 3,517,791	300 : 3,518,410	46.3 : 3,518,193	456 : 3,518,294	301-37 : 3,517,968	106 : 3,518,542
195-127 : 3,518,164	349 : 3,518,411	47.5 : 3,518,194	465.3 : 3,518,295	302-66 : 3,517,969	115 : 3,518,543
197-98 : 3,517,792	220-4 : 3,517,849	51.5 : 3,518,195	468 : 3,518,296	303-6 : 3,517,970	127 : 3,518,544
198-25 : 3,517,793	9 : 3,517,850	56 : 3,518,196	480 : 3,518,297	22 : 3,517,971	158 : 3,518,545
31 : 3,517,794	20.5 : 3,517,851	62.9 : 3,518,197	497 : 3,518,298	305-10 : 3,517,972	169 : 3,518,548
33 : 3,517,795	21 : 3,517,852	3,518,198	513 : 3,518,299	307-88 : 3,518,447	325-8 : 3,518,548
3,517,796	31 : 3,517,853	89 : 3,518,199	515 : 3,518,300	114 : 3,518,448	38 : 3,518,548
3,517,797	93 : 3,517,854	99 : 3,518,200	524 : 3,518,301	215 : 3,518,449	42 : 3,518,549
36 : 3,517,798	221-259 : 3,517,855	171 : 3,518,201	526 : 3,518,302	216 : 3,518,450	56 : 3,518,549
135 : 3,517,799	278 : 3,517,856	181 : 3,518,202	543 : 3,518,303	221 : 3,518,451	375 : 3,518,550
210 : 3,518,800	289 : 3,517,857	301.3 : 3,518,203	553 : 3,518,304	235 : 3,518,452	328-5 : 3,518,551
200-5 : 3,518,381	305 : 3,517,858	446 : 3,518,204	558 : 3,518,305	240 : 3,518,453	43 : 3,518,552
24 : 3,518,382	222-52 : 3,517,859	466 : 3,518,205	559 : 3,518,306	251 : 3,518,454	48 : 3,518,553
43 : 3,518,383	194 : 3,517,861	468 : 3,518,206	563 : 3,518,307	265 : 3,518,455	63 : 3,518,554
61.45 : 3,518,384	202 : 3,517,860	468 : 3,518,207	567.6 : 3,518,308	269 : 3,518,456	110 : 3,518,555
144 : 3,518,387	399 : 3,517,932	521 : 3,518,209	577 : 3,518,309	297 : 3,518,457	133 : 3,518,556
148 : 3,518,388	440 : 3,517,862	254-92 : 3,517,910	602 : 3,518,310	309 : 3,518,458	139 : 3,518,557
166 : 3,518,389	460 : 3,517,863	111 : 3,517,911	606 : 3,518,313	309 : 3,518,459	140 : 3,518,558
3,518,390	223-57 : 3,517,864	256-1 : 3,517,912	609 : 3,518,314	308-9 : 3,517,973	329-101 : 3,518,559
167 : 3,518,396	69 : 3,517,865	259-91 : 3,517,913	612 : 3,518,315	187 : 3,517,974	104 : 3,518,560
168 : 3,518,391	111 : 3,517,866	260-17.2 : 3,518,210	621 : 3,518,316	227 : 3,517,975	130 : 3,518,561
203-78 : 3,518,165	224-31 : 3,517,867	18 : 3,518,211	624 : 3,518,318	236 : 3,517,976	330-4.9 : 3,518,562
3,518,166	45 : 3,517,868	22 : 3,518,212	638 : 3,518,319	310-8.2 : 3,518,460	9 : 3,518,563
3,518,167	225-2 : 3,517,869	27 : 3,518,213	666.5 : 3,518,320	10 : 3,518,461	10 : 3,518,564
204-32 : 3,518,168	34 : 3,517,870	22 : 3,518,214	672 : 3,518,321	15 : 3,518,463	31 : 3,518,565
35 : 3,518,169	103 : 3,517,871	28.5 : 3,518,215	674 : 3,518,322	22 : 3,518,464	144 : 3,518,566
43 : 3,518,170	226-90 : 3,517,872	67 : 3,518,323	683.15 : 3,518,323	47 : 3,518,465	331-2 : 3,518,567
49 : 3,518,171	113 : 3,517,873	29.2 : 3,518,217	825 : 3,518,324	54 : 3,518,466	94.5 : 3,518,568
67 : 3,518,172	227-144 : 3,517,874	33.4 : 3,518,219	828 : 3,518,326	63 : 3,518,467	109 : 3,518,571
95 : 3,518,173	229-39 : 3,517,875	37 : 3,518,220	923 : 3,518,327	74 : 3,518,469	116 : 3,518,573
149 : 3,518,174	40 : 3,517,876	3,518,221	923 : 3,518,327	85 : 3,518,471	332-7.51 : 3,518,574
159.12 : 3,518,176	235-3 : 3,517,877	3,518,222	923 : 3,518,327	95 : 3,518,472	14 : 3,518,575
19 : 3,518,175	92 : 3,518,412	45.75 : 3,518,223	923 : 3,518,327	168 : 3,518,473	333-10 : 3,518,576
177 : 3,518,178	114 : 3,517,878	85 : 3,518,224	923 : 3,518,327	178 : 3,518,474	12 : 3,518,577
195 : 3,518,179	153 : 3,518,413	95 : 3,518,226	923 : 3,518,327	245 : 3,518,475	14 : 3,518,578
268 : 3,518,180	164 : 3,518,414	3,518,227	923 : 3,518,327	312-111 : 3,517,977	21 : 3,518,579
206-39 : 3,517,802	181 : 3,517,879	47 : 3,518,228	923 : 3,518,327	235 : 3,517,978	24 : 3,518,580
45.14 : 3,517,801	194 : 3,517,880	64 : 3,518,229	923 : 3,518,327	313-108 : 3,518,476	28 : 3,518,581
56 : 3,517,803	197 : 3,518,416	65 : 3,518,230	923 : 3,518,327	109.5 : 3,518,477	30 : 3,518,582
3,517,804	236-13 : 3,517,881	67 : 3,518,231	923 : 3,518,327	117 : 3,518,478	73 : 3,518,583
59 : 3,517,805	238-8 : 3,517,882	70 : 3,518,233	923 : 3,518,327	161 : 3,518,479	80 : 3,518,584
63.2 : 3,517,806	346 : 3,517,883	79.3 : 3,518,234	923 : 3,518,327	288 : 3,518,480	81 : 3,518,585
208-11 : 3,518,181	339-33 : 3,517,884	111 : 3,518,236	923 : 3,518,327	315-24 : 3,518,481	334-7 : 3,518,586
50 : 3,518,182	309 : 3,517,885	176 : 3,518,237	923 : 3,518,327	27 : 3,518,482	335-46 : 3,518,587
209-73 : 3,517,807	518 : 3,517,886	221 : 3,518,238	923 : 3,518,327	36 : 3,518,483	124 : 3,518,588
3,517,808	568 : 3,517,887	230 : Re.26,928	923 : 3,518,327	111 : 3,518,484	132 : 3,518,589
122 : 3,517,809	579 : 3,517,888	249 : 3,518,239	923 : 3,518,327	129 : 3,518,485	213 : 3,518,590
210-7 : 3,517,810	240-1.3 : 3,518,417	251 : 3,518,240	923 : 3,518,327	194 : 3,518,486	216 : 3,518,591
19 : 3,517,811	41.3 : 3,518,419	255 : 3,518,241	923 : 3,518,327	232 : 3,518,487	234 : 3,518,592
40 : 3,518,183	35 : 3,518,418	257 : 3,518,242	923 : 3,518,327	317-3 : 3,518,488	285 : 3,518,593
73 : 3,517,812	78 : 3,518,420	266-37 : 3,517,918	923 : 3,518,327	16 : 3,518,489	336-15 : 3,518,594
166 : 3,517,813	85 : 3,518,421	270-68 : 3,517,919	923 : 3,518,327	31 : 3,518,490	134 : 3,518,595
197 : 3,517,814	91.3 : 3,518,242	77 : 3,517,920	923 : 3,518,327	33 : 3,518,491	192 : 3,518,596
256 : 3,517,815	141 : 3,517,889	271-8 : 3,517,921	923 : 3,518,327	68 : 3,518,492	337-46 : 3,518,597
266 : 3,517,816	141 : 3,517,890	44 : 3,517,922	923 : 3,518,327	100 : 3,518,493	135 : 3,518,598
279 : 3,517,817	244-9 : 3,517,891	53 : 3,517,923	923 : 3,518,327	101 : 3,518,494	186 : 3,518,599
392 : 3,517,818	244-46.4 : 3,517,892	75 : 3,517,924	923 : 3,518,327	108 : 3,518,495	201 : 3,518,600
400 : 3,517,819	54 : 3,517,892	76 : 3,517,925	923 : 3,518,327	123 : 3,518,496	327 : 3,518,601
491 : 3,517,820	55.16 : 3,517,893	86 : 3,517,926	923 : 3,518,327	150 : 3,518,497	338-73 : 3,518,602
512 : 3,517,821	75.2 : 3,517,894	1 : 3,517,927	923 : 3,518,327	230 : 3,518,498	164 : 3,518,604
211-11 : 3,517,822	190 : 3,517,895	3 : 3,517,928	923 : 3,518,327	317-3 : 3,518,499	183 : 3,518,605
13 : 3,517,823	197 : 3,517,896	6 : 3,517,929	923 : 3,518,327	317-3 : 3,518,499	260 : 3,518,606
50 : 3,517,824	7 : 3,517,898	71 : 3,517,930	923 : 3,518,327	317-3 : 3,518,499	270 : 3,518,607
126 : 3,517,825	118 : 3,517,899	75 : 3,517,931	923 : 3,518,327	317-3 : 3,518,499	339-12 : 3,518,608
134 : 3,517,826	118 : 3,517,900	86 : 3,517,932	923 : 3,518,327	317-3 : 3,518,499	16 : 3,518,609
163 : 3,517,827	134 : 3,517,901	95 : 3,517,933	923 : 3,518,327	317-3 : 3,518,499	17 : 3,518,610
177 : 3,517,828	246-167 : 3,518,422	105 : 3,517,934	923 : 3,518,327	317-3 : 3,518,499	18 : 3,518,611
212-8 : 3,517,829	468 : 3,518,423	115 : 3,517,936	923 : 3,518,327	317-3 : 3,518,499	19 : 3,518,612
132 : 3,517,830	248-59 : 3,517,901	137 : 3,517,935	923 : 3,518,327	317-3 : 3,518,499	45 : 3,518,613
214-6 : 3,517,831	137 : 3,517,902	157 : 3,517,937	923 : 3,518,327	317-3 : 3,518,499	74 : 3,518,614
3,517,832	291 : 3,517,903	197 : 3,517,938	923 : 3,518,327	317-3 : 3,518,499	94 : 3,518,615
3,517,833	324 : 3,517,904	279-2 : 3,517,939	923 : 3,518,327	317-3 : 3,518,499	107 : 3,518,616
7 : 3,517,834	469 : 3,517,905	55 : 3,517,940	923 : 3,518,327	317-3 : 3,518,499	125 : 3,518,618
8.5 : 3,517,835	249-184 : 3,517,906	166 : 3,517,941	923 : 3,518,327	317-3 : 3,518,499	127 : 3,518,619
16.1 : 3,517,836	43.5 : 3,518,424	257 : 3,517,942	923 : 3,518,327	317-3 : 3,518,499	184 : 3,518,620
35 : 3,517,837	43.5 : 3,518,425	405 : 3,517,943	923 : 3,518,327	317-3 : 3,518,499	340-5 : 3,518,675
77 : 3,517,838	51.5 : 3,518,426	414.5 : 3,517,944	923 : 3,518,327	317-3 : 3,518,499	7 : 3,518,677
85.5 : 3,517,839	53 : 3,518,427	425 : 3,517,945	923 : 3,518,327	317-3 : 3,518,499	
91 : 3,517,840	67 : 3,518,428	432 : 3,517,946	923 : 3,518,327	317-3 : 3,518,499	
93 : 3,517,841					

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

Alabama.....	1	Kentucky.....	21	Oregon.....	41
Alaska.....	2	Louisiana.....	22	Pennsylvania.....	42
American Samoa.....	3	Maine.....	23	Puerto Rico.....	43
Arizona.....	4	Maryland.....	24	Rhode Island.....	44
Arkansas.....	5	Massachusetts.....	25	South Carolina.....	45
California.....	6	Michigan.....	26	South Dakota.....	46
Canal Zone.....	7	Minnesota.....	27	Tennessee.....	47
Colorado.....	8	Mississippi.....	28	Texas.....	48
Connecticut.....	9	Missouri.....	29	Utah.....	49
Delaware.....	10	Montana.....	30	Vermont.....	50
District of Columbia.....	11	Nebraska.....	31	Virginia.....	51
Florida.....	12	Nevada.....	32	Virgin Islands.....	52
Georgia.....	13	New Hampshire.....	33	Washington.....	53
Guam.....	14	New Jersey.....	34	West Virginia.....	54
Hawaii.....	15	New Mexico.....	35	Wisconsin.....	55
Idaho.....	16	New York.....	36	Wyoming.....	56
Illinois.....	17	North Carolina.....	37	U.S. Air Force.....	57
Indiana.....	18	North Dakota.....	38	U.S. Army.....	58
Iowa.....	19	Ohio.....	39	U.S. Navy.....	59
Kansas.....	20	Oklahoma.....	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

PATENTS

1 : 3,517,403	6 : 3,517,835	6 : 3,518,299	6 : 3,518,688	10 : 3,518,196	17 : 3,517,558
3,517,443	3,517,838	3,518,310	3,518,689	3,518,206	3,517,570
3,517,555	3,517,861	3,518,315	3,518,690	3,518,216	3,517,605
3,517,788	3,517,864	3,518,318	3,518,698	3,518,225	3,517,606
3,518,024	3,517,884	3,518,331	3,518,699	3,518,229	3,517,627
3,518,405	3,517,893	3,518,352	3,518,700	3,518,242	3,517,637
3,518,547	3,517,897	3,518,354	3,517,592	3,518,316	3,517,676
3,518,569	3,517,899	3,518,355	3,517,593	3,518,321	3,517,746
3,518,580	3,517,909	3,518,366	3,517,719	3,518,337	3,517,747
4 : 3,517,445	3,517,913	3,518,375	3,517,807	11 : 3,517,716	3,517,748
3,518,033	3,517,942	3,518,384	3,517,834	3,518,226	3,517,751
3,518,526	3,517,951	3,518,388	3,518,656	3,518,227	3,517,795
3,518,552	3,517,961	3,518,389	3,517,472	3,518,683	3,517,867
5 : 3,518,046	3,517,963	3,518,402	3,517,503	3,518,685	3,517,868
6 : 3,517,397	3,517,978	3,518,442	3,517,536	12 : 3,517,436	3,517,872
3,517,401	3,517,982	3,518,445	3,517,542	3,517,496	3,517,881
3,517,423	3,517,996	3,518,451	3,517,679	3,517,607	3,517,894
3,517,437	3,517,999	3,518,462	3,517,681	3,517,664	3,517,896
3,517,444	3,518,001	3,518,463	3,517,720	3,517,841	3,517,903
3,517,447	3,518,004	3,518,480	3,517,731	3,517,929	3,517,931
3,517,468	3,518,011	3,518,494	3,517,758	3,517,938	3,517,934
3,517,505	3,518,012	3,518,501	3,517,892	3,518,096	3,517,937
3,517,508	3,518,016	3,518,531	3,517,914	3,518,214	3,517,947
3,517,509	3,518,025	3,518,559	3,517,921	3,518,282	3,517,952
3,517,518	3,518,034	3,518,567	3,517,933	13 : 3,517,394	3,517,979
3,517,550	3,518,056	3,518,576	3,517,936	3,517,499	3,517,983
3,517,560	3,518,075	3,518,582	3,517,958	3,517,537	3,517,993
3,517,569	3,518,082	3,518,593	3,517,965	3,517,801	3,517,997
3,517,591	3,518,089	3,518,595	3,517,991	3,517,876	3,518,005
3,517,604	3,518,091	3,518,601	3,518,072	3,517,932	3,518,036
3,517,621	3,518,093	3,518,610	3,518,162	16 : 3,517,749	3,518,077
3,517,625	3,518,105	3,518,613	3,518,210	3,518,163	3,518,147
3,517,632	3,518,114	3,518,614	3,518,236	3,518,305	3,518,158
3,517,635	3,518,121	3,518,615	3,518,261	3,518,681	3,518,165
3,517,642	3,518,134	3,518,617	3,518,381	17 : Re.26,924	3,518,185
3,517,648	3,518,137	3,518,628	3,518,394	Re.26,925	3,518,193
3,517,662	3,518,145	3,518,629	3,518,400	3,518,436	3,518,211
3,517,677	3,518,146	3,518,635	3,518,436	3,518,441	3,518,261
3,517,684	3,518,150	3,518,636	3,518,441	3,518,459	3,518,364
3,517,688	3,518,164	3,518,637	3,518,459	3,518,479	3,518,365
3,517,700	3,518,166	3,518,645	3,518,495	3,518,495	3,518,383
3,517,715	3,518,167	3,518,646	3,518,525	3,518,525	3,518,411
3,517,736	3,518,176	3,518,648	3,518,564	3,517,455	3,518,414
3,517,739	3,518,179	3,518,651	3,518,622	3,517,456	3,518,421
3,517,762	3,518,182	3,518,658	3,518,653	3,517,461	3,518,427
3,517,776	3,518,183	3,518,660	3,518,697	3,517,463	3,518,500
3,517,802	3,518,209	3,518,670	10 : 3,517,616	3,517,475	3,518,524
3,517,808	3,518,250	3,518,671	3,517,900	3,517,490	3,518,528
3,517,809	3,518,285	3,518,675	3,518,184	3,517,492	3,518,538
3,517,811	3,518,298	3,518,680	3,518,195	3,517,524	3,518,586

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

PI 43

17 : 3,518,598	25 : 3,518,013	29 : 3,517,556	36 : 3,517,442	36 : 3,518,574	42 : 3,517,666
3,518,667	3,518,037	3,517,583	3,517,446	3,518,630	3,517,696
18 : 3,517,392	3,518,065	3,517,622	3,517,452	3,518,631	3,517,702
3,517,399	3,518,110	3,517,694	3,517,466	3,518,647	3,517,728
3,517,453	3,518,219	3,517,750	3,517,484	3,518,650	3,517,754
3,517,465	3,518,235	3,517,773	3,517,513	3,518,654	3,517,765
3,517,506	3,518,312	3,517,794	3,517,515	3,518,657	3,517,784
3,517,532	3,518,373	3,517,917	3,517,528	3,518,663	3,517,787
3,517,541	3,518,378	3,518,178	3,517,539	3,518,666	3,517,799
3,517,588	3,518,386	3,518,221	3,517,551	3,518,669	3,517,803
3,517,626	3,518,413	3,518,314	3,517,559	3,518,692	3,517,822
3,517,644	3,518,458	3,518,322	3,517,582	3,518,694	3,517,878
3,517,668	3,518,465	3,518,467	3,517,585	37 : 3,517,454	3,517,880
3,517,685	3,518,483	3,518,468	3,517,598	3,517,479	3,517,883
3,517,726	3,518,485	3,518,471	3,517,599	3,517,480	3,517,916
3,517,779	3,518,491	3,518,600	3,517,618	3,517,540	3,517,950
3,517,785	3,518,492	3,518,616	3,517,623	3,517,707	3,517,971
3,517,786	3,518,536	30 : 3,517,651	3,517,657	3,517,891	3,517,981
3,517,866	3,518,541	3,517,752	3,517,665	3,518,104	3,517,994
3,517,874	3,518,544	31 : 3,517,772	3,517,667	3,518,138	3,518,018
3,517,889	3,518,553	32 : 3,517,890	3,517,669	3,518,486	3,518,059
3,517,907	3,518,554	33 : 3,517,529	3,517,670	3,518,596	3,518,086
3,517,962	3,518,558	3,517,706	3,517,671	38 : 3,517,919	3,518,100
3,517,970	3,518,578	3,517,818	3,517,672	39 : Re.26,926	3,518,101
3,518,076	3,518,591	3,518,555	3,517,673	3,517,396	3,518,124
3,518,109	3,518,624	34 : Re.26,927	3,517,674	3,517,414	3,518,142
3,518,154	3,518,640	Re.26,928	3,517,686	3,517,424	3,518,153
3,518,233	3,518,649	3,517,419	3,517,693	3,517,425	3,518,168
3,518,239	3,518,661	3,517,439	3,517,695	3,517,428	3,518,181
3,518,240	3,518,665	3,517,596	3,517,698	3,517,448	3,518,194
3,518,260	3,518,672	3,517,603	3,517,712	3,517,470	3,518,204
3,518,274	3,518,682	3,517,660	3,517,725	3,517,564	3,518,217
3,518,309	3,518,687	3,517,675	3,517,796	3,517,567	3,518,241
3,518,343	26 : Re.26,929	3,517,708	3,517,805	3,517,568	3,518,254
3,518,344	3,517,411	3,517,792	3,517,810	3,517,586	3,518,301
3,518,482	3,517,417	3,517,806	3,517,849	3,517,620	3,518,302
3,518,499	3,517,451	3,517,820	3,517,860	3,517,646	3,518,304
3,518,561	3,517,460	3,517,871	3,517,863	3,517,658	3,518,320
3,518,604	3,517,467	3,517,920	3,517,895	3,517,661	3,518,333
19 : 3,517,427	3,517,473	3,517,956	3,517,908	3,517,683	3,518,349
3,517,488	3,517,535	3,518,041	3,517,912	3,517,692	3,518,359
3,517,711	3,517,552	3,518,042	3,517,923	3,517,697	3,518,409
3,517,724	3,517,561	3,518,053	3,517,927	3,517,701	3,518,422
3,518,353	3,517,563	3,518,067	3,517,930	3,517,710	3,518,428
3,518,693	3,517,573	3,518,071	3,517,935	3,517,721	3,518,430
21 : 3,517,699	3,517,649	3,518,107	3,517,939	3,517,722	3,518,457
3,518,396	3,517,654	3,518,108	3,517,946	3,517,791	3,518,466
22 : 3,517,487	3,517,659	3,518,125	3,517,954	3,517,793	3,518,466
3,517,553	3,517,729	3,518,131	3,517,955	3,517,834	3,518,534
3,517,554	3,517,753	3,518,132	3,517,957	3,517,844	3,518,535
3,517,738	3,517,782	3,518,133	3,517,976	3,517,870	3,518,570
3,517,745	3,517,790	3,518,203	3,517,985	3,517,873	3,518,573
3,517,756	3,517,825	3,518,215	3,517,987	3,517,901	3,518,587
3,517,769	3,517,846	3,518,220	3,517,990	3,517,974	3,518,603
3,518,044	3,517,856	3,518,258	3,517,995	3,518,008	3,518,605
3,518,218	3,517,859	3,518,269	3,518,009	3,518,028	3,518,620
3,518,319	3,517,879	3,518,270	3,518,010	3,518,057	3,518,642
3,518,323	3,517,882	3,518,271	3,518,020	3,518,079	43 : 3,517,636
3,518,607	3,517,911	3,518,272	3,518,021	3,518,118	3,518,460
23 : 3,517,885	3,517,918	3,518,273	3,518,032	3,518,119	44 : 3,517,823
24 : 3,517,587	3,517,940	3,518,275	3,518,038	3,518,129	3,518,152
3,517,615	3,517,943	3,518,279	3,518,064	3,518,139	3,518,223
3,517,848	3,517,948	3,518,280	3,518,066	3,518,140	3,518,223
3,517,928	3,517,964	3,518,283	3,518,070	3,518,157	3,518,223
3,517,998	3,517,968	3,518,287	3,518,073	3,518,189	3,518,566
3,518,000	3,518,030	3,518,294	3,518,081	3,518,205	3,518,588
3,518,049	3,518,031	3,518,332	3,518,084	3,518,207	46 : 3,517,590
3,518,051	3,518,047	3,518,338	3,518,085	3,518,212	3,517,944
3,518,106	3,518,068	3,518,360	3,518,087	3,518,212	47 : 3,517,398
3,518,177	3,518,113	3,518,367	3,518,088	3,518,264	3,518,040
3,518,200	3,518,116	3,518,370	3,518,092	3,518,265	3,518,063
3,518,201	3,518,127	3,518,371	3,518,095	3,518,281	3,518,069
3,518,300	3,518,172	3,518,377	3,518,111	3,518,295	3,518,078
3,518,328	3,518,222	3,518,401	3,518,123	3,518,326	48 : 3,517,400

48 : 3,518,151	48 : 3,518,585	51 : 3,518,175	53 : 3,518,380	55 : 3,517,764	55 : 3,518,099
3,518,156	3,518,608	3,518,232	3,518,621	3,517,819	3,518,120
3,518,202	3,518,609	3,518,448	55 : 3,517,481	3,517,824	3,518,277
3,518,342	3,518,623	3,518,498	3,517,482	3,517,827	3,518,278
3,518,379	3,518,677	3,518,527	3,517,485	3,517,840	3,518,444
3,518,420	3,518,678	53 : Re. 26,923	3,517,523	3,517,941	3,518,472
3,518,437	3,518,679	3,517,629	3,517,534	3,517,960	3,518,518
3,518,449	3,518,695	3,517,945	3,517,634	3,517,972	3,518,519
3,518,481	51 : 3,517,412	3,517,959	3,517,663	3,517,975	3,518,523
3,518,512	3,517,713	3,518,159	3,517,761	3,518,090	3,518,543
3,518,530	3,517,858				

Design Patents

1 : 217,931	6 : 217,920	17 : 217,904	29 : 217,932	37 : 217,895	41 : 217,912
217,946	217,929	217,922	34 : 217,893	217,909	42 : 217,900
6 : 217,901	217,947	26 : 217,925	34 : 217,893	217,910	217,926
217,902	9 : 217,928	27 : 217,940	36 : 217,896	217,917	217,934
217,903	217,933	217,906	217,915	39 : 217,897	217,935
217,907	217,938	217,913	217,916	217,898	217,936
217,918	12 : 217,914	217,923	217,927	217,899	217,937
217,919	17 : 217,894	217,939	217,942	217,945	217,941

Plant Patents

6 : 2,975	6 : 2,976				
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DEFENSIVE PUBLICATIONS APPLICATIONS
(Notice of Dec. 16, 1969, 869 O.G. 687)

34 : T875,024	36 : T875,028	36 : T875,029	36 : T875,030	47 : T875,027	63 : T875,025
36 : T875,026					



U.S. DEPARTMENT OF COMMERCE

Official Gazette of the United States Patent Office

June 30, 1970

Volume 875

Number 5

TRADEMARKS NOTICES

Index of Consolidated Listing of Recent Official Gazette Notices

Following is a descriptive word index for the Consolidated Listing of Recent Official Gazette Notices which appeared in the January 13, 1970 OFFICIAL GAZETTE. The index refers to all item numbers of pertinent notices related to the key word referenced.

A	Items
Abandonment:	
Application at Board of Appeals	108
Abstracts, Patent	118, 119, 121
Actions, Office:	
Attachments to	10
First Page Form	14, 70
Amendments:	
After Allowance	84
After Final Rejection	66
Basis in Original Disclosure	81
Claims—Brackets	83
Examiners' Amendment Practice	82
Fees	24
Hand Delivery of	9, 68

A—Continued

	Items
Appeals -----	33, 66, 99-109
Abandonment of Application Before Board of Appeals -----	108
Attorney Appearances Before Board of Appeals -----	33
Briefs, Reply -----	109
Dismissal -----	101
Examiner Appearances Before Board of Appeals -----	106, 107
Reopening Prosecution After Decision by Board of Appeals -----	67
Assignee, Issue of Patent to -----	144
Assignments :	
Accessibility of Records -----	20
Notification re Conflict -----	21
Recording of Certified Copies -----	19
C	
Certificates of Correction -----	114-117
Citation of References -----	122, 124, 125, 127
Claim Interpretation -----	80

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1970

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]	24,830
Date of oldest new application	June 18, 1969
Date of oldest amended application (filing date)	October 20, 1966

C. M. WENDT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 17, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B	9-20-69	10-12-67
(II) F. H. WETTERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200	10-1-69	10-20-66
(III) C. E. FOWLER, Classes 12, 16, 19, 21, 23, 26, 31, 34, 35, 36, 44	9-4-69	9-17-67
(IV) M. E. ABRAMSON, Classes 13, 14, 20, 22, 24, 25, 29, Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107	6-18-69	5-18-67
Renewals (All Classes)	4-6-70	
Sec. 12(c) Publications (All Classes)	4-10-70	

Applications filed during the month of May 1970—2,798

Registrations Issued	452—No. 893,495 to No. 893,946
Renewals Issued	120

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C—Continued

Items	Headings, Patent	Items
Claims:		48
Dependent	Hearings:	
Method	Appeal	83, 106, 107
Non-Elected	Trademark	180
Classification, Patent		
Computer Programs:		
Examination of Applications	Incorporation by Reference	89, 90
Protection Study	Informal Applications of Foreign Applications	92, 93
Continuing Applications:	Inquiries, Status	110-113
Chains of	Interference Practice	9, 68, 85, 86
Reference Citations in	Interviews	93
Res Judicata	Inventors, Change of	
Streamline Continuations		
Convention Cases:		
German Requirements	Licenses To File Applications in Foreign Countries	143
Correspondence:		
Necessary Information on Papers	Mailing Address, Patent Office	8, 15
Patent Office Mailing Address	Multiple Dependent Claim Practice—Trial	73, 74
Declarations		
Defensive Publication Program	Non-Elected Claims	88, 92
Dependent Claims	Non-Final Second Action Rejection Practice	62
Trial Multiple Dependent Claim Practice		
Deposit Accounts	Orders:	
Design Patent Practice	Defensive Publications	137
Diligence	Foreign Patents and/or Published Applica-	
Directory of Registered Patent Attorneys/Agents	tions	17
Disclaimers, Terminal	References Cited in ESP Actions	126
Disclosure, Application		
Disclosure Document Program	P	
Divisional Applications	Patentability Brief	78, 79
Double Patenting	Patentees, List of	18
Drawings	Petition To Revive Practice	3, 148
Drug Guidelines	Photoprints as Drawings	62
	Plant Patent Applications	37
Effective Date of U.S. Patent	Post Card Receipt	13
Election of Species	Post Final Rejection Practice	66, 68
Examiners' Amendment Practice	Pre-Examination	78, 79
Extensions of Time	Printing Priorities	138
	Prior Art:	
Fees	Voluntary Citation by Applicants	125
Filing Date:	Rejections Not Based on Prior Art	57
Incorporation by Reference	Priority	41, 42, 50, 51, 138
Photoprints as Drawings	Foreign Priority of Continuing Applications	50
Plant Patent Applications	German Applications	51
Final Rejection:	Patent Printing	138
First Action	Reissue Applications	141
Non-Final Second Action	Public Information	12
Prosecution After Final Rejection	Publications, Citation of	122
Time for Response		
First Action Procedure	R	
Foreign Exchange Programs:	Recording of Instruments	19
Philippines-U.S.	References	122-128, 137
Swedish-U.S.	Reissue Applications—Foreign Priority	41
Foreign, Miscellaneous Matters:	Rejections:	
Citations of Foreign Patents	Final Rejection—Time for Response	97, 98
Informal Applications	First Action Final	69
Licenses To File Applications in Foreign Coun-	Mere Function of Machine	76
tries	Non-Final Second Action	62
Orders for Copies of Foreign Patents	Not Based on Prior Art	57
Priority Reissue Applications	Prosecution After Final Rejection	66, 68
Priority of Continuing Applications	Res Judicata	71
Format:	Technical	56
Front Page of Patent, Proposed	Reopening Prosecution After Board of Appeals De-	
Patent Headings	cision	67
Requesting Streamline Continuation Applica-	Res Judicata	71
tion	Restriction and Election	66, 88-91, 94
Function of Machine—Rejection	Revival	8, 148
	Rule Changes:	
G	Amendments After Allowance (Rule 312)	84
German Requirements in Convention Cases	Certificates of Correction (Rules 322, 323)	116
Guidelines:	Declaration in Lieu of Oath (Rule 68)	34, 35
Disclosures of Utility in Drug Cases	Defensive Publication Program (Misc. Rules)	133
Examination of Computer Programs—Reclassification	Defensive Publication Program, Extension (Pro-	
of Guidelines	posal)	136
Incorporation by Reference in Patent Applica-	Export of Technical Data (Rule 516)	143
tions	Fees and Charges (Misc. Rules)	31
Model Patent Application	Housekeeping Changes (Misc. Rules)	147
Preparation of Patent Abstracts	Interference Practice (Misc. Rules)	113
Preparation of Patent Application Disclosures	Issuance of Patent to Assignee (Rule 384)	144
	Patentability Brief (Proposal) (Rule 96)	78, 79

Items	Items
Search Exchange Programs:	
Philippines-U.S.	145
Swedish-U.S.	146
Search Room	22
Secrecy of Inventions	143
Special Treatment of Applications:	
Special Examining Procedure for Certain New	
Applications	58-60
Applications To Be Taken Up Special	61
Species, Election of	88-92
Status:	
Information re Pending Applications	1
Inquiries	2, 3
Streamline Continuation Practice	43-46
Technical Rejections	56, 57
Telephone Practice	86, 88-91
Time for Response	95-98
Trademarks	129-131
U.S. Patent, Effective Date of	47
Withdrawal of Attorney	32
Withdrawal of Final Rejection After Notice of Appeal	102

RICHARD A. WAHL,
Assistant Commissioner.

June 3, 1970.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 57,743 (THOR), Thor Power Tool Company, Portable motor-driven pneumatic drills, portable motor-driven pneumatic hammers, and other portable motor-driven pneumatic tools and parts of and repairs for said tools; Reg. No. 57,111, same, Portable electrically actuated drills; Reg. No. 129,108, same, Hose-couplings; Reg. No. 533,044, same, Independent Pneumatic Tool Company, Electrically actuated portable power tools, comprising drills, star drills, screw drivers, stud setters, nut setters, wrenches, reamers, tappers, nibblers, hammers, saws, grinders, valve seat grinders, rotary files, wire brush machines, sanders, polishers and buffers, and parts, attachments and accessories therefor comprising electric motors, armature assemblies, field assemblies, electric cord, plugs, switches, rotor assemblies, stator assemblies and electric motor fans; Reg. No. 536,416, same, Carriages for supporting and transporting wagon drills; Reg. No. 561,043, same, Pneumatically actuated portable and stationary power tools and machines, comprising drills, screw drivers, stud setters, nut setters, rotary wrenches, impact wrenches, tappers, nibblers, hammers, chipping hammers, scaling hammers, calking hammers, beading hammers, riveting hammers, spike drivers, nail drivers, core busters, rivet busters, holders-on, rammers, rivet drivers, rivet squeezers, grinders, valve seat grinders, rotary files, sanders, polishers, buffers, chisels, wire brush machines, saws, rock drills including sinkers, drifters, stoppers and pluggers, wagon drills, paving and concrete breakers, clay diggers, trench diggers, tampers, hitch cutters, sump pumps, vibrators and hoists, electrically operated bench and stationary power tools and machines, comprising general purpose grinders, valve seat refacers and valve seat grinders, and parts, attachments, and accessories therefor and for electrically operated portable power tools, said parts, attachments and accessories comprising bearings, gears, metal packings, metal bushings, clutch jaws, rotor blades for pneumatic motors, sockets, socket wrench shanks, chucks, screw driver bits, chuck keys, screw driving and nut setting attachments for drills, adaptors for operably securing attachments in portable power tools, mandrels, arbors, angle attachments, extension shanks, extension bits, twist drills, reamers, spindles, extension spindles, spindle protection caps, circular saw blades, hole saw blades, rotary files, cushion and backing pads for sanders and polishers, screw finders and finder assemblies, valve guide cleaners of the reamer type, hole spotters for locating holes for a working tool, chisels, chisel blanks, gouges,

turning wrenches for straight shank tools, bush hammers, bull points, grinding wheel holders, cutting tools, grinding wheel guards, chisel retainers, steel cutters, dust collectors and shields, universal joints, kick-out clutch attachments, positive clutch attachments, slip clutch attachments, tool holders, throttles, grip handles, breast plates, extension handles, manually operated speed regulators for controlling the speed of pneumatic tools, rivet sets for riveting hammers, rivet set clips, rivet chisels, drill steels for rock drills, hand sharpening tools for forming the bit ends of drill steels, calking tools, beading tools, blower throttles, butts, pins, rivet jaws, rivet yokes, knock-out punches, blow guns, shooting drivers, asphalt cutters, clay spades, frost wedges, mold points, rock breakers, broaching tools, tampers, digging points, gad points, flat picks, hoist trolleys, drill centralizers for grinding drill steels of rock drills, and tool reests; pilot pin wrenches, expanding and plug pilots for valve grinding tools; balancers for suspending power tools in working position; tool supports and stands; power tool kits comprising portable pneumatic or electric power tools and attachments and accessories therefor; rotary air motors; grinding wheel dressers and diamond files therefor; and hand tools for the service, repair, disassembly and assembly of portable, bench and stationary power tools, machines and parts, attachments and accessories therefor, comprising wrenches, tool holders, lapps, re-threading and sizing dies, extractors, reamers, drifts, taps, bench blocks, clamps, clamping rings, screw drivers, screw driving bits, broaches, pliers, pullers, facing tools, arbors, spreaders, rivet upsetters, screw upsetters and removers, wedges, punches, vises, vibrators for testing hammer speeds, fan removing tubes, and fixtures for holding assembly, removal and installation of tool parts; Reg. No. 633,643, same, Thor Power Tool Company, Gasoline engine driven power trowels; Reg. No. 633,434, same, Gasoline driven vibratory finishing screeds for concrete, pneumatic concrete vibrators, and multiple pneumatic nut setter units, filed Mar. 4, 1969, D.C., N.D. Ill. (Chicago), Doc. 69c465, Thor Power Tool Company v. Interther, Inc. and Thorne Associates, Inc. Stipulation, complaint and counterclaim dismissed without prejudice, Dec. 31, 1969.

Reg. No. 57,111. (See Reg. No. 57,742.)

Reg. No. 129,108. (See Reg. No. 57,742.)

Reg. No. 533,044. (See Reg. No. 57,742.)

Reg. No. 536,416. (See Reg. No. 57,742.)

Reg. No. 533,906 (BEE AND DESIGN), Columbia River Packers Association, Inc., Canned, fresh, and frozen fish; Reg. No. 533,907 (BUMBLE BEE BRAND), same; Reg. No. 561,074, same, filed Mar. 9, 1970, D.C., C.D. Calif. (Los Angeles), Doc. 70-493-DWW, Castle & Cooke, Inc. v. Donald H. Williams, doing business as Desert Supply Co.

Reg. No. 533,907. (See Reg. No. 533,906.)

Reg. No. 561,043. (See Reg. No. 57,742.)

Reg. No. 561,074. (See Reg. No. 533,906.)

Reg. No. 633,643. (See Reg. No. 57,742.)

Reg. No. 633,434. (See Reg. No. 57,742.)

Reg. No. 744,345 (AMETEK), Ametek, Inc., Electric motors, electric motor actuators and synchro transducers; Reg. No. 744,361, same, Springs, spring motors, spring motor reels, metal stampings for machine parts, and centrifugal drying machines; Reg. No. 744,361, same, Laundry washing machines, laundry liquid extracting machines, laundry washer-extractors, laundry ironers and laundry folding machines; Reg. No. 744,422, same, Pressure gauges, wire terminal and material pull testers, mechanical force gauges, material testing machines and accessories, beverage measuring dispensers, ammeters, voltmeters, thermometers, process control and recording instruments, and timing and pressure actuated mechanisms for opening parachutes; Reg. No. 744,507, same, Air volume controllers for water pressure systems, and industrial type fans; Reg. No. 744,712 (AMETEK AND DESIGN A), same, Electric motors and electric motor actuators and synchro transducers; Reg. No. 744,750, same, Springs, spring motors, spring motor reels, metal stampings for machine parts, and centrifugal drying machines; Reg. No. 744,761, same, Laundry washing machines, laundry liquid extracting machines, laundry washer-extractors, laundry ironers and laundry folding machines; Reg. No. 744,760, same, Pressure gauges, wire terminal and material pull testers, mechanical force gauges, material testing machines and accessories, beverage measuring dispensers, ammeters, voltmeters, thermometers, process control and recording instruments, temperature

control instruments, and timing and pressure actuated mechanisms for opening parachutes; Reg. No. 744,800 (AMTEK), same, Liquid filtering apparatus and filter cloth therefor; Reg. No. 744,810 (AMTEK AND DESIGN A), same; Reg. No. 744,820, same, Air volume controllers for water pressure systems, and industrial type fans, filed Mar. 19, 1970, D.C., S.D.N.Y., Doc. 70-C-1135, Ametek, Inc. v. Ametek Creations, Inc.

Reg. No. 744,831. (See Reg. No. 744,848.)

Reg. No. 744,801. (See Reg. No. 744,848.)

Reg. No. 744,822. (See Reg. No. 744,848.)

Reg. No. 744,807. (See Reg. No. 744,848.)

Reg. No. 744,712. (See Reg. No. 744,848.)

Reg. No. 744,750. (See Reg. No. 744,848.)

Reg. No. 744,761. (See Reg. No. 744,848.)

Reg. No. 744,700. (See Reg. No. 744,848.)

Reg. No. 744,800. (See Reg. No. 744,848.)

Reg. No. 744,810. (See Reg. No. 744,848.)

Reg. No. 744,820. (See Reg. No. 744,848.)

Reg. No. 851,200 (AAMCO), Aamco Automatic Transmissions, Inc., Automobile repair services; Reg. No. 800,230 (AAMCO AND DESIGN), same, filed Nov. 7, 1969, D.C., N.D. Ohio (Cleveland), Doc. C69-892, Aamco Automatic Transmissions, Inc. v. Patco, Inc. Final consent decree, perpetual injunction enjoining defendant, Mar. 31, 1970.

Reg. No. 800,230. (See Reg. No. 851,200.)

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 2, 1962, 76 Stat. 760. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 283,818. Andrea Raab Corporation, Brooklyn, N.Y. Filed Oct. 31, 1967.

ANDREA

Owner of Reg. No. 819,289.

Class 29—Brooms, Brushes, and Dusters

For Eye Liner Brushes, Eye Shadow Brushes, Lip Brushes, Complexion Brushes, and Eye-Brow Brushes (Int. Cl. 21).
First use Mar. 27, 1962.

Class 37—Paper and Stationery

For Facial Cleansing Tissues (Int. Cl. 16).
First use Oct. 10, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

For False Eyelashes and Artificial Finger Nails (Int. Cl. 8).
First use Jan. 28, 1963.

Class 51—Cosmetics and Toilet Preparations

For Pads Impregnated With Nail Polish Remover, Pads Impregnated With Eye Makeup Remover, Cosmetic Adhesives, Makeup Blending Powder, Finger Nail Mending Liquid, Lip Gloss, Hair Lightener, Nail Polish Remover, and Finger Nail Adhesive Remover (Int. Cl. 3).
First use July 24, 1967.

Class 52—Detergents and Soaps

For False Eyelash Cleaner (Int. Cl. 3).
First use Oct. 31, 1966.

SN 286,806. Bernard Food Industries, Inc., Evanston, Ill. Filed Dec. 13, 1967.



Class 45—Soft Drinks and Carbonated Waters

For Dry Mix Powders To Be Added to Water for Making Fruit Flavored Beverages (Int. Cl. 32).
First use Feb. 15, 1951.

Class 46—Foods and Ingredients of Foods

For Soup Bouillon Powders and Soup Bases; Canned Foods—Namely, Seafood, Fish, Meat and Chicken; Canned Prepared Dishes—Namely, Chili With and Without Meat, Spaghetti and Meatballs, Spanish Rice, Meatless Ravioli and Sauce, Vegetable Chop Suey, Ravioli and Meat Sauce, Meatless Spaghetti; Canned Prepared Meat and Poultry Dishes; Canned Prepared Meat Products; Meatless Sauces and Sauces Containing Meat; Powdered Gravy Sauce Mixes Both Meatless and Meat (Poultry) Containing Milk Powder and Season-

ing of a Spiced Nature; Meat and Vegetable Enhancer Products—Namely, Meat Enhancer and Enricher and Enhancer of a Flour Nature, Chicken Fry and Breading Mix, Meat Tenderizer, Potato Whitener, Meat Loaf Mix, Salad Dressings; Canned Meatless Chow Mein and Canned Italian Style Vegetable Dishes; Pizza Pie Mix; Pizza Pie Cheese; Baking Specialties—Namely, Cake Mixes, Pastry Mixes, Cake Fillings of a Fruit Nature, Graham Cracker Crumbs, Egg Powder and Whole Milk Powder for Baking Purposes; Powders for Making Cake Icings, Powders for Making Dessert Toppings of a Cream Nature and Pie, Cake and Dessert Fillings of a Cream Nature; Dry Mixes—Namely, Sour Cream, Sour Cream and Chives, Western Ham Omelette, Scrambled Eggs With Freeze Dried Ham, Gelatin Desserts and Gelatin Dessert Powders, Vegetable Aspic Gelatin, Unflavored and Uncolored Gelatin Base, Puddings, Custard Mixes; Mixes for Making Spumoni; Powder for Making Fruit Jellies; Fruit Preserves and Jellies; Liquid Pancake Syrup and Dry Pancake Syrup; Pancake Mixes, French Toast Batter Mix; Low Moisture Fruits and Fruit Mixes; Low Moisture Vegetables; Freeze Dried Vegetables and Vegetable Mixes; Low Moisture Cole Slaw Mix and Dressing; Mixes for Making Hot Chocolate, Cocoa and Malted Milk; Fruit Flavored Mix for Baking Purposes, Mix for Making a Non-Alcoholic Egg Nog; Dietetic Foods—Namely, Dry Mix Salt Free Soup Bases, Dry Mix Sugar Free Gelatin Dessert, Dry Mix Sugar Free Pudding, and Sugar Free Salad Dressings (Int. Cls. 5, 29, and 30).
First use Dec. 18, 1947.

Class 50—Merchandise Not Otherwise Classified

For Novelty Item Known as Dehydrated Water (Int. Cl. 20).
First use Dec. 12, 1962.

SN 294,103. Philip G. Whitman, Inc., New York, N.Y. Filed Mar. 25, 1968.

KINEX

Class 1—Raw or Partly Prepared Materials

For Heavy Duty Woven Fabrics Impregnated With Plastic and Simulated Leather (Int. Cls. 18 and 24).

Class 37—Paper and Stationery

For Paper and Paperboard Backing for Use as Backing Material and Vinyl Film for Use as a Wrapping Material (Int. Cl. 16).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Non-Woven Fibrous Backing Material and Light Weight Fabrics Impregnated With Plastic (Int. Cl. 24).
First use Sept. 15, 1967.

SN 302,373. Toppan Printing Co., Ltd., Taito-ku, Tokyo, Japan. Filed June 25, 1968.

TOPPAN

Class 22—Games, Toys, and Sporting Goods

For Doll Cases (Int. Cl. 28).
First use Apr. 1, 1964; in commerce Apr. 1, 1964.

Class 37—Paper and Stationery

For Address Books, Cheques, Envelopes, Wrapping Paper, and Wallpaper (Int. Cls. 16 and 27).
First use Apr. 1, 1963; in commerce Apr. 1, 1963.

Class 38—Prints and Publications

For Stereoscopic Three Dimensional Printed Pictures, Catalogues, Pamphlets, Menus, Books, Picture Postcards, Calendars, Fine Art Reproductions, Transfer Sheets, and Changing Pictures (Int. Cl. 16).
First use Oct. 1, 1961; in commerce Oct. 1, 1961.

SN 302,791. Universal Chemicals & Coatings, Inc., Elk Grove, Village, Ill. Filed July 1, 1968.

**Class 16—Protective and Decorative Coatings**

For Protective, Decorative and Functional Chemical Coatings for Metals and Other Non-Metallic Substrates and Anti-Rust Coatings (Int. Cl. 2).
First use Jan. 9, 1968.

Class 21—Electrical Apparatus, Machines, and Supplies

For Conductive Coatings for Electrical Applications (Int. Cl. 9).
First use Jan. 9, 1968.

SN 305,316. Conchemco, Incorporated (Delaware corporation), Kansas City, Mo., by merger from Conchemco, Incorporated (Missouri corporation), Kansas City, Mo. Filed Aug. 16, 1968.

CRITERION**Class 12—Construction Materials**

For Prefabricated Homes Constructed and Assembled at a Factory and Moved to the Erection Site by Special Truck (Int. Cl. 19).

Class 19—Vehicles

For Mobile Homes (Int. Cl. 12).
First use Oct. 30, 1967.

SN 306,088. Burger King Corporation, Miami, Fla. Filed Sept. 9, 1968.

HOME OF THE WHOPPER

Owner of Reg. No. 782,990.

Class 45—Soft Drinks and Carbonated Waters

For Soft Drinks of All Varieties (Int. Cl. 32).

Class 46—Foods and Ingredients of Foods

For Hamburger Sandwiches (Int. Cl. 29).
First use Jan. 12, 1958.

SN 307,374. Societe dite: Eurofinance S.A.R.L., Paris, France. Filed Sept. 16, 1968.



Owner of French Reg. No. 723,332, dated Dec. 20, 1966.

Class 38—Prints and Publications

For Printed Booklets Relating to Financial Matters (Int. Cl. 16).

Class 102—Insurance and Financial

For Furnishing Clients Periodic Data and Analyses of Information Showing Financial Condition of and Performance by Businesses, Industrial Companies, and Financial Institutions, and Stock Market Operations (Int. Cl. 36).

SN 312,364. Dallas Systems Corp., Dallas, Tex. Filed Nov. 18, 1968.

KRAZY ICE

Without disclaiming any common law rights thereto, applicant disclaims the word "Ice" apart from the mark as a whole.

Class 2—Receptacles

For Disposable Plastic Coated Beverage Cups (Int. Cl. 21).

Class 31—Filters and Refrigerators

For Refrigerated Machines for Dispensing Semi-Frozen Carbonated Beverages (Int. Cl. 11).

Class 45—Soft Drinks and Carbonated Waters

For Semi-Frozen Soft Drinks (Int. Cl. 32).
First use at least as early as Oct. 15, 1968.

SN 312,370. SCM Corporation, New York, N.Y. Filed Nov. 18, 1968.

CORONASTAT

Owner of Reg. No. 824,030.

Class 6—Chemicals and Chemical Compositions

For Chemical Supplies for Use With Photocopiers—Namely, Replenishers, Dispersants, Toners, Liquid Compositions To Neutralize and Prevent the Build Up of Static Electricity, and Coating Materials for Treating Copy Paper (Int. Cl. 1).
First use Sept. 6, 1967.

Class 37—Paper and Stationery

For Copy Paper (Int. Cl. 16).
First use Oct. 28, 1968.

SN 321,298. U.S. Industries, Inc., New York, N.Y. Filed Mar. 10, 1969.



Owner of Reg. Nos. 547,806, 762,349, and others.

Class 21—Electrical Apparatus, Machines, and Supplies

For AM and FM Radio Receivers, Multiple Band Radio Receivers, Portable Radios, Transistor Radios, Electric Clock-Radio Combinations, Television Sets, Combination Radio-Phonograph Units, Electrically Operated Speaker Systems, Radio-Phonograph Cassettes, Amplifiers, and Electric Dry-Cell Batteries (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Electrical Tape Sound Recorders, Stereo Tape Recorders and Tape Decks, Cassettes for Tape Sound Recorders, Electrical Phonographs, and Record Changers (Int. Cl. 9).

First use May 28, 1968.

SN 347,133. Fulton Tire, Inc., Wheeling, W. Va. Filed Dec. 29, 1969.

IF IT'S ROUND AND ROLLS . . . WE HAVE IT!**Class 35—Baking, Heat, Machinery Packing, and Non-metallic Tires**

For Tires (Int. Cl. 13).

First use Nov. 25, 1969.

Class 101—Advertising and Business

For Retail Tire Store Services (Int. Cl. 35).
First use September 1963.

SN 344,524. Murphy Products Company, Inc., Burlington, Wis. Filed Nov. 25, 1969.

LINEBACKER**Class 18—Medicines and Pharmaceutical Preparations**

For Minerals for Livestock (Int. Cl. 5).
First use Nov. 19, 1969.

Class 46—Foods and Ingredients of Foods

For Feeds for Livestock and Poultry (Int. Cl. 31).
First use Oct. 3, 1969.

SN 348,025. Gem, Incorporated, Byhalia, Miss. Filed Nov. 10, 1969.

PRESTIGE

Owner of Reg. No. 806,924.

Class 6—Chemicals and Chemical Compositions

For Laundry Starch (Int. Cl. 3).

Class 52—Detergents and Soaps

For Glass Cleaner and Chalkboard Cleaner (Int. Cl. 3).
First use Nov. 7, 1969.

SN 341,099. Philadelphia Quarts Company, Philadelphia, Pa. Filed Oct. 20, 1969.

METSO

Owner of Reg. Nos. 292,100, 872,397, and others.

Class 6—Chemicals and Chemical Compositions

For Soluble Alkali Silicates (Int. Cl. 1).

Class 52—Detergents and Soaps

For Household and Industrial Cleaning Preparations (Int. Cl. 3).
First use Oct. 10, 1980.

SN 338,013. Northern Laboratories, Inc., Prestige, Manitowish, Wis. Filed Sept. 16, 1969.

PRESTIGE**Class 51—Cosmetics and Toilet Preparations**

For Moisture Skin Lotion and Hair Rinse (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use May 10, 1965.

SN 333,866. Field Research Corporation, San Francisco, Calif. Filed July 30, 1969.

THE CALIFORNIA POLL**Class 38—Prints and Publications**

For Reports on Public Opinion Issued From Time to Time (Int. Cl. 16).

Class 101—Advertising and Business

For Public Opinion and Survey Research Services (Int. Cl. 35).
First use as early as Dec. 1, 1946.

SN 332,775. Swank, Inc., Attleboro, Mass. Filed July 17, 1969.

PRINCE GARDNER

"Prince Gardner" is not the name of any living individual. Owner of Reg. Nos. 359,533, 516,773, and 853,299.

Class 2—Receptacles

For Jewelry Boxes (Int. Cl. 20).

First use Feb. 13, 1968.

Class 28—Jewelry and Precious Metal Ware

For Key Chains Made in Whole or in Part of Precious or Semi-Precious Metals, or Combination Thereof (Int. Cl. 14).
First use Dec. 20, 1968.

SN 332,061. Shand Kydd Limited, Somerford, Christchurch, England. Filed July 9, 1969.

SHAND KYDD

Owner of British Reg. No. 927,242, dated June 27, 1968.

Class 20—Linoleum and Oiled Cloth

For Vinyl Wallcovering (Int. Cl. 27).

Class 37—Paper and Stationery

For Wallpaper (Int. Cl. 27).

SN 331,097. G. C. Murphy Company, McKeesport, Pa. Filed June 27, 1969.

TRIPLE CHECK

Owner of Reg. Nos. 386,707, 784,001, and others.

Class 2—Receptacles

For Vacuum Bottles and Insulated Jugs (Int. Cl. 21).
First use Mar. 21, 1967.

Class 16—Protective and Decorative Coatings

For Paint Products—Namely, Interior and Exterior Paints, Varnishes, Paint Thinner, and Spray Paint (Int. Cl. 2).
First use Mar. 19, 1964.

SN 328,063. Lenderink, Inc., Grand Rapids, Mich. Filed May 22, 1969.

CARDS OF WOOD

Applicant disclaims the word "Cards" apart from the use of the mark as shown.

Class 37—Paper and Stationery

For Card Blanks of Wood Veneer (Int. Cl. 16).

Class 38—Prints and Publications

For Calling Cards, Business Cards, and Christmas Cards (Int. Cl. 16).

First use in or about February 1929.

SN 326,280. Forrest G. Scott, Auburn, Ind. Filed May 5, 1969.

TURB-A-FOG**Class 9—Explosives, Firearms, Equipments, and Projectiles**

For Aerosol Container for Producing, Dispensing and Dispersing Tear-Gas Fogs, Inert Smokes and Other Riot-Control Agents in Crowd, Mob and Riot-Control Operations (Int. Cl. 13).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Thermal-Aerosol Fog Generator Applicator for Producing, Dispensing and Dispersing Insecticidal and Fungicidal Fogs and Smokes in Insect Control and Plant Disease Control Operations (Int. Cl. 7).

First use Sept. 27, 1966.

SN 323,236. Bridgeport Engravers Supply Co., Inc., Bridgeport, Conn. Filed Apr. 1, 1969.

BESCO

Owner of Reg. No. 336,655.

Class 14—Metals and Metal Castings and Forgings

For Engravers' Copper, Zinc and Brass, in Plate, Sheet, or Other Solid Form (Int. Cl. 6).

Class 52—Detergents and Soaps

For Printing Plate Cleaners and Solvent Cleaners for Use in Connection With Printing Machinery (Int. Cl. 2).

First use Mar. 1, 1935.

SN 322,666. General Electric Company, Schenectady, N.Y. Filed Mar. 24, 1969.

UNIVERSAL

Owner of Reg. Nos. 96,144, 340,336, and others.

Class 21—Electrical Apparatus, Machines, and Supplies

For Coffee Makers, Irons, Mixers, Skillets, Cookers, Grills, Blenders, and Toasters (Int. Cls. 7, 9, and 11).

First use January 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Knives, Knife Sharpeners, Ice Crushers, and Can Openers (Int. Cls. 7 and 8).

First use January 1961.

Class 29—Brooms, Brushes, and Dusters

For Clothes Brushes and Toothbrushes (Int. Cl. 21).
First use June 1963.

Class 44—Dental, Medical, and Surgical Appliances

For Hair Dryers, Massagers, and Manicure Sets (Int. Cls. 8, 10, and 11).

First use January 1964.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 316,190. DeKalb AgResearch, Inc., DeKalb, Ill. Filed Jan. 9, 1969.



The word "Wheat" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 705,389, 867,733, and others.
For Seeds of Wheat and Hybrids of Wheat (Int. Cl. 31).
First use Nov. 6, 1963.

SN 327,417. Sackner Products, Inc., Grand Rapids, Mich. Filed May 15, 1969.

INSULDEK

For Padding Material, Specifically Material Used as an Insulator Above Springs and the Like on Seating Products (Int. Cl. 22).

First use on or about Apr. 25, 1968.

SN 334,470. General Wig Manufacturers, Inc., Miami, Fla. Filed Aug. 5, 1969.

MICHELON

For Synthetic Fibers Used in Making Wigs, Falls, and Wiglets (Int. Cl. 22).
First use Apr. 8, 1969.

SN 334,649. United Seeds, Inc., Ralston, Nebr. Filed Aug. 6, 1969.

ANTELOPE

For Field Seeds and Lawn Seeds (Int. Cl. 31).
First use Dec. 31, 1917.

SN 339,495. Shell Oil Company, New York, N.Y. Filed Oct. 2, 1969.

KRATON

Owner of Reg. No. 794,983.

For Thermoplastic Rubbers for Use in the Manufacture of Adhesives, Sealants, Coatings, and Pressure-Sensitive Tapes; Thermoplastic Rubbers for Use as a Molding Compound in the Manufacture of Pharmaceutical-Grade Products; and Thermoplastic Rubbers for General Purpose Extrusion and Injection Molding (Int. Cl. 17).

First use Mar. 14, 1969.

SN 339,930. Polyplaster United, Inc., Union, N.J. Filed Oct. 6, 1969.

POLYPRES

For Laminated Polyvinyl Sheet Material Backed by a Pressure Sensitive Adhesive, Sold for Application to Structural Panels in Aircraft and Other Uses in Industrial Arts (Int. Cl. 17).

First use Apr. 23, 1969.

Class 2—Receptacles

SN 307,962. W. P. Anderson, d.b.a. Bill's Pill Box, Rhododendron, Oreg. Filed Sept. 23, 1968.



Applicant disclaims "Pill Box," "Turn 'n' Take" and the representation of the pill box apart from the mark as shown.
For Plastic Pill Box (Int. Cl. 21).
First use July 9, 1968.

SN 318,418. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Feb. 5, 1969.



Applicant disclaims the words "Convenience Food Service," apart from the mark as shown. Owner of Reg. Nos. 227,085, 821,397, and others.

For Plastic Plates and Covers Therefor, Plastic Cups, Bowls and Trays, With and Without Covers (Int. Cl. 21).
First use Jan. 3, 1969.

LABPAK

Owner of Reg. No. 689,865.
For Paper Packages for Light-Sensitive Films and Papers (Int. Cl. 16).
First use Oct. 3, 1958.

SN 338,615. Sentry Hardware Corporation, Cleveland, Ohio. Filed Sept. 22, 1969.

SENTRY

Owner of Reg. Nos. 764,970, 865,167, and others.
For Portable Tool Boxes (Int. Cl. 20).
First use June 10, 1969.

SN 341,440. Continental Manufacturing Co., St. Louis, Mo. Filed Oct. 20, 1969.

FIBROLENE

For Mop Buckets (Int. Cl. 21).
First use April 1969.

SN 347,036. National Can Corporation, Chicago, Ill. Filed Dec. 23, 1969.

DYNA-WELD

For Metal Cans (Int. Cl. 6).
First use during November 1969.

SN 351,608. Consolidated Aluminum Corporation, Jackson, Tenn. Filed Feb. 17, 1970.

STERALCON

For Metal Foil Containers—Namely, Sterilizable Aluminum Containers (Int. Cl. 6).
First use Dec. 20, 1966.

SN 352,943. Henry M. Chang, New York, N.Y. Filed Mar. 3, 1970.

Auto-Sip

For Containers Adapted To Contain Foods in Liquid or Other forms, Including Milk and Soft Drinks, Which Containers Have a Utensil or Drinking Straw Packaged Integrally Therewith (Int. Cl. 21).
First use July 1965.

SN 353,864. Euclid Spiral Paper Tube Corp., Cleveland, Ohio. Filed Mar. 12, 1970.

SHAFT-HUGGERS

For Paper Tubes (Int. Cl. 16).
First use on or about Jan. 26, 1970.

SN 354,024. Pak-Well Paper Products Co., North Wales, Pa. Filed Mar. 13, 1970.

SHOP-IN

For Merchandise Bags (Int. Cl. 16).
First use February 1966.

SN 354,025. Pak-Well Paper Products Co., North Wales, Pa. Filed Mar. 13, 1970.

SHOO-IN

For Merchandise Bags (Int. Cl. 16).
First use December 1962.

SN 354,145. Dart Industries Inc., d.b.a. Tupperware, Los Angeles, Calif. Filed Mar. 16, 1970.

EASY CRISP

For Plastic Household Containers and Covers Therefor (Int. Cl. 21).
First use Feb. 23, 1970.

SN 355,986. Packaging Corporation of America, Evanston, Ill. Filed Apr. 6, 1970.

For Formed Cartons for Eggs or Other Fragile Articles (Int. Cl. 16).
First use on or about Aug. 21, 1968.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 337,598. United Products Corporation, Kansas City, Mo. Filed Sept. 10, 1969.

TEL-STAR

For Suitcases and Luggage (Int. Cl. 18).
First use Sept. 3, 1962.

Class 4 — Abrasives and Polishing Materials

SN 331,530. Pelletronics, Inc., Trenton, N.J. Filed July 1, 1969.

PELL-A-SIL

For Silicon Carbide Abrasive Grit Used as Fast-Cutting Blasting and Cutting Media (Int. Cl. 3).
First use Apr. 11, 1969.

SN 331,531. Pelletronics, Inc., Trenton, N.J. Filed July 1, 1969.

PELL-A-MET

For Steel, Malleable, or Chilled Iron Spheres and Grit Used in Blast-Cleaning or Peening Metal Surfaces (Int. Cl. 3).
First use Apr. 11, 1969.

SN 331,532. Pelletronics, Inc., Trenton, N.J. Filed July 1, 1969.

PELL-A-SPEC

For Mineral Abrasive Media in Blocky or Spherical Shapes Used in the Peening and Blast-Cleaning of Metal Surfaces (Int. Cl. 3).
First use Apr. 24, 1969.

SN 355,500. Topco Associates, Inc., Skokie, Ill. Filed Mar. 31, 1970.

ELNA

For Floor Wax and Furniture Polish (Int. Cl. 3).
First use Feb. 20, 1970, on floor wax.

Class 5 — Adhesives

SN 332,337. Fritz Muller Coroplast K.G., Wuppertal-Nachtreck, Germany. Filed July 11, 1969.

COROTHENE

Owner of U.S. Reg. Nos. 725,177 and 725,295.
For Synthetic Plastic Products—Namely, Adhesive Foils and Tapes (Int. Cl. 17).
First use at least as early as 1958; in commerce at least as early as July 10, 1963.

SN 347,151. Crown Zellerbach Corporation, San Francisco, Calif. Filed Dec. 29, 1969.

The mark consists of a fanciful representation of the letters "CZ." Owner of Reg. No. 890,818.
For Gummed Paper Tape (Int. Cl. 17).
First use Nov. 24, 1969.

Class 6 — Chemicals and Chemical Compositions

SN 286,490. The Ansul Company, Marinette, Wis. Filed Dec. 8, 1967.

PHYBAN

For Railroad and Industrial Herbicides (Int. Cl. 5).
First use Oct. 12, 1967.

SN 311,014. Canadian Hoechst Limited, Montreal, Quebec, Canada. Filed Oct. 31, 1968.

DERMINOL

For Fat Liquoring Agents and Auxiliaries for Leather and Fur (Int. Cl. 4).
First use March 1968; in commerce March 1968.

SN 313,234. Holliston Laboratories, Inc., Boston, Mass. Filed Nov. 29, 1968.

MILGARD

For Fungicide Used as a Spray on Athletic and Sporting Goods To Prevent Mildew, Mold and Odors Associated Therewith (Int. Cl. 5).
First use Feb. 21, 1968.

SN 315,874. Armour Pharmaceutical Company, d.b.a. Reheis Chemical Company, Chicago, Ill. Filed Jan. 6, 1969.

A.C.C.

For Impalpable Complex of Aluminum Chlorhydroxide for Use in the Manufacture of Toiletary and Cosmetics (Int. Cl. 1).
First use on or prior to Dec. 17, 1968.

SN 321,291. Timely Products, Incorporated, Fairfield, Conn. Filed Mar. 19, 1969.

COOL-IT

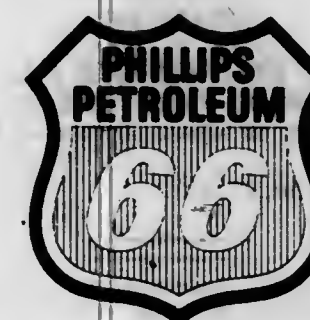
For Dry Composition Mix for Forming an Aqueous Refrigerant Solution (Int. Cl. 1).
First use on or about June 15, 1968.

SN 324,709. Ferguson Fumigants, Inc., Hazelwood, Mo. Filed Apr. 16, 1969.

ROTOX

For Fumigants (Int. Cl. 5).
First use Mar. 21, 1969.

SN 328,198. Phillips Petroleum Company, Bartlesville, Okla. Filed May 23, 1969.



The drawing is lined for the color red; no specific claim to the color is made. Applicant disclaims the word "Petroleum" apart from the mark as shown. Owner of Reg. No. 882,340.
For Chemicals and Chemical Compositions (Int. Cl. 1).
First use Apr. 29, 1969.

SN 333,584. Mallinckrodt Chemical Works, St. Louis, Mo. Filed July 25, 1969.

RES-O-MAT

For Thyroid Function Diagnostic Test Kit and Components Thereof (Int. Cl. 5).
First use May 26, 1969.

SN 339,290. Stonetree Corp., Chicago, Ill. Filed Sept. 30, 1969.

CHAMPION

For Pre-Mixed Windshield Washer Anti-Freeze Solvent (Int. Cl. 1).
First use Sept. 19, 1969.

SN 339,370. T.G. & Y. Stores Company, Oklahoma City, Okla. Filed Sept. 30, 1969.

GOLDEN T

For Laundry Starch (Int. Cl. 3).
First use July 29, 1968.

SN 340,986. Escambia Chemical Corporation, Pensacola, Fla. Filed Oct. 17, 1969.

BIG BOY

Owner of Reg. No. 576,815.
For Insecticides, Fungicides, Acaricides, and Nematocides Used in Agriculture (Int. Cl. 5).
First use on or about July 30, 1968.

SN 341,330. Minnesota Mining and Manufacturing Company, St. Paul Minn. Filed Oct. 22, 1969.

TARTAN-CLAD

Owner of Reg. No. 838,200.
For Primer for an Adhesive Contained on Decorative Sheet Material (Int. Cl. 1).
First use at least as early as Dec. 31, 1968.

SN 341,331. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Oct. 22, 1969.

DI-NOC

Owner of Reg. Nos. 443,309 and 824,567.
For Primer for an Adhesive Contained on Decorative Sheet Material (Int. Cl. 1).
First use at least as early as Dec. 31, 1968.

SN 341,332. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Oct. 22, 1969.



Owner of Reg. No. 673,751.
For Primer for an Adhesive Contained on Decorative Sheet Material (Int. Cl. 1).
First use at least as early as Dec. 31, 1968.

SN 353,960. Philadelphia Quarts Company, Philadelphia, Pa. Filed Mar. 13, 1970.

SS-C 200

For Sodium Silicate (Int. Cl. 1).
First use on or about Feb. 27, 1970.

SN 353,963. Philadelphia Quarts Company, Philadelphia, Pa. Filed Mar. 13, 1970.

SS 65

For Sodium Silicate (Int. Cl. 1).
First use on or about Feb. 27, 1970.

SN 353,964. Rite-Line Corporation, Rockville, Md. Filed Mar. 13, 1970.

SURE-TOUCH

Owner of Reg. No. 786,161.
For Chemical Compositions in Cake Form for Moistening Fingers To Facilitate Handling of Papers, Money, and Other Items (Int. Cl. 1).
First use June 16, 1961.

SN 355,503. Topco Associates, Inc., Skokie, Ill. Filed Mar. 31, 1970.

ELNA

For Air Freshener (Int. Cl. 5).
First use Feb. 26, 1970.

SN 355,506. Topco Associates, Inc., Skokie, Ill. Filed Mar. 31, 1970.

SPRINGTIME

For Fabric Softener (Int. Cl. 3).
First use Feb. 10, 1970.

SN 356,323. Baird Chemical Industries, Inc., Fair Lawn, N.J. Filed Apr. 9, 1970.

BARLOX

For Industrial Chemicals—Namely, Amine Oxides (Int. Cl. 1).
First use Aug. 26, 1966.

Class 7—Cordage

SN 338,858. St. Clair Mfg. Corp., Bellwood, Ill. Filed Sept. 25, 1969.

LADY CLAIR

Owner of Reg. No. 756,450.
For Gift Wrapping Bows (Int. Cl. 26).
First use Aug. 4, 1961.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 318,068. Lorillard Corporation, New York, N.Y. Filed Jan. 31, 1969.

MADISON

Owner of Reg. Nos. 688,559, 695,089, and 702,400.
For Cigarette Lighters (Int. Cl. 34).
First use Dec. 16, 1968.

SN 325,875. Jay Dental Products Co., Des Moines, Iowa. Filed Apr. 29, 1969.

The Smoker

For Ash Tray and Air Filter Unit (Int. Cl. 34).
First use Apr. 8, 1969.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 302,402. Federal Laboratories, Inc., Saltsburg, Pa. Filed July 10, 1968.



The words "Saltsburg, Pa." and "Inc." are disclaimed apart from the mark.

For Law Enforcement Equipment—Namely, Guns, Cartridges, and Flares; Inclinator Sights; Tear Gas and Smoke Grenades; Grenade Launchers; Cartridges (All Types); Detonating Fuses; Gun and Metal Detectors for Penal Institutions; Gun Carriers for Automobiles; Powders and Primers for Reloading; Cartridge Reloading Equipment; Revolvers; Rifles and Shotguns; Sub-Machine Guns; and Vests (Bullet Proof) (Int. Cl. 13).
First use July 1, 1948.

SN 320,457. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed Mar. 3, 1969.



INDIOS FFF

Applicant disclaims the words "Dynamit" and "Troisdorf" apart from the mark as shown. Owner of German Reg. No. 849,942.

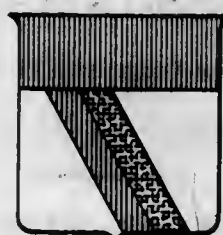
For Gunpowder (Int. Cl. 13).

SN 327,377. Firearms International Corporation, Washington, D.C. Filed May 15, 1969.

FINNWOLF

For Rifles (Int. Cl. 13).
First use Sept. 4, 1963.

SN 330,268. Federal Cartridge Corporation, Minneapolis, Minn. Filed June 17, 1969.



The drawing is lined for red and yellow colors, but no claim is made as to color.
For Small Arms Ammunition (Int. Cl. 13).
First use May 1968.

SN 340,498. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Oct. 13, 1969.

AQUANAL

For Explosives for Blasting (Int. Cl. 13).
First use Sept. 16, 1969.

SN 346,517. The Spesco Corporation, Atlanta, Ga. Filed Dec. 17, 1969.

SPESCO-FALCON

For Hand Guns—Namely, Pistols and Revolvers (Int. Cl. 13).
First use on or about Nov. 11, 1966.

SN 350,894. Federal Sign and Signal Corporation, Blue Island, Ill. Filed Feb. 9, 1970.

STRIKE

For Irritant-Type Gas Grenade (Int. Cl. 13).
First use Jan. 21, 1970.

SN 354,231. Sturm, Ruger & Co., Inc., Southport, Conn. Filed Mar. 16, 1970.

SERVICE-SIX

Owner of Reg. No. 658,423.
For Pistols and Revolvers (Int. Cl. 13).
First use Jan. 20, 1970.

SN 354,232. Sturm, Ruger & Co., Inc., Southport, Conn. Filed Mar. 16, 1970.

SAFETY-SIX

Owner of Reg. No. 658,423.
For Pistols and Revolvers (Int. Cl. 13).
First use Jan. 20, 1970.

SN 354,233. Sturm, Ruger & Co., Inc., Southport, Conn. Filed Mar. 16, 1970.

SECURITY-SIX

Owner of Reg. No. 658,423.
For Pistols and Revolvers (Int. Cl. 13).
First use Jan. 20, 1970.

SN 354,234. Sturm, Ruger & Co., Inc., Southport, Conn. Filed Mar. 16, 1970.

SPEED-SIX

Owner of Reg. No. 658,423.
For Pistols and Revolvers (Int. Cl. 13).
First use Jan. 20, 1970.

SN 355,226. Wayne C. Gibbs, d.b.a. Hensley & Gibbs, Murphy, Ore. Filed Mar. 27, 1970.

HENSLEY & GIBBS

For Bullet Molds (Int. Cl. 6).
First use 1940.

Class 10—Fertilizers

SN 352,793. Ecology, Inc., New York, N.Y. Filed Mar. 2, 1970.

ECCO

For Organic Fertilizer and Organic Compost Products (Int. Cl. 1).
First use Feb. 13, 1970.

SN 355,963. Ecology, Inc., New York, N.Y. Filed Apr. 6, 1970.

ECO-LAWN

For Organic Fertilizer and Organic Compost Products (Int. Cl. 1).
First use Mar. 13, 1970.

Class 12—Construction Materials

SN 317,884. Sylvan Pools, Inc., Doylestown, Pa. Filed Jan. 29, 1969.

EX-PAND-A-POOL

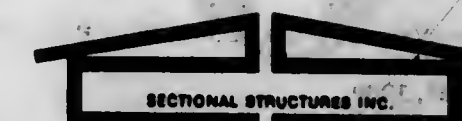
For Swimming Pools (Int. Cl. 19).
First use on or about Oct. 10, 1966.

SN 317,885. Sylvan Pools, Inc., Doylestown, Pa. Filed Jan. 29, 1969.

X-PAND-A-POOL

For Swimming Pools (Int. Cl. 19).
First use on or about Oct. 10, 1966.

SN 333,444. Sectional Structures Inc., Oswego, N.Y. Filed July 24, 1969.



For Sectional Building Modules for Use as Classroom Facilities for Public Schools and Commercial Office Complexes (Int. Cl. 19).
First use July 17, 1968.

SN 343,297. Johns-Manville Corporation, New York, N.Y. Filed Nov. 12, 1969.

CEDAR-BESTOS

For Interlays and Underlays for Shingles and Shakes (Int. Cl. 19).
First use at least as early as 1967.

SN 343,305. Johns-Manville Corporation, New York, N.Y. Filed Nov. 12, 1969.

QUAD/PAK

For Thermal Insulation (Int. Cl. 17).
First use at least on or about July 22, 1969.

SN 343,306. Johns-Manville Corporation, New York, N.Y. SN 332,763. Continental Industries, Inc., Tulsa, Okla. Filed Nov. 12, 1969. Filed July 16, 1969.

SNAP/PAK

For Thermal Insulation (Int. Cl. 17).
First use at least on or about July 22, 1969.

SN 353,246. American Saint Gobain Corporation, Kingsport, Tenn. Filed Mar. 6, 1970. SN 336,250. The Lee Company, Westbrook, Conn. Filed Aug. 15, 1969.

TRU-THERM

For Insulated Window Units (Int. Cl. 19).
First use Feb. 23, 1970.

SN 353,261. Woolsey Marine Industries, Inc., New York, N.Y. Filed Mar. 6, 1970.

RE-GLASS-IT

For Fiber-Glass Repair Compound (Int. Cl. 17).
First use Nov. 28, 1969.

SN 353,383. Rafter, Inc., Olivia, Minn. Filed Mar. 9, 1970.

STRAIT-WALL

Owner of Reg. No. 782,208.
For Wooden Building Frames (Int. Cl. 19).
First use July 23, 1963.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 324,918. Hyer Hardware Mfg. Co., Anaheim, Calif. Filed Apr. 18, 1969.

CORONATION

For Hardware—Namely, Pulls, Knobs, Back Plates Therefor, and Hinges (Int. Cl. 6).
First use Mar. 31, 1969.

SN 329,050. Truly Tubular Fitting Corporation, Mount Vernon, N.Y. Filed June 4, 1969.



For Tube Fittings (Int. Cl. 6).
First use May 6, 1969.

SN 330,175. McKinney Manufacturing Company, Scranton, Pa. Filed June 16, 1969.



For Butt Hinges, Hasps, Strap and Tee Hinges, Cabinet Hardware, and Shelf Brackets (Int. Cl. 6).
First use Apr. 1, 1969.

THE ELIMINATOR

For Tee Fittings (Int. Cl. 6).
First use May 1, 1968.

SN 336,250. The Lee Company, Westbrook, Conn. Filed Aug. 15, 1969.



For Hydraulic Inserts—Namely, Atomizing Nozzles (Int. Cl. 7).
First use on or before Jan. 1, 1964.

SN 342,252. Federal Screw Works, Detroit, Mich. Filed Oct. 31, 1969.

FLUID-FAST

Owner of Reg. No. 797,680.
For Nuts and Bolts Having Sealing Washers Attached Thereto (Int. Cl. 6).
First use Sept. 9, 1969.

SN 342,697. Almcee Wholesale Corporation, New York, N.Y. Filed Nov. 5, 1969.

BON CHEF

For Cookware—Namely, Enameled Casseroles, Sauce Pans, Frying Pans, Dutch Ovens and Tea Kettles (Int. Cl. 21).
First use May 16, 1969.

SN 347,087. Dover Corporation, New York, N.Y. Filed Dec. 24, 1969.

SWIVETTE

For Hose Swivels, and Swivel Joints and Couplings for Fluid Dispensing Equipment (Int. Cl. 6).
First use Dec. 1, 1969.

SN 347,487. Dart Industries, Inc., d.b.a. The West Bend Company, Los Angeles, Calif. Filed Dec. 31, 1969.

Town House

For Stainless Steel Cooking Utensils (Int. Cl. 21).
First use November 1969.

SN 348,021. Die Mesh Corporation, Pelham, N.Y. Filed Jan. 8, 1970.



For Expanded Aluminum Radiator Insect Screens (Int. Cl. 6).
First use Sept. 2, 1968.

SN 354,100. American Hoist & Derrick Company, St. Paul, Minn. Filed Mar. 16, 1970. SN 318,524. The Brooks Oil Company, Cleveland, Ohio. Filed Feb. 6, 1969.

LOK-A-LOY

For Connecting Link for Chains (Int. Cl. 6).
First use Feb. 23, 1970.

SN 356,554. Dennison Manufacturing Company, Framingham, Mass. Filed Apr. 13, 1970.

SECUR-A-TIE

For Flexible Fasteners for Wrap-Around Applications (Int. Cl. 20).
First use Oct. 27, 1966.

Class 14—Metals and Metal Castings and Forgings

SN 302,095. Manco Products Incorporated, Melvindale, Mich. Filed July 5, 1968.

TRU-CAST

Owner of Reg. No. 787,870.
For Beryllium Copper Castings To Be Used as Mold Components in the Plastic Molding Industry (Int. Cl. 6).
First use Apr. 7, 1963.

SN 320,368. Pacific Steel Foundry Co., Portland, Oreg. Filed Feb. 28, 1969.



For Unfinished and Semifinished Ferrous Castings (Int. Cl. 6).
First use 1946.

SN 345,255. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 4, 1969.

TATTLE-TAPE

Applicant claims no registration rights in the word "Tape" apart from the mark as a whole.
For Thin Metallic Strips for Concealment in Books or Periodicals (Int. Cl. 6).
First use Nov. 6, 1969.

SN 348,275. The Eastern Company, Naugatuck, Conn. Filed Jan. 12, 1970.

STANDARD

For Anchors (Int. Cl. 12).
First use Apr. 8, 1948.

Class 15—Oils and Greases

SN 310,722. Winfield Brooks Company, Inc., Woburn, Mass. Filed Oct. 28, 1968.

TAPFREE

For Tapping Fluid (Int. Cl. 4).
First use Nov. 25, 1959.

BROOKS

Owner of Reg. Nos. 256,600 and 258,590.
For Industrial Oils and Greases—Namely, Lubricating Oils and Greases, Roll Oils, Forging and Drawing Lubricant Compositions and Hydraulic Oils (Int. Cl. 4).
First use 1895.

SN 323,579. Master Chemical Corporation, Perrysburg, Ohio. Filed Apr. 3, 1969.

For Concentrated Cutting Fluid Coolant (Int. Cl. 4).
First use January 1967.

SN 323,580. Master Chemical Corporation, Perrysburg, Ohio. Filed Apr. 3, 1969.

For Concentrated Cutting Fluid Coolant (Int. Cl. 4).
First use January 1967.

SN 323,582. Master Chemical Corporation, Perrysburg, Ohio. Filed Apr. 3, 1969.

Owner of Reg. Nos. 601,823 and 767,813.
For Concentrated Cutting Fluid Coolant (Int. Cl. 4).
First use January 1967.

SN 337,708. Sun Oil Company, Philadelphia, Pa. Filed Sept. 11, 1969.

CONTRAN

For Transmission Fluids (Int. Cl. 4).
First use Jan. 1, 1968.

SN 337,711. Sun Oil Company, Philadelphia, Pa. Filed Sept. 11, 1969.

ALTRAN

For Transmission Fluid (Int. Cl. 4).
First use June 20, 1968.

SN 337,713. Sun Oil Company, Philadelphia, Pa. Filed Sept. 11, 1969.

SURMAC

For Industrial Lubricating Oils (Int. Cl. 4).
First use Aug. 1, 1968.

SN 352,681. Swiss American Laboratory, Riviera Beach, Fla. Filed Feb. 27, 1970.

PR

The mark comprises the letters "PR" with the "P" in reverse form.

For Lubricant for Watches, Clocks, Instruments, Gauges, Parking Meters, Taxi Meters, Guns, Typewriters, Timers, and Cameras (Int. Cl. 4).

First use June 2, 1969.

Class 16—Protective and Decorative Coatings

SN 303,446. W. C. Richards Co., Blue Island, Ill. Filed July 23, 1968.

SLIKIT!

For Protective Coating in Kit Form Comprising Liquids and Powders To Be Applied to Metal Surfaces To Prevent the Adhesion of Sand (Int. Cl. 2).

First use June 1968.

SN 313,273. D.A.W. Rainbow Painting Company, Inc., Clayton, Mo. Filed Nov. 29, 1968.

QUALIWARE

For Paint, Enamel and Primer Compositions (Int. Cl. 2). First use June 7, 1967.

SN 330,498. Gilman Paint & Varnish Company, Chattanooga, Tenn. Filed June 19, 1969.

VERSA-TONE

For Wood Stains (Int. Cl. 2). First use Mar. 19, 1969.

SN 338,188. Spramor Corporation of America, Chicago, Ill. Filed Sept. 17, 1969.

TENDURA

For Alkyd Enamel Protective Coating (Int. Cl. 2). First use Aug. 28, 1969.

Class 17—Tobacco Products

SN 322,742. Rembrandt Tobacco Corporation (Overseas) Limited, Zurich, Switzerland. Filed Mar. 25, 1969.



Owner of Reg. Nos. 865,624 and 869,624. For Cigarettes (Int. Cl. 34). First use Sept. 16, 1968; in commerce Sept. 16, 1968.

SN 322,748. St. Regis Tobacco Corporation Limited, Zurich, Switzerland. Filed Mar. 25, 1969.

MONTAGU

For Cigarettes (Int. Cl. 34).

First use Jan. 30, 1969; in commerce Jan. 30, 1969.

SN 326,935. Alvaro Gonzalez Gonzalez, d.b.a. Fabrica de Tabacos Alvaro, La Laguna de Tenerife, Islas Canarias, Spain. Filed May 9, 1969.

MONIC

For Cigars (Int. Cl. 34).

First use at least as early as Apr. 21, 1968; in commerce at least as early as Apr. 21, 1968.

SN 328,563. Lorillard Corporation, New York, N.Y. Filed May 28, 1969.



The drawing is lined for the color gold, but color is not claimed as a feature of the mark. Owner of Reg. Nos. 572,924, 758,275, and others.

For Cigarettes (Int. Cl. 34).

First use Jan. 16, 1952.

SN 328,709. Lorillard Corporation, New York, N.Y. Filed May 29, 1969.

LEVEL HEAD

For Smoking and Chewing Tobacco (Int. Cl. 34). First use about 1895.

SN 328,710. Lorillard Corporation, New York, N.Y. Filed May 29, 1969.

MOGUL

For Cigarettes (Int. Cl. 34).

First use about 1899.

SN 329,837. Carreras Limited, Basildon, Essex, England. Filed June 12, 1969.

HENELEIGH

Owner of British Reg. No. B867,524, dated July 31, 1964. For Cigarettes, Tobacco and Cigars (Int. Cl. 34).

SN 336,319. Corral, Wodiska Y Ca., Tampa, Fla. Filed Aug. 26, 1969.

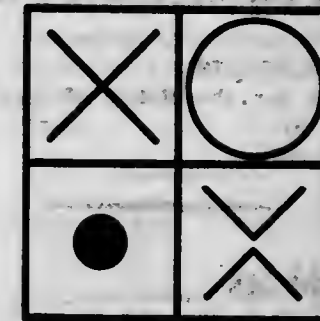
MIRADOR

For Cigars (Int. Cl. 34).

First use Aug. 21, 1969.

Class 18—Medicines and Pharmaceutical Preparations

SN 341,992. Parke, Davis & Company, Detroit, Mich. Filed Oct. 29, 1969.



SN 293,291. Medical Supply Company (Missouri corporation), Rockford, Ill.; assignee of Medical Supply Company (Illinois corporation), Rockford, Ill. Filed Mar. 14, 1968.

QC

For 20% Benzocaine, 0.5% 8-Hydroxyquinoline Topical Anesthetic Sold in Spray-Type Aerosol Containers and in Ointment Form, Primarily for First Aid Use (Int. Cl. 5). First use Jan. 12, 1967.

SN 319,334. Merck & Co., Inc., Rahway, N.J. Filed Feb. 17, 1969.

ALTRIPRES'-15

For Medicinal Preparation for Use in the Treatment of Hypertension (Int. Cl. 5). First use Feb. 4, 1969.

SN 325,560. American Cyanamid Company, Wayne, N.J. Filed Apr. 25, 1969.



Applicant disclaims the pictorial representation of a pig apart from the mark as shown. Owner of Reg. Nos. 771,414 and 793,588.

For Medicated Animal Feed Supplement (Int. Cl. 5). First use Feb. 14, 1968.

SN 327,156. Lepler Laboratories, Inc., Brookline, Mass. Filed May 13, 1969.

Som Ophyllin

For Pharmaceutical Preparation for Treatment of Asthma (Int. Cl. 5). First use on or about April 1961.

SN 336,671. Bristol-Myers Company, New York, N.Y. Filed Aug. 29, 1969.

NIGHT WATCH

For Sleep Aid Tablets (Int. Cl. 5). First use July 9, 1969.

For Formulation of Ketamine Hydrochloride an Anesthetic Preparation (Int. Cl. 5). First use on or before Oct. 20, 1969.

SN 342,796. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Nov. 6, 1969.

SHIPGUARD

For Vaccines for Veterinary Use (Int. Cl. 5). First use Sept. 18, 1969.

SN 345,571. Reid-Provident Laboratories Inc., Atlanta, Ga. Filed Dec. 8, 1969.

ESTRATAB

For Conjugated Estrogen Tablet (Int. Cl. 5). First use June 13, 1962.

SN 350,023. American Home Products Corporation, New York, N.Y. Filed Jan. 30, 1970.

A-V-E

For Veterinary Pharmaceutical Preparation and Vitamin and Nutritional Supplement for Use in the Treatment of Diseases and Convalescence of Animals (Int. Cl. 5). First use Oct. 31, 1968.

SN 350,431. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 4, 1970.

CYCLOPEN

For Analgesic Preparation (Int. Cl. 5). First use Nov. 17, 1969.

SN 351,754. Golden Fifty Pharmaceutical Co., Inc., Chicago, Ill. Filed Feb. 19, 1970.

GOLDEN FIFTY

Owner of Reg. No. 764,958. For Combination Vitamin and Mineral Capsules (Int. Cl. 5). First use at least as early as Apr. 1, 1962.

SN 352,563. Glenden Corporation, Rego Park, N.Y. Filed Feb. 27, 1970.

HABIT-X

For Preparation in Aerosol Spray Form To Stop Cigarette Smoking (Int. Cl. 5). First use Dec. 18, 1969.

SN 354,065. Carter-Wallace, Inc., New York, N.Y. Filed Mar. 16, 1970.

TREXAMATE

Owner of Reg. No. 657,373.
For Preparation for the Relief of Gastrointestinal Disturbances (Int. Cl. 5).
First use Feb. 3, 1970.

Class 19—Vehicles

SN 260,932. Sis-Veiculos Motorizados, Limitada, Anadia, Portugal. Filed Apr. 24, 1967.



Priority Claimed under Sec. 44(d) on Portuguese application, filed Nov. 30, 1966; Reg. No. 139,428, dated Nov. 11, 1969.

For Bicycles, Mopeds, Motorcycles, and Spare Parts Thereof (Int. Cl. 12).

SN 322,975. Eaz-Lift Spring Corporation, Sun Valley, Calif. Filed Mar. 27, 1969.



For Two-Step Attachment for House Trailers (Int. Cl. 12).
First use Aug. 12, 1968.

SN 324,058. Fantic Motor S.r.l. Fabbrica Velcoli Ricreativi, Barzago (Como), Italy. Filed Apr. 9, 1969.



The word "Motor" is disclaimed apart from the mark as a whole.

For Minibikes, Go-Carts, Minicycles, and Motorcycles (Int. Cl. 12).

First use Dec. 1, 1968; in commerce Dec. 21, 1968.

SN 325,471. Dyna Tune Corp., Gardena, Calif. Filed Apr. 24, 1969.

DYNA TUNE

For Coolant Systems—Namely, Vehicle Coolant Recovery Systems (Int. Cl. 11).
First use September 1968.

SN 333,935. GMC/Dynacoach, Inc., Los Angeles, Calif. Filed July 18, 1968.

DYNACOACH

For Motor Cars and Motor Trucks (Int. Cl. 12).
First use June 18, 1969.

SN 333,902. Celebrity Homes Corporation, Jefferson, Ga. Filed July 30, 1969.

CELEBRITY

For Mobile Homes—Namely, House Trailers and Motor Homes (Int. Cl. 12).
First use July 23, 1969.

SN 341,130. ATV Manufacturing Limited, Clarkson, Ontario, Canada. Filed Oct. 20, 1969.

SKIPPER

For Amphibious, All Terrain Vehicles (Int. Cl. 12).
First use Sept. 24, 1969; in commerce Sept. 24, 1969.

SN 345,188. Muncie Metal Spinning, Inc., Muncie, Ind. Filed Dec. 3, 1969.

FUN-TOON

For Pontoon Boats (Int. Cl. 12).
First use on or about Aug. 27, 1964.

SN 353,194. Hackney Bros. Body Co., Wilson, N.C. Filed Mar. 5, 1970.



Owner of Reg. No. 511,693.
For Buses, Vans, Dairy Vehicle Bodies for Automotive Trucks Used in Delivering Dairy Products, Insulated and Refrigerated Automotive Vehicle Bodies, Custom Built Truck Bodies and Commercial Trailers, and Structural Parts Thereof (Int. Cl. 12).
First use about 1900.

SN 354,980. Regal Marine Industries, Inc., Orlando, Fla. Filed Mar. 24, 1970.

REGAL

For Boats (Int. Cl. 12).
First use Oct. 1, 1969.

SN 356,434. Sightseer Corporation, Newark, Ohio. Filed Apr. 9, 1970.

SIGHTSEER

For Motor Homes (Int. Cl. 12).
First use Mar. 11, 1970.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 295,120. The Crandall Wholesale Company, Ferndale, Mich. Filed Apr. 8, 1968.

CRANCO

For Car Radios and Reverb Units (Int. Cl. 9).
First use Nov. 16, 1967.

SN 310,137. The Singer Company, New York, N.Y. Filed Oct. 21, 1968.

SNAP-AWAY

For Automatic Cord Reels Sold as Parts of Electrical Appliances (Int. Cl. 9).
First use Aug. 1, 1968.

SN 317,651. Utility Tool Company, Birmingham, Ala. Filed Jan. 27, 1969.

PIPE HORN

For Electrically Powered Sensor for Locating Electrically Concealed Structures—Namely, Pipe, Cables, Wires, Electrical Conduits, Valves and the Like (Int. Cl. 9).
First use Dec. 15, 1965.

SN 321,822. McDonnell Douglas Corporation, Santa Monica, Calif. Filed Mar. 14, 1969.

ISOMITE

For Nuclear Batteries and Components Thereof (Int. Cl. 9).
First use Nov. 8, 1968.

SN 323,492. Visual Electronics Corporation, New York, N.Y. Filed Apr. 2, 1969.

READYFILE

For Devices for Magnetically Storing Video Information Corresponding to Multiple Lines of Alphanumeric Characters, and for Selecting and Reading Out Such Lines on Demand for Television Transmission (Int. Cl. 9).
First use Mar. 18, 1968.

SN 332,007. Franklin Stores Corporation, d.b.a. Barkers, Bronx, N.Y. Filed July 8, 1969.

BARKERS

For Radio Receivers (Int. Cl. 9).
First use 1962.

SN 342,767. Gene S. Tepper, d.b.a. Elbo Products, San Francisco, Calif. Filed Nov. 5, 1969.

ELBO

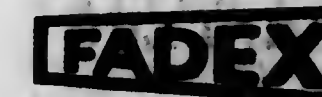
For Electric Lamps (Int. Cl. 11).
First use Aug. 15, 1968.

SN 343,215. Fedtro, Inc., Rockville Centre, N.Y. Filed Nov. 12, 1969.

SIGNAL-MATIC

For Automobile Accessory Consisting of a Switch Which When Activated Causes the Front and Rear Parking Lights To Flash On and Off (Int. Cl. 9).
First use Oct. 31, 1969.

SN 346,915. Lear Siegler, Inc., Toledo, Ohio. Filed Dec. 22, 1969.



For Fluorescent Lamps (Int. Cl. 11).
First use Jan. 2, 1959.

SN 348,917. Essex International, Inc., Fort Wayne, Ind. Filed Jan. 19, 1970.

COLORFOIL

For Coaxial Cable (Int. Cl. 9).
First use on or before Dec. 31, 1968.

SN 349,867. Houdaille Industries, Inc., Buffalo, N.Y. Filed Jan. 28, 1970.

WSC

For Lubrication Cycle Electrical Control Panel and Parts Thereof (Int. Cl. 9).
First use June 1, 1962.

SN 350,070. Del Electronics Corp., Mount Vernon, N.Y. Filed Jan. 30, 1970.

DELMICA

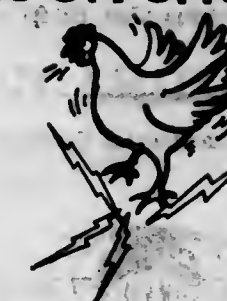
For Capacitors (Int. Cl. 9).
First use Jan. 8, 1970.

SN 350,089. Hardy Scales Company, Maywood, Calif. Filed Jan. 30, 1970.

CHROMATICS

For Control Panels (Int. Cl. 9).
First use on or about Nov. 1, 1967.

SN 350,386. Ft-Shock, Inc., Knoxville, Tenn. Filed Feb. 8, 1970.

FLOCK SHOCK

No claim is made to the word "Shock" apart from the mark as shown.
For Electric Fence Controllers (Int. Cl. 9).
First use May 12, 1969.

SN 351,324. Gearmaster, Inc., McHenry, Ill. Filed Feb. 13, 1970. SN 353,793. Superior Continental Corporation, Hickory, N.C. Filed Mar. 11, 1970.

GEARMASTER

For Electric Motors (Int. Cl. 7).
First use Sept. 28, 1960.

SN 351,426. Collform Company, Geneva, Ill. Filed Feb. 16, 1970.

OMNI-LUG

For Coll Forms (Int. Cl. 9).
First use on or about Mar. 17, 1969.

SN 352,110. Engelmann Microwave Co., Montville, N.J. Filed Feb. 24, 1970.

EMCO

For Electrical Devices—Namely, Attenuators, Terminations, Filters, D.C. Shorts, D.C. Blocks, Monitors, Couplers, Power Dividers, Crystal Mounts, Crystal Switches, and Oscillators (Int. Cl. 9).
First use Nov. 6, 1962.

SN 352,145. Jard Company, Incorporated, Bennington, Vt. Filed Feb. 24, 1970.

CLORPHEN A

For Electrical Capacitors (Int. Cl. 9).
First use Sept. 18, 1969.

SN 352,146. Jard Company, Inc., Bennington, Vt. Filed Feb. 24, 1970.

CLORPHEN

For Electrical Capacitors (Int. Cl. 9).
First use Sept. 18, 1969.

SN 352,847. Illinois Tool Works Inc., Chicago, Ill. Filed Feb. 25, 1970.

MICROMATIC

For Capacitors (Int. Cl. 9).
First use as early as Feb. 12, 1970.

SN 353,200. LTV Ling Altec, Inc., Richardson, Tex. Filed Mar. 5, 1970.

TCS

For Public Address Systems (Int. Cl. 9).
First use June 2, 1969.

SN 353,792. Superior Continental Corporation, Hickory, N.C. Filed Mar. 11, 1970.



Owner of Reg. Nos. 866,958 and 866,959.
For Communication Cable and Cable Connectors (Int. Cl. 9).
First use May 1, 1969.

COMM/SCOPE

Owner of Reg. Nos. 866,958 and 866,959.
For Communication Cable and Cable Connectors (Int. Cl. 9).
First use May 1, 1969.

SN 353,928. Superior Continental Corporation, Hickory, N.C. Filed Mar. 12, 1970.

STRATA SHIELD

For Coaxial Communication Cable (Int. Cl. 9).
First use Jan. 15, 1970.

SN 356,830. All-Steel Equipment Inc., Aurora, Ill. Filed Apr. 14, 1970.



Owner of Reg. Nos. 206,988, 734,847, and others.
For Electrical Boxes—Namely, Switch, Outlet, Sealing, Cable Conduit, Utility, Junction, Cutout, Pool, and Receptacle Boxes, Concrete Rings, Covers and Plates for Electrical Boxes, Bar Hangers for Electrical Boxes, and Electrical Cable and Conduit Fittings and Connectors (Int. Cl. 9).
First use Aug. 15, 1960.

Class 22—Games, Toys, and Sporting Goods

SN 309,985. Hubert D. Oster, Jr., d.b.a. RDR Manufacturing Company, Titusville, Fla. Filed Oct. 18, 1968.

THE ARMCHAIR QUARTERBACK

For Equipment Sold as a Unit for Playing a Board Type Parlor Game (Int. Cl. 28).
First use Mar. 1, 1968.

SN 323,310. Kenner Products Company, Cincinnati, Ohio. Filed Apr. 1, 1969.

PUSH-A-SHOW

For Push Toys (Int. Cl. 28).
First use on or about Sept. 29, 1968.

SN 324,803. Northwestern Golf Company, Chicago, Ill. Filed Apr. 11, 1969.

MICRO-LITE 400

For Golf Clubs (Int. Cl. 28).
First use January 1969.

SN 326,223. Frans Kneissl, Skifabrik, Kufstein, Kufstein, Tirol, Austria. Filed May 2, 1969.

VS-MULTIFLEX-KANTE

Owner of Austrian Reg. No. 62,687, dated Sept. 16, 1968.
For Steel Edges Sold as a Component of Skis (Int. Cl. 28).
First use February 1968; in commerce February 1968.

SN 327,237. CO-5 Company, Inc., Benton Harbor, Mich. Filed May 14, 1969.



Applicant disclaims exclusive rights to use of the word "Rumy" apart from the mark shown.
For Equipment Sold as a Unit for Playing an Amusement Card-Type Game (Int. Cl. 28).
First use Apr. 10, 1969.

SN 327,501. The Lange Co., Dubuque, Iowa. Filed May 16, 1969.

LANGE-FLEX

For Especially Formulated Flexible Epoxy Material Used in the Manufacture of Ski Boots and Sold Only as a Component Thereof (Int. Cl. 25).
First use March 1969.

SN 327,502. The Lange Co., Dubuque, Iowa. Filed May 16, 1969.

LANGE-FLO

For Plastic Padding Material Used in the Manufacture of Ski Boots and Sold as a Component Thereof (Int. Cl. 25).
First use March 1969.

SN 328,748. True Temper Corporation, Cleveland, Ohio. Filed May 29, 1969.



For Snow Skis (Int. Cl. 28).
First use on or about Mar. 17, 1969.

SN 332,472. George W. Fols, Tulsa, Okla. Filed July 14, 1969.

COURT KING

For Tennis Ball Retrieving Apparatus (Int. Cl. 28).
First use Mar. 14, 1969.

SN 333,188. Scientific Demonstrators, Inc., Eugene, Oreg. Filed July 22, 1969.

HARMONOGRAPH

For Educational Toy Demonstrating Oscillatory Phenomena—Namely, a Pendulum Toy (Int. Cl. 28).
First use May 16, 1969.

SN 334,057. Dart Industries Inc., d.b.a. Tupperware, Los Angeles, Calif. Filed July 31, 1969.

KUP-L-UPS

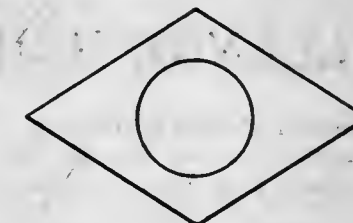
For Toy Animal Assembly Kits (Int. Cl. 28).
First use July 14, 1969.

SN 334,522. Mattel, Inc., Hawthorne, Calif. Filed Aug. 6, 1969.

PATTER PAL

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use July 8, 1969.

SN 334,879. James W. Strader, Fort Lauderdale, Fla. Filed Aug. 8, 1969.



For Artificial Fishing Lure (Int. Cl. 28).
First use June 1968.

SN 335,319. Milton Bradley Company, Springfield, Mass. Filed Aug. 14, 1969.

TEE PARTY

For Equipment Sold as a Unit for Playing a Board Game Having Movable Pieces (Int. Cl. 28).
First use Aug. 6, 1969.

SN 335,715. Stearns Manufacturing Company, St. Cloud, Minn. Filed Aug. 19, 1969.

PEE-WEE

For Garment for Out-of-Door Sporting Wear—Namely, a Floatable Vest (Int. Cl. 9).
First use Jan. 15, 1968.

SN 335,861. Gentex Corporation, New York, N.Y. Filed Aug. 21, 1969.

ESCORT

For Life Jackets (Int. Cl. 9).
First use Aug. 8, 1969.

SN 335,862. Gentex Corporation, New York, N.Y. Filed Aug. 21, 1969.

GUARDIAN

For Life Jackets (Int. Cl. 9).
First use Aug. 8, 1969.

SN 336,352. SW Industries, Inc., Newton, Mass. Filed Aug. 26, 1969.

MICRO 300

Owner of Reg. No. 884,958.
For Bowling Balls (Int. Cl. 28).
First use June 18, 1969.

SN 336,827. Mercer Tackle Co., Inc., Lawton, Okla. Filed Sept. 2, 1969.

LADDIE

For Fishing Lures, Spinners, Jigs, and Spoons (Int. Cl. 28).
First use July 1, 1969.

SN 338,676. Gladding Corporation, South Otselic, N.Y. Filed Sept. 23, 1969.

TEFLOAT

For Fishing Lines (Int. Cl. 28).
First use June 1969.

SN 345,050. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 2, 1969.

CHALLENGE BRIDGE

Applicant claims no registration rights in the word "Bridge" apart from the mark. Owner of Reg. No. 697,411.
For Apparatus Sold as a Unit for Playing a Card Game (Int. Cl. 28).
First use Mar. 2, 1969.

SN 349,090. The Skor-Mor Company, Dickinson, N. Dak. Filed Jan. 20, 1970.

SKOR-MOR

For Hand, Wrist and Forearm Support for Use by Bowlers (Int. Cl. 28).
First use September 1968.

SN 349,140. Plano Molding Company, Plano, Ill. Filed Jan. 21, 1970.

PLANO

For Fishing Tackle Boxes (Int. Cl. 28).
First use August 1958.

SN 351,001. Parker Brothers, Inc., Salem, Mass. Filed Feb. 10, 1970.

PLUG-A-JUG

For Equipment for Playing a Spelling Game (Int. Cl. 28).
First use Dec. 29, 1969.

SN 351,005. The United States Playing Card Company, Cincinnati, Ohio. Filed Feb. 10, 1970.

GYPSY WITCH

For Fortune Telling Playing Cards (Int. Cl. 16).
First use in or prior to September 1948.

SN 351,742. Wilson Sporting Goods Co., River Grove, Ill. Filed Feb. 18, 1970.

INTERNATIONAL

For Tennis Nylon (Int. Cl. 28).
First use Jan. 16, 1968.

SN 352,804. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Feb. 25, 1970.

HORSIN' AROUND

For Equipment Sold as a Unit for Playing a Parlor Type Amusement Game (Int. Cl. 28).
First use on or about Jan. 30, 1970.

SN 353,825. Mattel, Inc., Hawthorne, Calif. Filed Mar. 12, 1970.

BUGEYE

For Toy Miniature Automobile (Int. Cl. 28).
First use Nov. 13, 1969.

SN 354,088. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

WAILIN'

For Toy Automobile (Int. Cl. 28).
First use Jan. 20, 1970.

SN 354,089. Mattel, Inc., Hawthorne, Calif. Filed Mar. 16, 1970.

VISITIN' VALERIE

For Dolls, Doll Clothing, and Doll Accessories (Int. Cl. 28).
First use Jan. 20, 1970.

SN 354,858. Mattel, Inc., Hawthorne, Calif. Filed Mar. 18, 1970.

TOP ELIMINATOR

For Toy Automobile Race Set (Int. Cl. 28).
First use Nov. 13, 1969.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 287,089. Outboard Marine Corporation, Waukegan, Ill. Filed Dec. 18, 1967.

POWER PULSE

For Ignitions Sold as a Component of Outboard Motors (Int. Cl. 7).
First use at least as early as Oct. 1, 1966.

SN 294,899. Korkele, Inc., Beverly Hills, Calif. Filed Mar. 28, 1968.



The drawing is lined for the color red.
For Liquid Control Devices for Gas and Oil Wells—Namely, Dewatering Apparatus, Liquid-Gas Separators, and Parts Thereof (Int. Cl. 7).
First use 1949.

SN 306,325. Asbury Universal, Inc., Murrysville, Pa. Filed Aug. 30, 1968.



For Material Handling Buckets for Front End Loaders and the Like (Int. Cl. 7).
First use Mar. 23, 1965.

SN 316,596. Beard Equipment Company, Frankfort, Ind. Filed Jan. 15, 1969.

SUPER-B

For Identifying Grain Dryers (Int. Cl. 11).
First use Dec. 9, 1968.

SN 323,269. Highway Trailer Industries, Inc., Edgerton, Wis., assignee of Windy Point Farms, Wapato, Wash. Filed Apr. 1, 1969.

ORCHARD-AIDE

For Self Propelled Vehicle Having an Elevatable and Rotatable Boom for Positioning an Operator for Farm and Industrial Use (Int. Cl. 12).
First use October 1968.

SN 327,784. Sears, Roebuck and Co., Chicago, Ill. Filed May 20, 1969.

ARC JOINT

For Pliers (Int. Cl. 8).
First use on or about Jan. 1, 1954.

SN 329,857. Hapman Corporation, Kalamazoo, Mich. Filed June 12, 1969.

KOBO

For Automatic Conveyors for Use in Industrial Plants, and Parts Thereof (Int. Cl. 7).
First use May 2, 1969.

SN 333,415. Ralph Levin, d.b.a. Razosharp, Brooklyn, N.Y. Filed July 24, 1969.

RAZOSHARP

For Knife With a Removable Blade (Int. Cl. 8).
First use May 27, 1969.

SN 336,156. Oneida Ltd., Oneida, N.Y. Filed Aug. 25, 1969.

MON'REAL

For Flatware Made of Non-Precious Metal (Int. Cl. 8).
First use Aug. 13, 1969.

SN 339,191. Kansas Instruments, Incorporated, Council Grove, Kans. Filed Sept. 29, 1969.

GEYSER

For Metal Parts Washing Machines and Parts and Components Thereof (Int. Cl. 7).
First use during May 1969.

SN 339,902. Dudley Kobow, Inc., Los Angeles, Calif. Filed Oct. 6, 1969.



The words "Pepper Grinders" are disclaimed apart from the mark as shown.
For Pepper Mills (Int. Cl. 21).
First use on or about June 23, 1969.

SN 348,308. Markwell Manufacturing Company, Inc., New York, N.Y. Filed Jan. 12, 1970.

MTC

For Stapling Machines (Int. Cl. 7).
First use Dec. 1, 1969.

SN 348,539. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Jan. 14, 1970.

HAPPY HELPERS

For Stainless Steel Knives, Forks and Spoons (Int. Cl. 8).
First use Dec. 12, 1969.

SN 348,540. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Jan. 14, 1970.

MIRAMARA

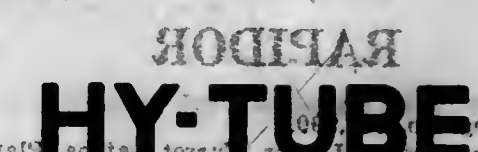
For Stainless Steel Knives, Forks and Spoons (Int. Cl. 8).
First use Dec. 13, 1969.

SN 349,089. Siemag Stegener Maschinenbau Gesellschaft mit beschränkter Haftung, Dahlbruch, Westphalia, Germany. Filed Jan. 20, 1970.



Owner of German Reg. No. 348,812, dated Apr. 23, 1968; and U.S. Reg. No. 780,212.
For Machines for Processing Synthetic Plastics and Parts for Such Machines, Molds for the Manufacture of Goods from Synthetic Plastics (Int. Cl. 7).

SN 349,514. Symons Mfg. Company, Des Plaines, Ill. Filed Jan. 23, 1970.



For Belt-Type Portable Conveyors (Int. Cl. 7).
First use Dec. 15, 1969.

SN 349,698. Sukup Manufacturing Company, Sheffield, Iowa. Filed Jan. 26, 1970.

FOREWAY

Owner of Reg. No. 856,470.
For Auger Type Apparatus for Removing Granular Material From the Bottom of an Enclosure (Int. Cl. 7).
First use Oct. 9, 1968.

SN 349,746. Cherry-Burrell Corporation, Chicago, Ill. Filed Jan. 27, 1970.

POSI-SEAL

For Plastic Sealing Machines (Int. Cl. 7).
First use Dec. 31, 1969.

SN 349,854. FMC Corporation, San Jose, Calif. Filed Jan. 28, 1970.

UNI-PRESSURE

For Pump Systems for Maintaining Predetermined Water Pressures in Buildings (Int. Cl. 7).
First use December 1964.

SN 356,245. The Gillette Company, Boston, Mass. Filed Apr. 8, 1970.



For Razors and Razor Blades (Int. Cl. 8).
First use Jan. 27, 1970.

SN 356,246. Harold R. Hacker, d.b.a. Neutron Co., Noblesville, Ind. Filed Apr. 8, 1970.

NEUTRON

For Vibratory Parts Feeders (Int. Cl. 7).
First use Mar. 3, 1970.

SN 356,544. Bokum Tool Company, Inc., Madison Heights, Mich. Filed Apr. 13, 1970.

RAPIDOR

Owner of Reg. No. 667,990.
For Tools for Use on Lathes, Turret Lathes, Planing Machines and Automatic Machines for External Applications in Turning, Threading, Grooving, Roughing, Semi-Finishing, Finishing, Cutting Off and Threading (Int. Cl. 7).
First use January 1960.

Class 25—Locks and Safes

SN 332,994. John J. Rudolf, Jr., Excelsior, Minn. Filed July 18, 1969.

SNUG LUG

For Locking Device in the Form of a Flat Disc With Apertures Therein Designed To Fit Over the Axle and Securing Nuts of a Wheel (Int. Cl. 6).
First use July 7, 1969.

Class 26—Measuring and Scientific Appliances

SN 318,846. The Virtis Company, Inc., Gardiner, N.Y. Filed Feb. 4, 1969.

VIRGLAS

For Tissue Culture Products—Namely, Spinner Flasks, Spin Filter Flasks, Magnetic Stirrers, Beaker Spinners and Buffy Coat Tubes (Int. Cl. 9).
First use Dec. 19, 1968.

SN 320,867. Spiratone, Inc., Flushing, N.Y. Filed Mar. 5, 1969.

CAMRALARM

For Bags for Carrying Cameras and Having an Alarm Attachment for Operation if the Bag is Picked up or Opened by an Unauthorized Individual (Int. Cl. 9).
First use Aug. 1, 1968.

SN 322,458. Marsyn Corporation, Newton, Mass. Filed Mar. 21, 1969.

MARSYN

For Instrument for Measuring, Positioning and Detecting Small Mechanical Parts and Displacement of Such Parts and Pressure Variations Occurring in the Use of Such Instruments (Int. Cl. 9).
First use Sept. 13, 1968.

SN 322,789. Star-New Era, Inc., South Hackensack, N.J., by change of name from Powers & Eaton Industries, Inc., South Hackensack, N.J. Filed Mar. 25, 1969.

MAT SCAN

For Detecting Mechanisms for Monitoring Matrices for Type Setting and Type Casting Machines, and Parts Thereof (Int. Cl. 9).
First use during about February 1968.

SN 329,827. Berkey/Colortran Mfg., Inc., Burbank, Calif. Filed June 12, 1969.

GELATRAN

For Sheet and Roll Film Material for Use as Filters in Conjunction With Lighting Equipment (Int. Cl. 11).
First use Apr. 7, 1969.

SN 329,843. Robert J. Donoghue, Windsor, Conn. Filed June 12, 1969.

SQUEEZE-METER

For Plastic Measuring Bottles (Int. Cl. 9).
First use Oct. 25, 1968.

SN 330,054. Teckton, Inc., Waltham, Mass. Filed June 18, 1969.

HEATRONICS

For Heat Actuated, Non-Electrical Switching Devices for Performing Logic Functions of Gates, Flip-Flops and Memory Elements (Int. Cl. 9).
First use at least as early as May 1969.

SN 332,102. Geoservices Societe Anonyme, Paris, France. Filed July 9, 1969.

DENSIMUD

Priority claimed under Sec. 44(d) on French Reg. No. 758,586, dated Mar. 6, 1969.
For Apparatus To Measure and/or Record the Specific Weight of Any Material Liquid, Solid or Gaseous (Int. Cl. 9).

SN 332,248. Mita Kogyo Kabushiki Kaisha, Osaka, Japan. Filed July 10, 1969.

COPYSTAR

For Photographic Printing and Developing Machines, Blue Printing and Developing Machines and Sensitized Papers (Int. Cl. 9).
First use March 1958; in commerce Apr. 1959.

SN 334,557. Computervision Corporation, Waltham, Mass. Filed Aug. 6, 1969.

AUTOLIGN

For Electro-Optical Automatic Mask Aligner for Use in the Manufacture of Solid State Electronic Devices (Int. Cl. 9).
First use July 1969.

SN 334,726. Kimtec, Incorporated, Houston, Tex. Filed Aug. 7, 1969.

CHICK-HUT

For Miniature Incubator for Educational Purposes (Int. Cl. 9).
First use Sept. 30, 1968.

SN 339,301. Computervision Corporation, Waltham, Mass. Filed Sept. 30, 1969.

COMPUCIRCUIT

For Electronically Controlled, Computer Compatible Photo Plotters (Int. Cl. 9).
First use July 1969.

SN 342,245. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Oct. 31, 1969.

CRONAFLEX

Owner of Reg. Nos. 608,302, 820,987, and others.
For Processors for Reproduction Film (Int. Cl. 9).
First use July 10, 1969.

SN 347,578. American Instrument Company, Inc., Silver Spring, Md. Filed Jan. 2, 1970.

CELLTRIFUGE

For Blood Cell Separators (Int. Cl. 9).
First use Mar. 13, 1969.

SN 347,596. Fordax Corp., Wellesley Hills, Mass. Filed Jan. 2, 1970.

FORDAX

For Digital Computers (Int. Cl. 9).
First use as early as Dec. 15, 1969.

SN 348,120. C. G. Conn Ltd., Elkhart, Ind. Filed Jan. 9, 1970.

STROBOTUNER

Owner of Reg. Nos. 501,429 and 828,923.
For Electronic Instruments for Indicating the Frequency of Sound (Int. Cl. 9).
First use February 1954.

SN 349,233. Variasystems, Corporation, Plainview, N.Y. Filed Jan. 21, 1970.

Variasystems

For Electronic Computer Controllers (Int. Cl. 9).
First use August 1969.

SN 350,167. Electrovision, Inc., Fullerton, Calif. Filed Jan. 28, 1970.

ELECTROTEMP

For Electronic Thermometer for Clinical Purposes (Int. Cl. 9).
First use Jan. 1, 1969.

SN 350,609. Renault International, Ltd., Fitchburg, Mass. Filed Feb. 5, 1970.

ALUMINARIES

For Sunglasses (Int. Cl. 9).
First use on or about October 1969.

SN 350,757. Mercury Instruments, Inc., Cincinnati, Ohio. Filed Feb. 6, 1970.

MERCOR

For Corrected Readout Instruments for Gas Meters (Int. Cl. 9).
First use Dec. 24, 1969.

SN 351,633. Textron Inc., Rochester, N.Y. Filed Feb. 17, 1970.

KEYLINE

For Spectacle Frames and Parts Therefor (Int. Cl. 9).
First use November 1964.

SN 351,634. Textron Inc., Rochester, N.Y. Filed Feb. 17, 1970.

NOTABLE

For Spectacle Frames and Parts Therefor (Int. Cl. 9).
First use September 1965.

Class 27 — Horological Instruments

SN 343,549. Gruen Industries, Inc., New York, N.Y. Filed Nov. 14, 1969.

AMERICAN LEADERSHIP

Applicant disclaims the word "American" apart from the mark as shown.

For Watches, Watch Cases and Watch Movements (Int. Cl. 14).

First use Jan. 27, 1947.

SN 343,556. Gruen Industries, Inc., New York, N.Y. Filed Nov. 14, 1969.

TRANS WORLD

Owner of Reg. Nos. 526,588, 532,052, and others.
For Watches, Watch Cases and Watch Movements (Int. Cl. 14).

First use July 31, 1946.

SN 855,956. Compagnie des Montres Marvin S.A., La Chaux de Fonds, Switzerland. Filed Apr. 6, 1970.

VOLTRON

For Watches (Int. Cl. 14).
First use Jan. 28, 1970; in commerce Jan. 28, 1970.

Class 28 — Jewelry and Precious-Metal Ware

SN 337,867. Cardow, Incorporated, St. Thomas, Virgin Islands. Filed Sept. 15, 1969.



For Jewelry (Int. Cl. 14).
First use Mar. 20, 1969.

SN 339,523. Zayre Corp., Natick, Mass. Filed Oct. 2, 1969.

ZAYRE

For Jewelry (Int. Cl. 14).
First use at least as early as January 1963.

SN 344,128. Oneida Ltd., Oneida, N.Y. Filed Nov. 20, 1969.

SILVER CREST

Applicant disclaims the word "Silver" apart from the mark as shown.

For Flatware Made of, or Coated with, Silver (Int. Cl. 8).
First use Oct. 10, 1969.

SN 345,650. Litton Precision Products, Inc., Beverly Hills, Calif. Filed Dec. 8, 1969.

For Jewelry, Including Rings, Having Simulated Precious Stones, and Simulated Precious Stones (Int. Cl. 14).
First use Aug. 28, 1969.

Class 30 — Crockery, Earthenware, and Porcelain

SN 322,440. Interpace Corporation, d.b.a. Castleton China, New Castle, Pa. Filed Mar. 21, 1969.

CARRIAGEHOUSE

For China Dinnerware (Int. Cl. 21).
First use Jan. 3, 1967.

Class 31 — Filters and Refrigerators

SN 322,913. Schroeder Brothers Corporation, McKees Rocks, Pa. Filed Mar. 26, 1969.

TRICRON

For Filter Elements for Industrial Use (Int. Cl. 7).
First use Mar. 12, 1969.

SN 334,432. Filfast Corporation, Holliston, Mass. Filed Aug. 5, 1969.

KOOLIT

For Plastic Foam Based Re-Usable Refrigerant Materials and More Specifically Urea Formaldehyde Foam in Block or Particle Form Saturated With Liquid and Packaged in a Tight-Fit Plastic Wrapping (Int. Cl. 1).
First use at least as early as Apr. 20, 1969.

SN 335,082. Union Carbide Corporation, New York, N.Y. Filed Aug. 11, 1969.

FLEX-ICE

For Ice Packs Containing a Reusable Refrigerant for Both Therapeutic and General Cooling Purposes (Int. Cl. 11).
First use on or about July 29, 1969.

SN 347,023. Mr. Charles W. Jones, Jr., Wilmington, Del. Filed Dec. 23, 1969.

CYLFORM

For Air Filter Element (Int. Cl. 11).
First use Nov. 10, 1969.

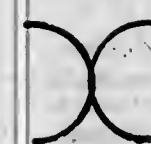
SN 356,565. Flanders Filters, Inc., Washington, N.C. Filed Apr. 13, 1970.

CHANNEL-HOOD

For Air Filter Assembly and Housing Therefor (Int. Cl. 11).
First use June 6, 1968.

Class 32 — Furniture and Upholstery

SN 323,607. Tendo Moko Co., Ltd., Tendo-shi, Yamagata-ken, Japan. Filed Apr. 3, 1969.



The mark is a Japanese stylized ideograph which means "heaven" or "sky."
For Furniture—Namely, Chairs, Sofas, Ottomans, Stools, Tables, Desks, Wardrobes, Sideboards, Cupboards, and Bookshelves (Int. Cl. 20).
First use at least as early as Jan. 31, 1960.

SN 332,922. Contract Sales, Inc., Wheaton, Ill. Filed July 18, 1969.

CRAGWOOD

For Kitchen Cabinets, and Vanities (Int. Cl. 20).
First use February 1969.

SN 339,043. Riverside Furniture Corporation, Fort Smith, Ark. Filed Sept. 26, 1969.



Bringing Beauty to the Home

The slogan "Bringing Beauty to the Home" is disclaimed apart from the mark as shown.

For Occasional Tables, Curio Cabinets, Wall Consoles, Bookcases, Occasional Chairs, and Rockers, Loose Cushion Wood Arm Living Room as Well as Fully Upholstered Furniture (Int. Cl. 20).
First use June 20, 1969.

SN 349,652. S. S. Kresge Company, Detroit, Mich. Filed Jan. 26, 1970.



For Storage Chests (Int. Cl. 20).
First use on or before Nov. 26, 1969.

SN 349,653. S. S. Kresge Company, Detroit, Mich. Filed Jan. 26, 1970.



For Storage Chests (Int. Cl. 20).
First use on or before Nov. 26, 1969.

SN 351,083. Aberdeen Manufacturing Corporation, New York, N.Y. Filed Feb. 11, 1970.

SUNCRAFT OF CALIFORNIA

No claim is made to the word "California" apart from the mark as shown.
For Outdoor Lawn and Patio Furniture (Int. Cl. 20).
First use 1952.

SN 351,554. James Summerton, Sedona, Ariz. Filed Feb. 16, 1970.

LEGENDWOOD

For Picture Frames (Int. Cl. 20).
First use on or about Feb. 3, 1970.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 318,849. E. Sam Dick Company, Inc., Seattle, Wash. Filed Feb. 7, 1969.

TRANSAIRE

For Heat Source Systems, Including Boiler, Condensate Receiver, Chemical Azetropes and Feed System, for Providing Heat to Liquid Petroleum Gas Vaporizers (Int. Cl. 11).
First use April 1967.

SN 345,596. Bow Solder Products Co., Inc., Newark, N.J. Filed Dec. 8, 1969.

GALVSWET

For Solder (Int. Cl. 6).
First use Oct. 10, 1969.

SN 348,568. Nor-Jann Co., Inc., La Crosse, Wis. Filed Jan. 14, 1970.



For Portable Cooker Using Newspapers as Fuel (Int. Cl. 11).
First use Apr. 1, 1969.

SN 349,195. Dolly Madison Industries, Inc., Philadelphia, Pa. Filed Jan. 21, 1970.

LITTLE DUTCHMAN

Owner of Reg. No. 807,591.
For Baking Ovens (Int. Cl. 11).
First use Apr. 18, 1969.

SN 349,944. CCI Aerospace Corporation, d.b.a. The Marquardt Company, Van Nuys, Calif. Filed Jan. 29, 1970.

SUE

For Industrial Burners and Heaters (Int. Cl. 11).
First use Jan. 7, 1970.

SN 350,281. Masco Corporation, Taylor, Mich. Filed Feb. 2, 1970. SN 344,206. Aries Record Productions, Inc., Chicago, Ill. Filed Nov. 21, 1969.

OceanFire

For Humidifiers and Parts Thereof (Int. Cl. 11).
First use Aug. 15, 1969.

aries

The black rectangular background on the drawing is not part of the mark but is merely to indicate reverse lettering. For Grooved Phonograph Records (Int. Cl. 9).
First use Sept. 9, 1969; November 1967 in a different form.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 282,187. Habasit, Ltd., Reinach-Basel, Switzerland. Filed Oct. 10, 1967.

HABASIT

For Transmission and Conveyor Belting Made from Synthetic Materials (Int. Cl. 7).
First use July 1, 1963; in commerce July 1, 1963.

SN 346,227. Dana Corporation, Toledo, Ohio. Filed Dec. 15, 1969.

999

For Gaskets and Gasketing Material (Int. Cl. 17).
First use Nov. 14, 1969.

Class 36 — Musical Instruments and Supplies

SN 325,035. Grossman Music Corporation, Cleveland, Ohio. Filed Apr. 21, 1969.

"Vibra-Bell"

For Bells Which Are Sold as a Component Part of Recorders, Brass Horns, Reed Instruments, Wind Instruments and Pre-Band Melody Wind Instruments (Int. Cl. 15).
First use on or about Dec. 3, 1968.

SN 335,999. Melodie Vendor Corporation, Appleton, Wis. Filed Aug. 22, 1969.

MELODIE VENDOR

Applicant disclaims the word "Vendor" apart from the mark as shown.

For Coin Operated Phonograph Record Player and Vending Machine Sold as a Unit (Int. Cl. 9).
First use Sept. 24, 1965.

SN 338,424. McGraw-Hill, Inc., New York, N.Y. Filed Sept. 19, 1969.

CPI NEWTAPE

Applicant disclaims the term "Newtape" apart from the mark as shown.

For Pre-Recorded Tape Cassettes (Int. Cl. 9).
First use Aug. 21, 1969.

SN 345,961. Lanier Electronic Laboratory, Inc., Atlanta, Ga. Filed Dec. 11, 1969.



Owner of Reg. No. 880,889.
For Recording-Transcribing Devices of the Type in Which a Magnetizable Tape Is Used for the Recording and the Subsequent Transcribing of Information and for Parts Thereof (Int. Cl. 9).
First use on or about Apr. 15, 1969.

SN 351,734. Superscope, Inc., Sun Valley, Calif. Filed Feb. 18, 1970.



For Magnetic Tapes and Records (Int. Cl. 9).
First use Jan. 15, 1970.

SN 352,155. La Flor Records, Inc., New York, N.Y. Filed Feb. 24, 1970.



Applicant disclaims the word "Records" which is a name of the goods.
For Tape Cartridges and Phonograph Records (Int. Cl. 9).
First use June 18, 1968.

SN 352,157. La Flor Records, Inc., New York, N.Y. Filed Feb. 24, 1970.

INCA RECORDS

Applicant disclaims the word "Records" which is a name of the goods.
For Tape Cartridges, and Phonograph Records (Int. Cl. 9).
First use Oct. 21, 1968.

SN 353,303. Hammond Corporation, Deerfield, Ill. Filed Mar. 6, 1970. SN 324,902. Editrice Lutetia, S.R.L., Opera Milan, Italy. Filed Apr. 19, 1969.

AUTOCHORD

For Electric Organs (Int. Cl. 15).
First use Feb. 4, 1970.

Class 37 — Paper and Stationery

SN 303,888. Seymour Bosworth, Plainview, N.Y. Filed July 30, 1968.

PROGRAMAID

For Computer Coding Forms, Holders and Binders Thereof (Int. Cl. 16).
First use June 5, 1968.

SN 319,089. Fort Howard Paper Company, Green Bay, Wis. Filed Feb. 13, 1969.

JEEVES

For Disposable Paper Products—Namely, Towels, Napkins, Toilet Paper, Facial Tissue, Wipers, Table Covers, and Tray Covers (Int. Cl. 16).
First use Dec. 6, 1968.

SN 352,849. Instant-Pay, Montgomery, Ala. Filed Feb. 25, 1970.

INSTANT-PAY

For Paper Business Forms (Int. Cl. 16).
First use on or about Jan. 1, 1970.

SN 352,636. Graphic Controls Corporation, Buffalo, N.Y. Filed Feb. 27, 1970.

UNIVEL

For Drafting Paper (Int. Cl. 16).
First use Sept. 4, 1968.

SN 353,083. Chemolene Industries, Inc., Bordentown, N.J. Filed Mar. 4, 1970.

KapOff

For Writing Instruments, Especially Felt-Tip Markers and Marking Pens (Int. Cl. 16).
First use Jan. 27, 1970.

Class 38 — Prints and Publications

SN 316,929. Central Flower News, Inc., Chicago, Ill. Filed Jan. 21, 1969.

FLOWER NEWS

For Weekly Newspaper (Int. Cl. 16).
First use Apr. 3, 1947.

EXECUTIVE

For Monthly Magazine (Int. Cl. 16).
First use in or before 1967; in commerce Oct. 15, 1968.

SN 327,813. Digital Systems Corporation, Hanover, N.H. Filed May 21, 1969.

PACER

For Computer Encoded Programs Consisting of Information-Bearing Punched Cards or Magnetic Tape Usually Sold in Connection With a Manual (Int. Cl. 16).
First use in or about August 1962.

SN 338,052. Heating Publishers, Inc., Montclair, N.J. Filed Sept. 18, 1969.

electric heat and air conditioning

Owner of Reg. Nos. 632,903 and others.
For Magazine Published From Time to Time (Int. Cl. 16).
First use Jan. 10, 1955.

SN 340,055. United Computing Corporation, Redondo Beach, Calif. Filed Oct. 7, 1969.

UNITE I

For Computer Program (Int. Cl. 16).
First use Jan. 20, 1968.

SN 347,315. Radio Comics, Inc., New York, N.Y. Filed Dec. 29, 1969.

JOSIE AND THE PUSSYCATS

For Comic Magazines (Int. Cl. 16).
First use on or about Sept. 15, 1969.

SN 347,726. Darje, Inc., Sioux City, Iowa. Filed Jan. 5, 1970.

DARJE

For Printed Calendars Which Are Affixed to the Crystal of a Wristwatch and on Other Printed Materials (Int. Cl. 16).
First use Nov. 4, 1969.

Class 39 — Clothing

SN 316,476. Sheffield Industries, Inc., Miami, Fla. Filed Jan. 18, 1969.

PRETTY POLLY

For Ladies' Hosiery, Panty Hose, and Leisure Slippers (Int. Cl. 25).
First use June 28, 1968.
Subj. to Int'l. with SN 345,091.

SN 330,154. Lebow Bros., Inc., Baltimore, Md. Filed June 16, 1969.

ENTER-EASE POCKET

No claim is made to the word "Pocket" apart from the mark shown.
For Pockets Forming a Component Part of Coats, Trousers and Jackets Made for Men, Women and Children (Int. Cl. 25).
First use Apr. 18, 1969.

SN 331,248. Spartans Industries, Inc., New York, N.Y. Filed June 27, 1969.

Carla

The name "Carla" is fanciful and is not intended to identify any living individual.
For Girls' Apparel and Accessories—Namely, Coats, Suits, Dresses, Sweaters, Blouses, Bathing Suits, Hats, Scarves, Belts, and Gloves (Int. Cl. 25).
First use Jan. 15, 1968.

SN 331,406. Mr. Henry, Inc., New York, N.Y. Filed June 30, 1969.

ENRICO CAPUCCI

The name "Enrico Capucci" is fanciful.
For Men's and Boys' Outer Shirts and Cabana Sets Comprising Shirts and Short Pants (Int. Cl. 25).
First use June 2, 1969.

SN 331,415. Norman Wiatt Co., Los Angeles, Calif. Filed June 30, 1969.

SuZee Jr.

The abbreviation "Jr." is disclaimed apart from the mark as shown.
For Junior Petite Dresses (Int. Cl. 25).
First use Mar. 1, 1969.

SN 336,767. Cole of California, Inc., Los Angeles, Calif. Filed Sept. 2, 1969.

ANACAPA

For Misses' Swimsuits, Beach Coats, Jackets, Skirts, Shorts, Slacks, Blouses, Sweaters, Vests, Shifts, Shirts, and Dresses (Int. Cl. 25).
First use July 29, 1969.

SN 336,810. Kayser-Roth Corporation, New York, N.Y. Filed Sept. 2, 1969.

MIRACLE-MATES

For Ladies' Blouses, Skirts, Slacks, Vests, Jackets, and Sweaters (Int. Cl. 25).
First use Mar. 11, 1967.

SN 337,877. Angelica Corporation, St. Louis, Mo. Filed Sept. 15, 1969.

CAREER FASHIONS

The word "Fashions" is disclaimed apart from the mark.
For Coats, Smocks, Dresses, Pants, Over-Coats, Topcoats, Men's Blazers, Ties, and Boots (Int. Cl. 25).
First use July 16, 1969.

SN 338,302. Consolidated Foods Corporation, Chicago, Ill. Filed Sept. 19, 1969.

RELAXAHAND GLOVE

The word "Glove" is disclaimed apart from its use in the mark.
For Stretch Fabric Gloves (Int. Cl. 25).
First use July 10, 1969.

SN 338,303. Consolidated Foods Corporation, Chicago, Ill. Filed Sept. 19, 1969.

GENTLE MASSAGE GLOVE

The word "Glove" is disclaimed apart from its use in the mark.
For Stretch Fabric Gloves (Int. Cl. 25).
First use July 6, 1969.

SN 338,304. Consolidated Foods Corporation, Chicago, Ill. Filed Sept. 19, 1969.

ISOMETRIC EXERCISE GLOVE

The words "Exercise Glove" are disclaimed apart from its use in the mark.
For Stretch Fabric Gloves (Int. Cl. 25).
First use June 18, 1969.

SN 338,586. Stanley J. Love, New York, N.Y. Filed Sept. 22, 1969.

Mon Amour

The wording "Mon Amour" is translated "my love."
For Women's and Children's Apparel—Namely, Dresses, Jumpers, Skirts, Blouses, Suits, Sweaters, Slips, Culottes, Pant Dresses, Jumpsuits, Pants, Jackets, Shirts, Toppers, and Coats (Int. Cl. 25).
First use Aug. 21, 1969.

SN 338,818. Springfoot, Inc., Charleston, W. Va. Filed Sept. 24, 1969.

SPRINGFOOT

Owner of Reg. No. 717,210.
For Hosiery (Int. Cl. 25).
First use Aug. 1, 1944.

SN 339,459. Servisco, Elisabeth, N.J. Filed Oct. 1, 1969.

"THE DISPENSABLES"

For Work Clothes (Int. Cl. 25).
First use Apr. 27, 1969.

SN 340,215. Anvil Brand, Incorporated, New York, N.Y. Filed Oct. 9, 1969.

ANVIL BRAND

Owner of Reg. Nos. 756,847 and 781,054.
For Men's Underwear (Int. Cl. 25).
First use Aug. 24, 1969.

SN 340,438. Stony Brook Casuals, Inc., New York, N.Y. Filed Oct. 10, 1969.

Eye

For Dresses, Blouses, Skirts, Suits, and Jackets (Int. Cl. 25).
First use May 28, 1965.

SN 340,761. Braemar Knitwear Limited, Hawick, Scotland. Filed Oct. 15, 1969.

BRAEMAR

Owner of U.S. Reg. Nos. 509,216 and 524,900.
For Knitted Underwear, Jackets, Sweaters, Hose and Half Hose, Jumpers, Cardigans, Suits and Skirts, Jerseys, Jersey Suits (Int. Cl. 25).
First use 1962; in commerce 1962.

SN 341,694. The Puritan Sportswear Corporation, Altoona, Pa. Filed Oct. 24, 1969.

ALL MAN-PART PURITAN

Owner of Reg. Nos. 148,887, 867,578, and others.
For Men's Shirts, Sweaters, Jackets, Coats, Trousers, Knit Shirts, Walk Shorts and Swim Trunks (Int. Cl. 25).
First use June 28, 1968.

SN 342,726. Belfra, Societe Anonyme, Colre, Switzerland. Filed Nov. 5, 1969.

DAMART-THERMAWEAR

Owner of Swiss Reg. No. 240,505, dated Mar. 11, 1969.
For Women's Underwear, Slips, Bras, Chemises, Girdles, Panties, Tights, Hoods, Anklets, Knee Bands, Hosiery, Slippers, Robes and Bed Jackets; Children's Underwear and Pajamas; and Men's Underwear and Shorts (Int. Cl. 25).

SN 343,090. Danoca Industries, Inc., New York, N.Y. Filed Nov. 10, 1969.

KNTTISSIMO

For Boys' Suits and Girl's Dresses (Int. Cl. 25).
First use Aug. 15, 1968.

SN 345,091. Pretty Polly Limited, Sutton-in-Ashfield, England. Filed Dec. 2, 1969.

PRETTY POLLY

For Pant-Hose and Tights for Women and Children and Womens' Stockings (Int. Cl. 25).
First use during the year 1926; in commerce during the month of July 1963.
Subj. to Intf. with SN 316,476.

SN 347,666. Wellico Enterprises, Inc., Waynesville, N.C. Filed Jan. 2, 1970.

GLO LITE

For Footwear—Namely, Shoes, Boots, Slippers and Sandals (Int. Cl. 25).
First use Dec. 1, 1969.

SN 348,188. N. Edelson Sons Corporation, New York, N.Y. Filed Jan. 9, 1970.

MISS BROADWAY

Owner of Reg. No. 388,628.
For Women's and Misses' Slips, Nightgowns, Pajamas and Chemises (Int. Cl. 25).
First use Jan. 2, 1941.

SN 348,262. Gable-Skogmo, Inc., Minneapolis, Minn. Filed Jan. 12, 1970.

For Denim Dungarees and Matching Work Clothes (Int. Cl. 25).
First use August 1966.

SN 349,697. Springfoot, Inc., Charleston, W. Va. Filed Jan. 26, 1970.

SPRINGFOOT

Owner of Reg. No. 717,210.
For Men's and Boys' Underwear (Int. Cl. 25).
First use November 1966.

SN 353,823. Hanes Corporation, Winston-Salem, N.C. Filed Mar. 12, 1970.

GREAT LEGS

For Ladies' Hosiery and Panty Hose (Int. Cl. 25).
First use Mar. 6, 1970.

SN 354,549. International Playtex Corporation, New York, N.Y. Filed Mar. 19, 1970.

PLAYTEX

For Stretch Rubbers (Int. Cl. 25).
First use Mar. 5, 1970.

SN 354,550. International Playtex Corporation, New York, N.Y. Filed Mar. 19, 1970.

PLAYTEX

For Stretch Boots (Int. Cl. 25).
First use Mar. 5, 1970.

SN 354,553. International Playtex Corporation, New York, N.Y. Filed Mar. 19, 1970.

TRICO-SHEEN

For Brassiere (Int. Cl. 25).
First use Feb. 13, 1970.

SN 355,494. Converse Rubber Corporation, Malden, Mass. Filed Mar. 31, 1970.

STRETCH LITE

For Stretch Boots and Shoes (Int. Cl. 25).
First use at least as early as Jan. 1, 1970.

Class 40—Fancy Goods, Furnishings, and Notions

SN 297,192. Jerrax Imports, Inc., New York, N.Y. Filed May 2, 1968.

JEROME ALEXANDER

"Jerome Alexander" identifies "Jerome Axelrod" whose consent is of record.
For Wigs, Hair Pieces, Wiglets, Falls and Toupees (Int. Cl. 26).
First use Feb. 6, 1968.

SN 303,545. Peter Suba and Emma Suba, d.b.a. Continental Tress Fashions, Toronto, Ontario, Canada

REMMI HAIR

Applicant disclaims the right to the exclusive use of the word "Hair" apart from the mark. Owner of Canadian Reg. No. 157,717, dated July 12, 1968.
For Hair Goods for Human Use—Namely, Wigs, Hair Pieces, Toupees, Falls and Wiglets (Int. Cl. 26).

SN 330,477. Center City Beauty Salon, Inc., Philadelphia, Pa. Filed June 19, 1969.

FLING WIGS

"Wigs" is disclaimed apart from the mark as shown.
For Wigs Formed of Synthetic Fibers (Int. Cl. 26).
First use Feb. 19, 1969.

SN 332,454. Coamo Currie Limited, New York, N.Y. Filed July 14, 1969.



The drawing is lined for the color blue.
For Hair Pieces (Int. Cl. 26).
First use before Feb. 1, 1969.

SN 339,330. La Marquesa Wig Corporation, Miami, Fla. Filed Sept. 30, 1969.

CASA SEVILLE

For Wigs and Hair Pieces (Int. Cl. 26).
First use June 10, 1966.

SN 339,906. Mandarin Textiles Limited, Kowloon, Hong Kong. Filed Oct. 6, 1969.

DYNASTY

For Wigs (Int. Cl. 26).
First use on or about Aug. 7, 1969; in commerce on or about Aug. 7, 1969.

SN 341,571. Appearance Products Corporation, Miami, Fla. Filed Oct. 24, 1969.

EYE TURN ON

Applicant disclaims the word "Eye" apart from the mark as shown.
For False Eyelashes (Int. Cl. 3).
First use Sept. 9, 1969.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 296,755. Standard Oil Company, Flemington, N.J. Filed Apr. 29, 1968.

EXXON

For Synthetic Textile Fabrics in the Piece (Int. Cl. 24).
First use Oct. 20, 1967.

SN 330,236. General Polyflex, Incorporated, Harmony, Minn. Filed June 17, 1969.

PLUSH PAD

For Carpet Underpadding (Int. Cl. 27).
First use Nov. 17, 1964.

SN 333,826. Hayden Textiles, Inc., New York, N.Y. Filed July 29, 1969.



For Textile Fabrics in the Piece of Synthetic Fibers or Cellulosic Fibers or Combinations Thereof (Int. Cl. 24).
First use on or about Dec. 26, 1967.

SN 334,890. West Point-Pepperell, Inc., West Point, Ga. Filed Aug. 8, 1969.

FAIRFAX

Owner of Reg. No. 509,351.
For Rugs and Blankets (Int. Cls. 24 and 27).
First use Feb. 6, 1968.

SN 340,289. J. P. Stevens & Co., Inc., New York, N.Y. Filed Oct. 9, 1969.

PENGUIN

Owner of Reg. No. 264,106.
For Piece Goods of One or More Natural Fibers, Including Wool and Cotton, or Synthetic Fibers or Cellulosic Fibers or Blends of the Foregoing (Int. Cl. 24).
First use July 23, 1929.

SN 341,327. Klopman Mills, Inc., Rockleigh, N.J. Filed Oct. 22, 1969.

CONTURA

Owner of Reg. No. 507,256.
For Fabrics in the Piece, Composed of Man-Made Fibers and Fabrics in the Piece, Composed of Blends of Cotton Fibers and Man-Made Fibers (Int. Cl. 24).
First use at least as early as Nov. 1, 1947.
Subj. to Intf. with SN 832,117.

SN 342,725. Bolfra, Societe Anonyme, Coire, Switzerland. Filed Nov. 5, 1969.

DAMART-THERMAWEAR

Owner of Swiss Reg. No. 240,503, dated Mar. 11, 1969.
For Upholstery Fabrics, Table Linens and Bedspreads (Int. Cl. 24).

SN 352,409. E. T. Barwick Industries, Inc., Chamblee, Ga. Filed Feb. 26, 1970.

DENSI-TEE

For Carpets (Int. Cl. 27).
First use Feb. 2, 1970.

Class 43—Thread and Yarn

SN 330,686. American Enka Corporation, Enka, N.C. Filed June 23, 1969.

SPECTRODYE

Owner of Reg. No. 776,362.
For Synthetic Thread and Yarn (Int. Cl. 23).
First use June 17, 1969.

Class 44—Dental, Medical, and Surgical Appliances

SN 323,569. Johnson & Johnson, New Brunswick, N.J. Filed Apr. 3, 1969.



For Dental Table Covers; Dental Floss and Dispensers Therefor; Dental Napkins; Instrument Wraps; Gauze Sponges; Gauze; Cotton and Dispensers Therefor; Disposable Towels for Dental Clinical and Surgical Use; Patient Comfort Kits; Laparotomy Packs; Drapes and Drape Packs; Throat Packs; Surgical Dressings; Dressings Change Trays (Int. Cls. 5 and 24).
First use Sept. 18, 1964.

TM 875 O.G.—11

SN 329,356. Hoffel Instruments Incorporated, Norwalk, Conn. Filed June 6, 1969.

ECHOTROL

For Ultrasonic Diagnostic Instrument Circuitry Sold as a Component of Medical and Surgical Diagnostic Instruments (Int. Cl. 10).
First use Sept. 13, 1965.

SN 333,057. Nuclear Associates, Inc., Westbury, N.Y. Filed July 22, 1969.

GAMMA VUE

The word "Gamma" is disclaimed apart from the mark as shown.
For Shielded Syringes (Int. Cl. 10).
First use June 15, 1968.

SN 336,993. Abbott Laboratories, North Chicago, Ill. Filed Sept. 4, 1969.

URIFLO

For Urinary Catheters (Int. Cl. 10).
First use Sept. 20, 1968.

SN 337,184. Medico-Dental Technical Corporation, San Francisco, Calif. Filed Sept. 5, 1969.

MYDENT

For Dental Supplies—Namely, False Teeth for Dentures (Int. Cl. 10).
First use July 15, 1969.

SN 338,870. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Sept. 25, 1969.

UROMATIC

For Cysto Irrigating Set for Post-Operative Irrigation and Cystoscopy (Int. Cl. 10).
First use June 16, 1969.

SN 339,029. MacTavish Industries Inc., Richmond, Va. Filed Sept. 26, 1969.



For Disposable Underpads for Incontinent Patients (Int. Cl. 5).
First use Dec. 19, 1968.

SN 358,380. Propper Manufacturing Company, Inc., Long Island City, N.Y. Filed Mar. 9, 1970.

F/O

For Oscopes (Int. Cl. 10).
First use April 1967.

Class 45—Soft Drinks and Carbonated Waters

SN 329,221. Brooks Products, Inc., Holland, Mich. Filed June 5, 1969.

SUN-GLO

For Carbonated Soft Drinks (Int. Cl. 32).
First use prior to Oct. 26, 1946.

SN 339,818. PepsiCo, Inc., New York, N.Y. Filed Oct. 6, 1969.

CHAN-JUREEN

For Powdered Imitation Tangerine Flavored Soft Drink Mix (Int. Cl. 32).
First use Aug. 27, 1969.

SN 339,814. PepsiCo, Inc., New York, N.Y. Filed Oct. 6, 1969.

CHERRY-AKI

For Powdered Imitation Cherry Flavored Soft Drink Mix (Int. Cl. 32).
First use Aug. 27, 1969.

SN 339,817. PepsiCo, Inc., New York, N.Y. Filed Oct. 6, 1969.

MARCO POLO

The mark consists of the name of the famous Italian traveler and explorer.
For Powdered Imitation Fruit Flavored Soft Drink Mix (Int. Cl. 32).
First use Aug. 27, 1969.

Class 46—Foods and Ingredients of Foods

SN 269,523. Eastern Bakeries Limited, St. John, New Brunswick, Canada. Filed Apr. 19, 1967.

FUN BUNS

Applicant disclaims the word "Buns" apart from the mark shown.
For Bakery Products—Namely, Buns, Sweet or Otherwise (Int. Cl. 30).
First use on or about Mar. 1, 1966; in commerce Mar. 1, 1966.

SN 296,168. International Food Corporation, Chattanooga, Tenn. Filed Apr. 22, 1968.

Plum Nelly

For Prepared Food Products—Namely, Fried Chicken, Rolls, Roast Beef Sandwiches, Hamburger Sandwiches, Hot Dog Sandwiches, Cole Slaw, French Fried Potatoes, French Fried Onion Rings, Potato Salad, Baked Beans, Home Style Bread, Gravy of a Meat Nature, Milk, Coffee (Int. Cls. 29 and 30).
First use Apr. 3, 1968.

SN 301,688. Armour and Company, Chicago, Ill. Filed July 1, 1968.

TENDER-TEST

For Fresh Beef (Int. Cl. 29).
First use on or prior to June 11, 1968.

SN 301,690. Armour and Company, Chicago, Ill. Filed July 1, 1968.



The word "Beef" is disclaimed apart from the mark as shown. The drawing is lined for an orange color, no claim is made to color. Owner of Reg. Nos. 518,558, 655,674, and 804,358.

For Fresh Beef (Int. Cl. 29).
First use on or prior to June 11, 1968.

SN 305,726. A. Dewied Casing Company, Broderick, Calif. Filed Aug. 22, 1968.



No claim is made to the words "Real Casing" apart from the mark shown.
For Hot Dog and Sausage Casings (Int. Cl. 18).
First use Dec. 27, 1967.

SN 306,334. Carnation Company, Los Angeles, Calif. Filed Aug. 30, 1968.

**Trophy**

Owner of Reg. Nos. 553,867, 758,797, and 811,790.
For Horse Feed (Int. Cl. 31).
First use at least as early as Aug. 9, 1957.

SN 313,877. A. & R. Meat Co., New York, N.Y. Filed Dec. 9, 1968.



The word "Morcilla" is disclaimed separate and apart from the mark as shown. The English equivalent of the Spanish word "Morcilla" is "hog's pudding."
For Cooked Blood Pudding (Int. Cl. 29).
First use January 1950.

SN 314,220. Clyde A. Harbin, Whitehaven, Tenn. Filed Dec. 11, 1968.



Applicant disclaims the terms "Shakemix-R," "T.M.," and "Mix" apart from the mark as shown. Owner of Reg. No. 854,887.

For Milk Substitute for Admixture With Ice Cream and the Like in Making Milkshakes (Int. Cl. 29).
First use Aug. 28, 1967.

SN 314,222. Clyde A. Harbin, Whitehaven, Tenn. Filed Dec. 11, 1968.



The words "Makes" and "Mixes" are disclaimed apart from the mark as shown. Owner of Reg. No. 853,739.
For Combination Stabilizer Emulsifier for Ice Cream Mixes and Ice Milk Mixes (Int. Cl. 30).
First use May 4, 1967.

SN 316,130. Quality Egg Co., Inc., Brooklyn, N.Y. Filed Jan. 8, 1969.



The drawing is lined for the color yellow. Applicant disclaims the representation of an egg.
For Fresh Eggs, Liquid Eggs and Frozen Eggs (Int. Cl. 29).
First use on or about Jan. 1, 1968.

SN 320,142. General Foods Corporation, White Plains, N.Y. Filed Feb. 26, 1968.

MUNCH-A-BERRY MONKEYS

The word "Monkeys" is disclaimed apart from the mark as a whole.
For Food Product, Dough-Like in Nature, With or Without a Fruit Filling To Be Prepared in a Toaster (Int. Cl. 30).
First use Sept. 16, 1968.

SN 320,735. Peter Paul, Inc., Naugatuck, Conn. Filed Mar. 4, 1969.

JOY

For Candy (Int. Cl. 30).
First use Feb. 19, 1969.

SN 320,781. Alimentos Seleccionados Amaral S.A., Sao Paulo, Brazil. Filed Mar. 5, 1969.

PAN-CHIPS

For Semi-Prepared Chips Derived From Manioc (Int. Cl. 29).
First use July 11, 1968; in commerce July 11, 1968.

SN 320,977. F. M. Stamper Company, d.b.a. Banquet Canning Co., St. Louis, Mo. Filed Mar. 6, 1969.

BUFFET SUPPER

For Frozen Prepared Food Products—Namely, Gravy and Sliced Beef, Gravy and Sliced Turkey, Barbeque Sauce With Sliced Beef, Spaghetti and Meatballs, Beef Stew, Salisbury Steak and Gravy, Chicken and Dumplings, Chicken Chow Mein, and Beef Chop Suey (Int. Cl. 29).
First use Sept. 14, 1965.

SN 321,323. Oroweat Baking Co. of San Francisco, d.b.a. Golden Gate Bakery, South San Francisco, Calif. Filed Mar. 3, 1969.

GOLDEN GATE

For Bakery Products—Namely, English Muffins, Rolls, and Breads (Int. Cl. 30).
First use Mar. 28, 1960.

SN 321,933. Hi-Life Packing Company, Chicago, Ill. Filed Mar. 17, 1969.

PET LIFE

Applicant disclaims the word "Pet" apart from the mark as shown. Owner of Reg. Nos. 389,549, 748,854, and others.
For Canned Dog and Cat Food (Int. Cl. 31).
First use Sept. 20, 1968.

SN 321,934. Hi-Life Packing Company, Chicago, Ill. Filed Mar. 17, 1969.

KITTY PLEASE

Applicant disclaims the word "Kitty" apart from the mark as shown. Owner of Reg. No. 839,372.
For Canned Cat Food (Int. Cl. 31).
First use Sept. 20, 1968.

SN 321,996. Snow White Mushroom Co., Avondale, Pa. Filed Mar. 17, 1969.

Snow White

For Fresh Mushrooms (Int. Cl. 31).
First use Aug. 28, 1968.

SN 322,469. Quarterback Sports Federation, Inc., Bloomington, Minn. Filed Mar. 21, 1969.

FULLBACK

For Sandwiches (Int. Cl. 29).
First use May 1, 1966.

SN 322,470. Quarterback Sports Federation, Inc., Minneapolis, Minn. Filed Mar. 21, 1969.

LINEBACKER

For Sandwiches (Int. Cl. 29).
First use May 1, 1966.

SN 322,471. Quarterback Sports Federation, Inc., Minneapolis, Minn. Filed Mar. 21, 1969.

HALFBACK

For Sandwiches (Int. Cl. 29).
First use May 1, 1966.

SN 324,608. Redfern Foods Corporation, Atlanta, Ga. Filed Apr. 15, 1969.

REDFERN

Owner of Reg. No. 813,097.
For Sausage, Wieners, Frankfurters, Bologna, Liver Loaf, Luncheon Meats, Salami, Ham, Roast Beef, Barbecued Pork, Chipped Beef, Souse, Corned Beef, Refrigerated Beef, and Refrigerated Veal (Int. Cl. 29).
First use at least as early as Jan. 1, 1947.

SN 324,932. Redfern Foods Corporation, Atlanta, Ga. Filed Apr. 18, 1969.

PLANTATION PATTIES

Applicant disclaims the word "Patties" apart from the mark as shown.
For Partially Cooked Patties Consisting Essentially of Grits and Sausage in Refrigeratable Packages (Int. Cl. 29).
First use at least as early as Aug. 31, 1968.

SN 325,228. The C. F. Sauer Company, Richmond, Va. Filed Apr. 22, 1969.

SAUER'S GOLD MEDAL

Owner of Reg. Nos. 25,222, 864,635, and others.
For Mustard and Mustard Bran, Pure Mustard, Mayonnaise, Meatless Sandwich Spread, Salad Dressing and Peanut Butter (Int. Cls. 29 and 30).
First use in or about April 1964.

SN 325,229. The C. F. Sauer Company, Richmond, Va. Filed Apr. 22, 1969.



Owner of Reg. Nos. 25,222, 864,635, and others.
For Mustard and Mustard Bran, Pure Prepared Mustard, Thousand Island Dressing, Russian Dressing, French Dressing, Coleslaw Dressing, Salad Dressing and Tartar Sauce (Int. Cls. 29 and 30).
First use in or about Apr. 1964.

SN 328,247. Pet Incorporated, St. Louis, Mo. Filed May 26, 1969.

MINI-TACOS

Applicant disclaims any rights in the word "Mini" apart from the mark as shown.
For Corn Chips (Int. Cl. 29).
First use April 1969.

SN 329,464. Frito-Lay, Inc., Dallas, Tex. Filed June 9, 1969.

FUNYUNS

Owner of Reg. No. 837,232.
For Snack Foods—Namely, Potato Chips, Corn Chips, Puffed Corn Snacks and Tortilla Chips (Int. Cl. 29).
First use Apr. 16, 1968.

SN 330,043. American Bakeries Company, Chicago, Ill. Filed June 16, 1969.

GOLDEN BAKED

Applicant disclaims the expression "Baked" apart from the mark shown.
For Bread (Int. Cl. 30).
First use Oct. 5, 1968.

SN 330,607. David Michael & Co., Inc., Philadelphia, Pa. Filed June 20, 1969.

SUPERVAN

For Flavoring Powder (Int. Cl. 30).
First use May 14, 1969.

SN 331,002. Agway, Inc., Dewitt, N.Y. Filed June 26, 1969.

MILL QUEEN

For Livestock Feed (Int. Cl. 31).
First use Feb. 3, 1969.

SN 331,010. Beymer-Mann Company, Winter Haven, Fla. Filed June 26, 1969.



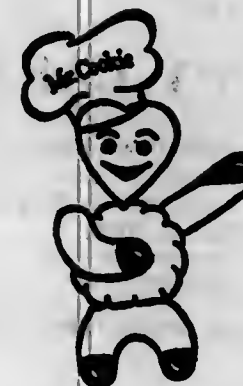
Applicant disclaims the words "Florida Citrus" and the map of Florida apart from the mark as shown.
For Fresh Citrus Fruits (Int. Cl. 31).
First use Dec. 15, 1967.

SN 331,041. Hunt-Wesson Foods, Inc., Fullerton, Calif. Filed June 26, 1969.

TOP TOMATA

Without waiving its common law rights and for purposes of this registration only, applicant makes no claim to the word "Tomata" apart from the mark as used.
For Canned Tomatoes (Int. Cl. 29).
First use June 6, 1969.

SN 331,431. Silver Lake Cookie Co., Inc., Baldwin, N.Y. Filed June 30, 1969.



Applicant disclaims the word "Cookie" when used apart from the mark as shown, but not otherwise and without waiving any common law rights thereto.
For High and Low Calorie Cookies (Int. Cl. 30).
First use June 12, 1969.

SN 331,606. Florasynth, Inc., Bronx, N.Y. Filed July 2, 1969.

FLORASYNTHETIC

Owner of Reg. Nos. 853,959, 777,488, and others.
For Essential Oils for Use as Food Flavoring Materials and as Ingredients of Food Flavoring Materials (Int. Cl. 3).
First use on or about June 6, 1969.

TM 875 O.G.—13

SN 335,443. Fearn International Inc., Franklin Park, Ill. Filed Aug. 15, 1969.

EGGO

Owner of Reg. Nos. 589,018, 720,074, and others.
For Potato Chips, Corn Chips, Tortilla Chips, Pretzels, Mayonnaise, Salad Dressings, Table Syrup, Pancake and Waffle Mix, Frozen Waffles and Noodles, Relish, Non-Dairy Sour Cream Dressing, Barbecue Sauce, Tartar Sauce and Cole Slaw (Int. Cls. 29 and 30).
First use Apr. 27, 1935.

SN 336,062. Frito-Lay, Inc., Dallas, Tex. Filed Aug. 25, 1969.

PETER BAKER'S

"Peter Baker" is a fanciful name and is not the name of a particular living individual.
For Snack Foods—Namely, Bacon-Flavored, Cereal-based Snack, Potato Chips, Corn Chips and Puffed Corn Snacks (Int. Cl. 29).
First use Aug. 8, 1969.

SN 336,744. General Mills, Inc., Minneapolis, Minn. Filed Sept. 2, 1969.

TREE HOUSE

For Food Products—Namely, Sandwiches, Cakes, Soups, Coffee, Potato Salad, Macaroni and Cheese Main Dishes, Hot Dog Buns and Hamburger Buns (Int. Cls. 29 and 30).
First use on or about July 18, 1969.

SN 337,403. General Mills, Inc., Minneapolis, Minn. Filed Sept. 9, 1969.

OVER SAUCES

Applicant disclaims the word "Sauces" apart from the mark as shown.
For Sauces for Flavoring and Garnishing Meats and Vegetables (Int. Cl. 30).
First use on or about Aug. 7, 1969.

SN 339,390. Desert Citrus Co., Yuma, Ariz. Filed Oct. 1, 1969.

KIVA

The word "Kiva" in Pueblo Indian architecture means "a ceremonial chamber or structure."
For Fresh Citrus Fruits (Int. Cl. 31).
First use at least as early as April 1969.

SN 339,606. Steak n Shake, Inc., Bloomington, Ill. Filed Oct. 2, 1969.

STEAK N SHAKE JR.

Owner of Reg. Nos. 609,979, 843,430, and 872,846.
For Steakburger Sandwiches (Int. Cl. 29).
First use July 1, 1965.

SN 340,470. Bartlow Brothers, Inc., Rushville, Ill. Filed Oct. 13, 1969.

KORN TOP

For Prepared Meat Products (Int. Cl. 29).
First use May 1950.

SN 340,949. Setts Packing Company, Inc., St. Joseph, Mo. Filed Oct. 16, 1969.

BUN-BUDDIES

For Weiners (Int. Cl. 29).
First use Oct. 10, 1969.

SN 340,982. Lillian T. Borchard, Oxnard, Calif. Filed Oct. 17, 1969.

GoldenMAID

For Fresh Deciduous Fruits and Grapes (Int. Cl. 31).
First use at least as early as August 1954.

SN 341,024. Fleer Corp., Philadelphia, Pa. Filed Oct. 17, 1969.

QuickSand

For Chewing Gum (Int. Cl. 30).
First use Aug. 18, 1969.

SN 341,248. John Morrell & Co., Chicago, Ill. Filed Oct. 21, 1969.

PRESIDENTS TABLE

For Frankfurters, Pork Sausage, Sliced Luncheon Meats, Sliced Sausage, and Sliced Meat Loaf (Int. Cl. 29).
First use Oct. 9, 1969.

SN 342,988. Mama Cookie Bakeries, Inc., d.b.a. Pennywise Cookies, Chicago, Ill. Filed Nov. 7, 1969.

Pennywise

The drawing is lined for red.
For Cookies (Int. Cl. 30).
First use Mar. 12, 1969.

SN 343,054. Mr. Boston Seafoods Corp., Boston, Mass. Filed Nov. 10, 1969.



For Fresh Frozen Shrimp Cocktails (Int. Cl. 29).
First use May 19, 1969.

SN 343,212. Curacao Trading Company, Inc., New York, N.Y. Filed Nov. 12, 1969.

CETECO

For Fresh and Frozen Tropical Food Products, viz. Fruits and Vegetables, Biscuits, Cheese, Sweetened Condensed Milk and Evaporated Milk (Int. Cls. 29, 30, and 31).
First use June 2, 1969.

SN 343,373. Allied Mills, Inc., Chicago, Ill. Filed Nov. 13, 1969.

FLAKE'N PEL

For Cattle Feed (Int. Cl. 31).
First use July 25, 1969.

SN 343,560. Geo. A. Hormel & Company, Austin, Minn. Filed Nov. 14, 1969.

BUTTERCUT

For Fresh and Frozen Packaged Meat Patties Formed From Various Kinds of Meat (Int. Cl. 29).
First use Aug. 28, 1969.

SN 344,612. Albertson's, Inc., d.b.a. Tosco, Inc., Downey, Calif. Filed Nov. 26, 1969.

JANET LEE

The name "Janet Lee" is fictitious and is not known to be the name of any living person.

For Bakery Products—Namely, Rolls, English Muffins, and Hamburger Buns; Ice Cream and Imitation Ice Milk; Canned Fruits and Canned Vegetables; Frozen Orange Juice; Imitation Vanilla; Cheddar-Type Cheese Spread; and Canned Fruit Juices, Vegetable Juices, and Tomato Juice (Int. Cls. 29, 30, and 32).

First use at least as early as 1962.

SN 346,255. Kemoo Farm Foods, Ltd., Wahiawa, Oahu, Hawaii. Filed Dec. 15, 1969.

HAPPY CAKE

The word "Cake" is disclaimed apart from the mark as shown.

For Cake Containing Nuts and Fruit (Int. Cl. 30).
First use on or before Sept. 9, 1969.

SN 346,676. Worthington Foods, Inc., Worthington, Ohio. Filed Dec. 18, 1969.

StrippleZips

Owner of Reg. No. 881,783.
For Bacon Flavored, Crunchy, High Protein, Vegetable Base Foods for Use as a Garnish (Int. Cl. 29).
First use July 3, 1969.

SN 346,980. Swizels, Inc., Hoboken, N.J. Filed Dec. 22, 1969.

HIPPIES

For Confectionery—Namely, Candy (Int. Cl. 30).
First use on or about Dec. 5, 1969.

SN 346,999. Worthington Foods, Inc., Worthington, Ohio. Filed Dec. 22, 1969.

For High Protein, Vegetable Base Foods for Use in the Place of Meat of Animal Flesh Type (Int. Cl. 29).
First use May 28, 1969.

SN 347,693. Sunshine Biscuits, Inc., New York, N.Y. Filed Jan. 5, 1970.

TALK TURKEY

Without waiver of any common-law rights, applicant makes no claim of exclusive right to use the word "Turkey" apart from the complete mark shown in the drawing.

For Imitation Turkey-Flavored Snack Crackers (Int. Cl. 30).
First use July 14, 1969.

SN 348,631. Armour-Dial, Inc., Chicago, Ill. Filed Jan. 15, 1970.

BANKIT

For Canned Dog Food (Int. Cl. 31).
First use on or prior to Dec. 11, 1969.

SN 349,432. The Quaker Oats Company, Chicago, Ill. Filed Jan. 23, 1970.

VITAMAN THE GREAT

Owner of Reg. No. 857,596.
For Ready-To-Eat Cereal (Int. Cl. 30).
First use Dec. 18, 1969.

SN 350,448. Aunt Millie's Sauces, Inc., New York, N.Y. Filed Feb. 4, 1970.

CLAMINARA

For Spaghetti Sauce (Int. Cl. 30).
First use Nov. 12, 1969.

SN 350,452. Edward H. Bohlmann, d.b.a. No-DK Distributors, Encino, Calif. Filed Feb. 4, 1970.

For Chewing Gum (Int. Cl. 30).
First use on or about July 28, 1964.

SN 350,647. Carter-Wallace, Inc., New York, N.Y. Filed Feb. 6, 1970.

EASY DRESS

For Imitation Mayonnaise (Int. Cl. 29).
First use Jan. 20, 1970.

AIRLIGHT

For Wheat Flour (Int. Cl. 30).
First use at least as early as June 1, 1937.

Class 47—Wines

SN 300,111. A. Racke KG, Bingen (Rhine), Germany. Filed June 10, 1968.

Amselfelder

"Amselfelder" is translated into English as "blackbirdfield." Owner of German Reg. No. 809,064, dated Mar. 6, 1965.
For Wine of Yugoslav Origin (Int. Cl. 33).

SN 337,333. Lanson Pere & Fils, Societe anonyme, Reims, Marne, France. Filed Sept. 8, 1969.



No claim is made to the words "Vintage 1961," "Reims" and "Brut," apart from the mark as shown. The drawing is lined for the color purplish red. Owner of U.S. Reg. Nos. 676,501 and 679,805; and French Reg. No. 701,866, dated Nov. 2, 1965.
For Champagne Wines (Int. Cl. 33).

Class 48—Malt Beverages and Liquors

SN 333,355. Associated Brewing Company, Detroit, Mich. Filed July 24, 1969.

BIG MOUTH

For Beer (Int. Cl. 32).
First use Apr. 23, 1969.

SN 348,929. Asreco Products Co., Wapato, Wash. Filed Nov. 19, 1969.

Insta-Brau

For Home Brew Beer Mix Liquid Concentrate (Int. Cl. 32).
First use Oct. 20, 1969.

SN 354,194. Lucky Breweries, Inc., San Francisco, Calif. Filed Mar. 16, 1970.

Lucky

Owner of Reg. Nos. 804,778, 657,853, and others.
For Beer (Int. Cl. 32).
First use June 9, 1969; Jan. 18, 1933, in a different form.

Class 49 — Distilled Alcoholic Liquors

SN 297,912. Zimmerman's Cut Rate Liquor Store, Inc., Chicago, Ill. Filed May 10, 1968.

ZIMEROV

For Vodka (Int. Cl. 33).
First use March 1967.

SN 333,567. The Highland Distilleries Company Limited, Glasgow, Scotland. Filed July 25, 1969.

GLENGLASSAUGH

Owner of British Reg. No. B856,953, dated Nov. 23, 1963.
For Scotch Whisky (Int. Cl. 33).

SN 336,208. Don J. Carew, d.b.a. Carew Distributing Company, Los Angeles, Calif. Filed Aug. 22, 1969.

Pipe'n Kilt

For Blended Scotch Whisky (Int. Cl. 33).
First use Mar. 6, 1969.

Class 50 — Merchandise Not Otherwise Classified

SN 335,313. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Aug. 14, 1969.

KLEERITE

For Vinyl Carpet Runners (Int. Cl. 27).
First use June 4, 1969.

SN 342,384. The Akro Corporation, Canton, Ohio. Filed Nov. 3, 1969.

AKRO

Owner of Reg. Nos. 876,701, 876,702, and 878,835.
For Carpet-to-Vinyl Mats and Matting (Int. Cl. 27).
First use on or about Apr. 1, 1969.

SN 354,768. General Mills, Inc., Minneapolis, Minn. Filed Mar. 23, 1970.

CUCKOO STRAWS

For Plastic Straws (Int. Cl. 20).
First use on or about Mar. 11, 1970.

Class 51 — Cosmetics and Toilet Preparations

SN 316,131. Dart Industries Inc., Los Angeles, Calif., by change of name from Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company, Los Angeles, Calif. Filed Jan. 8, 1969.

redi-spray

Applicant disclaims the word "Spray" apart from the mark as shown.
For Personal Deodorant (Int. Cl. 5).
First use in 1963.

SN 326,110. Luzier Incorporated, Kansas City, Mo. Filed May 1, 1969.

FINAL-EYES

For Compact Containing Eyebrow Make-Up, Eyeliner and Mascara and Applicator Therefor (Int. Cl. 3).
First use Jan. 24, 1968.

SN 330,152. Lancome S.A., Paris, France. Filed June 16, 1969.

ABYSSALE

The mark is the French for "unfathomable."
For Moisturizing Cream (Int. Cl. 3).
First use at least as early as 1961; in commerce at least as early as 1961.

SN 330,710. Block Drug Company, Inc., Jersey City, N.J. Filed June 28, 1969.

DENTU-MIST

Owner of Reg. Nos. 191,719 and 390,473.
For Cosmetic Preparation—Namely, Breath Freshener (Int. Cl. 3).
First use on or about June 9, 1969.

SN 331,239. Posner Laboratories, Inc., Corona, N.Y. Filed June 27, 1969.

SECOND SKIN

The word "Skin" is disclaimed apart from the mark as shown.
For Face and Body Creams (Int. Cl. 3).
First use Mar. 24, 1969.

SN 332,573. Beecham Inc., Clifton, N.J. Filed July 15, 1969.

**Arrête La Marche
Du Temps**

The words, "Arrête La Marche Du Temps" translated into English means "stop the march of time."
For Compact Make-Up—Namely, Face Powder (Int. Cl. 3).
First use June 11, 1969.

SN 335,547. Century Creations, Incorporated, d.b.a. Dairi-metics, Ltd., Venice, Calif. Filed Aug. 18, 1969.

Dr. Care

For Hand Cream (Int. Cl. 3).
First use June 20, 1969.

SN 336,108. Max Factor & Co., Hollywood, Calif. Filed Aug. 25, 1969.

LASH-A-DASHERY

For Cake Eye-Liner, Eye Shadow, and Mascara (Int. Cl. 3).
First use July 22, 1969.

SN 337,849. Charmaceuticals, Inc., Los Angeles, Calif. Filed Sept. 15, 1969.

A Touch of Silk

For Face Cream (Int. Cl. 3).
First use Jan. 2, 1969.

SN 342,903. A. H. Robins Company, Incorporated, Richmond, Va. Filed Nov. 6, 1969.

TIE-BREAKER

For Cosmetics for Men—Namely, Cologne and After Shave Lotion (Int. Cl. 3).
First use Oct. 14, 1969.

SN 344,787. Johnson & Johnson, New Brunswick, N.J. Filed Nov. 28, 1969.

SUDDEN SOFTNESS

Applicant disclaims the word "Softness" apart from the mark as shown.
For Hand Lotion (Int. Cl. 3).
First use Oct. 24, 1969.

SN 345,184. Luzier Incorporated, Kansas City, Mo. Filed Dec. 3, 1969.

LU-MOIST

For Moisturizing Massage Cream (Int. Cl. 3).
First use Oct. 1, 1969.

SN 345,501. Richardson-Merrell Pty. Limited, Fairfield, South Wales, Australia. Filed Dec. 5, 1969.

Deep Secret

Owner of Australian Reg. No. A216,553, dated Feb. 2, 1968.
For Skin Lotion (Int. Cl. 3).

SN 354,935. Colgate-Palmolive Company, New York, N.Y. Filed Mar. 24, 1970.

DYNEX

For Dentifrice (Int. Cl. 3).
First use Mar. 9, 1970.

Class 52 — Detergents and Soaps

SN 315,484. National Tea Co., Chicago, Ill. Filed Dec. 30, 1968.

PINK DELIGHT

The word "Pink" is disclaimed apart from the mark as shown.
For Household Detergents in Liquid State (Int. Cl. 3).
First use Nov. 2, 1967.

SN 316,605. Caled Products Company, Inc., Brentwood, Md. Filed Jan. 15, 1969.

Z-P

For Spotter Composition for Removing Spots and Stains From Garments in Dry Cleaning Plants (Int. Cl. 3).
First use Sept. 24, 1965.

SN 316,607. Caled Products Company, Inc., Brentwood, Md. Filed Jan. 15, 1969.

SUPER CAL

Applicant disclaims the word "Super" apart from the mark as shown. Owner of Reg. Nos. 753,574 and 754,860.
For Detergent Composition for Use in Commercial Dry Cleaning of Garments (Int. Cl. 3).
First use October 1966.

SN 316,615. Caled Products Company, Inc., Brentwood, Md. Filed Jan. 15, 1969.

ECONO-CHARGE

For Detergent Concentrate for Dry Cleaning Garments in Commercial Dry Cleaning Plants (Int. Cl. 3).
First use May 1968.

SN 324,787. Amway Corporation, Ada, Mich. Filed Apr. 17, 1969.

DISH DROPS

Applicant disclaims the word "Dish" apart from the mark as shown.
For Concentrated Preparation for Washing Dishes (Int. Cl. 3).
First use on or about Dec. 24, 1948.

SN 338,867. Amway Corporation, Ada, Mich. Filed Sept. 25, 1969.

TRI-ZYME

For Laundry Pre-Soak Composition With Stain Removing Enzymes (Int. Cl. 3).
First use on or about Mar. 25, 1969.

SERVICE MARKS

Class 100—Miscellaneous

SN 300,287. Paramed, Incorporated, New York, N.Y. Filed June 12, 1968.

PARAMED

For Consultation and Designing Services, Rendered to Hospitals, Architects Specializing in Hospitals, to Colleges and Pharmaceutical Manufacturers in Connection With Floor-Plan Layout, Construction, Modernization, Packaging, Inventory Control, Purchasing and Personnel Training (Int. Cl. 42). First use September 1957.

SN 315,694. The Printing Industry of the Carolinas, Inc., Charlotte, N.C. Filed Dec. 12, 1968.

PICA

For Trade Association Services—Namely, the Promotion of the Interests of Those in the Printing Industry (Int. Cl. 42). First use December 1946.

SN 326,805. Superintendence Company, Inc., New York, N.Y. Filed May 8, 1969.



For Supervising, Loading, Discharging, Weighing, Sampling, and Analyzing of Shipments and Cargoes of All Types (Int. Cl. 42). First use January 1964.

SN 328,508. Mister Beefe International, Inc., Pittsburgh, Pa. Filed May 28, 1969.



FOR THE UNITED STATES OF AMERICA

The applicant disclaims the term "Beefe" separate and apart from the mark as shown in the accompanying drawing reserving all common law rights which it may now or hereinafter have in said term.

For Restaurant Services (Int. Cl. 42). First use at least as early as June 12, 1968.

TM 256

SN 329,332. Bratskellars of America, Inc., Denver, Colo. Filed June 6, 1969.



For Restaurant and Liquor Bar Services (Int. Cl. 42). First use on or about Jan. 2, 1967.

SN 334,903. Some Other Place, Inc., Franklin Park, Ill. Filed Aug. 8, 1969.



For Bar and Restaurant Services (Int. Cl. 42). First use September 1967.

SN 336,632. John A. Pace, Dallas, Tex. Filed Aug. 29, 1969.

MISS KABOB

Applicant disclaims the word "Kabob" apart from the mark as shown.

For Restaurant Services (Int. Cl. 42). First use at least as early as September 1967.

SN 338,491. Regis Corporation, Minneapolis, Minn. Filed Sept. 22, 1969.



For Owner of Reg. No. 862,885. For Beauty Salon Services (Int. Cl. 42). First use on or about Jan. 1, 1954.

SN 339,605. Steak n Shake, Inc., Bloomington, Ill. Filed Oct. 2, 1969.

STEAK N SHAKE JR.

Owner of Reg. Nos. 609,979, 843,430, 872,346, and others. For Restaurant Services (Int. Cl. 42). First use July 1, 1965.

JUNE 30, 1970

U. S. PATENT OFFICE

TM 257

SN 354,376. A & W International, Inc., Santa Monica, Calif. Filed Mar. 18, 1970.

-AN ISLAND OF REFRESHMENT

For Restaurant Services (Int. Cl. 42). First use January 1968.

SN 354,781. Sizzlebörd Restaurants, Inc., Needham Heights, Mass. Filed Mar. 23, 1970.

sizzlebörd

For Restaurant Services (Int. Cl. 42). First use at least as early as June 1968.

Class 101—Advertising and Business

SN 293,237. Consumer Controls, Inc., Liverpool, N.Y. Filed Mar. 14, 1968.

BUY-POWER

For Promoting the Business of Banks and Savings Institutions Through Arrangements With Merchandisers To Honor Discount Certificates Issued by Said Banks and Institutions (Int. Cl. 35). First use at least as early as Feb. 19, 1968.

SN 293,238. Consumer Controls, Inc., Liverpool, N.Y. Filed Mar. 14, 1968.



For Promoting the Business of Banks and Savings Institutions Through Arrangements With Merchandisers To Honor Discount Certificates Issued by Said Banks and Institutions (Int. Cl. 35). First use Jan. 5, 1968.

SN 313,311. Lex Computer Systems, Redwood City, Calif. Filed Nov. 29, 1968.



LEX COMPUTER SYSTEMS

The words "Computer Systems" and the representation of a computer reel are disclaimed apart from the mark as shown. The mark consists of the word "Lex" plus a design. The mark is stippled for purposes of indicating color contrast only and does not form a part of the mark.

For Management and Decision Assistance Services to Law Offices (Int. Cl. 35). First use February 1968.

SN 321,809. Dr. Richard L. Williamson, d.b.a. Animal Kingdom Pet Supplies, Shenandoah, Iowa. Filed Mar. 10, 1969.

ANIMAL KINGDOM

For Retail Pet Supply Store Services (Int. Cl. 35). First use Jan. 11, 1969.

SN 327,841. Bookland of Huntsville, Inc., Huntsville, Ala. Filed May 21, 1969.

BOOKLAND

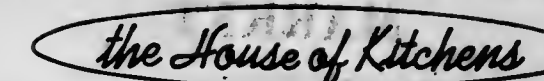
For Retail Book Stores Services (Int. Cl. 35). First use May 1966.

SN 327,846. Bowl & Board, Inc., New York, N.Y. Filed May 21, 1969.

BOWL & BOARD

For Retail Gift Shop Services; Rendering Technical Assistance to Gift Shops—Namely, Advising and Assisting Operation of Gift Shops (Int. Cl. 35). First use Mar. 3, 1964.

SN 331,200. The House of Kitchens, Inc., Mechanicville, N.Y. Filed June 27, 1969.



No claim is made to the word "Kitchens" apart from the mark. For Distributorship Services in Field of Kitchen Appliances, Cabinets and Related Merchandise (Int. Cl. 35). First use May 1964.

SN 331,688. Avitron Corporation, Upper Saddle River, N.J. Filed July 3, 1969.



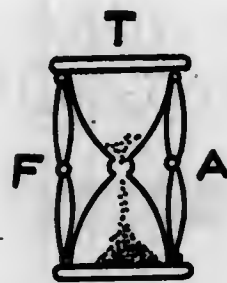
For Tax and Financial Consulting Services to Companies in the Aviation Industry (Int. Cl. 35). First use Jan. 18, 1969.

SN 332,916. Central Information Processing Corporation, Baltimore, Md. Filed July 18, 1969.



For Computerized Payroll Service (Int. Cl. 35). First use Apr. 16, 1969.

SN 334,902. Dan Gray, d.b.a. Time Finance Adjusters, Fort Worth, Tex. Filed Aug. 8, 1969.



For Adjusting and Repossessing Mortgaged Property (Int. Cl. 35).
First use Apr. 8, 1957.

SN 335,822. MDC Systems, Inc., Montgomery, Ala. Filed Aug. 21, 1969.

MDC

For Computerized Bookkeeping Services, Computer Software Program Design and Installation Services, and Services of Supplying Forms and Supplemental Supplies of Others for Use in Computer Operations (Int. Cl. 35).
First use at least as early as May 9, 1969.

SN 340,309. Bachman's Inc., Minneapolis, Minn. Filed Oct. 10, 1969.

EUROPEAN FLOWER MARKET

The designation "Flower Market" is disclaimed apart from the composite expression "European Flower Market."
For Providing Retail Floral Supply Services in Sections of Department Stores, Supermarkets, and the Like (Int. Cl. 35).
First use Apr. 8, 1968.

SN 340,310. Bachman's Inc., Minneapolis, Minn. Filed Oct. 10, 1969.



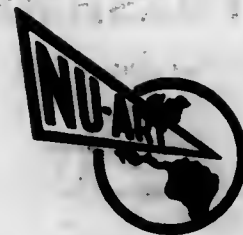
The designation "Flower Market" is disclaimed apart from the composite expression "European Flower Market."
For Providing Retail Floral Supply Services in Sections of Department Stores, Supermarkets, and the Like (Int. Cl. 35).
First use November 1968.

SN 341,764. V.I.P., Inc., Austin, Tex. Filed Oct. 27, 1969.

V.I.P.

For Providing Discount Privileges to Club Members for Goods and Services From Selected Merchants (Int. Cl. 35).
First use at least as early as about Dec. 10, 1968.

SN 345,705. Violetta Tartaglia, d.b.a. Nu-Art Advertising, Brooklyn, N.Y. Filed Dec. 9, 1969.



For Preparation of Advertising Displays, Posters, and Decals for Others (Int. Cl. 35).
First use Mar. 15, 1952.

SN 346,806. Lewis Greenwood, d.b.a. L. Greenwood Company, North Hollywood, Calif. Filed Dec. 22, 1969.

PAY-FONE

For Bookkeeping Services Utilizing Data Telecommunication (Int. Cl. 35).
First use at least as early as September 1967.

SN 351,079. Lever Brothers Company, New York, N.Y. Filed Feb. 11, 1970.

MONI-CHEK

For Providing of Premium Certificates to Consumers, and the Redeeming of Such Certificates for Selected Items of Merchandise (Int. Cl. 35).
First use May 12, 1969.

Class 102 — Insurance and Financial

SN 331,246. South Suburban Federal Savings and Loan Association, Harvey, Ill. Filed June 27, 1969.

Xtracnex

For Investment Savings Account Services (Int. Cl. 36).
First use Feb. 8, 1969.

Class 103 — Construction and Repair

SN 309,553. Dresser Industries, Inc., Dallas, Tex. Filed Oct. 14, 1968.

DIGUN

For Oil and Gas Well Perforating Services (Int. Cl. 37).
First use on or about July 1, 1968.

Class 104 — Communication

SN 311,108. American Television and Communications Corporation, Denver, Colo. Filed Nov. 1, 1968.



The representation of the map of the United States of America is disclaimed apart from the mark as shown.
For Cable Antenna Television Services (Int. Cl. 38).
First use Aug. 15, 1968.

SN 330,121. Facsimile Centers Incorporated, New York, N.Y. Filed June 16, 1969.

FCI

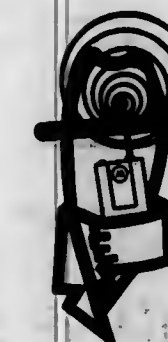
For Transmittal of Writings Over Telephone Lines (Int. Cl. 38).
First use May 6, 1969.

SN 330,487. Facsimile Centers Incorporated, New York, N.Y. Filed June 19, 1969.



For Services of Transmittal of Writings Over Telephone Lines (Int. Cl. 38).
First use May 6, 1969.

SN 339,681. Phone Depots, Inc., New York, N.Y. Filed Oct. 3, 1969.



For Tone and Voice Radio Paging and Tone Only Radio Paging Service; Radio Transmission and Receiving Service Connecting Subscriber and Central Office for Relaying Messages to and From Subscriber (Int. Cl. 38).
First use July 1, 1969.

Class 105 — Transportation and Storage

SN 338,267. Fun-Tyme Packages, Inc., Brooklyn, N.Y. Filed July 23, 1969.

BAHAMA-RAMA

For Conducting Travel Tours for Others (Int. Cl. 39).
First use Dec. 15, 1968.

Class 106 — Material Treatment

SN 297,663. Dun-Rite Leather & Suede Processing, Brooklyn, N.Y. Filed May 8, 1968.



For Leather and Suede Processing for Others (Int. Cl. 40).
First use Feb. 8, 1968.

SN 318,518. Lubeco, Inc., Compton, Calif. Filed Dec. 8, 1968.

TICERMET

For Applying an Anodized Coating to Titanium Products of Others (Int. Cl. 40).
First use Feb. 27, 1968.

SN 334,225. Film Corporation of America, Philadelphia, Pa. Filed Aug. 1, 1969.

FCA

For Photofinishing Services (Int. Cl. 40).
First use Jan. 8, 1969.

SN 344,357. Film Corporation of America, Jenkintown, Pa. Filed Nov. 24, 1969.



For Photofinishing Services (Int. Cl. 40).
First use Jan. 8, 1969.

Class 107 — Education and Entertainment

SN 311,058. Paul Alton Proctor, d.b.a. The Casanovas, Raleigh, N.C. Filed Oct. 31, 1968.



The drawing is lined for the color red, and the color is claimed as a part of the mark.
For Entertainment Services—Namely, the Rendering of Vocal and Instrumental Entertainment (Int. Cl. 41).
First use Feb. 28, 1968.

SN 315,006. Madison Square Garden Corporation, New York, N.Y. Filed Dec. 28, 1968.

MAGIC WORLD

For Variety Entertainment Presentations, Athletic Exhibitions, and Entertainment, Cultural and Musical Pageants and Presentations (Int. Cl. 41).

First use not later than Oct. 1, 1967.

SN 318,951. Dale Carnegie & Associates, Inc., Garden City, N.Y. Filed Feb. 12, 1969.

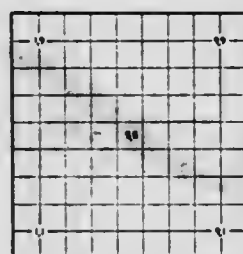


Applicant makes no claim to the words "Supervision & Management Seminar," apart from the mark as shown. Owner of Reg. Nos. 361,829, 376,455, and others.

For Educational Services—Namely, the Teaching of Managerial Skills Through a Series of Group Discussions, Lectures and Individual Projects (Int. Cl. 41).

First use Apr. 3, 1967.

SN 320,384. Scientific Methods, Inc., Austin, Tex. Filed Feb. 28, 1969.



Owner of Reg. No. 856,255.

For Conducting Management Training Courses (Int. Cl. 41).

First use April 1962.

SN 331,865. Cincinnati Basketball Club Company, Cincinnati, Ohio. Filed July 7, 1969.



For Entertainment Services in the Nature of Professional Basketball Exhibitions Rendered Live and Through the Media of Radio and Television Broadcasts (Int. Cl. 41).

First use Aug. 25, 1957.

SN 340,720. Management Games Institute, Inc., Larchmont, N.Y. Filed Oct. 15, 1969.



For Correspondence School Services in the Field of Business Management (Int. Cl. 41).

First use at least as early as Dec. 26, 1968.

SN 340,736. Psychological Associates, Inc., St. Louis, Mo. Filed Oct. 15, 1969.

DIMENSIONAL SALES TRAINING

The words "Sales Training" are disclaimed apart from the mark as shown.

For Educational Services—Namely, Conducting Seminars in Sales and Management (Int. Cl. 41).

First use May 1967.

SN 342,063. Richard Proctor, d.b.a. Elaine Powers Figure Salons, Fair Oaks, Calif. Filed Oct. 29, 1969.

ELAINE POWERS FIGURE SALONS

The term "Figure Salons" is disclaimed apart from the mark as shown. The words "Elaine Powers" do not identify a living individual to the knowledge of the applicant.

For Figure Improvement Services (Int. Cl. 41).

First use June 1962.

SN 352,423. Walt Disney Productions, Burbank, Calif. Filed Feb. 26, 1970.

NEW ORLEANS SQUARE

For Services in Connection With Providing Participation Type Entertainment in an Amusement and Educational Park (Int. Cl. 41).

First use July 26, 1966.

SN 355,192. Unitek Corporation, Monrovia, Calif. Filed Mar. 27, 1970.

UNITEK

For Performance of Educational Services in Organizing and Conducting Industry Seminars and Work Shops Relating to Precision Resistance Welding and Semiconductor Processing, Packaging and Bonding Technology (Int. Cl. 41).

First use at least as early as 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 331,713. The Arabic Club, Dayton, Ohio. Filed July 3, 1969.



No claim is made to the exclusive right to use the words "Member," "The," and "of Dayton, Ohio," apart from the mark as shown.

For Indicating Membership in Applicant.

First use during December 1919.

CERTIFICATION MARKS

Class A — Goods

SN 352,842. National Electrical Manufacturers Association, New York, N.Y. Filed Mar. 2, 1970.



The mark certifies that National Electrical Manufacturers Association ("NEMA") has verified, through an independent laboratory, that when tested in accordance with Standard HE2, the electric space heating equipment to which the mark is affixed conforms to the temperature test provisions of said Standard HE2. Said standard has been adopted by and is acceptable to applicant. Owner of Reg. No. 838,560.

For Electrical Space Heating Equipment of the Type Particularly Used in Residences, Such as Baseboard Heaters, Wall Heaters, and Comfort Heating Cable.

First use August 1969.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 893,495. SEE-CURE. Epic Resins Corporation. SN 285,006. Pub. 4-14-70. Filed 11-16-67.
- 893,496. BEAKER DESIGN. Lancer Chemical Corporation. MULTIPLE CLASS (Classes 1, 6, and 15). SN 292,045. Pub. 4-14-70. Filed 2-28-68.
- 893,497. VICRYL. The Sherwin-Williams Company. SN 301,263. Pub. 4-14-70. Filed 6-24-68.
- 893,498. SILASTIC LS-63. Dow Corning Corporation. SN 316,709. Pub. 4-14-70. Filed 1-16-69.
- 893,499. STARLIGHT. Fränkische Pelsindustrie Märkle & Co., Furth, Bavaria, Germany. MULTIPLE CLASS (Classes 1 and 39). SN 321,360. Pub. 4-14-70. Filed 9-26-68.
- 893,500. TUF-COTE FELT. Specialty Converters, Inc. SN 322,103. Pub. 4-14-70. Filed 3-18-69.
- 893,501. GENAL. General Electric Company. SN 323,699. Pub. 4-14-70. Filed 4-4-69.
- 893,502. STRATOMERIC. Reeves Brothers, Inc. SN 329,511. Pub. 4-14-70. Filed 6-9-69.
- 893,503. VIVANA. Dow Badische Company. SN 334,766. Pub. 4-14-70. Filed 8-8-69.
- 893,504. FL AND CIRCLE DESIGN. Flow Laboratories, Inc. SN 344,182. Pub. 4-14-70. Filed 11-21-69.
- 893,505. DOG, RAT AND CIRCLE DESIGN. Flow Research Animals, Inc. SN 344,183. Pub. 4-14-70. Filed 11-21-69.
- 893,506. READY TO GO TO WORK WHEN THEY ARRIVE. Flow Research Animals, Inc. SN 344,184. Pub. 4-14-70. Filed 11-21-69.

Class 2—Receptacles

- 893,507. ARISTOCRAT. Evans-Aristocrat Industries, Inc. SN 316,195. Pub. 4-14-70. Filed 1-9-69.
- 893,508. TUFF-GLO. The Mead Corporation. SN 322,726. Pub. 4-14-70. Filed 3-25-69.
- 893,509. DOMTAR. Domtar Limited. SN 327,814. Pub. 4-14-70. Filed 5-21-69.
- 893,510. PRIDEMARK. Maryland Cup Corp. SN 333,836. Pub. 4-14-70. Filed 7-29-69.
- 893,511. POLYSTORMOR. Mallinckrodt Chemical Works. SN 334,104. Pub. 4-14-70. Filed 7-31-69.
- 893,512. DUK-IT AND DESIGN. McDonald Products Corporation. MULTIPLE CLASS (Classes 2, 8, 32, and 37). SN 338,461. Pub. 4-14-70. Filed 9-22-69.
- 893,513. MISCELLANEOUS DESIGN. McDonald Products Corporation. MULTIPLE CLASS (Classes 2, 8, 32, and 37). SN 338,462. Pub. 4-14-70. Filed 9-22-69.
- 893,514. GENIE BAGS. Ethyl Corporation. SN 338,712. Pub. 4-14-70. Filed 9-24-69.
- 893,515. FABRICARTON. Warnaco Inc. SN 342,191. Pub. 4-14-70. Filed 10-30-69.

Class 5—Adhesives

- 893,516. SUNCURE. Sun Chemical Corporation. SN 303,076. Pub. 4-14-70. Filed 7-18-68.
- 893,517. TIRE SAFE. Ore-Lube Corporation. SN 325,213. Pub. 4-14-70. Filed 4-22-69.

Class 6—Chemicals and Chemical Compositions

- 893,496. (See Class 1 for this trademark.)
- 893,518. ARISTAR. The British Drug Houses Limited. SN 278,628. Pub. 4-14-70. Filed 8-16-67.
- 893,519. CONSO STAIN-GUARD. Consolidated Foods Corporation. SN 293,361. Pub. 4-14-70. Filed 3-15-68.
- 893,520. SUNCURE. Sun Chemical Corporation. SN 303,077. Pub. 4-14-70. Filed 7-18-68.
- 893,521. SNOW GO. Bernard J. Semel. SN 313,735. Pub. 4-14-70. Filed 12-5-68.
- 893,522. LITTLE PAL. Celebrity, Inc. SN 315,289. Pub. 4-14-70. Filed 12-27-68.
- 893,523. PA AND DESIGN. R.A. Chemical Corp. SN 317,279. Pub. 4-14-70. Filed 1-23-69.
- 893,524. MISCELLANEOUS DESIGN. Teledyne, Inc. SN 321,836. Pub. 4-14-70. Filed 3-14-69.
- 893,525. INHIBITRON. Chemtrust Industries Corp. SN 323,328. Pub. 4-14-70. Filed 4-1-69.
- 893,526. SCORCH. Pennwalt Corporation. SN 328,334. Pub. 4-14-70. Filed 5-26-69.
- 893,527. KA 7 AND DESIGN. A. K. Electric Corp. SN 328,968. Pub. 4-14-70. Filed 6-3-69.
- 893,528. CERTIFIRED. E. I. du Pont de Nemours and Company. SN 331,109. Pub. 4-14-70. Filed 6-27-69.
- 893,529. DOW AND DIAMOND DESIGN. The Dow Chemical Company. SN 340,882. Pub. 4-14-70. Filed 10-16-69.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 893,512. (See Class 2 for this trademark.)
- 893,513. (See Class 2 for this trademark.)

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 893,530. LAWMAN. Colt's Inc. SN 331,471. Pub. 4-14-70. Filed 6-24-69.
- 893,531. HYDRATOL. Commercial Solvents Corporation. SN 333,097. Pub. 4-14-70. Filed 7-22-69.

Class 10—Fertilizers

- 893,532. OXYCHEM. Occidental Petroleum Corporation. SN 336,838. Pub. 4-14-70. Filed 9-2-69.

Class 11—Inks and Inking Materials

- 893,533. THE CHEMISTRY OF COLOR. Formlabs, Incorporated. SN 296,015. Pub. 4-14-70. Filed 4-19-68.
- 893,534. MIMCON. A. B. Dick Company. SN 296,524. Pub. 4-14-70. Filed 4-25-68.
- 893,535. GIRL FRIDAY. Eaton Allen Corp. SN 306,658. Pub. 4-14-70. Filed 9-5-68.

JUNE 30, 1970

U. S. PATENT OFFICE

TM 263

Class 12—Construction Materials

- 893,536. POLYDITREMZENE. The Tremco Manufacturing Company. SN 302,461. Pub. 3-31-70. Filed 7-10-68.
- 893,537. UCAR. Union Carbide Corporation. SN 322,501. Pub. 4-14-70. Filed 3-21-69.
- 893,538. INMONT. Inmont Corporation. SN 327,551. Pub. 4-14-70. Filed 5-19-69.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 893,539. PACEMAKER. Harloc Products Corporation. MULTIPLE CLASS (Classes 13 and 25). SN 302,811. Pub. 4-14-70. Filed 7-16-68.
- 893,540. RADIFLEX. Sheets Radiflex Corporation. SN 328,355. Pub. 4-14-70. Filed 5-26-69.
- 893,541. TURBO-MASSAGE. Wolverine Brass Works. SN 337,114. Pub. 4-14-70. Filed 9-4-69.
- 893,542. DUO-FAST AND DESIGN. Fastener Corporation. MULTIPLE CLASS (Classes 18 and 23). SN 337,218. Pub. 4-14-70. Filed 9-8-69.
- 893,543. SEPER-AIR. Robert E. Marshburn, d.b.a. Seper-Air Products. SN 337,558. Pub. 4-14-70. Filed 9-10-69.

Class 14—Metals and Metal Castings and Forgings

- 893,544. 3M. Minnesota Mining and Manufacturing Company. SN 345,256. Pub. 4-14-70. Filed 12-4-69.

Class 15—Oils and Greases

- 893,496. (See Class 1 for this trademark.)
- 893,545. BENDIX AND DESIGN. The Bendix Corporation. SN 309,226. Pub. 4-14-70. Filed 10-9-68.
- 893,546. TRIPLE ACTION. Diamond Shamrock Corporation. SN 314,143. Pub. 4-14-70. Filed 12-11-68.
- 893,547. DOW CORNING 11. Dow Corning Corporation. SN 316,705. Pub. 4-14-70. Filed 1-16-69.
- 893,548. AUTRAN. The British Petroleum Company Limited. SN 323,238. Pub. 4-14-70. Filed 4-1-69.
- 893,549. NONSTICKENSTOFFE. Contour Chemical Co. SN 332,089. Pub. 4-14-70. Filed 7-9-69.
- 893,550. SIOUX. Sun Oil Company. SN 337,719. Pub. 4-14-70. Filed 9-11-69.

Class 16—Protective and Decorative Coatings

- 893,551. C CITAL AND DESIGN. Citoan A.G. SN 288,677. Pub. 4-14-70. Filed 1-12-68.
- 893,552. EPIMASTIC. Walles Dove Bitumastic Limited. SN 311,536. Pub. 4-14-70. Filed 11-6-68.

Class 17—Tobacco Products

- 893,553. LIMELITE. Philip Morris Incorporated. SN 338,322. Pub. 4-14-70. Filed 9-19-69.
- 893,554. OLD KING COLE. Wally Frank, Ltd. SN 342,483. Pub. 4-14-70. Filed 11-3-69.
- 893,555. OLD SUNLAND. Philip Morris Incorporated. SN 342,799. Pub. 4-14-70. Filed 11-6-69.

Class 18—Medicines and Pharmaceutical Preparations

- 893,556. GOMBAULT'S CAUSTIC BALSAM AND DESIGN. Gombault Products Corporation. SN 283,151. Pub. 4-14-70. Filed 1-10-68.
- 893,557. LANGYN. Daniel B. Langley, M.D., d.b.a. Langyn Laboratories. SN 299,777. Pub. 4-14-70. Filed 6-5-68.
- 893,558. SPOFA (DESIGN). Spofa-Spojene Podniky Pro Zdravotnickou Vyrobu. SN 305,785. Pub. 4-14-70. Filed 8-23-68.
- 893,559. MEDIC-FAIR. Medic-Fair, Inc. SN 316,323. Pub. 4-14-70. Filed 1-10-69.
- 893,560. STAYNER AND DESIGN. Stayner Corporation. SN 316,842. Pub. 4-14-70. Filed 1-16-69.
- 893,561. RENALYTE. Cobe Laboratories, Inc. SN 321,194. Pub. 4-14-70. Filed 3-10-69.
- 893,562. ACNESPAN. USV Pharmaceutical Corporation. SN 322,929. Pub. 4-14-70. Filed 3-26-69.
- 893,563. EXCEDRIN P.M. Bristol-Myers Company. SN 323,785. Pub. 4-14-70. Filed 4-7-69.
- 893,564. ASMATANE MIST. Riker Laboratories, Inc., by change of name and assignment from Rexall Drug and Chemical Company, d.b.a. Riker Laboratories. SN 324,504. Pub. 4-14-70. Filed 4-14-69.
- 893,565. DRUG CITY. Drug City, Incorporated. SN 324,898. Pub. 4-14-70. Filed 4-18-69.
- 893,566. FACE IT. Richardson-Merrell Inc. SN 326,480. Pub. 4-14-70. Filed 5-6-69.
- 893,567. MARIDYL. Geigy Chemical Corporation. SN 328,841. Pub. 4-14-70. Filed 6-2-69.
- 893,568. PRIOL. Geigy Chemical Corporation. SN 328,842. Pub. 4-14-70. Filed 6-2-69.
- 893,569. DICLOSURIC. Merck & Co., Inc. SN 329,196. Pub. 4-14-70. Filed 6-4-69.
- 893,570. LINTANIL. Merck & Co., Inc. SN 329,107. Pub. 4-14-70. Filed 6-4-69.
- 893,571. PERIACIN-VITA. Merck & Co., Inc. SN 329,108. Pub. 4-14-70. Filed 6-4-69.
- 893,572. DICLOSURIC. Merck & Co., Inc. SN 329,109. Pub. 4-14-70. Filed 6-4-69.
- 893,573. NATABEC RX. Parke, Davis & Company. SN 331,480. Pub. 4-14-70. Filed 7-1-69.
- 893,574. DIVESTIN. A. H. Robins Company, Incorporated. SN 331,541. Pub. 4-14-70. Filed 7-1-69.
- 893,575. KOTEX FRESH'N CLEAN. Kimberly-Clark Corporation. SN 333,280. Pub. 4-14-70. Filed 7-28-69.
- 893,576. NALDEGESIC. Bristol-Myers Company. SN 336,512. Pub. 4-14-70. Filed 8-28-69.
- 893,577. TODAY. Carter-Wallace, Inc. SN 341,739. Pub. 4-14-70. Filed 10-27-69.
- 893,578. RESPAIRE. Bristol-Myers Company. SN 341,893. Pub. 4-14-70. Filed 10-28-69.
- 893,579. ENO. Beecham Inc. SN 344,048. Pub. 4-14-70. Filed 11-20-69.
- 893,580. MILID. Rotta Research Laboratorium S.p.A. SN 344,081. Pub. 4-14-70. Filed 11-20-69.

Class 19—Vehicles

- 893,581. HEATHAIR. Heath Tecna Corporation. SN 302,810. Pub. 4-14-70. Filed 7-9-68.
- 893,582. DYNABULK. Dynabulk Corporation. SN 307,881. Pub. 4-14-70. Filed 9-20-68.
- 893,583. BENDIX AND DESIGN. The Bendix Corporation. SN 309,228. Pub. 4-14-70. Filed 10-9-68.
- 893,584. ASH IN DIAMOND DESIGN. Ash Precision Equipment, Inc. SN 311,002. Pub. 4-14-70. Filed 10-31-68.

- 893,585. PIRELLI. Pirelli S.p.A. MULTIPLE CLASS (Classes 19, 21, 22, 35, 39, and 44). SN 317,175. Pub. 4-14-70. Filed 1-22-69.
- 893,586. NAULETE. Nautlette, Inc. SN 320,074. Pub. 4-14-70. Filed 2-25-69.
- 893,587. PORTA-STOR. Assemblers, Inc. SN 323,883. Pub. 4-14-70. Filed 4-2-69.
- 893,588. CACCI CRAFT. Cacci Craft, Inc. SN 326,841. Pub. 4-14-70. Filed 5-5-69.
- 893,589. FOG BUSTER. John A. Schroeder, d.b.a. Will-Win Associates. SN 327,687. Pub. 4-14-70. Filed 5-19-69.
- 893,590. BRIDGESTONE M II RS. Bridgestone Tire Company Limited. SN 329,793. Pub. 4-14-70. Filed 6-12-69.
- 893,591. POLARIS. Textron Inc. SN 334,675. Pub. 4-14-70. Filed 8-7-69.
- 893,592. RANCHETTE. Lowe's Companies, Inc. SN 343,221. Pub. 4-14-70. Filed 11-12-69.
- 893,593. EMPRESS. The Firestone Tire & Rubber Company. SN 343,689. Pub. 4-14-70. Filed 11-17-69.
- 893,594. GENTRY. Northland Camps, Inc. SN 345,194. Pub. 4-14-70. Filed 12-3-69.

Class 21—Electrical Apparatus, Machines, and Supplies

- 893,585. (See Class 19 for this trademark.)
- 893,595. CHROMARA. Dale T. Smith, Jr., d.b.a. Smith Laboratories. SN 265,659. Pub. 4-14-70. Filed 2-28-67.
- 893,596. SLIMMING POOL GEYSER. Edmond Bordeaux Szekely, d.b.a. Hydrodynamics Research and Development Co. SN 266,468. Pub. 4-14-70. Filed 3-10-67.
- 893,597. ATELIER INTERNATIONAL LTD. Atelier International, Ltd. MULTIPLE CLASS (Classes 21 and 32). SN 277,957. Pub. 4-14-70. Filed 8-10-67.
- 893,598. SOURIAU. Souriau & Cie. SN 294,535. Pub. 4-14-70. Filed 3-29-68.
- 893,599. DATA PRODUCTS CORPORATION AND DESIGN. Data Products Corporation. SN 295,124. Pub. 4-14-70. Filed 4-8-68.
- 893,600. VEGART. Compagnie de Caoutchouc Manufacture Dynamic. SN 295,720. Pub. 4-14-70. Filed 4-16-68.
- 893,601. COMBIFLEX. Allmanna Svenska Elektriska Aktiebolaget. SN 299,083. Pub. 4-14-70. Filed 5-27-68.
- 893,602. TELETRADE. The Bunker-Ramo Corporation. SN 307,898. Pub. 7-1-69. Filed 9-18-68.
- 893,603. BURGESS TAPES. Giffen Corp. MULTIPLE CLASS (Classes 21 and 40). SN 310,515. Pub. 4-14-70. Filed 10-25-68.
- 893,604. PS DESIGN. Pass & Seymour, Inc. SN 310,974. Pub. 4-14-70. Filed 10-31-68.
- 893,605. SHALDA. Harvey Hubbell, Incorporated, d.b.a. Shalda Lighting Products Company. SN 312,197. Pub. 4-14-70. Filed 11-14-68.
- 893,606. DUAL SHOWMAN. Columbia Broadcasting System, Inc. SN 314,320. Pub. 4-14-70. Filed 12-12-68.
- 893,607. MASTERWORK. Columbia Broadcasting System, Inc. MULTIPLE CLASS (Classes 21 and 36). SN 317,791. Pub. 4-14-70. Filed 1-29-69.
- 893,608. TEM-PRESSURE. Kysor Industrial Corporation. SN 318,201. Pub. 4-14-70. Filed 2-3-69.
- 893,609. LITESHAPES. Luminous Ceilings, Inc. SN 322,719. Pub. 4-14-70. Filed 3-25-69.
- 893,610. ASH FLASH SOLAR. The H. J. Ashe Company, Inc. SN 324,392. Pub. 4-14-70. Filed 4-14-69.
- 893,611. CAPIL. Cape Asbestos Insulations (Proprietary) Limited. SN 335,546. Pub. 3-31-70. Filed 8-18-69.
- 893,612. TYLESCENT. Stanley E. Sorenson, d.b.a. Sorenco Products. SN 335,780. Pub. 4-14-70. Filed 8-20-69.
- 893,613. HYSTAREED. Cunningham Corporation. SN 337,276. Pub. 4-14-70. Filed 9-8-69.

- 893,614. HYSTAREED AND DESIGN. Cunningham Corporation. SN 337,277. Pub. 4-14-70. Filed 9-8-69.
- 893,615. MOCOM. Motorola, Inc. SN 337,565. Pub. 4-14-70. Filed 9-10-69.
- 893,616. PROCESSOTRON. Graphex, Inc. SN 337,659. Pub. 4-14-70. Filed 9-11-69.
- 893,617. SPEED-O-VISION. Matsushita Electric Industrial Co., Ltd. SN 337,673. Pub. 4-14-70. Filed 9-11-69.
- 893,618. S & EI. S & EI Manufacturing. SN 337,833. Pub. 4-14-70. Filed 9-12-69.
- 893,619. CEL-GARD AND DESIGN. Airpax Electronics Incorporated. SN 338,107. Pub. 4-14-70. Filed 9-17-69.
- 893,620. UNIPLY. Power Designs, Inc. SN 338,691. Pub. 4-14-70. Filed 9-23-69.
- 893,621. FLYING BOMB AND WINGED BOMB DESIGN. Kal It Battery Factory Ltd. SN 339,900. Pub. 4-14-70. Filed 10-6-69.
- 893,622. VIP. Reach Electronics, Inc. SN 340,423. Pub. 4-14-70. Filed 10-10-69.
- 893,623. XL (DESIGN). Oreck Corporation. SN 344,065. Pub. 4-14-70. Filed 11-20-69.
- 893,624. VIRDEN. The Scott & Fetzer Company. SN 344,140. Pub. 4-14-70. Filed 11-20-69.

Class 22—Games, Toys, and Sporting Goods

- 893,585. (See Class 19 for this trademark.)
- 893,625. DOLL-MATES. Mattel, Inc. SN 334,939. Pub. 4-14-70. Filed 8-11-69.
- 893,626. RATTLER. Mattel, Inc. SN 345,768. Pub. 4-14-70. Filed 12-10-69.
- 893,627. OVERTAKER. Mattel, Inc. SN 345,767. Pub. 4-14-70. Filed 12-10-69.
- 893,628. ROD REVVER. Mattel, Inc. SN 345,768. Pub. 4-14-70. Filed 12-10-69.
- 893,629. SPEED BELT. Mattel, Inc. SN 345,769. Pub. 4-14-70. Filed 12-10-69.
- 893,630. SPEED BREED. Mattel, Inc. SN 346,029. Pub. 4-14-70. Filed 12-12-69.
- 893,631. HOT PIPES. Mattel, Inc. SN 346,030. Pub. 4-14-70. Filed 12-12-69.
- 893,632. SPEED CENTER. Mattel, Inc. SN 346,033. Pub. 4-14-70. Filed 12-12-69.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 893,542. (See Class 13 for this trademark.)
- 893,633. COPY-RITE. Copy-rite Corporation. SN 282,178. Pub. 4-14-70. Filed 10-10-67.
- 893,634. MINET. Henry E. Leflon. SN 286,690. Pub. 4-14-70. Filed 12-11-67.
- 893,635. PINTREX. Henry J. Modrey, d.b.a. Modrey Associates. SN 293,160. Pub. 4-14-70. Filed 3-13-68.
- 893,636. FLO Matic. Lomag Corporation. SN 294,294. Pub. 4-14-70. Filed 3-27-68.
- 893,637. CLEVELAND. The Cleveland Automatic Machine Company. SN 295,618. Pub. 4-14-70. Filed 4-15-68.
- 893,638. ROI-CODER. William R. Blackwood, d.b.a. The Royston Company. SN 299,204. Pub. 4-14-70. Filed 5-28-68.
- 893,639. GEARMASTER. Gearmaster, Inc. SN 302,068. Pub. 4-14-70. Filed 7-5-68.
- 893,640. CHALLENGE AND DESIGN. The Challenge Machinery Company. SN 305,311. Pub. 4-14-70. Filed 8-16-68.
- 893,641. WHIRL-KING. The Edge-Rite Corporation. SN 306,125. Pub. 4-14-70. Filed 8-28-68.

- 893,642. HAVERHILL'S. Haverhill's, Inc. MULTIPLE CLASS (Classes 23, 26, 34, and 44). SN 306,417. Pub. 4-14-70. Filed 9-3-68.
- 893,643. COAT-O-MATIC. Daniel Lamar Christy. SN 307,561. Pub. 4-14-70. Filed 9-17-68.
- 893,644. SPRITELY ROSE. Utica Cutlery Company. SN 307,773. Pub. 4-14-70. Filed 9-19-68.
- 893,645. DELICA. Fukui & Company, Ltd. SN 307,997. Pub. 4-14-70. Filed 9-23-68.
- 893,646. VERSA-PLANE. Rockwell Manufacturing Company. SN 308,318. Pub. 4-14-70. Filed 9-26-68.
- 893,647. FLEETWOOD. Litton Business Systems, Inc. SN 309,269. Pub. 4-14-70. Filed 10-9-68.
- 893,648. GBB AND DESIGN. Gebi. Becker Gesellschaft mit beschränkter Haftung. SN 309,369. Pub. 4-14-70. Filed 10-10-68.
- 893,649. INDUSTRIAL WOODWORKING MACHINE AND DESIGN. Industrial Woodworking Machine Co., Inc. SN 312,297. Pub. 4-14-70. Filed 11-15-68.
- 893,650. EDELBROCK. Edelbrock Equipment Company. SN 312,880. Pub. 4-14-70. Filed 11-22-68.
- 893,651. E AND FLASK DESIGN. Applied Materials Technology, Inc. SN 313,263. Pub. 4-14-70. Filed 11-29-68.
- 893,652. POMA AND DESIGN. Jean Pomagalski S.A. SN 313,584. Pub. 4-14-70. Filed 12-4-68.
- 893,653. HI LO AND DESIGN. B. E. Wallace Products Corp. SN 315,282. Pub. 4-14-70. Filed 12-26-68.
- 893,654. WEAR-TEC. Dayco Corporation. SN 316,627. Pub. 4-14-70. Filed 1-15-69.
- 893,655. SHINE BOY. Shine Boy, Inc. SN 317,260. Pub. 4-14-70. Filed 1-22-69.
- 893,656. LANDSAVER. Hyster Company. SN 317,566. Pub. 4-14-70. Filed 1-27-69.
- 893,657. TRADEMASTER. Chicago Wheel & Manufacturing Co. SN 322,271. Pub. 4-14-70. Filed 3-20-69.
- 893,658. SOUTHWORTH MACHINE CO. ETC. AND DESIGN. Southworth Machine Company. SN 322,492. Pub. 4-14-70. Filed 3-21-69.
- 893,659. SPRAY BABY. Richard A. Carlyon, Jr. SN 323,186. Pub. 4-14-70. Filed 4-1-69.
- 893,660. TNC. Textron, Inc. SN 326,012. Pub. 4-14-70. Filed 4-30-69.
- 893,661. UNIDOR. Baker Perkins Inc. SN 326,977. Pub. 4-14-70. Filed 5-12-69.
- 893,662. FAM. Speedfam Corporation. SN 327,515. Pub. 4-14-70. Filed 5-16-69.
- 893,663. BIG ROVER. The Bloomfield Manufacturing Co., Inc., d.b.a. Hi-Lift Jack Co. SN 327,581. Pub. 4-7-70. Filed 5-19-69.
- 893,664. W AND DESIGN. Waukesha Foundry Company, Inc. SN 330,677. Pub. 4-14-70. Filed 6-23-69.
- 893,665. SK. Safety-Kleen Corporation. SN 331,427. Pub. 4-14-70. Filed 6-30-69.
- 893,666. VERTRUDER. Gloucester Engineering Co., Inc. SN 333,922. Pub. 4-14-70. Filed 7-30-69.
- 893,667. HY-CLAMP. The National Screw & Manufacturing Company. SN 334,604. Pub. 4-14-70. Filed 8-6-69.
- 893,668. WHITE IRRIGRO SYSTEM. White Motor Corporation. SN 335,101. Pub. 4-14-70. Filed 8-11-69.
- 893,669. WHITE IRRIGRO SYSTEM AND DESIGN. White Motor Corporation. SN 335,102. Pub. 4-14-70. Filed 8-11-69.
- 893,670. AUTOLINE. Hollis Engineering, Inc. SN 335,843. Pub. 4-14-70. Filed 8-14-69.
- 893,671. RICH-AIRATOR. Richards of Rockford, Inc. SN 336,603. Pub. 4-14-70. Filed 8-28-69.
- 893,672. RR TECHNOLOGY AND DESIGN. Richards of Rockford, Inc. SN 336,604. Pub. 4-14-70. Filed 8-28-69.
- 893,673. HYDRO-SWEEP. Richards of Rockford, Inc. SN 336,605. Pub. 4-14-70. Filed 8-28-69.
- 893,674. KOOL-FLOW. Richards of Rockford, Inc. SN 336,606. Pub. 4-14-70. Filed 8-28-69.
- 893,675. CON-VEL. Dana Corporation. SN 337,015. Pub. 4-14-70. Filed 9-4-69.

- 893,676. BUCK. Buck Tool Company. SN 337,149. Pub. 4-14-70. Filed 9-5-69.
- 893,677. ZAYRE. Zayre Corp. SN 339,519. Pub. 4-14-70. Filed 10-2-69.

Class 24—Laundry Appliances and Machines

- 893,678. VIBRA-STEAMER. Western Automation Corporation. SN 328,752. Pub. 4-14-70. Filed 5-29-69.

Class 25—Locks and Safes

- 893,539. (See Class 13 for this trademark.)

Class 26—Measuring and Scientific Appliances

- 893,642. (See Class 23 for this trademark.)
- 893,679. TIT AND DESIGN. Cobble Laboratory Company Limited. MULTIPLE CLASS (Classes 26 and 52). SN 283,628. Pub. 4-14-70. Filed 10-30-67.
- 893,680. REMINGTON. Sperry Rand Corporation. SN 288,362. Pub. 4-14-70. Filed 1-8-68.
- 893,681. DBA AND GLOBE DESIGN. DBA Systems, Inc. MULTIPLE CLASS (Classes 26 and 101). SN 315,709. Pub. 4-14-70. Filed 1-3-69.
- 893,682. INDUCHEM. Induchem Laboratory Glass Co., Inc. SN 316,010. Pub. 4-14-70. Filed 1-7-69.
- 893,683. SURTEMP. Leeds & Northrup Company. SN 319,921. Pub. 4-14-70. Filed 2-24-69.
- 893,684. OKI COMFORT LINE AND DESIGN. O.K.I. Supply Co. MULTIPLE CLASS (Classes 26 and 39). SN 320,758. Pub. 4-14-70. Filed 3-5-69.
- 893,685. A. Automata Corporation. MULTIPLE CLASS (Classes 26 and 38). SN 331,261. Pub. 4-14-70. Filed 6-30-69.
- 893,686. LUMITRON. Lumitron Corp. SN 333,583. Pub. 4-14-70. Filed 7-25-69.
- 893,687. D DESIGN. Durrum Instrument Corporation. SN 334,213. Pub. 4-14-70. Filed 8-1-69.
- 893,688. DURRUM. Durrum Instrument Corporation. SN 334,214. Pub. 4-14-70. Filed 8-1-69.
- 893,689. DEPTHERM. Vexilar Engineering Incorporated. SN 335,629. Pub. 4-14-70. Filed 8-18-69.
- 893,690. GUIDE-O-MATIC. Fedtro, Inc. SN 335,692. Pub. 4-14-70. Filed 8-19-69.
- 893,691. LISCO. Fidelity Manufacturing Company. SN 335,965. Pub. 4-14-70. Filed 8-22-69.
- 893,692. V BAN AND DESIGN. Minoco Lens Company, Inc. SN 342,210. Pub. 4-14-70. Filed 10-31-69.
- 893,693. MICROTECTOR. Dwyer Instruments, Inc. SN 342,589. Pub. 4-14-70. Filed 11-4-69.

Class 27—Horological Instruments

- 893,694. STELLARIS. Mondia S.A. SN 306,499. Pub. 4-14-70. Filed 9-3-68.
- 893,695. CHARACTER BUG DESIGN (LOVE BUG). Gordon Jewelry Corporation. MULTIPLE CLASS (Classes 27 and 28). SN 318,301. Pub. 4-14-70. Filed 2-4-69.
- 893,696. AVALON AVA-TRON. N Engel & Company, Inc. SN 320,053. Pub. 4-14-70. Filed 2-25-69.
- 893,697. ARNEX AND DESIGN. Arnex Time Co. Inc. SN 334,273. Pub. 4-14-70. Filed 8-5-69.

Class 28 — Jewelry and Precious-Metal Ware

- 893,695. (See Class 27 for this trademark.)
- 893,698. SEABORNE. Seaborne Enterprises, Inc., by change of name from Pearls by Slutsky Ltd. SN 323,470. Pub. 4-14-70. Filed 4-2-69.
- 893,699. STYLIST. Ripley and Gowen Company Incorporated. SN 331,426. Pub. 4-14-70. Filed 6-30-69.
- 893,700. WALCO. Walco Jewelry Company, d.b.a. Wallach Manufacturing Company. SN 333,782. Pub. 4-14-70. Filed 7-28-69.
- 893,701. TATTOO. Textron Inc. SN 333,951. Pub. 4-14-70. Filed 7-30-69.
- 893,702. HS DESIGN. Stuckey & Speer, Inc. SN 334,641. Pub. 4-14-70. Filed 8-6-69.
- 893,703. VEL CLIP AND DESIGN. American Velcro, Inc. SN 334,802. Pub. 4-14-70. Filed 8-8-69.
- 893,704. WELLINGTON AND DESIGN. M. Belmont Ver Standig, Inc., d.b.a. Ver Standig, Inc. SN 335,719. Pub. 4-14-70. Filed 8-19-69.
- 893,705. MERCURY HEAD (DESIGN). Mercury Ring Corporation. SN 337,561. Pub. 4-14-70. Filed 9-10-69.
- 893,706. INTRIGUE. Fairdeal Manufacturing Co. SN 340,217. Pub. 4-14-70. Filed 10-9-69.

Class 29 — Brooms, Brushes, and Dusters

- 893,707. SSK AND DESIGN. S. S. Kresge Company. SN 333,929. Pub. 4-14-70. Filed 7-30-69.

Class 30 — Crockery, Earthenware, and Porcelain

- 893,708. ENGLISH SWIRL. The Scio Pottery Company. SN 325,514. Pub. 4-14-70. Filed 4-24-69.
- 893,709. MOON GLOW. Interpace Corporation. SN 336,808. Pub. 4-14-70. Filed 9-2-69.

Class 31 — Filters and Refrigerators

- 893,710. ARROW AND DESIGN. Bangor Punta Operations, Inc. MULTIPLE CLASS (Classes 31 and 34). SN 310,534. Pub. 4-14-70. Filed 10-25-68.
- 893,711. CANNON. Degremont S.A. SN 319,409. Pub. 4-14-70. Filed 1-21-69.
- 893,712. TRIPLE SOFT AND DESIGN. Triple Soft Corporation. SN 323,485. Pub. 4-14-70. Filed 4-2-69.
- 893,713. HUMODOR. Lehigh, Inc. SN 335,881. Pub. 4-14-70. Filed 8-21-69.
- 893,714. CAM-VAC. Cambridge Filter Corporation. SN 338,534. Pub. 4-14-70. Filed 9-22-69.
- 893,715. CRYSTAL REEF. Neotek Associates. SN 344,795. Pub. 4-14-70. Filed 11-28-69.
- 893,716. SUPERSEAL. Flanders Filters, Inc. SN 345,047. Pub. 4-14-70. Filed 12-2-69.

Class 32 — Furniture and Upholstery

- 893,512. (See Class 2 for this trademark.)
- 893,513. (See Class 2 for this trademark.)
- 893,597. (See Class 21 for this trademark.)
- 893,717. PRELUDE. Prelude Corporation. SN 321,726. Pub. 4-14-70. Filed 3-14-69.

- 893,718. TUFF-TOP. Lear Siegler, Inc. SN 325,282. Pub. 4-14-70. Filed 4-23-69.
- 893,719. DREAMER. The Englander Company, Inc. SN 333,258. Pub. 4-14-70. Filed 7-23-69.
- 893,720. TURNS DAY-INTO NIGHT. Eclipse Sleep Products Inc. SN 334,564. Pub. 4-14-70. Filed 8-6-69.
- 893,721. ZOL. Zolads Pere & Fils, Société Anonyme. SN 335,491. Pub. 4-14-70. Filed 8-15-69.
- 893,722. CHIRO-MAGIC AND STARS DESIGN. Holland Maid, Inc. SN 335,864. Pub. 4-14-70. Filed 8-21-69.
- 893,723. QUIKTRAY. Jarke Corporation. SN 336,897. Pub. 4-14-70. Filed 9-3-69.
- 893,724. VARA-PLAN. Vogel-Peterson Co. SN 338,199. Pub. 4-14-70. Filed 9-17-69.
- 893,725. KEM-FLEX. Kewaunee Scientific Equipment Corporation. SN 340,564. Pub. 4-14-70. Filed 10-13-69.

Class 33 — Glassware

- 893,726. HANG ONE ON AND DESIGN. Morgantown Glassware Guild, Incorporated. SN 332,124. Pub. 4-14-70. Filed 7-9-69.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 893,642. (See Class 23 for this trademark.)
- 893,710. (See Class 31 for this trademark.)
- 893,727. HYDROTHERM. American Hydrotherm Corporation. SN 96,461. Pub. 3-14-61. Filed 5-5-60.
- 893,728. VECTORMATIC. Fedders Corporation. SN 304,079. Pub. 4-14-70. Filed 8-1-68.
- 893,729. DUO-FLEX. Fedders Corporation. SN 306,234. Pub. 4-14-70. Filed 8-29-68.
- 893,730. CHATTANOOGA AND DESIGN. Industrial Boiler Company, Inc. SN 325,124. Pub. 4-14-70. Filed 2-28-69.
- 893,731. WESIX AND DESIGN. Wesix Electric Heater Co. SN 333,956. Pub. 4-14-70. Filed 7-30-69.
- 893,732. INSTAMATIC. Crown-X, Inc. SN 338,544. Pub. 4-14-70. Filed 9-22-69.
- 893,733. ELECTROLUX. Consolidated Foods Corporation. SN 339,662. Pub. 4-14-70. Filed 10-3-69.
- 893,734. SUNDOWNER. Insto-Gas Corporation. SN 340,018. Pub. 4-14-70. Filed 10-7-69.
- 893,735. UNIPOWER. Mid-Continent Metal Products Co. SN 345,111. Pub. 4-14-70. Filed 12-3-69.
- 893,736. VAPOTRON-4000. Hamilton Humidity, Inc. SN 345,894. Pub. 4-14-70. Filed 12-11-69.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 893,585. (See Class 19 for this trademark.)
- 893,737. PNEUMANT. Warenzeichenverband der Reifenwerke der Deutschen Demokratischen Republik E.V. SN 296,904. COLLECTIVE MARK. Pub. 4-14-70. Filed 4-29-68.
- 893,738. SEXAUER PRODUCTS AND DESIGN. J. A. Sexauer Mfg. Co., Inc. SN 328,599. Pub. 4-14-70. Filed 5-28-69.
- 893,739. HERCUMILE. The Hercules Tire & Rubber Company. SN 337,043. Pub. 4-14-70. Filed 9-4-69.
- 893,740. EXCLUDER. W. S. Shamban & Co. SN 340,830. Pub. 4-14-70. Filed 10-15-69.

Class 36 — Musical Instruments and Supplies Class 38 — Prints and Publications

- 893,807. (See Class 21 for this trademark.)
- 893,741. C AND DESIGN. Crumar di Mario Crucianelli-F. Marchetti & C. S.a.S. SN 314,533. Pub. 4-14-70. Filed 12-16-68.
- 893,742. BEGO AND DESIGN. Bego Enterprises, Inc. SN 324,167. Pub. 4-14-70. Filed 4-10-69.
- 893,743. JAMIE RECORDS AND DESIGN. Jamie Record Co. SN 325,758. Pub. 4-14-70. Filed 4-28-69.
- 893,744. RARE EARTH. Motown Record Corporation. SN 334,858. Pub. 4-14-70. Filed 8-8-69.
- 893,745. LANCER. M. Hohner Inc. SN 343,285. Pub. 4-14-70. Filed 11-12-69.
- 893,746. BLIMP AND DESIGN. Blimp Productions, Inc. SN 343,384. Pub. 4-14-70. Filed 11-13-69.
- 893,747. FORMULA STRINGS. G.H.S. Corporation. SN 343,693. Pub. 4-14-70. Filed 11-17-69.
- 893,748. RAM'S HEAD DESIGN. Arles Record Productions, Inc. SN 344,207. Pub. 4-14-70. Filed 11-21-69.
- 893,749. CANYON AND DESIGN. Canyon Records. SN 344,877. Pub. 4-14-70. Filed 11-26-69.
- 893,750. GRIT. Budget Sound, Inc., d.b.a. Grit Records. SN 344,814. Pub. 4-14-70. Filed 11-28-69.

Class 37 — Paper and Stationery

- 893,512. (See Class 2 for this trademark.)
- 893,513. (See Class 2 for this trademark.)
- 893,751. BUFFALO AND DESIGN. Louis Reichman America Corp. SN 299,484. Pub. 4-14-70. Filed 5-31-68.
- 893,752. BLUFILM. Nu-Film Products Company Inc. SN 313,239. Pub. 4-14-70. Filed 11-29-68.
- 893,753. BONANZA. Tuckersharp Pen Company, Inc. SN 317,775. Pub. 4-14-70. Filed 1-28-69.
- 893,754. SNOLIN. R. & W. Watson Limited. SN 317,893. Pub. 4-14-70. Filed 1-29-69.
- 893,755. FABROLEEN. R. & W. Watson Limited. SN 319,005. Pub. 4-14-70. Filed 2-12-69.
- 893,756. PAMMY. Fort Howard Paper Company. SN 319,041. Pub. 4-14-70. Filed 2-13-69.
- 893,757. POSY. Fort Howard Paper Company. SN 319,044. Pub. 4-14-70. Filed 2-13-69.
- 893,758. AZOVEL. Deffiance-Axon Corporation. SN 320,449. Pub. 4-14-70. Filed 3-3-69.
- 893,759. COLORBALLOO. Bradner Central Company. SN 322,142. Pub. 4-14-70. Filed 3-19-69.
- 893,760. CANDID. Wausau Paper Mills Company. SN 327,706. Pub. 4-14-70. Filed 5-19-69.
- 893,761. UNIMOUNT. The C. R. Gibson Company. SN 331,184. Pub. 4-14-70. Filed 6-27-69.
- 893,762. AM AND DESIGN. Addressograph-Multigraph Corporation. SN 331,839. Pub. 4-14-70. Filed 7-7-69.
- 893,763. POCKET PREPER. Cory Corporation. SN 332,453. Pub. 4-14-70. Filed 7-14-69.
- 893,764. FILE-IT. Imperial Methods Co. SN 332,620. Pub. 4-14-70. Filed 7-15-69.
- 893,765. MISCELLANEOUS DESIGN. Groveton Papers Company. SN 333,708. Pub. 4-14-70. Filed 7-28-69.
- 893,766. SERCOSOF. S. E. Rykoff & Co. SN 334,285. Pub. 4-14-70. Filed 8-4-69.
- 893,767. FORM FOLD. Georgia-Pacific Corporation. SN 335,973. Pub. 4-14-70. Filed 8-22-69.
- 893,768. UNILAR. Smith, MacVaugh & Hodges, Inc. SN 338,331. Pub. 4-14-70. Filed 9-19-69.
- 893,769. KALEIDOSCOPE. Kimberly-Clark Corporation. SN 339,087. Pub. 4-14-70. Filed 9-29-69.

- 893,885. (See Class 26 for this trademark.)
- 893,770. DESIGN OF A FIGURE. Magazine Management Co., Inc., d.b.a. Marvel Comics Group, assignee, by mesne assignment of Magazine Management Company, d.b.a. Marvel Comics Group (partnership). SN 378,235. Pub. 4-14-70. Filed 8-14-67.
- 893,771. BK (DESIGN). Barbara Kirchner. SN 298,160. Pub. 4-14-70. Filed 3-13-68.
- 893,772. WORLD MARKETING AND DESIGN. Dun & Bradstreet Publications Corp. SN 302,308. Pub. 4-14-70. Filed 7-9-68.
- 893,773. TELEPHONE MINI-DATE. Chronicle Publishing Company. SN 302,801. Pub. 4-14-70. Filed 7-9-68.
- 893,774. HOLY BIBLE AND DESIGN. James T. Alsop, d.b.a. Alpha and Omega Publications Co. SN 306,308. Pub. 4-14-70. Filed 8-29-68.
- 893,775. THINK FRENCH. Visual Education Association, Inc. SN 310,155. Pub. 4-14-70. Filed 10-21-68.
- 893,776. REPRODUCTA. Reproducta Company, Inc. SN 311,062. Pub. 4-14-70. Filed 10-31-68.
- 893,777. FISHING IN MARYLAND. Burton C. Dillon, d.b.a. Fishing in Maryland. SN 317,009. Pub. 4-14-70. Filed 1-21-69.
- 893,778. KEPSAKE PORTRAITS AND MEDALLION DESIGN. Keepsake Portraits, Inc. SN 329,246. Pub. 4-14-70. Filed 6-5-69.
- 893,779. EXECUTIVE FITNESS. Rodale Press, Inc. SN 332,740. Pub. 4-14-70. Filed 7-16-69.
- 893,780. A STUDIO BOOK. The Viking Press, Inc. SN 333,955. Pub. 4-14-70. Filed 7-30-69.
- 893,781. "SKETCH-IT." Orell Industries, Inc. SN 337,191. Pub. 4-14-70. Filed 9-5-69.
- 893,782. ZOONOOZ. Zoological Society of San Diego, Inc. SN 337,214. Pub. 4-14-70. Filed 9-5-69.
- 893,783. FLIGHT. Air Review Publishing Corporation. SN 337,415. Pub. 4-14-70. Filed 9-9-69.
- 893,784. MISCELLANEOUS DESIGN. Country Club Enterprises, Inc. SN 339,994. Pub. 4-14-70. Filed 10-7-69.
- 893,785. FLORIDA VACATION FUN-TIMES. Southern Press, Inc. SN 340,435. Pub. 4-14-70. Filed 10-10-69.
- 893,786. VIEW-MASTER. GAF Corporation. SN 340,711. Pub. 4-14-70. Filed 10-15-69.
- 893,787. INSIGHT. The Journal Company. SN 341,524. Pub. 4-14-70. Filed 10-23-69.
- 893,788. JAICO AND DESIGN. Richard J. Gould, d.b.a. Jaico. SN 341,652. Pub. 4-14-70. Filed 10-24-69.
- 893,789. ANTIQUE ANGEL AND DESIGN. Kirchnercarpenter. SN 342,873. Pub. 4-14-70. Filed 11-6-69.
- 893,790. KAL-NAMEL. Kalamazoo Label Company. SN 344,996. Pub. 4-14-70. Filed 12-1-69.
- 893,791. INDUSTRIA AVICOLA. Watt Publishing Co. SN 345,035. Pub. 4-14-70. Filed 12-1-69.

Class 39 — Clothing

- 893,499. (See Class 1 for this trademark.)
- 893,585. (See Class 19 for this trademark.)
- 893,684. (See Class 26 for this trademark.)
- 893,792. WEAR-A-WAY. Angelica Corporation. SN 300,678. Pub. 4-14-70. Filed 6-18-68.
- 893,793. GYMNASTICS AND DESIGN. Gerbo Footwear Corporation. SN 324,288. Pub. 4-14-70. Filed 4-11-69.
- 893,794. SOFTPROTECT. Adidas-Fabrique de Chaussures de Sport. SN 329,321. Pub. 4-14-70. Filed 6-6-69.
- 893,795. SPORTRON. Franklin Stores Corporation, d.b.a. Barkers. SN 331,506. Pub. 4-14-70. Filed 7-1-69.

- 893,796. PEEK-A-NEE. Le Roi Hosiery Co., Inc. SN 342,368. Pub. 4-14-70. Filed 11-3-69.
 893,797. MISCA. Arcade Trading Corp. SN 344,179. Pub. 4-14-70. Filed 11-21-69.

Class 40—Fancy Goods, Furnishings, and Notions

- 893,803. (See Class 21 for this trademark.)
 893,798. GOLDEN TOUCH. Golden Touch, Inc. SN 339,504. Pub. 4-7-70. Filed 10-2-69.

Class 41—Canes, Parasols, and Umbrellas

- 893,799. REVA. Reva Ostrow, d.b.a. Reva. SN 343,804. Pub. 4-14-70. Filed 11-18-69.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 893,800. TOMAHAWK. E. E. Elfrig Distributing Company, Inc. SN 332,814. Pub. 4-14-70. Filed 7-17-69.

Class 43—Thread and Yarn

- 893,801. REAKTION. Glen Raven Mills, Inc. SN 331,473. Pub. 4-14-70. Filed 6-30-69.

Class 44—Dental, Medical, and Surgical Appliances

- 893,855. (See Class 19 for this trademark.)
 893,842. (See Class 23 for this trademark.)
 893,802. AMERICAN HOSPITAL SUPPLY A AND DESIGN. American Hospital Supply Corporation. SN 261,442. Pub. 4-14-70. Filed 12-27-66.
 893,803. DE PUY. DePuy Manufacturing Co., Inc. SN 300,912. Pub. 4-14-70. Filed 6-20-68.
 893,804. MODULAR DESIGN. Parke, Davis & Company. SN 326,678. Pub. 4-14-70. Filed 5-7-69.
 893,805. SILENTA. Exel Oy. SN 327,874. Pub. 4-14-70. Filed 5-21-69.
 893,806. VENOMETER. H. W. Andersen Products, Inc. SN 333,893. Pub. 4-14-70. Filed 7-30-69.
 893,807. ANDORAN. Farbenfabriken Bayer Aktiengesellschaft. SN 334,315. Pub. 4-14-70. Filed 8-4-69.

Class 45—Soft Drinks and Carbonated Waters

- 893,808. PJ. Duffy-Mott Company, Inc. SN 321,641. Pub. 4-14-70. Filed 3-13-69.

Class 46—Foods and Ingredients of Foods

- 893,809. PIK-NIK. Beatrice Foods Co., assignee of John W. Leavitt Company. SN 177,896. Pub. 6-8-65. Filed 9-27-63.

- 893,810. VETS' BURGER. Perk Foods Co. SN 281,815. Pub. 4-14-70. Filed 10-4-67.

- 893,811. VETS'. Perk Foods Co. SN 281,816. Pub. 4-14-70. Filed 10-4-67.

- 893,812. THE PICNIC TREE. Food Facilities Management Corporation. SN 303,606. Pub. 4-14-70. Filed 7-25-68.

- 893,813. LYNN WILSON'S. Wilson Products Company. SN 308,339. Pub. 4-14-70. Filed 9-26-68.

- 893,814. DAFFY DILLY POP-ETTE. Geo. Leslie Smith. SN 310,138. Pub. 4-14-70. Filed 10-21-68.

- 893,815. JAFFA DELIGHT. Catz American Co., Inc. SN 313,492. Pub. 4-14-70. Filed 12-3-68.

- 893,816. SCHLEIDER AND DESIGN. Schleider Foods, Inc. SN 316,473. Pub. 4-14-70. Filed 1-13-69.

- 893,817. FALSTAFF. Falstaff Brewing Corporation. SN 316,783. Pub. 4-14-70. Filed 1-16-69.

- 893,818. PAAS. Plough, Inc. SN 324,308. Pub. 4-14-70. Filed 4-11-69.

- 893,819. PLATOLINE. H. Kohnstamm & Co., Inc. SN 324,724. Pub. 4-14-70. Filed 4-16-69.

- 893,820. PEYTON'S. John Morrell & Co. SN 324,863. Pub. 4-14-70. Filed 4-18-69.

- 893,821. STA-NUT. SCM Corporation, d.b.a. Durkee Famous Foods. SN 324,935. Pub. 4-14-70. Filed 4-18-69.

- 893,822. TRAIL BLAZERS. Beatrice Foods Co., d.b.a. Chocolate Company of America. SN 326,982. Pub. 4-14-70. Filed 5-12-69.

- 893,823. COUNTRY OVEN. The Kroger Co. SN 329,248. Pub. 4-14-70. Filed 6-5-69.

- 893,824. KLOPS. C. F. Mueller Company. SN 329,258. Pub. 4-14-70. Filed 6-5-69.

- 893,825. NEPTUNE. Peavey Company. SN 329,752. Pub. 4-14-70. Filed 6-11-69.

- 893,826. NODS. Deer Park Baking Co. SN 331,352. Pub. 4-14-70. Filed 6-30-69.

- 893,827. MATEY'S. Keebler Company. SN 331,911. Pub. 4-14-70. Filed 7-7-69.

- 893,828. F FAR-MAR-CO AND DESIGN. Far-Mar Co., Inc. SN 332,468. Pub. 4-14-70. Filed 7-14-69.

- 893,829. FARMBLEND. Ralston Purina Company. SN 333,639. Pub. 4-14-70. Filed 7-28-69.

- 893,830. ROYAL RED. Kenal Salmon Packing Co., d.b.a. Parks Canning Company. SN 334,094. Pub. 4-14-70. Filed 7-31-69.

- 893,831. ROYAL PINK. Kenal Salmon Packing Co., d.b.a. Parks Canning Company. SN 334,095. Pub. 4-14-70. Filed 7-31-69.

- 893,832. TASTE IS THE TEST. Old Mansion, Incorporated. SN 334,739. Pub. 4-14-70. Filed 8-7-69.

- 893,833. HI-TEM. Ralston Purina Company. SN 342,595. Pub. 4-14-70. Filed 11-4-69.

Class 47—Wines

- 893,834. ALBERO. Hijos de Agustin Blazquez. SN 326,532. Pub. 4-14-70. Filed 5-6-69.

- 893,835. IDEAL PALE. Pedro Domecq, S.A. SN 331,527. Pub. 4-14-70. Filed 7-1-69.

Class 49—Distilled Alcoholic Liquors

- 893,836. POLMOS EXTRA ZYTANIA VODKA AND DESIGN. Przedsiębiorstwo Handlu Zagranicznego "Agros." SN 313,441. Pub. 4-14-70. Filed 12-2-68.

Class 50—Merchandise Not Otherwise Classified

- 893,837. AMERICA THE BEAUTIFUL. The Franklin Mint, Inc. SN 320,479. Pub. 4-14-70. Filed 3-3-69.

- 893,838. MARK THE LANDMARK. The Franklin Mint, Inc. SN 320,482. Pub. 4-14-70. Filed 3-3-69.

- 893,839. RACE TO OUTER SPACE. The Franklin Mint, Inc. SN 320,494. Pub. 4-14-70. Filed 3-3-69.

- 893,840. STAR TREK. The Franklin Mint, Inc. SN 320,500. Pub. 4-14-70. Filed 3-3-69.

- 893,841. SPIRIT OF '76. The Franklin Mint, Inc. SN 320,539. Pub. 4-14-70. Filed 3-3-69.

- 893,842. CAVALCADE OF SPORTS. The Franklin Mint, Inc. SN 320,547. Pub. 4-14-70. Filed 3-3-69.

- 893,843. HANDI-STRAWS. Fiberplastics, Inc. SN 327,093. Pub. 4-14-70. Filed 5-12-69.

- 893,844. PRESIDENTIAL HALL OF FAME. The Franklin Mint, Inc. SN 328,692. Pub. 4-14-70. Filed 5-29-69.

- 893,845. HYDROSPHERES. Data Packaging Corporation. SN 332,284. Pub. 4-14-70. Filed 7-11-69.

Class 51—Cosmetics and Toilet Preparations

- 893,846. POLISHED CREAMS. Richard Hudnut. SN 301,074. Pub. 4-14-70. Filed 6-21-68.

- 893,847. ADRIEN ARPEL. Adrien Arpel, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 302,579. Pub. 4-14-70. Filed 7-12-68.

- 893,848. SOFTENED. Clairol Incorporated. MULTIPLE CLASS (Classes 51 and 52). SN 304,729. Pub. 4-14-70. Filed 8-9-68.

- 893,849. EXTRA-VASH. Chas. Pfizer & Co., Inc. SN 310,357. Pub. 4-14-70. Filed 10-23-68.

- 893,850. SCARAMOUCHE. Parfumerie Lubin. SN 311,298. Pub. 4-14-70. Filed 11-1-68.

- 893,851. TOUCH OF PRIMEVAL. Viviane Woodard Corporation (Delaware corporation), assignee of Viviane Woodard Corporation (California corporation). SN 312,832. Pub. 4-14-70. Filed 11-21-68.

- 893,852. GENTLEMAN'S CHOICE. Viviane Woodard Corporation (Delaware corporation), assignee of Viviane Woodard Corporation (California corporation), d.b.a. Woodard for Men. SN 312,836. Pub. 4-14-70. Filed 11-21-68.

- 893,853. BUBBLE QUEEN. Cook United, Inc., by change of name from Cook Coffee Company. SN 316,998. Pub. 4-14-70. Filed 1-21-69.

- 893,854. COCOFINO AND DESIGN. Larry Wright, d.b.a. Cocofino, Inc. SN 318,845. Pub. 4-14-70. Filed 2-10-69.

- 893,855. MANIOL. Barnangens Tekniska Fabriks Aktiebolag. SN 321,859. Pub. 4-14-70. Filed 11-7-68.

- 893,856. MICRO-MAGIC. Micro-Therapeutics, Inc. SN 325,062. Pub. 4-14-70. Filed 4-21-69.

- 893,857. IRMA SHORELL'S MOISTURE/35. Irma Shorell, Inc. SN 328,019. Pub. 4-14-70. Filed 5-22-69.

- 893,858. SURF-TAN. Ruby Gale Colfours of P.R. Inc., d.b.a. Ruby Gale. SN 336,794. Pub. 4-14-70. Filed 9-2-69.

- 893,859. NAILETTE. The Fleetwood Co. SN 338,559. Pub. 4-14-70. Filed 9-22-69.

- 893,860. GOLD BULLION. Texton Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,068. Pub. 4-14-70. Filed 9-29-69.

- 893,861. BREXCENE. John H. Breck, Inc. SN 339,542. Pub. 4-14-70. Filed 10-2-69.

- 893,862. GOOD TIMES. Avon Products, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 339,643. Pub. 4-14-70. Filed 10-3-69.

- 893,863. WITNESS. Union Carbide Corporation. SN 340,995. Pub. 4-14-70. Filed 10-17-69.

- 893,864. MARGIN. Union Carbide Corporation. SN 342,601. Pub. 4-14-70. Filed 11-4-69.

Class 52—Detergents and Soaps

- 893,879. (See Class 26 for this trademark.)

- 893,847. (See Class 51 for this trademark.)

- 893,848. (See Class 51 for this trademark.)

- 893,860. (See Class 51 for this trademark.)

- 893,862. (See Class 51 for this trademark.)

- 893,865. HEX-O-WAX. Non-Tox Chemical Corp. SN 304,953. Pub. 4-14-70. Filed 8-12-68.

- 893,866. GUEST COLLECTION. Lanvin-Charles of the Ritz, Inc. SN 311,650. Pub. 4-14-70. Filed 11-8-68.

- 893,867. PENDETTE. Pennsalt Chemicals Corporation. SN 314,984. Pub. 4-14-70. Filed 12-20-68.

- 893,868. DRAINZ I/Q AND DESIGN. Jancyn Manufacturing Corp. SN 315,975. Pub. 4-14-70. Filed 1-7-69.

- 893,869. ACTI-LAN. Wyandotte Chemicals Corporation. SN 316,158. Pub. 4-14-70. Filed 1-8-69.

- 893,870. NITROMORS AND DESIGN. Wilcot (Parent) Co., Limited. SN 319,008. Pub. 4-14-70. Filed 2-12-69.

- 893,871. CLOVER FARM. Clover Farm Stores Corporation. SN 319,584. Pub. 4-14-70. Filed 2-19-69.

- 893,872. MEDI-DAN. Owen Laboratories, Inc. SN 322,612. Pub. 4-14-70. Filed 3-24-69.

- 893,873. DO-ALL. Armour-Dial, Inc. SN 334,805. Pub. 4-14-70. Filed 8-8-69.

- 893,874. CARPET BRITE. Colgate-Palmolive Company. SN 338,299. Pub. 4-14-70. Filed 9-19-69.

- 893,875. MORNING GIRL. John H. Breck, Inc. SN 338,357. Pub. 4-14-70. Filed 9-19-69.

- 893,876. BREXCENE. John H. Breck, Inc. SN 339,541. Pub. 4-14-70. Filed 10-2-69.

- 893,877. GYRO. Lever Brothers Company. SN 343,220. Pub. 4-14-70. Filed 11-12-69.

- 893,878. "THE LAST WORD." Knomark Inc. SN 343,469. Pub. 4-14-70. Filed 11-14-69.

Service Marks.

Class 100—Miscellaneous

- 893,879. LIBERTY LEASING. Liberty Leasing Company, Inc. SN 287,745. Pub. 4-14-70. Filed 12-28-67.

- 893,880. LIBERTY AND DESIGN. Liberty Leasing Company, Inc. SN 287,746. Pub. 4-14-70. Filed 12-28-67.

- 893,881. LIBERTY. Liberty Leasing Company, Inc. SN 287,747. Pub. 4-14-70. Filed 12-28-67.

- 893,882. INNOVATORS IN NUMERICS. Veeder Industries Inc. SN 292,985. Pub. 4-14-70. Filed 3-11-68.

- 893,883. JAPANESE STEAK HOUSE. Miami Springs Villas, Inc. SN 301,755. Pub. 4-14-70. Filed 7-1-68.

- 893,884. MARS METAL PRODUCTS CO., INC. AND DESIGN. Mars Technological Industries, by merger from Mars Metal Products Co., Inc. SN 301,852. Pub. 4-14-70. Filed 7-2-68.

- 893,885. ELDORADO ETC. AND DESIGN. Sonny's El Dorado, Inc. SN 304,975. Pub. 4-14-70. Filed 8-12-68.

- 893,886. CASA GRISANTI. Casa Grisanti, Inc. SN 306,563. Pub. 4-14-70. Filed 9-4-68.

- 893,887. STARCH. Daniel Starch & Staff, Inc. SN 308,239. Pub. 4-14-70. Filed 9-25-68.

- 893,888. CLASS . . . THE KEY WORD ON CAMPUS. Class Student Services, Inc. SN 309,161. Pub. 4-14-70. Filed 10-8-68.
- 893,889. TACO RANCHO. Taco Rancho, Inc. SN 309,406. Pub. 4-14-70. Filed 10-10-68.
- 893,890. WIN SCHULER'S. Win Schuler's, Inc. SN 310,376. Pub. 4-14-70. Filed 10-23-68.
- 893,891. U-HAUL. Arcoa, Inc. SN 314,131. Pub. 4-14-70. Filed 12-11-68.
- 893,892. U AND DESIGN. Arcoa, Inc. SN 314,132. Pub. 4-14-70. Filed 12-11-68.
- 893,893. CLUB 60. Club 60, Inc. SN 315,353. Pub. 4-14-70. Filed 12-30-68.
- 893,894. MISCELLANEOUS DESIGN. Kimberly-Clark Corporation. SN 319,057. Pub. 4-14-70. Filed 2-13-69.
- 893,895. FLORIDA CYPRESS GARDENS. Florida Cypress Gardens, Inc. MULTIPLE CLASS (Classes 100 and 107). SN 323,986. Pub. 4-14-70. Filed 4-9-69.
- 893,896. MISCELLANEOUS DESIGN. National 4-H Club Foundation of America, Inc. SN 324,214. Pub. 4-14-70. Filed 4-11-69.
- 893,897. MR. CHICKEN. F. F. Schudy. SN 324,514. Pub. 4-14-70. Filed 4-14-69.
- 893,898. MR. SANDWICH AND DESIGN. Mr. Sandwich, U.S.A., Inc. SN 324,730. Pub. 4-14-70. Filed 4-16-69.
- 893,899. COMPUSIZE. Compusize Inc. SN 325,175. Pub. 4-14-70. Filed 4-22-69.
- 893,900. C AND DESIGN. Compusize Inc. SN 325,176. Pub. 4-14-70. Filed 4-22-69.
- 893,901. MISCELLANEOUS DESIGN. Rolamite, Incorporated. SN 325,443. Pub. 4-14-70. Filed 4-24-69.
- 893,902. SMOKE QUITTERS. Smoke Quitters of Greater Philadelphia, Inc. SN 325,558. Pub. 3-31-70. Filed 4-25-69.
- 893,903. SMOKE QUITTERS AND DESIGN. Smoke Quitters of Greater Philadelphia, Inc. SN 325,559. Pub. 3-31-70. Filed 4-25-69.
- 893,904. FAT MIKES. Fat Mike's Inc. SN 326,087. Pub. 4-14-70. Filed 5-1-69.
- 893,905. STANLINCO. Stanlinco, Ltd. SN 326,451. Pub. 4-14-70. Filed 5-5-69.
- 893,906. THE DOWNUNDER AND DESIGN. Waterway Restaurants, Inc. SN 326,566. Pub. 4-14-70. Filed 5-6-69.
- 893,907. HUNGRY JACK. The Pillsbury Company. SN 330,772. Pub. 4-14-70. Filed 6-23-69.
- 893,908. BIG TEE BURGER. The Harlee Company. SN 333,498. Pub. 4-14-70. Filed 7-25-69.
- 893,909. A COACH HOUSE MOTOR INN AND DESIGN. Phil Gunp. SN 335,294. Pub. 4-14-70. Filed 8-14-69.
- 893,910. AAA RESERVATIONS AND DESIGN. The American Automobile Association (Incorporated), d.b.a. American Automobile Association. SN 344,925. Pub. 4-14-70. Filed 12-1-69.

Class 101—Advertising and Business

- 893,881. (See Class 26 for this trademark.)
- 893,911. SILVER DOLLAR BINGO. Curzon Display, Inc. SN 285,399. Pub. 4-14-70. Filed 11-22-67.
- 893,912. SYSTEMATION CONSULTANTS. Systemation Consultants, Inc. SN 288,384. Pub. 4-14-70. Filed 1-8-68.
- 893,913. STAMPS OFF AND DESIGN. Edward Heilner. SN 289,400. Pub. 4-14-70. Filed 1-23-68.
- 893,914. AIR AND DESIGN. Cannon Air Corp. SN 295,910. Pub. 4-14-70. Filed 4-18-68.
- 893,915. INN OF HAPPINESS. Inns of Happiness, Inc. SN 303,680. Pub. 4-14-70. Filed 7-26-68.
- 893,916. TRINELLA. Robert-Carole, Inc. SN 309,299. Pub. 4-14-70. Filed 10-9-68.

- 893,917. BRADLEES. Stop & Shop, Inc. SN 317,159. Pub. 4-14-70. Filed 1-21-69.
- 893,918. HIGH FIDELITY ROGERS BLUE CHIP OFFSET SEPARATIONS AND DESIGN. Rogers Engraving Co., Inc. SN 320,083. Pub. 4-14-70. Filed 2-25-69.
- 893,919. HIGH FIDELITY ROGERS BLUE CHIP PHOTO-ENGRAVING AND DESIGN. Rogers Engraving Co., Inc. SN 320,084. Pub. 4-14-70. Filed 2-25-69.
- 893,920. GENOVESE DRUG STORES AND DESIGN. Genovese Drug Stores, Inc. SN 320,593. Pub. 4-14-70. Filed 3-3-69.
- 893,921. GENOVESE DRUG STORES AND DESIGN. Genovese Drug Stores, Inc. SN 320,595. Pub. 4-14-70. Filed 3-3-69.
- 893,922. SOCIAL CALL. William A. Lindelow, d.b.a. Lindelow Customer Promotions. SN 321,381. Pub. 4-14-70. Filed 2-27-69.
- 893,923. OMNI-MED. Omni-Med, Inc. SN 321,532. Pub. 4-14-70. Filed 3-12-69.
- 893,924. TRANSCENTURY. Transcentury Corporation. SN 321,552. Pub. 4-14-70. Filed 3-12-69.
- 893,925. WHIZ-PRINT. Whiz-Print Copy Centers, Inc. SN 323,164. Pub. 4-14-70. Filed 3-28-69.
- 893,926. RALPHS AND DESIGN. Ralphs Grocery Company. SN 325,077. Pub. 4-14-70. Filed 4-21-69.
- 893,927. COMPTON. A. C. Nielsen Company. SN 325,886. Pub. 4-14-70. Filed 4-29-69.
- 893,928. SHOE CITY AND DESIGN. Shoe City, Inc. SN 335,307. Pub. 4-14-70. Filed 8-14-69.
- 893,929. LA BOUTTICA. La Bouttica Pappagallo, Inc. SN 336,069. Pub. 4-14-70. Filed 8-25-69.
- 893,930. PAY 'N SAVE. Pay'n Save Corporation. SN 344,295. Pub. 4-14-70. Filed 11-24-69.
- 893,931. MISCELLANEOUS AND GIFT DESIGN. Miscellaneous, Inc. SN 344,522. Pub. 4-14-70. Filed 11-25-69.

Class 103—Construction and Repair

- 893,932. MASTERCARE MAINTENANCE. Admiral Corporation. SN 317,290. Pub. 4-14-70. Filed 1-23-69.

Class 106—Material Treatment

- 893,933. NW (DESIGN). Northwest Plastics, Inc. SN 301,958. Pub. 4-14-70. Filed 7-3-68.
- 893,934. AO DESIGN. American Optical Corporation. SN 335,674. Pub. 4-14-70. Filed 8-19-69.

Class 107—Education and Entertainment

- 893,895. (See Class 100 for this trademark.)
- 893,935. T (DESIGN). Transamerica Corporation. SN 297,721. Pub. 4-14-70. Filed 5-8-68.
- 893,936. PON'S PUPPETS AND DESIGN. Gwendolyn Poin-dexter. SN 316,817. Pub. 4-14-70. Filed 1-16-69.
- 893,937. THE ELEVENTH HOUR. The Eleventh Hour, Inc. SN 318,694. Pub. 4-14-70. Filed 2-7-69.
- 893,938. LA PETITE ACADEMY AND DESIGN. Les Petite Academies, Inc., d.b.a. La Petite Academy. SN 326,777. Pub. 4-14-70. Filed 5-8-69.
- 893,939. KCR CROWN AND SHIELD DESIGN. Kansas City Royals Baseball Corporation. SN 327,388. Pub. 4-14-70. Filed 5-15-69.

Certification Marks

- 893,940. 19TH AMENDMENT. Suzanne M. Mork. SN 332,666. Pub. 4-14-70. Filed 7-16-69.
- 893,941. SAN FRANCISCO WARRIORS. San Francisco Warriors. SN 340,741. Pub. 4-14-70. Filed 10-15-69.
- 893,942. HELMET DESIGN. Dallas Cowboys Football Club, Inc. SN 341,895. Pub. 4-14-70. Filed 10-28-69.

Class A—Goods

- 893,944. 1 CALIFORNIA AND PEACH DESIGN. Joint Citing Peach Advisory Board. SN 343,135. Pub. 4-14-70. Filed 11-10-69.

Collective Membership Mark

Class 200

- 893,943. AMERICAN ORTHOTIC & PROSTHETIC ASSOCIATION AND DESIGN. American Orthotic and Prosthetic Association. SN 302,581. Pub. 4-14-70. Filed 5-10-68.

Class B—Services

- 893,945. COUNTRY CLUB QUALITY AT NEIGHBORHOOD PRICES. McGraw-Edison Company. SN 280,082. Pub. 4-14-70. Filed 9-11-67.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2—Receptacles

- 893,946. National Foam System, Inc., West Chester, Pa. SN 321,068. Filed P.R. 3-7-69; Am. S.R. 1-12-70.

DISPENSIT

For Portable, Thermally Insulated, Metal Containers for Beverages, Foodstuffs, Ice Cubes, and the Like (Int. Cl. 21). First use Mar. 27, 1947.

TRADEMARK REGISTRATIONS RENEWED

- 76,743. IVANHOE MILLS. Cl. 39 (Int. Cl. 25). 2-15-10.
- 77,420. TRIUMPH. Cl. 14 (Int. Cl. 6). 4-5-10.
- 77,552. TRAVELIGHT. Cl. 3 (Int. Cl. 18). 4-19-10.
- 78,388. SEXTANT. Cl. 46 (Int. Cl. 29). 6-7-10.
- 79,708. LEINETTE. Cl. 1 (Int. Cl. 22). 9-27-10.
- 267,337. ADORA. Cl. 39 (Int. Cl. 25). 2-18-30.
- 267,788. KEY-TITE AND REPRESENTATION OF KEY. Cl. 12 (Int. Cl. 17). 3-4-30.
- 267,974. PLEXOLAN. Cl. 51 (Int. Cl. 3). 3-4-30.
- 268,659. BONDERITE AND DESIGN. Cl. 6 (Int. Cl. 1). 3-18-30.
- 269,101. BROKEN ARO ETC. AND DESIGN. Cl. 1 (Int. Cl. 4). 3-25-30.
- 269,368. 24 KARAT. Cl. 39 (Int. Cl. 25). 4-1-30.
- 269,924. COMMODITY. Cl. 21 (Int. Cl. 17). 4-22-30.
- 269,925. 1XL. Cl. 21 (Int. Cl. 17). 4-22-30.
- 269,977. VANTIT. Cl. 14 (Int. Cl. 6). 4-22-30.
- 270,214. REGENT. Cl. 39 (Int. Cl. 25). 4-29-30.
- 270,361. MCCAA AND DESIGN. Cl. 44 (Int. Cl. 9). 5-6-30.
- 270,787. THE PHILADELPHIA INQUIRER. Cl. 38 (Int. Cl. 16). 5-13-30.
- 270,883. CEMENTICO. Cl. 16 (Int. Cl. 2). 5-18-30.
- 271,989. EL GALLO AND DESIGN. Cl. 44 (Int. Cl. 5). 6-17-30.
- 272,101. NIBS. Cl. 46 (Int. Cl. 30). 7-1-30.
- 272,289. THE WISCONSIN BANKER. Cl. 38 (Int. Cl. 16). 7-1-30.
- 273,405. THE SCHOLASTIC. Cl. 38 (Int. Cl. 16). 8-5-30.
- 273,575. TRU-LOK. Cl. 12 (Int. Cl. 19). 8-5-30.
- 273,707. MULTI-VANE. Cl. 23 (Int. Cl. 7). 8-5-30.
- 443,666. HAPPY ENDING. Cl. 51 (Int. Cl. 3). 1-10-50.
- 443,897. ADLAKE. Cl. 19 (Int. Cl. 12). 4-4-50.
- 443,899. KIDDICRAFT. Cl. 22 (Int. Cl. 28). 4-11-50.
- 443,903. TICO. Cl. 42 (Int. Cl. 24). 4-11-50.
- 444,056. VITRON. Cl. 1 (Int. Cl. 21). 6-27-50.
- 444,177. MINTO AND DESIGN. Cl. 30 (Int. Cl. 21). 8-29-50.
- 444,210. BOLTAFLUX. Cl. 50 (Int. Cl. 18). 9-12-50.
- 519,694. FERROX-CUBE. Cl. 14 (Int. Cl. 6). 1-10-50.
- 520,250. BULL DOG. Cl. 13 (Int. Cl. 6). 1-24-50.
- 521,922. VITA-BITE. Cl. 46 (Int. Cl. 31). 3-7-50.
- 522,246. RITE. Cl. 25 (Int. Cl. 6). 3-14-50.
- 522,657. ALMYCIL. Cl. 18 (Int. Cl. 5). 3-21-50.
- 522,673. BTC. Cl. 13 (Int. Cl. 6). 3-21-50.
- 522,857. DRAW-TITE ETC. AND DESIGN. Cl. 50 (Int. Cl. 22). 3-21-50.
- 523,001. MISCELLANEOUS DESIGN. Cl. 21 (Int. Cl. 9). 3-28-50.
- 523,111. JEAN PATOU. Cl. 51 (Int. Cl. 3). 3-28-50.
- 523,158. SYNCHROTEL. Cl. 21 (Int. Cl. 9). 3-28-50.
- 523,200. VIRGO SALT. Cl. 6 (Int. Cl. 1). 3-28-50.
- 523,325. MINUTURB. Cl. 23 (Int. Cl. 7). 4-4-50.
- 523,335. PAR-FLITE. Cl. 22 (Int. Cl. 28). 4-4-50.
- 523,383. ARMIX. Cl. 46 (Int. Cl. 29). 4-4-50.
- 523,385. WHITE CLOUD. Cl. 46 (Int. Cl. 29). 4-4-50.
- 523,387. CREM-HI. Cl. 46 (Int. Cl. 29). 4-4-50.
- 523,472. MERRY WIDOW. Cl. 39 (Int. Cl. 25). 4-4-50.
- 523,483. TULANE. Cl. 39 (Int. Cl. 25). 4-4-50.
- 523,583. CRAFTSMAN. Cl. 34 (Int. Cl. 11). 4-4-50.
- 523,754. CHRISTIAN DIOR. Cl. 39 (Int. Cl. 25). 4-11-50.
- 523,758. MCCORD. Cl. 23 (Int. Cl. 7). 4-11-50.
- 523,766. CLIPPER. Cl. 23 (Int. Cl. 7). 4-11-50.
- 523,780. PUTTIROPE. Cl. 12 (Int. Cl. 2). 4-11-50.
- 523,808. NONPAREL. Cl. 39 (Int. Cl. 25). 4-11-50.
- 523,840. FLUFFIPUFF. Cl. 29 (Int. Cl. 21). 4-11-50.
- 523,862. PUTTITAPE. Cl. 12 (Int. Cl. 2). 4-11-50.
- 523,883. ARKWRIGHT. Cl. 39 (Int. Cl. 25). 4-11-50.
- 523,947. SUBATH. Cl. 52 (Int. Cl. 3). 4-11-50.
- 524,067. LAPOINTE AND DESIGN. Cl. 23 (Int. Cl. 7). 4-18-50.
- 524,130. OB BLACK MAGIC. Cl. 12 (Int. Cl. 1). 4-18-50.
- 524,156. SOHIO HQ AND DESIGN. Cl. 15 (Int. Cl. 4). 4-18-50.
- 524,180. ULSTER JR. Cl. 39 (Int. Cl. 25). 4-18-50.
- 524,192. SPEEDE. Cl. 15 (Int. Cl. 4). 4-18-50.
- 524,282. TEXAS AND DESIGN. Cl. 3 (Int. Cl. 29). 4-18-50.
- 524,291. SUN-RAPT AND DESIGN. Cl. 46 (Int. Cl. 31). 4-25-50.
- 524,356. GIMBALS. Cl. 46 (Int. Cl. 30). 4-25-50.
- 524,430. LENBARRY. Cl. 39 (Int. Cl. 25). 4-25-50.
- 524,749. CRYORAP. Cl. 37 (Int. Cl. 16). 5-2-50.
- 524,984. OB. Cl. 12 (Int. Cl. 1). 5-9-50.

525,130. PLAYMATE. Cl. 22 (Int. Cl. 28). 5-9-50.
 525,305. VIODENUM. Cl. 18 (Int. Cl. 5). 5-16-50.
 525,344. FLOAT AWAYS. Cl. 39 (Int. Cl. 25). 5-16-50.
 525,625. HALLDON. Cl. 39 (Int. Cl. 25). 5-30-50.
 525,642. TRIPLE-SEAL ETC. AND DESIGN. Cl. 12 (Int. Cl. 6). 5-30-50.
 525,724. LUTREX. Cl. 1 (Int. Cl. 1). 5-30-50.
 526,213. GAIR AND DESIGN. Cl. 2 (Int. Cl. 16). 6-13-50.
 526,214. GAIR. Cl. 2 (Int. Cl. 16). 6-13-50.
 526,434. STUBBY FOLD. Cl. 37 (Int. Cl. 16). 6-13-50.
 526,706. MENDETS. Cl. 13 (Int. Cl. 6). 6-20-50.
 526,774. MOUNT VERNON. Cl. 37 (Int. Cl. 16). 6-27-50.
 526,961. TOWN LIFE. Cl. 39 (Int. Cl. 25). 6-27-50.
 527,221. SLUGGER. Cl. 46 (Int. Cl. 31). 7-4-50.
 527,443. TRUBILT. Cl. 39 (Int. Cl. 25). 7-11-50.
 527,517. PHOENIX BRAND. Cl. 46 (Int. Cl. 31). 7-11-50.
 527,547. APPLAUD. Cl. 46 (Int. Cl. 31). 7-11-50.
 527,548. REPEAT. Cl. 46 (Int. Cl. 31). 7-11-50.
 527,810. TRICLENE. Cl. 52 (Int. Cl. 1). 7-18-50.
 528,119. SLEEP CHARM. Cl. 32 (Int. Cl. 20). 7-25-50.
 528,211. LONDONAIRE. Cl. 39 (Int. Cl. 25). 8-1-50.
 528,454. CAVALIER. Cl. 17 (Int. Cl. 34). 8-1-50.
 528,596. CABLESPUN. Cl. 39 (Int. Cl. 25). 8-8-50.
 528,978. PENN-FIFTH AVENUE. Cl. 39 (Int. Cl. 25). 8-15-50.
 529,050. COLUMBIA. Cl. 6 (Int. Cl. 1). 8-15-50.
 529,113. LUSTERBRITE. Cl. 52 (Int. Cl. 3). 8-15-50.
 529,165. TORRINGTON. Cl. 34 (Int. Cl. 11). 8-15-50.
 529,224. VIEW-MASTER. Cl. 26 (Int. Cl. 9). 8-15-50.

529,296. RED SEAL AND DESIGN. Cl. 46 (Int. Cl. 29). 8-22-50.
 529,413. ELECTRIC AIRE. Cl. 44 (Int. Cl. 11). 8-22-50.
 529,475. DAVIES, ROSE. Cl. 18 (Int. Cl. 5). 8-22-50.
 529,681. BLUE JAY. Cl. 39 (Int. Cl. 25). 8-29-50.
 529,689. SPENCER'S. Cl. 39 (Int. Cl. 25). 8-29-50.
 529,797. PRESSURIZED AND DESIGN. Cl. 32 (Int. Cl. 6). 8-29-50.
 529,840. JFG. Cl. 46 (Int. Cl. 29). 8-29-50.
 529,913. FLOWERY TALKS. Cl. 38 (Int. Cl. 16). 8-29-50.
 530,007. KALMAN. Cl. 108 (Int. Cl. 37). 8-29-50.
 530,092. WEBSTER. Cl. 23 (Int. Cl. 7). 9-5-50.
 530,122. MILLER AND DESIGN. Cl. 35 (Int. Cl. 12). 9-5-50.
 530,170. SPIROLOX RETAINING RINGS. Cl. 23 (Int. Cl. 7). 9-5-50.
 530,299. PALM HILL. Cl. 46 (Int. Cl. 31). 9-5-50.
 530,357. SUPREME. Cl. 35 (Int. Cl. 7). 9-5-50.
 530,358. SUPERIOR. Cl. 27 (Int. Cl. 14). 9-5-50.
 530,457. WABASH. Cl. 13 (Int. Cl. 6). 9-12-50.
 530,794. BLOCK ETC. AND DESIGN. Cl. 39 (Int. Cl. 25). 9-19-50.
 530,906. FIVE BROTHERS. Cl. 49 (Int. Cl. 33). 9-19-50.
 530,978. HOOK-EYE. Cl. 23 (Int. Cls. 7 and 8). 9-19-50.
 530,994. CEM AND DESIGN. Cl. 23 (Int. Cl. 7). 9-19-50.
 531,056. CITATION. Cl. 49 (Int. Cl. 33). 9-19-50.
 531,076. BALATEENA. Cl. 39 (Int. Cl. 25). 9-19-50.
 531,347. CORTONE. Cl. 18 (Int. Cl. 5). 9-26-50.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

812,270. NATIONAL AND TRIANGLE DESIGN. Cl. 44. 8-2-66.
 889,216. COLOR REFRESHER. Cl. 52. 4-7-70.

Section 8

768,731. PHIPP'S AND DESIGN. Cl. 26. 4-28-64.
 768,950. CAHNITE. Cls. 4 and 52. 5-5-64.

The following registrations issued May 12, 1964

769,325. FLEXITE. Cl. 1.
 769,330. INSTANT LIFE. Cl. 1.
 769,333. AUTOMATED FLOWERS. Cl. 1.
 769,334. SPON-GEN. Cl. 1.
 769,353. NU-BRITE. Cl. 6.
 769,355. ZINOSPERSE. Cl. 6.
 769,357. LITTERFUME. Cl. 6.
 769,361. ADSORBOSIL. Cl. 6.
 769,368. 12. Cl. 10.
 769,369. GREAT LAKES AND DESIGN. Cl. 11.
 769,370. FRAME-AHL. Cl. 12.
 769,371. LIT. Cl. 12.
 769,344. ALI AND DESIGN. Cl. 2.
 769,385. NU-TWIST. Cl. 13.
 769,387. AQUA-TEST. Cl. 13.
 769,396. SUMMOLD. Cl. 13.
 769,397. REEL WALKER. Cl. 13.
 769,410. WESTERN AND DESIGN. Cl. 15.
 769,415. FERMAZYME. Cl. 18.
 769,420. GOLDEN YEARS. Cl. 18.
 769,422. SILADON. Cl. 18.
 769,423. SCOMIX. Cl. 18.
 769,424. PYRALEE. Cl. 18.
 769,425. SCOTRIP. Cl. 18.
 769,428. ZIP CLOTH. Cl. 19.
 769,429. SQUARE, CIRCLE AND LINE DESIGN. Cl. 20.
 769,431. YOLA. Cl. 21.
 769,436. TASCO AND DESIGN. Cl. 21.
 769,439. CONTROLAB. Cl. 21.
 769,444. RP. Cl. 21.
 769,445. FUSICON. Cl. 21.
 769,448. DESOTO. Cl. 21.
 769,449. CURTAC. Cl. 21.
 769,453. MY AUTOGRAPH AND DESIGN. Cl. 22.
 769,455. PIERRE THE POODLE. Cl. 22.

769,458. BLACK BELT. Cl. 22.
 769,459. NSU-PRINZ AND DESIGN. Cl. 23.
 769,467. BOMCO ETC. AND DESIGN. Cl. 23.
 769,469. CARBUT. Cl. 23.
 769,470. LAGOM. Cl. 23.
 769,476. FONTANA. Cl. 23.
 769,478. MILLICRON. Cl. 23.
 769,485. H AND DESIGN. Cl. 23.
 769,487. CRANE-FLO. Cl. 23.
 769,488. CASCO. Cl. 23.
 769,496. DIABORIT. Cl. 23.
 769,490. MICRO-GRIP. Cl. 23.
 769,497. DIAMY. Cl. 23.
 769,504. DORMA TS 59 THERMO-CONSTANT. Cl. 25.
 769,505. LIP. Cl. 26.
 769,510. ROBANNE. Cl. 28.
 769,519. GROTESQUE HUMAN FIGURE. Cl. 28.
 769,528. SLEEPWELL SHOPS AND DESIGN. Cl. 32.
 769,531. MISCELLANEOUS DESIGN. Cl. 32.
 769,533. SATINEX. Cl. 32.
 769,535. TOP-FAB AND DESIGN. Cl. 32.
 769,546. QUIET CUSHION. Cl. 34.
 769,549. SCHWANK. Cl. 34.
 769,550. S. Cl. 34.
 769,551. POWERFIN. Cl. 34.
 769,554. SCALEFLUX. Cl. 34.
 769,556. STEADI-ARC. Cl. 34.
 769,563. DUAL BARRIER. Cl. 35.
 769,568. MINNESOTA AND ONTARIO ETC. AND DESIGN. Cl. 37.
 769,570. SHAMROCK (DESIGN). Cl. 37.
 769,572. PHON-SLIDEX. Cl. 37.
 769,578. DIAL FOR DINNER. Cl. 38.
 769,579. PROFESSOR BOOK-BROWSER'S BOOKWIZ. Cl. 38.
 769,581. READING-GO-ROUND BOOK AND DESIGN. Cl. 38.
 769,584. DESIGN OF BIRD. Cl. 38.
 769,585. MARTIN'S CHARTS AND DESIGN. Cl. 38.
 769,586. EDWARD DON & CO. AND DESIGN. Cl. 38.
 769,587. SCOREASY ETC. AND DESIGN. Cl. 38.
 769,592. THE WHITE BOOK ETC. AND DESIGN. Cl. 38.
 769,594. COVENTRY ART. Cl. 38.
 769,597. DRI-BABE. Cl. 39.
 769,598. IRENE HERBERT'S PANTS PARLOUR. Cl. 39.
 769,599. MOUNTAIN GOAT. Cl. 39.
 769,601. REPRESENTATION OF A LADY AT A SPINNING WHEEL. Cl. 39.

769,603. THE 4-WARD LOOK. Cl. 39.
 769,605. KING AND PRINCE AND DESIGN. Cl. 39.
 769,606. ACHIEVEMENT. Cl. 39.
 769,607. CROSS KEYS. Cl. 39.
 769,612. MAGNA-GRIP. Cl. 39.
 769,613. KEENS COLONIALS. Cl. 39.
 769,614. EEEFFENANNY. Cl. 39.
 769,615. EEEFER. Cl. 39.
 769,618. DECO-TABS. Cl. 40.
 769,626. BUMBLELLA. Cl. 41.
 769,629. CONTOUR 5. Cl. 42.
 769,630. LURGANLAWN. Cl. 42.
 769,631. PAMELEAU. Cl. 42.
 769,636. A AND DESIGN. Cl. 44.
 769,637. SPRAY 'N SEE. Cl. 44.
 769,638. ANPRO AND DESIGN. Cl. 44.
 769,640. DUO. Cl. 44.
 769,648. OULEVAY JAVA AND DESIGN. Cl. 46.
 769,650. A-OK. Cl. 46.
 769,651. ST. LOUIS MAID AND FARM SCENE (DESIGN). Cl. 46.
 769,657. INVITO. Cl. 46.
 769,660. BLACK BEAUTY. Cl. 46.
 769,668. 7 SWEETS & 7 SOURS. Cl. 46.
 769,672. GOOD SEASONS AND DESIGN. Cl. 46.
 769,673. BOBAN. Cl. 46.

769,675. ROYAL SALMON. Cl. 49.
 769,676. HIGH ROAD. Cl. 49.
 769,690. MINUS-10. Cl. 51.
 769,685. MY PIGEON. Cl. 51.
 769,686. HAREM GIRL. Cl. 51.
 769,694. DOUBLE STAMP. Cl. 52.
 769,700. A AND DESIGN. Cl. 100.
 769,709. MISCELLANEOUS DESIGN. Cl. 102.
 769,712. PILOT PHOTO. Cl. 106.
 769,713. PILOT PHOTO AND DESIGN. Cl. 106.
 769,714. CROSS-BOWETTES. Cl. 107.
 769,715. C.S. AND DESIGN. Cl. 107.
 769,721. HI-VAPOR. Cl. 18.
 769,726. METAL FILM. Cl. 26.
 769,727. RICHMOND. Cl. 26.
 769,735. KISSIMMEE. Cl. 45.
 769,737. GOLDEN SESAME. Cl. 46.
 769,738. NATURAL WHOLE GRAIN GOODNESS. Cl. 46.
 769,742. FLEURS DE TABAC AND DESIGN. Cl. 51.
 769,743. SLIMLINER. Cl. 51.
 769,744. 'TINTS AL FRESCO.' Cl. 51.
 769,753. MATERIALS B & D ON THE MOVE TO THE FUTURE. Cl. 100.
 769,754. MARKET-AIDES. Cl. 101.
 769,756. PEST CONTROL ETC. AND DESIGN. Cl. 200.

INDEX OF REGISTRANTS

JUNE 30, 1970

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- ACF Industries, Inc., New York, N.Y. 267,788, ren. 6-30-70. Cl. 12.
 A.K. Electric Corp., Brooklyn, N.Y. 893,527, pub. 4-14-70. Cl. 6.
 A/S Bremanger Kraftsekskab, Svelgen, Norway. 269,977, ren. 6-30-70. Cl. 14.
 Acme Boot Co., Inc., Clarksville, Tenn. 769,612, can. Cl. 89.
 Adams Rite Mfg. Co., Glendale, Calif. 522,246, ren. 6-30-70. Cl. 25.
 Adams & Westlake Co., The, Elkhart, Ind. 443,897, ren. 6-30-70. Cl. 19.
 Addressograph-Multigraph Corp., Cleveland, Ohio. 893,762, pub. 4-14-70. Cl. 87.
 Adidas-Fabrique de Chaussures de Sport, Landersheim, France. 893,794, pub. 4-14-70. Cl. 89.
 Admiral Corp., Chicago, Ill. 893,932, pub. 4-14-70. Cl. 103.
 Adora Knitwear Co. Inc., New York, N.Y. 267,837, ren. 6-30-70. Cl. 89.
 Aerotec Industries, Inc., Greenwich, Conn. 769,636, can. Cl. 44.
 Air Review Publishing Corp., Dallas, Tex. 893,783, pub. 4-14-70. Cl. 38.
 Airpax Electronics Inc., Fort Lauderdale, Fla. 893,619, pub. 4-14-70. Cl. 21.
 All Electronics, Inc., Mineola, N.Y. 769,344, can. Cl. 2.
 Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden. 893,601, pub. 4-14-70. Cl. 21.
 All-Steel Equipment Inc., Aurora, Ill. 523,001, ren. 6-30-70. Cl. 21.
 Alsop, James T., d.b.a. Alpha & Omega Publications Co., Brighton, Colo. 893,774, pub. 4-14-70. Cl. 38.
 American Automobile Association (Inc.), d.b.a. American Automobile Association, Washington, D.C. 893,910, pub. 4-14-70. Cl. 100.
 American Biltrite Rubber Co., Inc., Chelsea, Mass. 270,214, ren. 6-30-70. Cl. 39.
 American Hospital Supply Corp., Evanston, Ill. 893,802, pub. 4-14-70. Cl. 44.
 American Hydrotherm Corp., Long Island City, N.Y. 893,727, pub. 3-14-61. Cl. 34.
 American Nutrition Co., Chicago, Ill. 769,420, can. Cl. 18.
 American Optical Corp., Southbridge, Mass. 893,934, pub. 4-14-70. Cl. 106.
 American Orthotic and Prosthetic Association, Washington, D.C. 893,943, pub. 4-14-70. Cl. 200.
 American Screen Products Co., Chicago, Ill. 769,370, can. Cl. 12.
 American Velcro, Inc., Manchester, N.H. 893,703, pub. 4-14-70. Cl. 28.
 Andersen, H. W., Products, Inc., Oyster Bay, N.Y. 769,638, can. Cl. 44.
 Andersen, H. W., Products, Inc., Oyster Bay, N.Y. 893,806, pub. 4-14-70. Cl. 44.
 Angelica Corp., St. Louis, Mo. 893,792, pub. 4-14-70. Cl. 39.
 Applied Materials Technology, Inc., Santa Clara, Calif. 893,651, pub. 4-14-70. Cl. 23.
 Applied Science Laboratories, Inc., State College, Pa. 769,361, can. Cl. 6.
 Arcade Trading Corp., New York, N.Y. 893,797, pub. 4-14-70. Cl. 39.
 Arcoa, Inc., Phoenix, Ariz. 893,891-2, pub. 4-14-70. Cl. 100.
 Aries Record Productions, Inc., Chicago, Ill. 893,748, pub. 4-14-70. Cl. 36.
 Arizona Citrus Growers, Phoenix, Ariz. 527,517, ren. 6-30-70. Cl. 46.
 Arkansas Power & Light Co., Little Rock, Ark. 769,700, can. Cl. 100.
 Arkwright, Inc., New York, N.Y. 523,883, ren. 6-30-70. Cl. 39.
 Armour & Co., Chicago, Ill. 523,353, ren. 6-30-70. Cl. 46.
 Armour & Co., Chicago, Ill. 523,385, ren. 6-30-70. Cl. 46.
 Armour & Co., Chicago, Ill. 523,387, ren. 6-30-70. Cl. 46.
 Armour-Dial, Inc., Chicago, Ill. 893,873, pub. 4-14-70. Cl. 52.
 Arnex Time Co. Inc., New York, N.Y. 893,697, pub. 4-14-70. Cl. 27.
 Arpel, Adrien, Inc., New York, N.Y. 893,847, pub. 4-14-70. Multiple Class (Classes 51 and 52).
 Ash Precision Equipment, Inc., Detroit, Mich. 893,584, pub. 4-14-70. Cl. 19.
 Ashe, H. J., Co., Inc., The, South Norwalk, Conn. 893,610, pub. 4-14-70. Cl. 21.
 Assemblers, Inc., West Liberty, Iowa. 893,587, pub. 4-14-70. Cl. 19.
 Atelier International, Ltd., New York, N.Y. 893,597, pub. 4-14-70. Multiple Class (Classes 21 and 32).
 Atlantic Service Co., Inc., Brooklyn, N.Y. 530,978, ren. 6-30-70. Cl. 23.
 Automata Corp., Richland, Wash. 893,685, pub. 4-14-70. Multiple Class (Classes 26 and 38).
 Avon Products, Inc., New York, N.Y. 893,862, pub. 4-14-70. Multiple Class (Classes 51 and 52).
 Baird-Neece Packing Corp., Porterville, Calif. 530,299, ren. 6-30-70. Cl. 46.
 Baker Perkins Inc., Saginaw, Mich. 893,661, pub. 4-14-70. Cl. 23.
 Balata, Victor, & Textile Belting Co., Easton, Pa. 530,357, ren. 6-30-70. Cl. 35.
 Bangor Punta Operations, Inc., New York, N.Y. 893,710, pub. 4-14-70. Multiple Class (Classes 31 and 34).
 Bankers Publishing Co., Milwaukee, Wis. 272,289, ren. 6-30-70. Cl. 38.
 Barnangens Tekniska Fabriks Aktiebolag, Stockholm-Bromma, Sweden. 893,855, pub. 4-14-70. Cl. 51.
 Barnett, Irvin, Homestead, Fla. 527,548, ren. 6-30-70. Cl. 46.
 Beatrice Foods Co., Chicago, Ill., from John W. Leavitt Co., Everett, Mass. 893,809, pub. 6-2-65. Cl. 45.
 Beatrice Foods Co., d.b.a. Chocolate Co. of America, Chicago, Ill. 893,822, pub. 4-14-70. Cl. 46.
 Beco Enterprise, Inc., McAllen, Tex. 893,742, pub. 4-14-70. Cl. 36.
 Beecham Inc., Clifton, N.J. 893,579, pub. 4-14-70. Cl. 18.
 Beltman Co. Inc., Bridgeport, Conn. 769,618, can. Cl. 40.
 Bendix Corp., The, Detroit, Mich. 893,845, pub. 4-14-70. Cl. 15.
 Bendix Corp., The, Detroit, Mich. 893,583, pub. 4-14-70. Cl. 19.
 Big D Chemical Co., d.b.a. Le Fevre Products Co., Oklahoma City, Okla. 769,685-6, can. Cl. 51.
 Blackwood, William R., d.b.a. The Royston Co., Topsfield, Mass. 893,638, pub. 4-14-70. Cl. 23.
 Blanchard, Robert L., New York, N.Y. 522,857, ren. 6-30-70. Cl. 50.
 Blimp Productions, Inc., Beverly Hills, Calif. 893,746, pub. 4-14-70. Cl. 36.
 Bloomfield Mfg. Co., Inc., The, d.b.a. Hi Lift Jack Co., Bloomfield, Ind. 893,663, pub. 4-7-70. Cl. 23.
 Bonck, J. H., Co., Inc., New Orleans, La. 523,483, ren. 6-30-70. Cl. 39.
 Bradner Central Co., Chicago, Ill. 893,759, pub. 4-14-70. Cl. 37.
 Breck, John H., Inc., Wayne, N.J. 893,216, can. Cl. 52.
 Breck, John H., Inc., Wayne, N.J. 893,861, pub. 4-14-70. Cl. 51.
 Breck, John H., Inc., Wayne, N.J. 893,875-6, pub. 4-14-70. Cl. 52.
 Brewer-Titchener Corp., Cortland, N.Y. 522,673, ren. 6-30-70. Cl. 13.
 Bridgestone Tire Co. Ltd., Tokyo, Japan. 893,590, pub. 4-14-70. Cl. 19.
 Bristol-Myers Co., New York, N.Y. 893,563, pub. 4-14-70. Cl. 18.
 Bristol-Myers Co., New York, N.Y. 893,576, pub. 4-14-70. Cl. 18.
 Bristol-Myers Co., New York, N.Y. 893,578, pub. 4-14-70. Cl. 18.
 British Drug Houses Ltd., The, London, England. 893,518, pub. 4-14-70. Cl. 6.
 British Petroleum Co. Ltd., The, London, England. 893,548, pub. 4-14-70. Cl. 15.
 Brown Flintube Co., Elyria, Ohio. 769,551, can. Cl. 34.
 Brown, Henry Arthur, La Grange, Ill. 769,579, can. Cl. 38.
 Bryant, Estelle Poet, d.b.a. Estelle Bryant Tussy Cosmetics, Inc., New York, N.Y. 406,610. Am. 7(d). Cl. 51.
 Buck Tool Co., Kalamazoo, Mich. 893,676, pub. 4-14-70. Cl. 23.
 Budd Co., The, Philadelphia, Pa. 769,726, can. Cl. 26.
 Budget Buddy Co., Kansas City, Mo. 769,578, can. Cl. 88.
 Budget Sound, Inc., d.b.a. Grit Records, Burbank, Calif. 893,750, pub. 4-14-70. Cl. 36.
 Building Information, Inc., Pelham, N.Y. 769,592, can. Cl. 28.
 Bunker-Ramo Corp., The, Oak Brook, Ill. 893,602, pub. 7-1-69. Cl. 21.
 Cacci Craft, Inc., Tampa, Fla. 893,588, pub. 4-14-70. Cl. 19.
 Cambridge Filter Corp., Syracuse, N.Y. 893,714, pub. 4-14-70. Cl. 31.
 Cannon Air Corp., Raytown, Mo. 893,914, pub. 4-14-70. Cl. 101.
 Canyon Records, Phoenix, Ariz. 893,749, pub. 4-14-70. Cl. 36.
 Cape Asbestos Insulations (Proprietary) Ltd., Benoni South, Transvaal, Republic of South Africa. 893,611, pub. 3-31-70. Cl. 21.
 Carlyon, Richard A., Jr., Carson City, Nev. 893,659, pub. 4-14-70. Cl. 23.
 Carter-Wallace, Inc., New York, N.Y. 893,577, pub. 4-14-70. Cl. 18.
 Casa Grisanti, Inc., Louisville, Ky. 893,886, pub. 4-14-70. Cl. 100.
 Casco Corp., Sycamore, Ill. 769,488, can. Cl. 23.
 Cato Oil & Grease Co., Inc., to Cato Oil & Grease Co., Oklahoma City, Okla. 524,266, cor. Cl. 15.
 Cats American Co., Inc., New York, N.Y. 893,815, pub. 4-14-70. Cl. 46.
 Celebrity, Inc., Bronx, N.Y. 893,522, pub. 4-14-70. Cl. 6.
 Chadbourne Inc., Charlotte, N.C. 269,868, ren. 6-30-70. Cl. 39.
 Challenge Machinery Co., The, Grand Haven, Mich. 893,640, pub. 4-14-70. Cl. 23.
 Chemtrust Industries Corp., Maywood, Ill. 893,525, pub. 4-14-70. Cl. 6.
 Chicago Spring Products Co., Chicago, Ill. 529,797, ren. 6-30-70. Cl. 32.
 Chicago Strings, The, Chicago, Ill. 769,715, can. Cl. 107.
 Chicago Wheel & Mfg. Co., Chicago, Ill. 893,657, pub. 4-14-70. Cl. 28.

Christy, Daniel Lamar, Fremont, Ohio. 893,643, pub. 4-14-70. Cl. 23.
 Chronicle Publishing Co., St. Charles, Ill. 893,778, pub. 4-14-70. Cl. 38.
 Citosan A.G., Guttlingen, Switzerland. 893,551, pub. 4-14-70. Cl. 16.
 Clairol Inc., New York, N.Y. 893,848, pub. 4-14-70. Multiple Class (Classes 51 and 52).
 Class Student Services, Inc., Rockville, Md. 893,888, pub. 4-14-70. Cl. 100.
 Cleveland Automatic Machine Co., The, Cincinnati, Ohio. 893,637, pub. 4-14-70. Cl. 23.
 Clover Farm Stores Corp., Cleveland, Ohio. 893,871, pub. 4-14-70. Cl. 52.
 Club 80, Inc., Deerfield, Wis. 893,893, pub. 4-14-70. Cl. 100.
 Cobble Laboratory Co. Ltd., Tokyo, Japan. 893,879, pub. 4-14-70. Multiple Class (Classes 26 and 52).
 Cobe Laboratories, Inc., Denver, Colo. 893,561, pub. 4-14-70. Cl. 18.
 Colgate-Palmolive Co., New York, N.Y. 893,874, pub. 4-14-70. Cl. 52.
 Collette Mfg. Co., Amsterdam, N.Y. 526,706, ren. 6-30-70. Cl. 13.
 Colt's Inc., Hartford, Conn. 893,530, pub. 4-14-70. Cl. 9.
 Columbia Broadcasting System, Inc., New York, N.Y. 893,606-7, pub. 4-14-70. Cl. 21.
 Commercial Solvents Corp., New York, N.Y. 893,531, pub. 4-14-70. Cl. 9.
 Compagnie de Caoutchouc Mfg. Dynamic, Paris, France. 893,600, pub. 4-14-70. Cl. 21.
 Compulize Inc., Leonia, N.J. 893,899-900, pub. 4-14-70. Cl. 100.
 Consolidated Foods Corp., New York, N.Y. 893,519, pub. 4-14-70. Cl. 6.
 Consolidated Foods Corp., Old Greenwich, Conn. 893,733, pub. 4-14-70. Cl. 34.
 Continental Can Co., Inc., New York, N.Y. 526,213-14, ren. 6-30-70. Cl. 2.
 Contour Chemical Co., Woburn, Mass. 893,549, pub. 4-14-70. Cl. 15.
 Cook Coffee Co.: See—
 Cook United, Inc., from Cook Coffee Co., Maple Heights, Ohio. 893,853, pub. 4-14-70. Cl. 51.
 Copy-Rite Corp., Chicago, Ill. 893,633, pub. 4-14-70. Cl. 23.
 Cory Corp., Chicago, Ill. 893,763, pub. 4-14-70. Cl. 37.
 Country Club Enterprises, Inc., Harrisburg, Pa. 893,784, pub. 4-14-70. Cl. 38.
 Country Shirt Co., The, New York, N.Y. 769,607, can. Cl. 39.
 Crane Co., New York, N.Y. 523,325, ren. 6-30-70. Cl. 23.
 Crane Co., New York, N.Y. 769,487, can. Cl. 23.
 Crockett, James U., Concord, Mass. 529,913, ren. 6-30-70. Cl. 38.
 Crown Cork & Seal Co., Inc., Philadelphia, Pa. 530,994, ren. 6-30-70. Cl. 23.
 Crown-X, Inc., Cleveland, Ohio. 893,732, pub. 4-14-70. Cl. 34.
 Crumar di Mario Crucianelli-F. Marchetti & C. S.A.S., Castelfidardo, Ancona, Italy. 893,741, pub. 4-14-70. Cl. 36.
 Cunningham Corp., Honeye Falls, N.Y. 893,613-14, pub. 4-14-70. Cl. 21.
 Curson Display, Inc., Omaha, Nebr. 893,911, pub. 4-14-70. Cl. 101.
 DBA Systems, Inc., Melbourne, Fla. 893,681, pub. 4-14-70. Multiple Class (Classes 26 and 101).
 Dallas Cowboys Football Club, Inc., Dallas, Tex. 893,942, pub. 4-14-70. Cl. 107.
 Dana Corp., Toledo, Ohio. 893,675, pub. 4-14-70. Cl. 23.
 Data Packaging Corp., Cambridge, Mass. 893,845, pub. 4-14-70. Cl. 50.
 Data Products Corp., Culver City, Calif. 893,599, pub. 4-14-70. Cl. 21.
 Dayco Corp., Dayton, Ohio. 893,654, pub. 4-14-70. Cl. 23.
 Day's Tailor-D Clothing, Inc., Tacoma, Wash. 530,794, ren. 6-30-70. Cl. 39.
 Dean-Morris Shoe Co., Inc., Middleboro, Mass. 709,599, can. Cl. 39.
 Deer Park Baking Co., Hammononton, N.J. 893,826, pub. 4-14-70. Cl. 46.
 Defiance-Axon Corp., Johnson City, N.Y. 893,758, pub. 4-14-70. Cl. 37.
 Degremont S.A., Supresnes, Seine, France. 893,711, pub. 4-14-70. Cl. 31.
 Delightform Foundations, Inc., Easton, Pa. 769,606, can. Cl. 39.
 Depuy Mfg. Co., Inc., Warsaw, Ind. 893,803, pub. 4-14-70. Cl. 44.
 Diamond Shamrock Corp., Cleveland, Ohio. 893,546, pub. 4-14-70. Cl. 15.
 Dick, A. B., Co., Niles, Ill. 893,534, pub. 4-14-70. Cl. 11.
 Dillon, Burton C., d.b.a. Fishing in Maryland, Baltimore, Md. 893,777, pub. 4-14-70. Cl. 38.
 Dior, Christian, Societe a Responsabilite Limitee, Paris, France. 523,754, ren. 6-30-70. Cl. 39.
 Domecq, Pedro, S.A., Cadiz, Spain. 893,835, pub. 4-14-70. Cl. 47.
 Domtar Ltd., Montreal, Quebec, Canada. 893,509, pub. 4-14-70. Cl. 2.
 Don, Edward & Co., Chicago, Ill. 769,586, can. Cl. 38.
 Dorken & Mankel K.G., Ennepetal-Voerde, Westphalia, Germany. 769,504, can. Cl. 25.
 Double Stamp Brands Inc., Birmingham, Ala. 769,694, can. Cl. 52.
 Dow Badische Co., Williamsburg, Va. 893,503, pub. 4-14-70. Cl. 1.
 Dow Chemical Co., The, Midland, Mich. 285,606, Am. 7(d). Cl. 52.
 Dow Chemical Co., The, Midland, Mich. 293,057, Am. 7(d). Cl. 12.
 Dow Chemical Co., The, Midland, Mich. 769,357, can. Cl. 6.
 Dow Chemical Co., The, Midland, Mich. 893,529, pub. 4-14-70. Cl. 6.
 Dow Corning Corp., Midland, Mich. 893,498, pub. 4-14-70. Cl. 15.
 Dow Corning Corp., Midland, Mich. 893,547, pub. 4-14-70. Cl. 15.
 Doyle Packing Co. Doric Corp., Oklahoma City, Okla. 508,071, Am. 7(d). Cl. 46.
 Drackett Co. of Canada, Ltd., Toronto, Ontario, Canada. 768,950, can. Multiple Class (Classes 4 and 52).
 Dri-Babe of California, Inc., Santa Monica, Calif. 769,597, can. Cl. 39.
 Drug City, Inc., Bloomfield, Conn. 893,565, pub. 4-14-70. Cl. 18.
 Duffy-Mott Co., Inc., New York, N.Y. 893,808, pub. 4-14-70. Cl. 45.
 Durrum Instrument Corp., Palo Alto, Calif. 893,687-8, pub. 4-14-70. Cl. 26.
 Dun & Bradstreet Publications Corp., New York, N.Y. 893,772, pub. 4-14-70. Cl. 38.
 Du Pont de Nemours, E. I. & Co., Wilmington, Del. 527,810, ren. 6-30-70. Cl. 52.
 Du Pont de Nemours, E. I. & Co., Wilmington, Del. 893,528, pub. 4-14-70. Cl. 6.
 Dwyer Instruments, Inc., Michigan City, Ind. 893,693, pub. 4-14-70. Cl. 26.
 Dynabulk Corp., Bellevue, Wash. 893,582, pub. 4-14-70. Cl. 19.
 Eaton, Allen, Corp., Brooklyn, N.Y. 893,535, pub. 4-14-70. Cl. 11.
 Eaton Mfg. Co., to Eaton Yale & Towne Inc., Cleveland, Ohio. 511,515, Am. 7(d). Cl. 13.
 Eaton Mfg. Co., to Eaton Yale & Towne Inc., Cleveland, Ohio. 891,531, Am. 7(d). Cl. 13.
 Eclipse Sleep Products Inc., Brooklyn, N.Y. 893,720, pub. 4-14-70. Cl. 32.
 Edelbrock Equipment Co., El Segundo, Calif. 893,650, pub. 4-14-70. Cl. 23.
 Edge-Rite Corp., The, Brownwood, Tex. 893,641, pub. 4-14-70. Cl. 23.
 Electric-Aire Engineering Corp., Elmwood Park, Ill. 529,413, ren. 6-30-70. Cl. 44.
 Electronic Fittings Corp., Danbury, Conn. 769,449, can. Cl. 21.
 Eleventh Hour, Inc., The, Chattanooga, Tenn. 893,937, pub. 4-14-70. Cl. 107.
 Elfrig, E. E. Distributing Co., Inc., Maywood, Ill. 893,800, pub. 4-14-70. Cl. 42.
 Ely & Walker, Inc., Memphis, Tenn. 76,743, ren. 6-30-70. Cl. 39.
 Engel, N. & Co., Inc., New York, N.Y. 893,696, pub. 4-14-70. Cl. 27.
 Englander Co., Inc., The, New York, N.Y. 893,719, pub. 4-14-70. Cl. 32.
 Epic Resins Corp., Waukesha, Wis. 893,495, pub. 4-14-70. Cl. 1.
 Ethyl Corp., Richmond, Va. 893,514, pub. 4-14-70. Cl. 2.
 Evans-Aristocrat Industries, Inc., Elizabeth, N.J. 893,507, pub. 4-14-70. Cl. 2.
 Evera Industries Inc., Moonachie, N.J. 769,397, can. Cl. 13.
 Eversharp, Inc., d.b.a. Schick Safety Razor Co., Milford, Conn. 769,570, can. Cl. 37.
 Exel Oy, Helsinki, Finland. 893,805, pub. 4-14-70. Cl. 44.
 Fairdeal Mfg. Co., Providence, R.I. 893,706, pub. 4-14-70. Cl. 28.
 Falstaff Brewing Corp., St. Louis, Mo. 893,817, pub. 4-14-70. Cl. 46.
 Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 893,807, pub. 4-14-70. Cl. 44.
 Far-mar Co., Inc., Hutchinson, Kans. 893,828, pub. 4-14-70. Cl. 46.
 Fastener Corp., Franklin Park, Ill. 893,542, pub. 4-14-70. Multiple Class (Classes 13 and 23).
 Fat Mike's Inc., Hasbrouck Heights, N.J. 893,904, pub. 4-14-70. Cl. 100.
 Fedders Corp., Edison, N.J. 893,728-9, pub. 4-14-70. Cl. 34.
 Federal Boiler Co., Inc., Midland Park, N.J. 769,546, can. Cl. 34.
 Fedtro, Inc., Rockville Centre, N.Y. 893,690, pub. 4-14-70. Cl. 26.
 Ferroxcube Corp., Saugerties, N.Y. 519,694, ren. 6-30-70. Cl. 14.
 Fiberplastics, Inc., Sausalito, Calif. 893,843, pub. 4-14-70. Cl. 50.
 Fidelity Mfg. Co., Sun Valley, Calif. 893,691, pub. 4-14-70. Cl. 26.
 Fieldcrest Mills, Inc., Spray, N.C. 769,631, can. Cl. 42.
 Firestone Tire & Rubber Co., The, Akron, Ohio. 893,593, pub. 4-14-70. Cl. 19.
 Flanders Filters, Inc., Washington, N.C. 893,716, pub. 4-14-70. Cl. 31.
 Fleetwood Co., The, Chicago, Ill. 893,859, pub. 4-14-70. Cl. 51.
 Florida Atlas Corp., d.b.a. Fort Bountiful Enterprises, Windermere, Fla. 769,626, can. Cl. 41.
 Florida Cypress Gardens, Inc., Cypress Gardens, Fla. 893,895, pub. 4-14-70. Multiple Class (Classes 100 and 107).
 Flow Laboratories, Inc., Rockville, Md. 893,504, pub. 4-14-70. Cl. 1.
 Flow Research Animals, Inc., Dublin, Va. 893,505-6, pub. 4-14-70. Cl. 1.
 Food Facilities Management Corp., Chicago, Ill. 893,812, pub. 4-14-70. Cl. 46.

Formulabs, Inc., Escondido, Calif. 893,533, pub. 4-14-70. Cl. 11.
 Fort Howard Paper Co., Green Bay, Wis. 526,774, ren. 6-30-70. Cl. 37.
 Fort Howard Paper Co., Green Bay, Wis. 893,756-7, pub. 4-14-70. Cl. 37.
 Frank, Wally, Ltd., New York, N.Y. 893,554, pub. 4-14-70. Cl. 17.
 Frankische Fezindustrie Markle & Co., Furth Bavaria, Germany. 893,499, pub. 4-14-70. Multiple Class (Classes 1 and 39).
 Franklin Mint Inc., The, Yeadon, Pa. 893,837-42, pub. 4-14-70. Cl. 50.
 Franklin Mint Inc., The, Yeadon, Pa. 893,844, pub. 4-14-70. Cl. 50.
 Franklin Stores Corp., d.b.a. Barkers, New York, N.Y. 893,795, pub. 4-14-70. Cl. 39.
 Fukui & Co., Ltd., Osaka, Japan. 893,645, pub. 4-14-70. Cl. 23.
 GAF Corp., New York, N.Y. 529,224, ren. 6-30-70. Cl. 28.
 GAF Corp., New York, N.Y. 893,786, pub. 4-14-70. Cl. 38.
 G. H. S. Corp., Battle Creek, Mich. 893,747, pub. 4-14-70. Cl. 36.
 Gale, Ruby, Coiffeurs of P.R. Inc., d.b.a. Ruby Gale, Santurce, Puerto Rico. 893,858, pub. 4-14-70. Cl. 51.
 Gearmaster, Inc., McHenry, Ill. 893,639, pub. 4-14-70. Cl. 23.
 Gebr. Becker Gesellschaft Mit Beschränkter Haftung, Wuppertal-Barmen, Germany. 893,648, pub. 4-14-70. Cl. 23.
 Geigy Chemical Corp., Ardsley, N.Y. 893,567-8, pub. 4-14-70. Cl. 18.
 Geir Industries, Inc., Cincinnati, Ohio. 528,119, ren. 6-30-70. Cl. 32.
 General Electric Co., Schenectady, N.Y. 893,501, pub. 4-14-70. Cl. 1.
 General Foods Corp., White Plains, N.Y. 769,672, can. Cl. 46.
 General Sportswear Co., Inc., Ellenville, N.Y. 524,180, ren. 6-30-70. Cl. 39.
 General Tire & Rubber Co., The, Akron, Ohio. 444,210, ren. 6-30-70. Cl. 50.
 General Tire & Rubber Co., The, Akron, Ohio. 769,384, can. Cl. 1.
 Genovese Drug Stores, Inc., Long Island City, N.Y. 893,920-1, pub. 4-14-70. Cl. 101.
 Georgia-Pacific Corp., Portland, Ore. 893,767, pub. 4-14-70. Cl. 37.
 Gerbo Footwear Corp., Huntingdon, Pa. 893,793, pub. 4-14-70. Cl. 39.
 Germain's Inc., Los Angeles, Calif. 769,368, can. Cl. 10.
 Gibson, C. R. Co., The, Norwalk, Conn. 893,761, pub. 4-14-70. Cl. 37.
 Giffen Corp., Miami, Fla. 893,603, pub. 4-14-70. Multiple Class (Classes 21 and 40).
 Gimbal Bros., San Francisco, Calif. 524,356, ren. 6-30-70. Cl. 46.
 Glen Raven Mills, Inc., Glen Raven, N.C. 893,801, pub. 4-14-70. Cl. 43.
 Gloucester Engineering Co., Inc., Gloucester, Mass. 893,666, pub. 4-14-70. Cl. 23.
 Gold Mine Jewelry Co., Inc., Rockville Centre, N.Y. 769,519, can. Cl. 28.
 Gold Seal Co., Bismarck, N. Dak. 523,840, ren. 6-30-70. Cl. 29.
 Golden Touch, Inc., Chicago, Ill. 893,798, pub. 4-7-70. Cl. 40.
 Gombault Products Corp., Newark, N.J. 893,556, pub. 4-14-70. Cl. 13.
 Good Luck Glove Co., Carbondale, Ill. 529,681, ren. 6-30-70. Cl. 39.
 Goodfriend, Sydney, d.b.a. Robert Allen Industries, Detroit, Mich. 769,387, can. Cl. 13.
 Goodrich, B. F. Co., The, Akron, Ohio. 530,122, ren. 6-30-70. Cl. 36.
 Gordon Jewelry Corp., Houston, Tex. 893,695, pub. 4-14-70. Multiple Class (Classes 27 and 28).
 Gorolin Corp., Chicago, Ill. 769,680, can. Cl. 51.
 Gould, Richard J., d.b.a. Jalco, Saginaw, Mich. 893,788, pub. 4-14-70. Cl. 38.
 Grace, W. B. & Co., Duncan, S.C. 524,749, ren. 6-30-70. Cl. 37.
 Graphex, Inc., Lawrence, Mass. 893,616, pub. 4-14-70. Cl. 21.
 Great Lakes Stamp & Mfg. Co. Inc., Chicago, Ill. 769,369, can. Cl. 11.
 Groveton Papers Co., Groveton, N.H. 893,765, pub. 4-14-70. Cl. 37.
 Guild Wine Co., d.b.a. Citation Brandy Co., Lodi, Calif. 531,056, ren. 6-30-70. Cl. 49.
 Gunn, Phil, Helena, Mont. 893,909, pub. 4-14-70. Cl. 100.
 Gustin-Bacon Mfg. Co., Kansas City, Mo. 769,533, can. Cl. 32.
 Gutman-Lann Glove Co., Inc., New York, N.Y. 769,629, can. Cl. 42.
 Hamilton Adams Imports, Ltd., New York, N.Y. 769,630, can. Cl. 42.
 Hamilton Humidity, Inc., Chicago, Ill. 893,736, pub. 4-14-70. Cl. 34.
 Harlee Co., The, Chicago, Ill. 893,908, pub. 4-14-70. Cl. 100.
 Harloc Products Corp., West Haven, Conn. 893,539, pub. 4-14-70. Multiple Class (Classes 13 and 25).
 Harmon, Benjamin G., d.b.a. Harmon & Co., Chicago, Ill. 769,554, can. Cl. 34.
 Haverhill's Inc., San Francisco, Calif. 893,642, pub. 4-14-70. Multiple Class (Classes 23, 26, 34, and 44).
 Heath Tecna Corp., Kent, Wash. 893,581, pub. 4-14-70. Cl. 19.
 Heller, Edward, Louisville, Ky. 893,913, pub. 4-14-70. Cl. 101.
 Henrite Products Corp., Morristown, Tenn. 769,485, can. Cl. 23.
 Herbert's, Irene, Pants Parlour, Tulsa, Okla. 769,598, can. Cl. 39.
 Hercules Tire & Rubber Co., The, Findlay, Ohio. 893,739, pub. 4-14-70. Cl. 35.
 Hewitt Soap Co., Inc., The, Dayton, Ohio. 523,947, ren. 6-30-70. Cl. 52.
 Hickey-Freeman Co., Inc., Rochester, N.Y. 528,211, ren. 6-30-70. Cl. 39.
 Hickey-Freeman Co., Inc., Rochester, N.Y. 528,596, ren. 6-30-70. Cl. 39.
 Hijos De Agustin Blasquez, Cadiz, Spain. 893,834, pub. 4-14-70. Cl. 47.
 Hohner, M., Inc., Hicksville, N.Y. 893,745, pub. 4-14-70. Cl. 36.
 Holland Maid, Inc., Holland, Mich. 893,722, pub. 4-14-70. Cl. 32.
 Hollis Engineering, Inc., Nashua, N.H. 893,670, pub. 4-14-70. Cl. 23.
 Holt, Ralph W., d.b.a. Holt Industries, Denver, Colo. 769,423, can. Cl. 19.
 Honey Toy Industries, Inc., Brooklyn, N.Y. 769,329, can. Cl. 1.
 Hooker Chemical Corp., Niagara Falls, N.Y. 768,659, ren. 6-30-70. Cl. 6.
 Hooker Chemical Corp., Niagara Falls, N.Y. 523,200, ren. 6-30-70. Cl. 6.
 Hubbard Hall Chemical Co., The, Waterbury, Conn. 529,113, ren. 6-30-70. Cl. 52.
 Hubbell, Harvey, Inc., d.b.a. Shalida Lighting Products Co., Bridgeport, Conn. 893,605, pub. 4-14-70. Cl. 21.
 Hudnut, Richard, Morris Plains, N.J. 893,846, pub. 4-14-70. Cl. 51.
 Hupp Corp., Cleveland, Ohio. 769,549-50, can. Cl. 24.
 Hyster Co., Portland, Ore. 893,656, pub. 4-14-70. Cl. 23.
 I.L.C.A. Simmenthal Meridionale S.p.A., Aprilia, Italy. 769,657, can. Cl. 46.
 Imber, Oswald O., d.b.a. Ray Control Co., New York, N.Y. 769,476, can. Cl. 23.
 Imperial Methods Co., Forest Park, Ill. 893,764, pub. 4-14-70. Cl. 37.
 Induchem Laboratory Glass Co., Inc., Roselle, N.J. 893,682, pub. 4-14-70. Cl. 26.
 Industrial Boiler Co., Inc., Chattanooga, Tenn. 893,780, pub. 4-14-70. Cl. 34.
 Industrial Woodworking Machine Co., Inc., Garland, Tex. 893,649, pub. 4-14-70. Cl. 23.
 Ingersoll-Rand Co., New York, N.Y. 278,707, ren. 6-30-70. Cl. 23.
 Inmont Corp., New York, N.Y. 893,538, pub. 4-14-70. Cl. 12.
 Inns of Happiness, Inc., Tulsa, Okla. 893,915, pub. 4-14-70. Cl. 101.
 Insto-Gas Corp., Detroit, Mich. 893,734, pub. 4-14-70. Cl. 24.
 Interspace Corp., Los Angeles, Calif. 886,161, cor. Cl. 12.
 Interspace Corp., Los Angeles, Calif. 893,769, pub. 4-14-70. Cl. 30.
 Ivener, Martin H., d.b.a. Martin Publishing Co., North Hollywood, Calif. 769,585, can. Cl. 38.
 JFG Coffee Co., Knoxville, Tenn. 529,840, ren. 6-30-70. Cl. 46.
 Jamie Record Co., Philadelphia, Pa. 893,743, pub. 4-14-70. Cl. 36.
 Jancyn Mfg. Corp., East Northport, N.Y. 893,868, pub. 4-14-70. Cl. 52.
 Jarke Corp., Chicago, Ill. 893,723, pub. 4-14-70. Cl. 32.
 Jarry, Hydraulics, Ltd., Montreal, Quebec, Canada. 769,478, can. Cl. 23.
 Jaus, Albert, d.b.a. Bohm & Co. Mercedesstrasse, Stuttgart-Bad Cannstatt, Germany. 769,467, can. Cl. 23.
 Jewett, E. W., Ventura, Calif. 527,221, ren. 6-30-70. Cl. 46.
 Johns-Manville Corp., New York, N.Y. 444,056, ren. 6-30-70. Cl. 1.
 Johns-Manville Corp., New York, N.Y. 899,609, cor. Cl. 13.
 Johnson & Johnson, New Brunswick, N.J. 769,640, can. Cl. 44.
 Joint Cling Peach Advisory Board, San Francisco, Calif. 893,944, pub. 4-14-70. Cl. A.
 Journal Co., The, Milwaukee, Wis. 893,787, pub. 4-14-70. Cl. 38.
 Kai It Battery Factory Ltd., Victoria, Hong Kong. 893,621, pub. 4-14-70. Cl. 21.
 Kalman Floor Co., Inc., New York, N.Y. 530,007, ren. 6-30-70. Cl. 103.
 Kalamazoo Label Co., Kalamazoo, Mich. 893,790, pub. 4-14-70. Cl. 38.
 Kansas City Royals Baseball Corp., Kansas City, Mo. 893,939, pub. 4-14-70. Cl. 107.
 Keebler Co., Elmhurst, Ill. 893,827, pub. 4-14-70. Cl. 46.
 Keepsake Portraits, Inc., Baltimore, Md. 893,778, pub. 4-14-70. Cl. 38.
 Kelly, Douglas, & Co., Ltd., d.b.a. Nabob Foods, Burnaby, British Columbia, Canada. 769,673, can. Cl. 46.
 Kelly Girl Service, Inc., Highland Park, Mich. 769,754, can. Cl. 101.
 Kenai Salmon Packing Co., d.b.a. Parks Canning Co., Seattle, Wash. 893,830-1, pub. 4-14-70. Cl. 46.
 Kendall Co., The, Walpole, Mass. 271,939, ren. 6-30-70. Cl. 44.
 Kendall Co., The, Walpole, Mass. 529,475, ren. 6-30-70. Cl. 18.
 Kewanee Scientific Equipment Corp., Adrian, Mich. 893,725, pub. 4-14-70. Cl. 32.
 Kiddiercraft (Holdings) Ltd., Kenley, Surrey, England. 443,899, ren. 6-30-70. Cl. 22.
 Kimberly-Clark Corp., Neenah, Wis. 893,575, pub. 4-14-70. Cl. 18.

Kimberly-Clark Corp., Neenah, Wis. 893,769, pub. 4-14-70. Cl. 37.
 Kimberly-Clark Corp., Neenah, Wis. 893,894, pub. 4-14-70. Cl. 100.
 Kirchcarpenter, Madison, Wis. 893,789, pub. 4-14-70. Cl. 38.
 Kirchner, Barbara, Jarrettsville, Md. 893,771, pub. 4-14-70. Cl. 38.
 Kissimmee Enterprises, Inc., d.b.a. Kissimmee Spring Water Co., Kissimmee, Fla. 769,735, can. Cl. 45.
 Knomark Inc., Jamaica, N.Y. 893,878, pub. 4-14-70. Cl. 52.
 Kohnstamm, H. & Co., Inc., New York, N.Y. 893,819, pub. 4-14-70. Cl. 46.
 Kollman Instrument Corp., Syosset, N.Y. 523,158, ren. 6-30-70. Cl. 21.
 Kreage, S. S., Co., Detroit, Mich. 893,707, pub. 4-14-70. Cl. 29.
 Kroger Co., The, Cincinnati, Ohio. 893,823, pub. 4-14-70. Cl. 46.
 Kysor Industrial Corp., Cadillac, Mich. 893,808, pub. 4-14-70. Cl. 21.
 LaBoutica Pappagallo, Inc., Greenwich, Conn. 893,929, pub. 4-14-70. Cl. 101.
 Lamb-Weston, Inc., Portland, Ore. 521,922, ren. 6-30-70. Cl. 46.
 Lancer Chemical Corp., Matawan, N.J. 893,496, pub. 4-14-70. Cl. 46.
 Multiple Class (Classes 1, 8, and 15).
 Lane Bryant, Inc., New York, N.Y. 528,991, ren. 6-30-70. Cl. 39.
 Langley, Daniel B., Md., d.b.a. Langyn Laboratories, Naples, Fla. 893,557, pub. 4-14-70. Cl. 18.
 Lanvin-Charles of the Ritz, Inc., New York, N.Y. 893,866, pub. 4-14-70. Cl. 52.
 Lapointe Machine Tool Co., Hudson, Mass. 524,067, ren. 6-30-70. Cl. 23.
 Lear Siegler, Inc., Kalamazoo, Mich. 893,718, pub. 4-14-70. Cl. 32.
 Lecount Tool Works, Inc., Cheshire, Conn. 769,490, can. Cl. 23.
 Leeds & Northrup Co., North Wales, Pa. 893,683, pub. 4-14-70. Cl. 26.
 Leflon, Henri E., Crugers, N.Y. 893,634, pub. 4-14-70. Cl. 23.
 Leigh, Inc., Easton, Pa. 893,713, pub. 4-14-70. Cl. 31.
 Le Roi Hosiery Co., Inc., New York, N.Y. 893,796, pub. 4-14-70. Cl. 39.
 Les Petite Academies, Inc., d.b.a. La Petite Academy, Springfield, Ill. 893,938, pub. 4-14-70. Cl. 107.
 Lever Bros. Co., New York, N.Y. 893,877, pub. 4-14-70. Cl. 52.
 Liberty Leasing Co., Inc., Chicago, Ill. 893,879-81, pub. 4-14-70. Cl. 100.
 Lighting & Lamps Co., Los Angeles, Calif. 769,371, can. Cl. 12.
 Lindelow, William A., d.b.a. Lindelow Customer Promotions, Fort Washington, Pa. 893,922, pub. 4-14-70. Cl. 101.
 Lp Societe Anonyme d'Horlogerie, Besancon (Doubs), France. 769,505, can. Cl. 26.
 Lisbeth Whiting Co., Inc., Brooklyn, N.Y. 769,455, can. Cl. 22.
 Litton Business Systems, Inc., New York, N.Y. 893,847, pub. 4-14-70. Cl. 23.
 Livingston & Doughty Ltd., Leicester, England. 769,325, can. Cl. 1.
 Lo Bue Bros., Inc., Lindsay, Calif. 524,291, ren. 6-30-70. Cl. 46.
 Loeb, Herman, Philadelphia, Pa. 77,552, ren. 6-30-70. Cl. 3.
 Logan-Long Co., The, Chicago, Ill. 273,575, ren. 6-30-70. Cl. 12.
 Lomax Corp., Roosevelt, N.Y. 893,636, pub. 4-14-70. Cl. 23.
 Lombardi Food Co., Royal Oak, Mich. 769,651, can. Cl. 46.
 Lowe's Companies, Inc., Wilkesboro, N.C. 893,592, pub. 4-14-70. Cl. 19.
 Luminous Ceilings, Inc., Chicago, Ill. 893,609, pub. 4-14-70. Cl. 21.
 Lumitron Corp., Los Angeles, Calif. 893,686, pub. 4-14-70. Cl. 26.
 Lynott, Dick, Inc., Duluth, Ga. 769,605, can. Cl. 39.
 Magazine Management Co., Inc., from Magazine Management Co., d.b.a. Marvel Comics Group, New York, N.Y. 893,770, pub. 4-14-70. Cl. 38.
 Mahon, Thomas J., Inc., Englewood Cliffs, N.J. 769,721, can. Cl. 18.
 Mallinckrodt Chemical Works, St. Louis, Mo. 893,511, pub. 4-14-70. Cl. 2.
 Mars Metal Products Co., Inc.: See—
 Mars Technological Industries.
 Mars Technological Industries, from Mars Metal Products Co., Inc., Palisades Park, N.J. 893,884, pub. 4-14-70. Cl. 100.
 Marshburn, Robert E., d.b.a. Seper-Air Products, Raleigh, N.C. 893,643, pub. 4-14-70. Cl. 13.
 Maryland Cup Corp., Owings, Wills, Md. 893,510, pub. 4-14-70. Cl. 2.
 Mason Rozen Importers, Inc., New York, N.Y. 769,601, can. Cl. 39.
 Matsushita Electric Industrial Co., Ltd., Osaka, Japan. 812,270, can. Cl. 44.
 Matsushita Electric Industrial Co., Ltd., Osaka Prefecture, Japan. 893,617, pub. 4-14-70. Cl. 21.
 Mattel, Inc., Hawthorne, Calif. 893,625-32, pub. 4-14-70. Cl. 22.
 Mattingly, C. J., Packing Co., Inc., Glendale, Ariz. 769,660, can. Cl. 46.
 McCord Corp., Detroit, Mich. 523,758, ren. 6-30-70. Cl. 23.
 McDonald Products Corp., Buffalo, N.Y. 893,512-13, pub. 4-14-70. Multiple Class (Classes 2, 8, 32, and 37).
 McGraw-Edison Co., Elgin, Ill. 893,945, pub. 4-14-70. Cl. B.

Mead Corp., The, Dayton, Ohio. 893,508, pub. 4-14-70. Cl. 2.
 Mead Johnson & Co., Evansville, Ind. 769,422, can. Cl. 18.
 Medic-Fair, Inc., Villanova, Pa. 893,559, pub. 4-14-70. Cl. 18.
 Medley Distilling Co., Owensboro, Ky. 530,906, ren. 6-30-70. Cl. 49.
 Melville Shoe Corp., New York, N.Y. 769,614-15, can. Cl. 39.
 Merck & Co., Inc., Rahway, N.J. 531,347, ren. 6-30-70. Cl. 18.
 Merck & Co., Inc., Rahway, N.J. 893,569-72, pub. 4-14-70. Cl. 18.
 Mercury Ring Corp., New York, N.Y. 893,705, pub. 4-14-70. Cl. 28.
 Meyer Laboratories, Inc., Detroit, Mich. 522,657, ren. 6-30-70. Cl. 18.
 Miami Springs Villas, Inc., Miami Springs, Fla. 893,883, pub. 4-14-70. Cl. 100.
 Micro-Therapeutics, Inc., New York, N.Y. 893,856, pub. 4-14-70. Cl. 51.
 Mid-Continent Metal Products Co., Chicago, Ill. 893,735, pub. 4-14-70. Cl. 84.
 Milla Products Co., Beverly Hills, Calif. 769,637, can. Cl. 44.
 Mine Safety Appliances Co., Pittsburgh, Pa. 270,361, ren. 6-30-70. Cl. 44.
 Minnesota Mining & Mfg. Co., St. Paul, Minn. 893,544, pub. 4-14-70. Cl. 14.
 Minnesota & Ontario Paper Co., Minneapolis, Minn. 769,568, can. Cl. 37.
 Minoco Lens Co., Inc., St. Cloud, Minn. 893,692, pub. 4-14-70. Cl. 26.
 Minton Ltd., Stoke-on-Trent, England. 444,177, ren. 6-30-70. Cl. 30.
 Miscellaneous, Inc., Cleveland, Ohio. 893,931, pub. 4-14-70. Cl. 101.
 Mr. Sandwich U.S.A., Inc., New York, N.Y. 893,898, pub. 4-14-70. Cl. 100.
 Modrey, Henry J., d.b.a. Modrey Associates, Stamford, Conn. 893,635, pub. 4-14-70. Cl. 23.
 Mogal Cutlery Co., Inc., New York, N.Y. 769,470, can. Cl. 23.
 Mondia S.A., La Chaux-de-Fonds, Switzerland. 893,694, pub. 4-14-70. Cl. 27.
 Monsanto Chemical Co., St. Louis, Mo. 769,753, can. Cl. 100.
 Monsanto Co., St. Louis, Mo. 525,724, ren. 6-30-70. Cl. 1.
 Morgantown Glassware Guild, Inc., Morgantown, W. Va. 893,726, pub. 4-14-70. Cl. 33.
 Mork, Suzanne M., Hopkins, Minn. 893,940, pub. 4-14-70. Cl. 107.
 Morrell, John & Co., Chicago, Ill. 893,820, pub. 4-14-70. Cl. 46.
 Morris, Phillips, Inc., New York, N.Y. 893,553, pub. 4-14-70. Cl. 17.
 Morris, Phillip, Inc., New York, N.Y. 893,555, pub. 4-14-70. Cl. 17.
 Motorola, Inc., Franklin Park, Ill. 893,615, pub. 4-14-70. Cl. 21.
 Motown Record Corp., Detroit, Mich. 893,744, pub. 4-14-70. Cl. 36.
 Mueller, C. F., Co., Jersey City, N.J. 893,824, pub. 4-14-70. Cl. 46.
 NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Wurttemberg, Germany. 769,459, can. Cl. 23.
 National Foam System, Inc., West Chester, Pa. 893,946, Cl. 2.
 National 4-H Club Foundation of America, Inc., Chevy Chase, Md. 893,896, pub. 4-14-70. Cl. 100.
 National Franchise Marketing & Leasing Corp., The, Bloomfield, N.J. 769,572, can. Cl. 37.
 National Greenhouse Co., Pana, Ill. 523,780, ren. 6-30-70. Cl. 12.
 National Greenhouse Co., Pana, Ill. 523,862, ren. 6-30-70. Cl. 12.
 National Screw & Mfg. Co., The, Mentor, Ohio. 520,250, ren. 6-30-70. Cl. 13.
 National Screw & Mfg. Co., The, Mentor, Ohio. 893,667, pub. 4-14-70. Cl. 23.
 Nautilette, Inc., Fort Wayne, Ind. 893,586, pub. 4-14-70. Cl. 19.
 Neotek Associates, Miami, Fla. 893,715, pub. 4-14-70. Cl. 31.
 Neuber, Adolph, d.b.a. The Amish Farm House, Lancaster, Pa. 769,668, can. Cl. 46.
 Nielsen, A. C., Co., Chicago, Ill. 893,927, pub. 4-14-70. Cl. 101.
 Nielsen Saw & Mfg. Co., d.b.a. Nielsen Corp., Eugene, Ore. 769,469, can. Cl. 23.
 Non-Tox Chemical Corp., Mamaroneck, N.Y. 893,865, pub. 4-14-70. Cl. 52.
 Northland Camps, Inc., Nampa, Idaho. 893,594, pub. 4-14-70. Cl. 19.
 Northwest Plastics, Inc., St. Paul, Minn. 893,933, pub. 4-14-70. Cl. 106.
 Northwestern Steel & Wire Co., Sterling, Ill. 769,885, can. Cl. 13.
 Norton Co., Worcester, Mass. 523,766, ren. 6-30-70. Cl. 23.
 Nozawa Trading, Inc., Los Angeles, Calif. 769,458, can. Cl. 22.
 Nu-Film Products Co., Inc., New York, N.Y. 893,752, pub. 4-14-70. Cl. 37.
 O.K.I. Supply Co., Cincinnati, Ohio. 893,684, pub. 4-14-70. Multiple Class (Classes 26 and 39).
 Occidental Petroleum Corp., Los Angeles, Calif. 893,532, pub. 4-14-70. Cl. 10.
 Oil Base, Inc., Houston, Tex. 524,180, ren. 6-30-70. Cl. 12.
 Oil Base, Inc., Houston, Tex. 524,984, ren. 6-30-70. Cl. 12.
 Old Mansion Inc., Richmond, Va. 893,832, pub. 4-14-70. Cl. 46.
 Olympic Sporting Goods Co., Inc., New York, N.Y. 769,453, can. Cl. 22.

Omni-Med, Inc., Springfield, Ill. 893,923, pub. 4-14-70. Cl. 101.
 Oreck Corp., Stamford, Conn. 893,623, pub. 4-14-70. Cl. 21.
 Orell Industries, Inc., Gaithersburg, Md. 893,781, pub. 4-14-70. Cl. 38.
 Ore-Lube Corp., College Point, N.Y. 893,517, pub. 4-14-70. Cl. 5.
 Ostrow, Reva, d.b.a. Reva, New York, N.Y. 893,799, pub. 4-14-70. Cl. 4.
 Outley S. A., Morges, Vaud, Switzerland. 769,648, can. Cl. 46.
 Overholt, A. & Co., National Distillers & Chemical Corp., New York, N.Y. 269,182, Am. 7(d). Cl. 49.
 Owen Laboratories, Inc., Dallas, Tex. 893,872, pub. 4-14-70. Cl. 52.
 PPG Industries, Inc., Pittsburgh, Pa. 529,050, ren. 6-30-70. Cl. 6.
 Parfumerie Lubin, Paris, France. 893,850, pub. 4-14-70. Cl. 51.
 Parfums Branel, Inc., d.b.a. Branel, New York, N.Y. 769,742, can. Cl. 51.
 Parke, Davis & Co., Detroit, Mich. 893,573, pub. 4-14-70. Cl. 18.
 Parke, Davis & Co., Detroit, Mich. 893,804, pub. 4-14-70. Cl. 44.
 Pass & Seymour, Inc., Syracuse, N.Y. 893,804, pub. 4-14-70. Cl. 21.
 Patou, Jean, Inc., New York, N.Y. 523,111, ren. 6-30-70. Cl. 51.
 Paw Paw Grape Juice Co., Paw Paw, Mich. 769,650, can. Cl. 46.
 Pay'N Save Corp., Seattle, Wash. 893,930, pub. 4-14-70. Cl. 101.
 Peabody Coal Co., St. Louis, Mo. 269,101, ren. 6-30-70. Cl. 1.
 Pearls by Slutsky Ltd.: See—
 Seaborne Enterprises, Inc.
 Peavey Co., Minneapolis, Minn. 893,825, pub. 4-14-70. Cl. 46.
 Penn Fifth Avenue Corp., New York, N.Y. 528,978, ren. 6-30-70. Cl. 39.
 Pennsalt Chemicals Corp., Philadelphia, Pa. 893,867, pub. 4-14-70. Cl. 52.
 Pennwalt Corp., Philadelphia, Pa. 893,526, pub. 4-14-70. Cl. 6.
 Peoples Bank & Trust Co., The, Cedar Rapids, Iowa. 769,709, can. Cl. 102.
 Perk Foods Co., Chicago, Ill. 893,810-11, pub. 4-14-70. Cl. 46.
 Pest Control Operators of California, Inc., Los Angeles, Calif. 769,756, can. Cl. 200.
 Pet Inc., St. Louis, Mo. 529,296, ren. 6-30-70. Cl. 46.
 Pfister, Chas. & Co., Inc., New York, N.Y. 893,849, pub. 4-14-70. Cl. 51.
 Philadelphia Newspapers, Inc., Philadelphia, Pa. 270,787, ren. 6-30-70. Cl. 38.
 Phipps, John D., Portland, Ore. 768,731, can. Cl. 26.
 Phoenix Controls, Inc., East Setonket, N.Y. 769,439, can. Cl. 21.
 Photocircuits Corp., Glen Cove, N.Y. 769,445, can. Cl. 21.
 Pierce Pre-Cooked Foods, Inc., Moorefield, W. Va. 769,737, can. Cl. 46.
 Pillsbury Co., The, Minneapolis, Minn. 893,907, pub. 4-14-70. Cl. 100.
 Pirelli S.p.A., Milan, Italy. 893,585, pub. 4-14-70. Multiple Class (Classes 19, 21, 22, 35, 39, and 44).
 Flexo Preparations, Inc., Lewistown, Pa. 267,974, ren. 6-30-70. Cl. 51.
 Plough, Inc., Memphis, Tenn. 893,818, pub. 4-14-70. Cl. 46.
 Polindexter, Gwendolyn, Shaker Heights, Ohio. 893,936, pub. 4-14-70. Cl. 107.
 Pomagalski, Jean, S.A., Fontaine-Grenoble, France. 893,652, pub. 4-14-70. Cl. 28.
 Power Designs, Inc., Westbury, N.Y. 893,620, pub. 4-14-70. Cl. 21.
 Prelude Corp., High Point, N.C. 893,717, pub. 4-14-70. Cl. 32.
 Procter & Gamble Co., The, Cincinnati, Ohio. 526,434, ren. 6-30-70. Cl. 37.
 Przedsiębiorstwo Handlu Zagranicznego "Agros," Warsaw, Poland. 893,838, pub. 4-14-70. Cl. 49.
 R.A. Chemical Corp., Brooklyn, N.Y. 893,523, pub. 4-14-70. Cl. 6.
 Radiant Wash Solution Corp., Buffalo, N.Y. 769,353, can. Cl. 6.
 Ralphs Grocery Co., Los Angeles, Calif. 893,926, pub. 4-14-70. Cl. 101.
 Ralston Purina Co., St. Louis, Mo. 893,829, pub. 4-14-70. Cl. 46.
 Ralston Purina Co., St. Louis, Mo. 893,833, pub. 4-14-70. Cl. 46.
 Ramsey Corp., St. Louis, Mo. 530,170, ren. 6-30-70. Cl. 23.
 Reach Electronics, Inc., Lexington, Nebr. 893,622, pub. 4-14-70. Cl. 21.
 Reeves Bros., Inc., New York, N.Y. 893,502, pub. 4-14-70. Cl. 1.
 Reichman, Louis, America Corp., New York, N.Y. 893,751, pub. 4-14-70. Cl. 37.
 Reproductions Co., Inc., New York, N.Y. 893,776, pub. 4-14-70. Cl. 38.
 Revlon, Inc., New York, N.Y. 769,744, can. Cl. 51.
 Rexall Drug & Chemical Co.: See—
 Riker Laboratories, Inc.
 Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 528,454, ren. 6-30-70. Cl. 17.
 Richards of Rockford, Inc., Rockford, Ill. 893,871-4, pub. 4-14-70. Cl. 23.
 Richardson-Merrell Inc., New York, N.Y. 893,566, pub. 4-14-70. Cl. 18.

Richmond Research Corp., New York, N.Y. 769,727, can. Cl. 28.
 Riker Laboratories, Inc., Northridge, from Rexall Drug & Chemical Co., d.b.a. Riker Laboratories, Los Angeles, Calif. 893,564, pub. 4-14-70. Cl. 18.
 Rilling Dermetics Co., Bridgeport, Conn. 769,743, can. Cl. 51.
 Ripley & Gowen Co., Inc., Attleboro, Mass. 893,689, pub. 4-14-70. Cl. 28.
 Robanne Corp., Washington, D.C. 769,510, can. Cl. 28.
 Robert-Carole, Inc., Elkins Park, Pa. 893,916, pub. 4-14-70. Cl. 101.
 Robins, A. H., Co., Inc., Richmond, Va. 893,574, pub. 4-14-70. Cl. 18.
 Rockwell Mfg. Co., Pittsburgh, Pa. 893,646, pub. 4-14-70. Cl. 23.
 Rodale Press, Inc., Emmaus, Pa. 893,779, pub. 4-14-70. Cl. 38.
 Rogers Engraving Co., Inc., Long Island City, N.Y. 893,918-19, pub. 4-14-70. Cl. 101.
 Rolamite, Inc., San Francisco, Calif. 893,901, pub. 4-14-70. Cl. 100.
 Roman Meal Co., Tacoma, Wash. 769,738, can. Cl. 46.
 Ross Products, Inc., New York, N.Y. 769,444, can. Cl. 21.
 Rott Research Laboratories S.p.A., Milan, Italy. 893,580, pub. 4-14-70. Cl. 18.
 Rowntree & Co., Ltd. Rowntree Mackintosh Ltd., York, England. 93,644, Am. 7(d). Cl. 46.
 Rowntree & Co., Ltd. Rowntree Mackintosh Ltd., York, England. 384,439, Am. 7(d). Cl. 46.
 Rowntree & Co., Ltd. Rowntree Mackintosh Ltd., York, England. 384,465, Am. 7(d). Cl. 46.
 Rykoff, S. E., & Co., Los Angeles, Calif. 893,766, pub. 4-14-70. Cl. 37.
 SCM Corp., d.b.a. Durkee Famous Foods, Cleveland, Ohio. 893,821, pub. 4-14-70. Cl. 46.
 S & M Mfg., Northridge, Calif. 893,618, pub. 4-14-70. Cl. 21.
 Safety-Kleen Corp., Elgin, Ill. 893,665, pub. 4-14-70. Cl. 23.
 Samsonte Corp., d.b.a. Shwyder Bros., Inc., Denver, Colo. 886,571, cor. Cl. 3.
 San Francisco Warriors, San Francisco, Calif. 893,941, pub. 4-14-70. Cl. 107.
 Saville, J. J., & Co. Ltd., Sheffield, England. 77,420, ren. 6-30-70. Cl. 14.
 Schenley Distillers, Inc., New York, N.Y. 769,675-6, can. Cl. 49.
 Schlieder Foods, Inc., Baltimore, Md. 893,816, pub. 4-14-70. Cl. 46.
 Scholastic Magazines, Inc., New York, N.Y. 278,405, ren. 6-30-70. Cl. 35.
 Schroeder, A., Music Corp., New York, N.Y. 769,584, can. Cl. 38.
 Schroeder, John A., d.b.a. Will-Win Associates, Milwaukee, Wis. 893,589, pub. 4-14-70. Cl. 19.
 Schudy, F. E., Houston, Tex. 893,697, pub. 4-14-70. Cl. 100.
 Schuler's Win, Inc., Marshall, Mich. 893,890, pub. 4-14-70. Cl. 100.
 Schwartz, Benjamin D., New York, N.Y. 531,076, ren. 6-30-70. Cl. 39.
 Scio Pottery Co., The, Scio, Ohio. 893,708, pub. 4-14-70. Cl. 30.
 Scott & Fetzer Co., The, Lakewood, Ohio. 893,624, pub. 4-14-70. Cl. 21.
 Scott-Lee Laboratories, Inc., New Orleans, La. 769,423-5, can. Cl. 18.
 Seaboard Photo Service Corp., Norfolk, Va. 769,712-13, can. Cl. 106.
 Seaborne Enterprises, Inc., from Pearls by Slutsky Ltd., New York, N.Y. 893,698, pub. 4-14-70. Cl. 28.
 Seale, E. C., & Co., Inc., Indianapolis, Ind. 769,581, can. Cl. 38.
 Sears, Roebuck & Co., Chicago, Ill. 523,583, ren. 6-30-70. Cl. 34.
 Semel, Bernard J., Washington, D.C. 893,521, pub. 4-14-70. Cl. 6.
 Sexauer, J. A., Mfg. Co., Inc., White Plains, N.Y. 893,738, pub. 4-14-70. Cl. 35.
 Shakespeare Co., Kalamazoo, Mich. 524,192, ren. 6-30-70. Cl. 15.
 Shamban, W. S., & Co., Los Angeles, Calif. 893,740, pub. 4-14-70. Cl. 35.
 Sheets Radifex Corp., Sun Valley, Calif. 893,540, pub. 4-14-70. Cl. 13.
 Sherwin-Williams Co., The, Cleveland, Ohio. 769,855, can. Cl. 6.
 Sherwin-Williams Co., The, Cleveland, Ohio. 893,497, pub. 4-14-70. Cl. 1.
 Shine Boy, Inc., Rock Island, Ill. 893,656, pub. 4-14-70. Cl. 23.
 Shlansky, Louis & Co., Inc., New York, N.Y. 525,625, ren. 6-30-70. Cl. 39.
 Shoe City, Inc., Montgomery, Ala. 893,928, pub. 4-14-70. Cl. 101.
 Shoe Corp. of America, to SCOA Industries, Inc., Columbus, Ohio. 526,366, Am. 7(d). Cl. 39.
 Shorell, Irma, Inc., New York, N.Y. 893,857, pub. 4-14-70. Cl. 51.
 Skinner, L. R., d.b.a. Scoreasy, Torrance, Calif. 769,587, can. Cl. 38.
 Sleepwell of Jamaica, Ltd., Flushing, N.Y. 769,528, can. Cl. 32.
 Smith, Dale T., Jr., d.b.a. Smith Laboratories, Tipp City, Ohio. 893,595, pub. 4-14-70. Cl. 21.
 Smith, Geo. Lealle, Denver, Colo. 893,814, pub. 4-14-70. Cl. 46.
 Smith, MacVaugh & Hodges, Inc., Philadelphia, Pa. 893,768, pub. 4-14-70. Cl. 37.

- Smoke Quitters of Greater Philadelphia, Inc., Philadelphia, Pa. 893,902-3, pub. 3-31-70. Cl. 100.
- Smoler Bros. Inc., Chicago, Ill. 524,480, ren. 6-30-70. Cl. 39.
- Sonny's El Dorado, Inc., Wauwatosa, Wis. 893,885, pub. 4-14-70. Cl. 100.
- Sorenson, Stanley E., d.b.a. Sorenco Products, Edmonds, Wash. 893,612, pub. 4-14-70. Cl. 21.
- Souriau & Cie, Boulogne-Billancourt Seine, France. 893,598, pub. 4-14-70. Cl. 21.
- Southern Press, Inc., Macon, Ga. 893,785, pub. 4-14-70. Cl. 38.
- Southmost Vegetable Cooperative Association, Homestead, Fla. 527,547, ren. 6-30-70. Cl. 46.
- Southworth Machine Co., Portland, Oreg. 893,658, pub. 4-14-70. Cl. 23.
- Spalding, A. G. & Bros. Inc., Chicopee, Mass. 523,335, ren. 6-30-70. Cl. 22.
- Speedfam Corp., Des Plaines, Ill. 893,662, pub. 4-14-70. Cl. 23.
- Spencer's Inc., Mount Airy, N.C. 529,689, ren. 6-30-70. Cl. 39.
- Specialty Converters, Inc., East Braintree, Mass. 893,500, pub. 4-14-70. Cl. 1.
- Spencer, George H., Jr., d.b.a. Automated Flowers Co., Greenwich, Conn. 769,333, cancl. Cl. 1.
- Sperry Rand Corp., New York, N.Y. 893,680, pub. 4-14-70. Cl. 26.
- Spofa-Spojene Podniky Pro Agravotnickou Vyrobu, Prague, Zizkov, Czechoslovakia. 893,558, pub. 4-14-70. Cl. 18.
- Springs Mills, Inc., Fort Mill, S.C. 443,903, ren. 6-30-70. Cl. 42.
- Standard Oil Co., The, Cleveland, Ohio. 524,156, ren. 6-30-70. Cl. 15.
- Standard Research & Development Co., Charlotte, N.C. 769,556, cancl. Cl. 34.
- Stanlinco, Ltd., Brooklyn, N.Y. 893,905, pub. 4-14-70. Cl. 100.
- Starch, Daniel & Staff, Inc., Mameroneck, N.Y. 893,887, pub. 4-14-70. Cl. 100.
- Stayner Corp., Berkeley, Calif. 893,560, pub. 4-14-70. Cl. 18.
- Stearns & Foster Co., The, Cincinnati, Ohio. 79,706, ren. 6-30-70. Cl. 1.
- Stevens, George M., Huntsville, Ark. 769,714, cancl. Cl. 107.
- Stop & Shop, Inc., Boston, Mass. 893,917, pub. 4-14-70. Cl. 101.
- Stuckey & Speer, Inc., Houston, Tex. 893,702, pub. 4-14-70. Cl. 28.
- Sturgis Posture Chair Co., The, Sturgis, Mich. 769,531, cancl. Cl. 32.
- Stylepark Industries, Inc., New York, N.Y. 769,613, cancl. Cl. 39.
- Sumitomo Bank, The, Osaka, Japan. 886,502, cor. Cl. 102.
- Summit Industries, Compton, Calif. 769,396, cancl. Cl. 13.
- Sun Chemical Corp., New York, N.Y. 893,516, pub. 4-14-70. Cl. 5.
- Sun Chemical Corp., New York, N.Y. 893,520, pub. 4-14-70. Cl. 6.
- Sun Oil Co., Philadelphia, Pa. 893,550, pub. 4-14-70. Cl. 15.
- Sunshine Art Studios, Inc., Springfield, Mass. 769,594, cancl. Cl. 38.
- Super-Form Brassiere, Inc., Orange, N.J. 769,603, cancl. Cl. 39.
- Superior Watch Corp., Pelham, N.Y. 530,358, ren. 6-30-70. Cl. 27.
- Svenska Diamantbergborrnings Aktiebolaget, Sundbyberg, Sweden. 769,496-7, cancl. Cl. 23.
- Syatemation Consultants, Inc., Houston, Tex. 893,912, pub. 4-14-70. Cl. 101.
- Szekely, Edmond B., d.b.a. Hydrodynamics Research & Development Co., San Diego, Calif. 893,596, pub. 4-14-70. Cl. 21.
- Taco Rancho, Inc., Orlando, Fla. 893,889, pub. 4-14-70. Cl. 100.
- Talking Scale Corp., d.b.a. Tasco Recorder & Electronics Co., Washington, D.C. 769,436, cancl. Cl. 21.
- Taste Engineering, Inc., Chicago, Ill. 769,415, cancl. Cl. 18.
- Teledyne, Inc., Los Angeles, Calif. 893,524, pub. 4-14-70. Cl. 6.
- Texas Trunk Co., Inc., San Antonio, Tex. 524,282, ren. 6-30-70. Cl. 3.
- Textron Inc., Providence, R.I. 893,591, pub. 4-14-70. Cl. 19.
- Textron, Inc., Cheshire, Conn. 893,660, pub. 4-14-70. Cl. 23.
- Textron Inc., Providence, R.I. 893,701, pub. 4-14-70. Cl. 28.
- Textron Inc., Providence, R.I. 893,800, pub. 4-14-70. Multiple Class (Classes 51 and 52).
- Thompson Aircraft Tire Corp., South San Francisco, Calif. 769,563, cancl. Cl. 35.
- Top-Fab Co., Minneapolis, Minn. 769,535, cancl. Cl. 32.
- Torin Corp., Torrington, Conn. 529,165, ren. 6-30-70. Cl. 34.
- Transamerica Corp., San Francisco, Calif. 893,935, pub. 4-14-70. Cl. 107.
- Transcentury Corp., Washington, D.C. 893,924, pub. 4-14-70. Cl. 101.
- Tremco Mfg. Co., The, Cleveland, Ohio. 893,536, pub. 3-31-70. Cl. 12.
- Triple Soft Corp., Oklahoma City, Okla. 893,712, pub. 4-14-70. Cl. 31.
- Truitt Bros. Inc., Belfast, Maine. 527,443, ren. 6-30-70. Cl. 39.
- Tuckersharpe Pen Co., Inc., Richmond, Va. 893,753, pub. 4-14-70. Cl. 87.
- USV Pharmaceutical Corp., New York, N.Y. 893,562, pub. 4-14-70. Cl. 18.
- Union Carbide Corp., New York, N.Y. 893,537, pub. 4-14-70. Cl. 12.
- Union Carbide Corp., New York, N.Y. 893,863-4, pub. 4-14-70. Cl. 51.
- Union Fishermen's Co-op Packing Co., Astoria, Oreg. 78,388, ren. 6-30-70. Cl. 46.
- United States Gypsum Co., Chicago, Ill. 270,833, ren. 6-30-70. Cl. 16.
- Utica Cutlery Co., Utica, N.Y. 893,644, pub. 4-14-70. Cl. 23.
- Van Worp, Robert; d.b.a. The Linseed White Co. Mary Carter Industries, Inc., Tampa, Fla. 615,094, Am. 7(d). Cl. 16.
- Veeder Industries Inc., Hartford, Conn. 893,882, pub. 4-14-70. Cl. 100.
- Ver Standig, M. Belmont, Inc., d.b.a. Ver Standig, Inc., Washington, D.C. 893,704, pub. 4-14-70. Cl. 28.
- Vexilar Engineering Inc., Minneapolis, Minn. 893,689, pub. 4-14-70. Cl. 26.
- Viking Press, Inc., The, New York, N.Y. 893,780, pub. 4-14-70. Cl. 38.
- Viobin Corp., Monticello, Ill. 525,305, ren. 6-30-70. Cl. 18.
- Visual Education Association, Inc., Dayton, Ohio. 893,775, pub. 4-14-70. Cl. 38.
- Vogel-Peterson Co., Elmhurst, Ill. 893,724, pub. 4-14-70. Cl. 32.
- Wabash Corp., Chicago, Ill. 530,457, ren. 6-30-70. Cl. 13.
- Wailles Dove Bitumastic Ltd., Hebburn, Country Durham, England. 893,552, pub. 4-14-70. Cl. 16.
- Walco Jewelry Co., d.b.a. Wallach Mfg. Co., Culver City, Calif. 893,700, pub. 4-14-70. Cl. 28.
- Wallace, B. E. Products Corp., Exton, Pa. 893,653, pub. 4-14-70. Cl. 23.
- Warenzeichenverband der Reifenwerke der Deutschen Demokratischen Republik E.V., Fuerstenwalde (Spree), Germany. 893,737, pub. 4-14-70. Cl. 35.
- Warnaco, Inc., Bridgeport, Conn. 523,472, ren. 6-30-70. Cl. 39.
- Warnaco Inc., Bridgeport, Conn. 893,515, pub. 4-14-70. Cl. 2.
- Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 433,666, ren. 6-30-70. Cl. 51.
- Waterway Restaurants, Inc., Fort Lauderdale, Fla. 893,906, pub. 4-14-70. Cl. 100.
- Watson, R. & W., Ltd., Linwood, Scotland. 893,754, pub. 4-14-70. Cl. 37.
- Watson, R. & W., Ltd., Linwood, Renfrewshire, Scotland. 893,755, pub. 4-14-70. Cl. 37.
- Watt Publishing Co., Mount Morris, Ill. 893,791, pub. 4-14-70. Cl. 38.
- Waukesha Foundry Co., Inc., Waukesha, Wis. 893,664, pub. 4-14-70. Cl. 23.
- Wausau Paper Mills Co., Brokaw, Wis. 893,760, pub. 4-14-70. Cl. 37.
- Weatherproof Products Corp., The, Kansas City, Mo. 525,642, ren. 6-30-70. Cl. 12.
- Webster Electric Co., Inc., Racine, Wis. 530,092, ren. 6-30-70. Cl. 23.
- Welsh Co., St. Louis, Mo. 525,130, ren. 6-30-70. Cl. 22.
- Wesix Electric Heater Co., Burlingame, Calif. 893,731, pub. 4-14-70. Cl. 34.
- Western Automation Corp., Seattle, Wash. 893,678, pub. 4-14-70. Cl. 24.
- Western Oil & Fuel Co., Minneapolis, Minn. 769,410, cancl. Cl. 15.
- Westinghouse Electric Corp., Pittsburgh, Pa. 269,924-5, ren. 6-30-70. Cl. 21.
- White Motor Corp., Cleveland, Ohio. 893,668-9, pub. 4-14-70. Cl. 23.
- Whiz-Print Copy Centers, Inc., Seattle, Wash. 893,925, pub. 4-14-70. Cl. 101.
- Wilcot (Parent) Co., Ltd., Bristol, England. 893,870, pub. 4-14-70. Cl. 52.
- Wilson Products Co., Salt Lake City, Utah. 893,813, pub. 4-14-70. Cl. 46.
- Wisconsin Shoe Co., Milwaukee, Wis. 525,344, ren. 6-30-70. Cl. 39.
- Wisteria Hosiery Mills, Inc., Saluda, S.C. 523,808, ren. 6-30-70. Cl. 39.
- Wolverine Brass Works, Grand Rapids, Mich. 893,541, pub. 4-14-70. Cl. 13.
- Woodard, Viviane, Corp., White Plains, N.Y. from Viviane Woodard Corp., Panorama City, Calif. 893,851-2, pub. 4-14-70. Cl. 51.
- Wright, Larry, d.b.a. Cocofino, Inc., Los Angeles, Calif. 893,854, pub. 4-14-70. Cl. 51.
- Wyandotte Chemicals Corp., Wyandotte, Mich. 893,869, pub. 4-14-70. Cl. 52.
- Y & S Candles, Inc., Brooklyn, N.Y. 272,101, ren. 6-30-70. Cl. 40.
- Young Research Laboratories Ltd., London, England. 769,431, cancl. Cl. 21.
- Yxhults Stenhuggeri AB, Hallabrottet, Sweden. 769,429, cancl. Cl. 20.
- Zamoiski, Jos. M., Co., The, Baltimore, Md. 769,448, cancl. Cl. 21.
- Zayre Corp., Natick, Mass. 893,677, pub. 4-14-70. Cl. 23.
- Zoladz Pere & Fils, Societe Anonyme, Paris, France. 893,721, pub. 4-14-70. Cl. 32.
- Zoological Society of San Diego, Inc., San Diego, Calif. 893,782, pub. 4-14-70. Cl. 38.

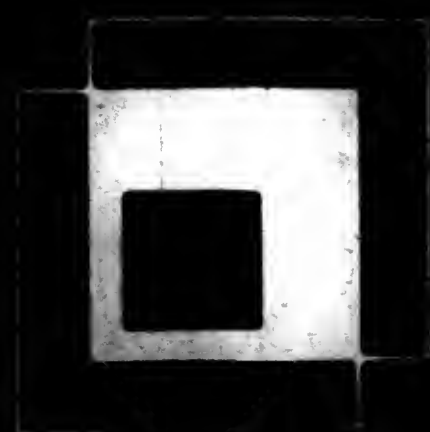
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